Attitudes to the Green Transition and Willingness to Pay in Emerging Markets: Concerned but Not Paying*

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While individuals in emerging markets are concerned about climate change, such concerns do not necessarily translate into a willingness to pay for environmental policies. Using rich data for 37 economies, mostly from emerging markets in Europe, the Caucasus, Central Asia and parts of North Africa and the Middle East, we empirically examine correlations with willingness to pay for environmental policies. We show that, beyond ability to pay, people who expect to be better off in the future, who are more patient and who trust the government are all more likely to be willing to pay for policies that mitigate climate change. Our results thus suggest that measures that increase people's incomes, build trust in government, reduce corruption and increase the transparency and efficiency of government spending could help boost support for green policies. Policies may also receive greater support if they take the form of subsidies, where the costs in terms of higher taxes are less salient.

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1. Introduction

Climate change poses a significant threat to global development, affecting lives and livelihoods through channels such as the increased frequency of extreme weather events, negative impacts on agricultural productivity, loss of water resources, and damage to infrastructure and other assets. While such effects are felt in both higher-income and lower-income economies, lower-income economies – and lower-income households within those economies – are less equipped to deal with them.

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Public support for environmental policies depends not only on their ecological benefits, but also on their perceived economic implications (see also *EBRD 2023*). Major economic transitions of the past (such as the rollout of digital technologies, the globalisation of trade and investment and the phasing-out of coal) offer important lessons for the transition to a less carbon-intensive economy (*EBRD 2023*; *OECD 2023*). Such transitions entail a reallocation of employment across sectors and industries, as well as changes to job requirements. They bring substantial opportunities and benefits for workers, but also new risks. Crucially, their impact varies across geographical areas and demographic groups, which can potentially exacerbate existing disparities in the economy.

Furthermore, recognition of the risks associated with climate change does not always translate into broad-based support for environmental policies. For instance, some of the most economically effective climate change policies, such as comprehensive pricing of carbon emissions, often face political resistance (see *Douenne and Fabre 2022* for a discussion of the Yellow Vest movement in France; see also *Klenert et al. 2018*).

Motivated by these considerations, this essay examines attitudes towards climate change and willingness to pay for policies that mitigate it. While public support for environmental policies has received increasing amounts of attention in economic literature, the analysis of its determinants has tended to focus on advanced economies, rather than emerging markets and developing economies.

We hope to contribute to the literature by examining various correlates of willingness to pay for environmental policies empirically, relying on rich micro-level data spanning a large set of emerging markets. We hope that gaining a better understanding of the factors inhibiting willingness to pay for environmental policies at the individual level will help guide policy initiatives and broaden public support for environmental protection.

The essay explores the following specific questions: Which individual characteristics are correlated with higher willingness to pay for policies mitigating climate change? In particular, how do factors such as concerns about climate change, ability to pay, expectations about the future, discount rates and trust affect willingness to pay?

The analysis draws on rich data on attitudes to climate change from the latest, fourth wave of the Life in Transition Survey (LiTS), a large representative survey covering 37 economies, mostly emerging markets, ranging from Europe, the Caucasus, Central Asia and parts of North Africa and the Middle East, and deep dive surveys, which were conducted as add-ons to LiTS in Albania, Armenia, Georgia, the Kyrgyz Republic and Tajikistan.

Our results should not be interpreted as causal – there may be reverse causality or omitted variables affecting both willingness to pay and, for instance, discount

rates or trust. Further research could examine such effects in an economic model, or try to identify clearer causal effects. Nonetheless, we believe that we highlight a number of interesting stylised facts.

The results of the survey suggest that most respondents in emerging markets are concerned about climate change and damage to the environment. However, such concerns do not necessarily translate into a willingness to pay more tax or forgo economic growth and job creation in order to prioritise environmental policies.

Respondents in higher-income households generally express greater willingness to pay in order to protect the environment. Willingness to pay is also generally higher among people with more positive expectations about the future (such as those who expect to be better off in four years' time than they are now). People who are more patient (valuing future income more highly relative to funds available today) are also more willing to pay for environmental policies, as are those who trust the government more.

Strikingly, results from the deep dive surveys suggest that only a small percentage of respondents believe that all proceeds from a carbon tax or an increase in electricity tariffs aimed at addressing climate change would end up being spent on the transition to a green economy. At the same time, participants in those surveys tend to underestimate the percentage of their country's energy production that currently comes from renewables. The results also suggest that environmental subsidies receive greater support than taxes (as the eventual costs of subsidies in terms of higher taxes are less salient).

These results could point to the importance of effectively communicating green policies and building awareness of the progress made to date. Efforts to build trust in government, reduce corruption and increase the efficiency and transparency of government spending could help to boost support for climate change policies in emerging markets. Highlighting the local environmental benefits of green policies (such as improved air quality, health benefits and potential job creation) could also help to leverage popular support for such measures.

This essay is structured as follows: Section 2 provides a brief overview of the related literature, Section 3 introduces the Life in Transition Survey (LiTS) and deep dives, Section 4 explores the correlates of willingness to pay and Section 5 concludes with policy implications.

2. Related literature

There is a growing body of literature looking at attitudes towards climate change, how environmental policies are perceived and what determines their level of support (see *Bergquist et al. 2022*; *Bumann 2021*; *Drews and van den Bergh 2016*

and *Fairbrother 2022* for reviews). Most of those studies focus on a single country or a subset of advanced economies: see, for instance, *Kotchen et al.* (*2013*) on the United States, *Veronesi et al.* (*2014*) on Switzerland, *Sergi et al.* (*2018*) on Pennsylvania and *Graham et al.* (*2019*) on the United Kingdom.

Comparative cross-country surveys looking at the drivers of support for different climate change policies in emerging market economies are relatively scarce. Notable exceptions include *Dechezleprêtre et al.* (*2022*), *Dabla-Norris et al.* (*2023*) and *Andre et al.* (*2024*). *Chaikumbung* (*2023*) provides a comprehensive analysis of the effects of institutions and cultures on people's willingness to pay for climate change policies by conducting a meta-regression analysis across studies in 47 countries.

Existing research points to several other attributes that shape willingness to pay beyond the simple ability to pay (see, for instance, *Dabla-Norris et al. 2023*; *Drews and van den Bergh 2016*; *Fairbrother 2022*; *Ziegler 2017* and *Carattini et al. 2018*). These include the perceived effectiveness of the policy and the expected benefits (for both the individual in question and society as a whole), the costs associated with its implementation and the perceived fairness of the policy (how outcomes will be distributed across all parties involved). Broader economic and political attitudes also shape policy support. For instance, right-leaning views have been associated with reduced support for publicly financed climate change policies, particularly in the United States and the United Kingdom (*Ziegler 2017; Fairbrother 2022*).

Other studies find that respondents who do not support subsidies for low-carbon technologies and renewable energy tend to cite the cost to taxpayers and concerns about corruption and the effectiveness of policies as the primary reasons for their views (*Dabla-Norris et al. 2023*). Previous studies have shown that countries with higher perceived corruption tend to have weaker environmental policies and higher greenhouse gas emissions after relevant political and economic factors have been taken into account (*Klenert et al. 2018*).

This essay contributes to the literature by drawing on rich, harmonised data across a large set of emerging markets on attitudes to climate change, willingness to pay for climate change mitigation as well as information on respondents' expectations about the future, discount rates and levels of trust.

The focus in this essay is on households' views and willingness to pay; for a review of the determinants of firms' decisions to invest in energy efficiency and pollution reduction, see, for instance, *De Haas* (*2024*). Recent work in this journal has also highlighted the growing importance of considerations of climate risk in financial markets (*Boros 2020*; *Németh-Durkó and Hegedűs 2021*; *Kolozsi et al. 2022*; *Ritter 2022*; *Szendrey and Dombi 2023*; *Várgedő 2023*) and on the insurance sector (*Pandurics and Szalai 2017*). Some central banks already have a green mandate or are focusing on environmental issues (*Matolcsy 2022; Bartók 2019*).

The paper is also related to the emerging literature on biodiversity finance – the use of private capital to finance biodiversity conservation and restoration – a new practice in sustainable finance (*Flammer et al. 2025; Jonäll et al. 2025; Naffa and Czupy 2024*).

3. Data

The analysis in this essay draws on a rich set of data on climate change and attitudes towards the green transition derived from the latest wave of the Life in Transition Survey. The Life in Transition Survey is a large representative household survey that has been carried out by the European Bank for Reconstruction and Development (EBRD) in collaboration with the World Bank since 2006. The latest wave, conducted in 2022–2023, expanded on earlier waves (conducted in 2006, 2010 and 2016) with an in-depth module on attitudes to climate change and willingness to pay. The survey included face-to-face interviews in local languages with 1,000 randomly selected households in 50 locations in each of 37 economies,[1] spanning Europe, the Caucasus, Central Asia and parts of north Africa and the Middle East. While most of these economies are emerging markets and developing economies, it also included some advanced comparators, such as Germany. For further information on the survey see *EBRD* (*2024*).[2]

As part of the new climate change module in the latest wave of the Life in Transition Survey (LiTS IV), respondents were asked about their views on climate change and its consequences. Participants were also asked whether they would prioritise the environment at the expense of economic growth and jobs, and whether they would be willing to pay more tax in order to fund policies that addressed climate change and its effects.

The survey thus provides unique insights into attitudes to and willingness to pay for climate change mitigation across a very large set of mostly emerging markets, based on large representative samples of households and a harmonised questionnaire.

The data are complemented by the results of deep dive surveys conducted by the World Bank in Albania, Armenia, Georgia, the Kyrgyz Republic and Tajikistan. The deep dive surveys included further questions on specific climate change policies, which were put to the 1,000 LiTS IV respondents in each of those five countries as part of their face-to-face interviews. In addition, they also included telephone interviews with 1,000 business managers in each economy. The companies

[1] Albania, Algeria, Armenia, Azerbaijan, Bosnia and Herzegovina, Belarus, Bulgaria, Croatia, Czechia, Estonia, Georgia, Germany, Greece, Hungary, Jordan, Kazakhstan, Kosovo, the Kyrgyz Republic, Latvia, Lebanon, Lithuania, Moldova, Mongolia, Montenegro, Morocco, North Macedonia, Poland, Romania, Russia, Serbia, the Slovak Republic, Slovenia, Tajikistan, Tunisia, Türkiye, Uzbekistan and the West Bank and Gaza.

[2] See also https://www.ebrd.com/sites/Satellite?c=Content&cid=1395236498263&d=Touch&pagename=EBRD%2FContent%2FContentLayout

in question were chosen at random from national registers of firms and were a representative sample in terms of firm size and sector.

4. Willingness to pay more to protect the environment

In most of the economies surveyed, a large percentage of respondents believe that climate change is real and are concerned about its consequences. On average, around 79 per cent of respondents in the economies surveyed believe that climate change will seriously affect the children of today, while around 65 per cent of respondents believe it will seriously affect them, with the difference between the two figures suggesting that people expect climate change shocks to become more severe in the more distant future (*Table 1*). This is in line with the results of other recent surveys, with such studies consistently finding that most people regard climate change as a serious problem (*Dabla-Norris et al. 2023*, *2024*; *Leiserowitz et al. 2021*).

Table 1
Descriptive statistics

Variable	N	Min	Max	Mean	SD
Age	37,389	18.00	95.00	45.82	17.28
Female (=1)	37,389	0.00	1.00	0.53	0.50
Has children (=1)	37,389	0.00	1.00	0.56	0.50
Married (=1)	37,236	0.00	1.00	0.58	0.49
Secondary education (=1)	37,389	0.00	1.00	0.66	0.47
Tertiary education (=1)	37,389	0.00	1.00	0.26	0.44
Urban (=1)	37,389	0.00	1.00	0.60	0.49
Employed (=1)	37,180	0.00	1.00	0.47	0.50
Consistently patient (=1)	34,629	0.00	1.00	0.48	0.50
Trusts the government (=1)	34,282	0.00	1.00	0.33	0.47
Experienced natural disaster(s) (=1)	37,167	0.00	1.00	0.18	0.38
Climate change will seriously affect me (=1)	35,435	0.00	1.00	0.65	0.48
Climate change will seriously affect children (=1)	35,130	0.00	1.00	0.79	0.41
Concerned about extreme weather events (=1)	37,389	0.00	1.00	0.70	0.46
Concerned about air pollution (=1)	37,389	0.00	1.00	0.67	0.47
Concerned about waste disposal (=1)	37,389	0.00	1.00	0.66	0.47
Concerned about loss of plant or animal species, or biodiversity (=1)	37,389	0.00	1.00	0.64	0.48
Concerned about rising temperatures (=1)	37,389	0.00	1.00	0.66	0.47
Concerned about the lack of action to address climate change (=1)	35,408	0.00	1.00	0.51	0.50
Prioritises environment over jobs (=1)	35,362	0.00	1.00	0.45	0.50
Willingness to pay: prevent environmental pollution (=1)	37,389	0.00	1.00	0.43	0.50
Willingness to pay: fight climate change (=1)	37,389	0.00	1.00	0.37	0.48
Willingness to pay: prevent biodiversity loss (=1)	37,389	0.00	1.00	0.41	0.49

Concerns are generally more pronounced when it comes to readily observable implications of climate change and environmental harm. For instance, 70 per cent of respondents are concerned about extreme weather events (such as droughts, floods, landslides and wildfires) and other natural disasters, while 64 to 67 per cent are concerned about waste disposal, air pollution, rising temperatures, the loss of plant or animal species, or biodiversity. At the same time, fewer respondents (51 per cent in total) are concerned about the lack of action to address climate change.

At the country level, environmental concerns are more pronounced in lower-income economies and economies where agriculture makes a larger contribution to employment and value added. This may reflect the fact that poorer economies are less able to cope with extreme weather than advanced economies (*Dabla-Norris et al. 2023*).

At the individual level, women, respondents with children and those with higher levels of education are more likely to think that climate change will significantly affect them or the children of today, based on regressions controlling for country fixed effects with standard errors clustered at the primary sampling unit (PSU) level.

Willingness to bear the economic costs of the green transition is significantly lower than the levels of concern about environmental damage. On average, 45 per cent of respondents in the economies surveyed would prioritise the environment at the expense of economic growth and jobs, with particularly strong support for this viewpoint in Moldova, Morocco, Slovenia and a number of economies in Central Asia.

At the individual level, women, older respondents, those with a tertiary education and people in higher-income households are more likely to think that protecting the environment should be the priority, based on regressions controlling for country fixed effects with standard errors clustered at the PSU level.

Fewer than half of all respondents say that they would be willing to pay more tax if it was used to fight global warming, prevent biodiversity loss or reduce pollution.

4.1. Empirical analysis

The following analysis examines various correlates of willingness to pay at the individual level in a simple linear regression setup. Willingness to pay to (1) prevent environmental pollution, (2) fight climate change or (3) prevent biodiversity loss (dummy variables y_i) are respectively regressed on the variable of interest (Int_i) – whether the respondent expects to climb the income ladder, is consistently patient, trusts the government, experienced natural disaster(s) and whether they think climate change will seriously affect them (one at a time as well as jointly) – as well as individual characteristics ($\boldsymbol{X_i}$: a female dummy, whether the respondent has

children and an interaction of the two, age, age squared to account for possible nonlinearities, education, marital status, urban/rural location, equivalised household income decile and a dummy for whether the respondent is employed) and country fixed effects (α_c):

$$y_i = \beta_0 + \beta_1 Int_i + \boldsymbol{X_i}'\boldsymbol{\beta_2} + \alpha_c + \varepsilon_i$$

Standard errors are clustered at the primary sampling unit level. Results are reported in *Table 2.* We examine the variables of interest both one at a time and jointly, and the results are very similar across specifications.

While the relationship between willingness to pay and the variables of interest may not be causal, for instance, picking up reverse causality or omitted variables affecting both, we believe these correlations are nonetheless interesting. Future research could examine them in a more causal setting, for instance, relying on instrumental variables (for instance, cultural attitudes towards saving and investment, which are unfortunately not available in our dataset).

Individual characteristics point to expected correlations: those with higher levels of education and, in some specifications, those with children, are more likely to express willingness to pay. Those who believe that climate change will seriously affect them are, as expected, more likely to express a willingness to pay to protect the environment and the effect is economically large (around 16 percentage points), controlling for individual characteristics and country fixed effects (*Table 2*).

Beyond attitudes, willingness to pay also reflects people's ability to pay (see also *Graham et al. 2019*). People in higher-income households are generally more able – and, accordingly, more willing – to pay for the green transition than those in lower-income households. For example, people in the top household income decile are, on average, around 10 percentage points more likely to be willing to pay to protect the environment than those in the bottom income decile (controlling for individual characteristics and country fixed effects).

At the same time, the relationship between household income and willingness to pay more to protect the environment is in line with the relationships observed for other policies. When it comes to paying for physical and digital infrastructure, education and healthcare, households in the top income decile are between 8 and 11 percentage points more likely to be willing to pay than households in the bottom decile. As one would expect, the income gradient is less pronounced when it comes to income redistribution policies. For instance, those at the top of the income distribution are only 4 percentage points more likely to be willing to pay to assist the poor and/or reduce inequality and 3.9 percentage points more likely to be willing to pay to create jobs.

4.2. Expectations and discount rates

Policies aimed at mitigating climate change will be costly today, but the pay-offs will stretch into the future, so the value that individuals place on the future relative to the present day can affect their willingness to pay for environmental policies.

Beyond current ability to pay, people's willingness to pay can thus also be expected to depend on their expectations of their own economic situation in the future, as well as how highly they value income in the future relative to the present.

People's expectations of their own economic situation in the future are captured here using questions on which rung of a ladder respondents think their household is today, and on which rung their household will be in four years' time, with the poorest in society on the bottom rung and the richest on the top rung. Respondents who think that their household will be on a higher rung of the income ladder in four years' time are 4.6 percentage points more likely to be willing to pay to reduce pollution, fight global warming and prevent biodiversity loss than similar individuals with no expectations of upward mobility in the future (controlling for individual characteristics and country fixed effects, see *Table 2*).

To measure the value that individuals place on future income relative to today's – that is to say, their discount rates – respondents were asked whether they would prefer to receive (i) an amount corresponding to around 55 per cent of the median household's daily income immediately or (ii) around 85 per cent a month later (in the case of Germany, around EUR 55 today or around EUR 85 one month later). Later in the survey, respondents were asked to choose between (i) 55 per cent of the median household's daily income six months later and (ii) 85 per cent seven months later. The analysis in this section defines respondents as 'consistently patient' if they prefer to wait for the larger amount in both situations, while 'consistently impatient' individuals are those who prefer to receive the smaller amount sooner in both situations. Those who choose to receive a smaller amount immediately in the first situation but are happy to wait seven – rather than six – months in order to receive a larger amount in the second situation are deemed to exhibit present bias.

Consistently patient respondents (those who value future income more highly) are 3–4 percentage points more likely to be willing to pay to reduce pollution, fight climate change or prevent biodiversity loss than consistently impatient individuals (those who value the present more highly), controlling for individual characteristics and country fixed effects (see *Table 2*). Similar results can be seen when it comes to willingness to pay for measures aimed at preventing biodiversity loss and fighting global warming. People's discount rates have a larger impact on willingness to pay than whether they have children.

Table 2
Correlates of willingness to pay

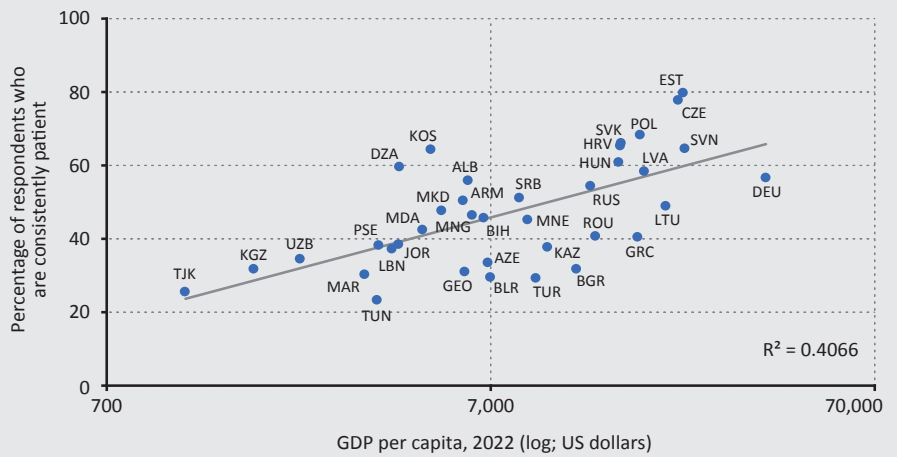
	Prevent environmental pollution					Fight climate change					Prevent biodiversity loss				
Expect to climb the income ladder	0.049***				0.042***	0.046***				0.043***	0.036***				0.033***
	–0,009				(0.010)	(0.009)				(0.010)	(0.009)				(0.010)
Consistently patient		0.036***			0.031***		0.027***			0.023**		0.031***			0.029***
		(0.009)			(0.010)		(0.009)			(0.010)		(0.009)			(0.010)
Trust the government			0.083***		0.076***			0.070***		0.065***			0.071***		0.067***
			(0.010)		(0.011)			(0.010)		(0.011)			(0.010)		(0.011)
Experienced natural disaster(s)				0.053***	0.050***				0.036***	0.031**				0.051***	0.046***
				(0.011)	(0.012)				(0.011)	(0.012)				(0.011)	(0.012)
Climate change will seriously affect me	0.170***	0.167***	0.164***	0.161***	0.159***	0.184***	0.183***	0.181***	0.178***	0.180***	0.172***	0.170***	0.169***	0.166***	0.163***
	(0.011)	(0.011)	(0.010)	(0.010)	(0.011)	(0.010)	(0.010)	(0.010)	(0.010)	(0.011)	(0.010)	(0.010)	(0.010)	(0.010)	(0.011)
Individual characteristics															
Female	0.007	0.006	0.012	0.007	0.017	–0.007	–0.009	–0.007	–0.009	–0.005	–0.009	–0.008	–0.009	–0.009	–0.004
	(0.010)	(0.010)	(0.010)	(0.009)	(0.010)	(0.010)	(0.010)	(0.009)	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)	(0.009)	(0.010)
Has children	0.015	0.021*	0.023**	0.019*	0.019*	–0.004	0.004	–0.000	0.001	–0.002	0.002	0.008	0.006	0.006	0.002
	(0.011)	(0.011)	(0.011)	(0.011)	(0.012)	(0.011)	(0.011)	(0.011)	(0.010)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.012)
Female # Has children	–0.015	–0.015	–0.019	–0.014	–0.020	0.003	0.001	0.001	0.003	0.002	0.003	–0.002	–0.001	0.003	–0.001
	(0.013)	(0.013)	(0.013)	(0.013)	(0.014)	(0.013)	(0.013)	(0.013)	(0.013)	(0.014)	(0.013)	(0.013)	(0.013)	(0.013)	(0.014)
Age	–0.001	–0.001	–0.000	–0.000	–0.001	–0.001	–0.001	–0.000	–0.000	–0.001	–0.001	–0.001	0.000	–0.000	–0.000
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Age squared	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	–0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Secondary education	0.016	0.014	0.014	0.015	0.019	0.018	0.015	0.011	0.013	0.017	0.014	0.014	0.014	0.014	0.019
	(0.016)	(0.015)	(0.015)	(0.015)	(0.017)	(0.015)	(0.015)	(0.015)	(0.014)	(0.017)	(0.016)	(0.015)	(0.015)	(0.015)	(0.017)
Tertiary education	0.052***	0.049***	0.056***	0.053***	0.057***	0.059***	0.054***	0.060***	0.056***	0.062***	0.054***	0.051***	0.058***	0.052***	0.062***
	(0.018)	(0.017)	(0.017)	(0.016)	(0.019)	(0.017)	(0.016)	(0.017)	(0.016)	(0.018)	(0.017)	(0.017)	(0.017)	(0.016)	(0.018)

	Prevent environmental pollution					Fight climate change					Prevent biodiversity loss				
Married	−0.003	−0.009	−0.011	−0.012	−0.006	−0.004	−0.007	−0.009	−0.008	−0.007	0.002	−0.002	−0.003	−0.005	0.001
	(0.011)	(0.011)	(0.011)	(0.010)	(0.011)	(0.011)	(0.010)	(0.011)	(0.010)	(0.011)	(0.011)	(0.010)	(0.011)	(0.010)	(0.012)
Other	−0.029**	−0.030**	−0.035***	−0.034***	−0.037***	−0.020	−0.020*	−0.027**	−0.024*	−0.025*	−0.017	−0.016	−0.017	−0.020	−0.018
	(0.013)	(0.013)	(0.013)	(0.013)	(0.014)	(0.013)	(0.012)	(0.013)	(0.012)	(0.013)	(0.013)	(0.012)	(0.013)	(0.012)	(0.014)
Urban	−0.003	−0.001	−0.002	0.001	−0.000	−0.016	−0.017	−0.018	−0.013	−0.020	−0.018	−0.018	−0.019	−0.015	−0.018
	(0.013)	(0.013)	(0.013)	(0.013)	(0.014)	(0.013)	(0.012)	(0.013)	(0.012)	(0.013)	(0.013)	(0.013)	(0.013)	(0.012)	(0.014)
Equivalised income decile	0.009***	0.009***	0.009***	0.009***	0.010***	0.009***	0.008***	0.008***	0.008***	0.009***	0.008***	0.007***	0.007***	0.007***	0.008***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)
Employed	−0.023**	−0.024***	−0.024***	−0.024***	−0.024**	−0.031***	−0.033***	−0.032***	−0.032***	−0.033***	−0.024***	−0.023***	−0.027***	−0.022**	−0.030***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.010)	(0.009)	(0.009)	(0.009)	(0.009)	(0.010)	(0.009)	(0.009)	(0.009)	(0.009)	(0.010)
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean of outcome	0.45	0.45	0.45	0.45	0.45	0.39	0.38	0.39	0.39	0.39	0.43	0.42	0.43	0.43	0.43
R^2	0.13	0.13	0.14	0.13	0.13	0.13	0.12	0.13	0.13	0.13	0.12	0.12	0.13	0.13	0.12
No. of economies	37	37	36	37	36	37	37	36	37	36	37	37	36	37	36
No. of observations	26,677	28,066	27,393	29,634	23,477	26,677	28,066	27,393	29,634	23,477	26,677	28,066	27,393	29,634	23,477

*Note: OLS regressions of being willing to pay to prevent environmental pollution, to fight climate change or to prevent biodiversity loss on individual characteristics (the omitted categories are 'primary education or below' and 'never married'; 'other' includes divorced, widowed and separated), the variable of interest and country fixed effects. Standard errors are clustered at the primary sampling unit level. *** denotes statistically significant at the 1 per cent level, ** at the 5 per cent level and * at the 10 per cent level. Based on LiTS IV.*

The rates at which future income is discounted by individuals are generally higher in poorer economies (see *Figure 1*; see also *Yesuf and Bluffstone 2019*; *De Lipsis 2021*). In the economies surveyed here, Tunisia and Tajikistan have the smallest shares of consistently patient respondents (at 24 and 26 per cent, respectively), while Estonia and Czechia have the largest shares (at 78 and 80 per cent, respectively).

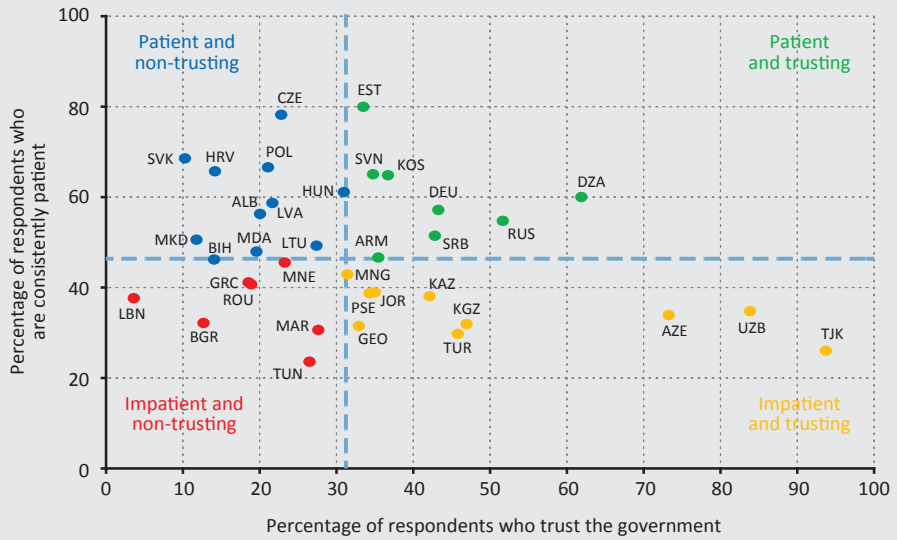
Figure 1
Richer economies generally tend to have larger shares of consistently patient respondents



Note: The horizontal axis shows the log of GDP per capita in 2022 in US dollars at market exchange rates.
Source: LiTS IV, World Bank and authors' calculations

This could, in part, be because discount rates reflect respondents' lack of trust that the promise of future pay-offs will be kept. Empirically, however, the relationship between discount rates and the degree of trust that respondents have in governments is relatively weak (see *Figure 2*).

Figure 2
Discount rates and measures of trust capture related but distinct concepts



Note: The horizontal axis shows the percentage of respondents who, when asked whether the government/cabinet of ministers can be trusted, express either some trust or complete trust. The dotted lines denote medians based on all economies covered by LiTS IV.

Source: LiTS IV and authors' calculations

The next section explores the relationship between trust and environmental attitudes in greater detail on the basis of the deep dive surveys that were conducted as add-ons to the Life in Transition Survey and among business leaders by the World Bank in Albania, Armenia, Georgia, the Kyrgyz Republic and Tajikistan.

A caveat is required. The five economies that were studied in the deep dive surveys are not necessarily representative of the 'typical' economy included in the survey, or a typical emerging market. For example, the quality of their economic institutions is below the average for the other economies included in the survey, while expressed willingness to pay for climate change mitigation policies, as well as for education, healthcare, housing, pensions, social welfare and infrastructure are considerably higher.

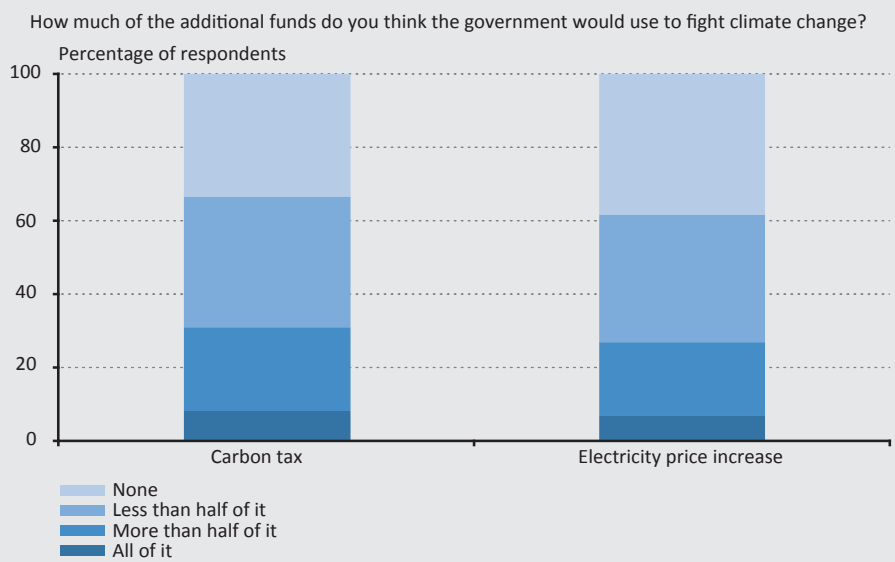
4.3. Trust

As part of those deep dive surveys, respondents were presented with a hypothetical scenario in which the government introduced a carbon tax of EUR 30 per tonne of CO_2 in order to raise funds to address climate change. Respondents were then asked how much of these additional funds they thought the government would use to fight climate change. A similar question was asked about a 20-per cent increase in the price of electricity.

Only 6 to 8 per cent of respondents believed that all of the funds earmarked for fighting climate change would be spent as advertised. A further 20 to 23 per cent thought that at least half of those funds would be spent on mitigating climate change, while the majority were highly sceptical about the actual use of those funds (see *Figure 3*).

While money is fungible and some scepticism about tax revenues being earmarked for particular purposes is understandable, the extent of that scepticism probably points to broader concerns about the transparency of government spending.

Figure 3
Widespread scepticism that tax revenues earmarked for environmental policies will be used as advertised



Source: World Bank deep dive surveys and authors' calculations

Nonetheless, it should be added that even if revenues from carbon taxes or higher electricity tariffs are not channelled to protect the environment, putting a price on emissions would already reduce the overconsumption of goods with negative externalities.

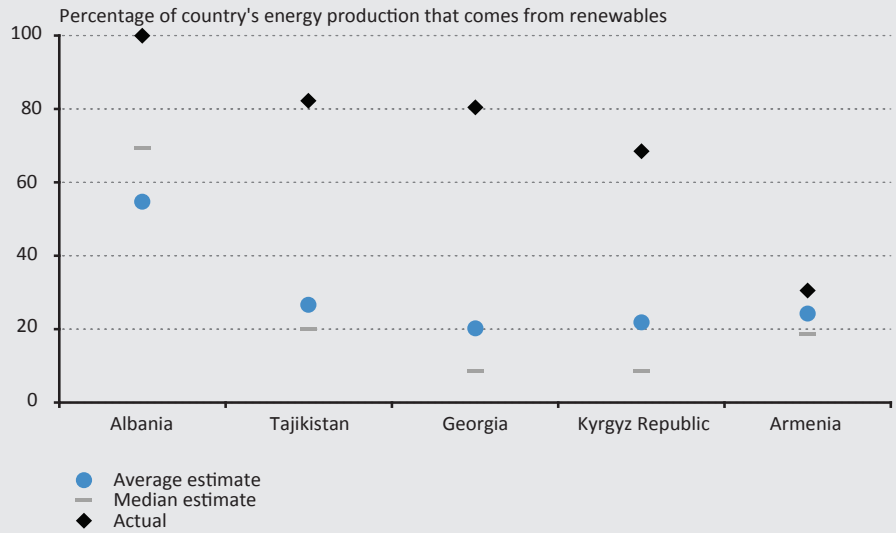
At the individual level, respondents who express higher levels of trust in the government tend to be more willing to pay for environmental policies when controlling for individual characteristics and country fixed effects (*Table 2*). In particular, respondents who express some trust or complete trust in the government (that is to say, respondents scoring 4 or 5 on a trust scale ranging from 1 to 5, where 1 indicates 'complete distrust' and 5 indicates 'complete trust') are, on average, 7–8 percentage points more likely to express a willingness to pay to protect the environment, fight climate change or prevent biodiversity loss than respondents who do not believe that their government can be trusted, that is those who score 1 or 2 on the trust scale above (see *Table 2*).

4.4. Information

Knowledge and understanding of climate change policies can boost support for environmental spending. However, there is still a sizeable information gap to be filled in most countries. The percentage of respondents reporting awareness of their government's measures to tackle climate change tends to be higher on average in advanced economies, although there is significant cross-country variation. In some emerging market economies (such as Azerbaijan, Colombia, the Philippines and Vietnam), where governments' environmental commitments have received extensive media attention at the domestic level, respondents report higher levels of awareness (*Dabla-Norris et al. 2023*).

The deep dive surveys suggest that people typically underestimate the percentage of their country's total energy production that comes from renewables. Respondents were asked to estimate the share that came from renewable sources in their country, and in all five economies both the mean and the median were well below the actual figure (see *Figure 4*). Albania, for instance, is entirely dependent on renewable sources for its energy, but the average answer in that country was 56 per cent.

Figure 4
People typically underestimate the percentage of their country's energy production that comes from renewables



Note: For Albania and the Kyrgyz Republic, actual data relate to 2022; for Armenia, Georgia and Tajikistan, they relate to 2021.

Source: IEA, World Bank deep dive surveys and authors' calculations

Better awareness of environmental risks also plays a role. Respondents who have personally experienced disruption or damage caused by flooding, drought or other natural disasters are, on average, around 3–5 percentage points more likely to be willing to pay to prevent environmental pollution, fight climate change and prevent biodiversity loss than those who have not had such personal experiences (controlling for individual characteristics and country fixed effects; see *Table 2*).

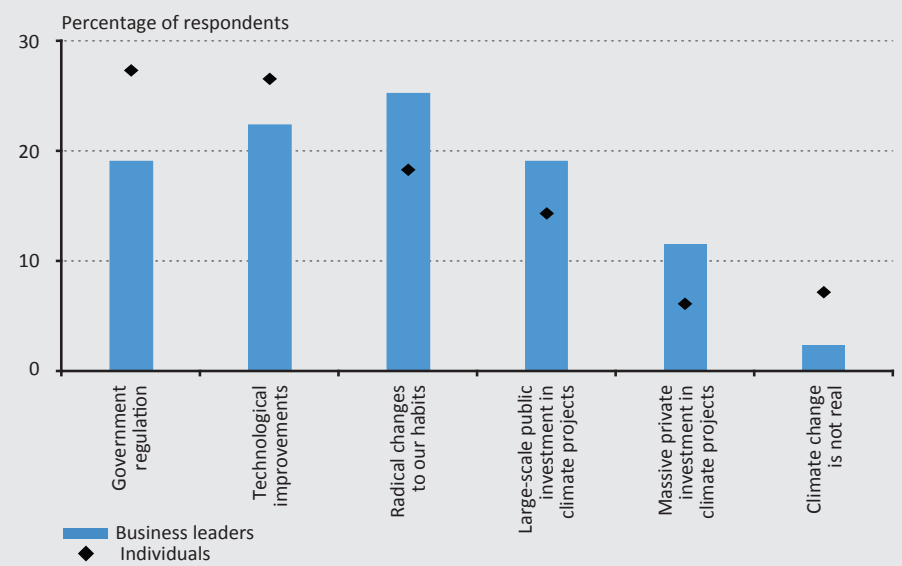
4.5. Attitudes towards climate change policies

Governments frequently invoke the principle of distributive justice in climate negotiations and public debate in order to justify their position on sharing the cost of reducing carbon emissions. Such stances are typically aligned with their countries' economic interests. Some arguments are based on the 'polluter pays' principle, with costs apportioned on the basis of current greenhouse gas emissions or cumulative emissions over time (*Dabla-Norris et al. 2024*); other arguments are based on the 'ability to pay' principle, with higher-income economies expected to pay higher costs.

In line with this, respondents in the deep dive surveys felt that all countries should, to some extent, pay to help address climate change, but the burden of financing climate change policies should increase with the level of economic development and personal income (*Dabla-Norris et al. 2023*). These views were also shared by a sample of business leaders – managers of manufacturing or service companies that had been selected at random from national registers of firms.

As regards policy design, individual respondents taking part in the deep dive surveys felt that government regulation and technological improvements were the most important means of tackling climate change (see *Figure 5*). Both were chosen by around 27 per cent of respondents from a list of six different options (with other options including radical changes to habits, large-scale public investment and massive private investment). Business leaders, by contrast, prioritised radical changes to habits over regulation and technology.

Figure 5
Most individuals see regulation and technological improvements as the best way to fight climate change, while business leaders prioritise changes to habits

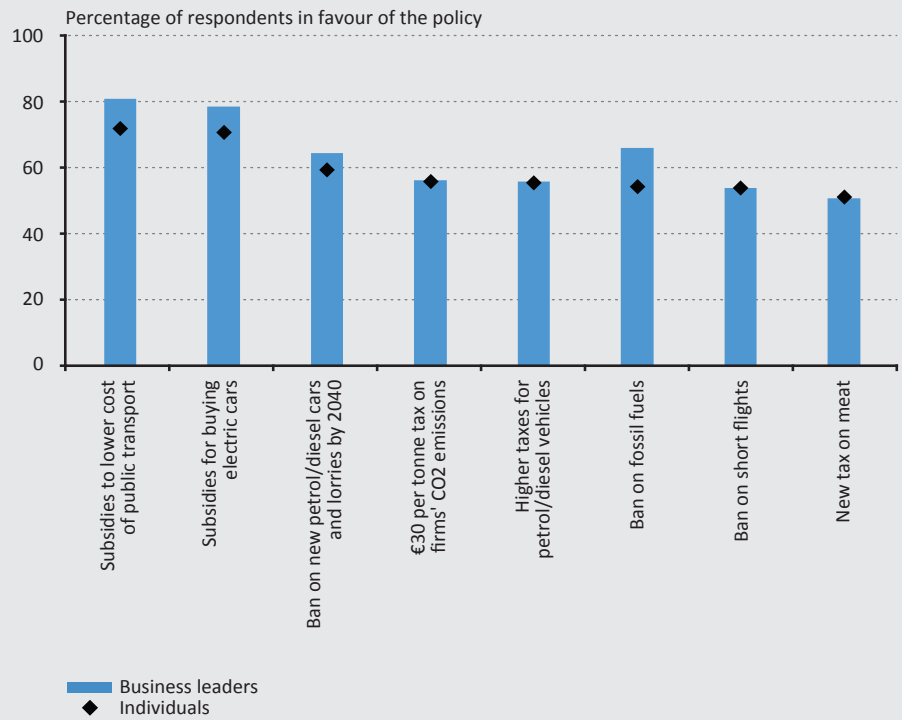


Note: This chart is based on responses to the question 'Which of the following do you believe is the most significant way to mitigate climate change?' Participants could only choose one answer.

Source: World Bank deep dive surveys and authors' calculations

Looking at respondents' support for individual measures, subsidies (for public transport or purchases of electric cars) were preferred to higher taxes (on greenhouse gas emissions, internal combustion vehicles or meat; see *Figure 6*). While the benefits of subsidies are well understood by the public, their costs (in the form of higher taxes or reduced spending elsewhere) tend to be less salient (*Fairbrother 2022*).

Figure 6
Subsidies (and some bans) are preferred to higher taxes



Note: Respondents were asked whether they favoured or opposed the adoption of these various policies in order to reduce greenhouse gas emissions. The calculations exclude respondents who replied 'don't know', as well as missing responses.

Source: World Bank deep dive surveys and authors' calculations

5. Conclusions and policy implications

The majority of people are concerned about environmental damage and the impact that climate change will have on them and their children. However, such concerns about climate change do not necessarily translate into a willingness to pay for environmental policies: the majority of the population are concerned, but those who are willing to pay higher taxes or prices to protect the environment remain a minority, albeit a large one.

Tackling climate change will require broad public support for environmental policies. Economic development may, over time, strengthen support for the green economy, since higher-income individuals tend, in general, to be more willing to pay for policies that mitigate climate change (as well as other public services). Such shifts are bound to be relatively slow, however.

A lack of trust in government and concerns about corruption can result in opposition to climate change policies, particularly in emerging markets with weaker economic institutions. For example, very few of the respondents who took part in the deep dive surveys believed that all proceeds from a hypothetical carbon tax or an increase in electricity tariffs would actually be spent on measures addressing climate change, despite those funds being earmarked for such initiatives. While this is not directly examined in this paper, our results tentatively suggest that building trust in public institutions and increasing the transparency and efficiency of government spending may help to overcome such scepticism. It should be added that even if revenues from carbon taxes or higher electricity tariffs are not channelled to protect the environment, putting a price on emissions would already reduce the overconsumption of goods with negative externalities.

The results of those surveys could also point to the importance of communicating effectively about green policies implemented to date and building awareness of progress made with the green transition, in addition to raising awareness of the cost of failing to cut pollution. For example, the deep dive surveys suggest that people vastly underestimate the percentage of their country's energy production that comes from renewables. Examining such linkages empirically, for instance, between more transparent communication or fighting local pollution and willingness to pay would be a promising avenue for further research.

Existing research suggest that better awareness of the progress made to date with the transition to a green economy can boost support for climate change policies. For instance, giving respondents information about the effectiveness of carbon pricing and the benefits of revenue recycling has been found to increase public support for those measures, with larger increases being seen in countries where there was little pre-existing knowledge of carbon taxes as an environmental policy instrument (*Dabla-Norris et al. 2023*).

Climate change policies should be designed in such a way that they are affordable and regarded as being fair to everyone. The funding of those policies needs to ensure that more of the costs are borne by higher earners, while benefits also accrue to individuals on lower incomes. The results of the deep dive surveys indicate that respondents expect to see these features in environmental policies. Social safety nets can help to protect the most vulnerable, while active labour market policies can assist with the transition process where workers are displaced by technological change.

Recycling some of the tax receipts from carbon pricing in order to subsidise investment in low-carbon technologies such as renewable energy or electric vehicles – a policy that enjoys broad-based support – could increase the availability of cleaner alternative energy sources (*EBRD 2023; IMF 2019, 2022; Shang 2021*). Subsidies tend to enjoy greater popular support, since their costs in terms of higher taxes are less salient.

Highlighting additional benefits of climate change policies, such as improved air quality, health benefits and potential job creation, can also help to reduce the public's sensitivity to their short-term costs.

Future research could examine the correlations highlighted in this paper in a more causal setting; a valuable area for further studies would also be examining the heterogeneity of such effects.

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