Environment Center
Charles University
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What makes climate change mitigation policies acceptable by public?
A review of influential factors

CECILIA 2050
OPTIMAL EU CLIMATE POLICY

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Structure of the presentation

1. Motivation & Objectives
2. Methods of systematic literature review
3. Literature review on factors influencing public acceptability of climate change policies
4. Conclusions and discussion

1. a) Why should we care about public acceptability/ support for (climate change) policies?

- public resistance, and reluctance among politicians to implement policies lacking public support can **inhibit the successful implementation of policies** (Steg, 2006), such as failure to introduce the carbon-energy taxation (in France in 2010, etc.)
- influences feasibility
- negative reactions after implementation
- increase acceptance or even raise support

img src: http://econews.com.au/news-to-sustain-our-world/abbotts-call-for-carbon-tax-vote-rejected/

1. b) Objectives

- to summarize the empirical evidence: a **systematic review** (see Cooper 2010) of e**mpirical studies** that examine public acceptability or acceptance of climate change policies.
- to synthesize prevailing findings about **factors influencing public acceptability**, both individual and socio-demographic factors, and characteristics of the policies.

2. Methods of the systematic literature review

- **GHG emissions mitigation policies**
- empirical studies from 2000 to present *(117 papers in total)*
- developed countries (+big developing)
- mainly **quantitative studies**
  - social-psychological models *(17)*
  - public opinion research (not theory-based) *(40)*
  - referenda *(5)*
  - stated preference studies *(43)*
- and few qualitative studies (13)
- not included:
  - no policy specification, acceptability of technologies, biofuels, renewable energy
  - general or not well specified policies and policy measures instruments

3. Results: Public acceptability/ acceptance of/ support for policies

1. Social psychological studies/ public opinion research
   - Behaviour – nonactivist behaviour in the public sphere
   - Attitudes

2. Economic: stated preference studies
   - Preferences – estimate the economic values of goods and services not traded in the market
   - Willingness to pay

3. Results: Public acceptability/ acceptance of/ support for policies

Terms often used interchangeably

1. acceptance / acceptability
   - passive evaluation (attitudes)
   - acceptability before the policy implementation
   - acceptance after
2. support
   - action-oriented
3. other reactions
   - (resistance, opposition) not to be omitted

(Batel et al.,2013)

3. Results: Factors influencing public acceptability of policies

I. Individual characteristics

- social-psychological: values, norms, beliefs, trust, etc.
- socio-economic & demographic variables

II. Characteristics of the policy to be implemented

- environmental effectiveness, compliance costs, or the allocation of policy costs between different groups
- different types of policies have different sets of predictors (Poortinga, Steg, & Vlek 2004)
- perception by the public: policy specific beliefs

(Eriksson, Garvill, and Nordlund 2006; Steg, Dreijerink, and Abrahamse 2006)

3. Findings I: characteristics of individuals - social-psychological factors

Overall, people are more likely to accept proposed policies if they: …

- are aware of and **concerned about the environmental problems** the policies are focused on;
- are **aware of consequences of climate change**, for example, impacts on health and standard of living of people, and number of species lost;
- **feel morally obliged to contribute** to tackle these problems;
- perceive policies as **fair and environmentally effective**;
- **trust the institution** which proposes policy.

3. Findings I: characteristics of individuals - social-psychological models:

Value-Belief-Norm Theory

W. Poortinga et al. / Energy Policy 48 (2012) 812–819

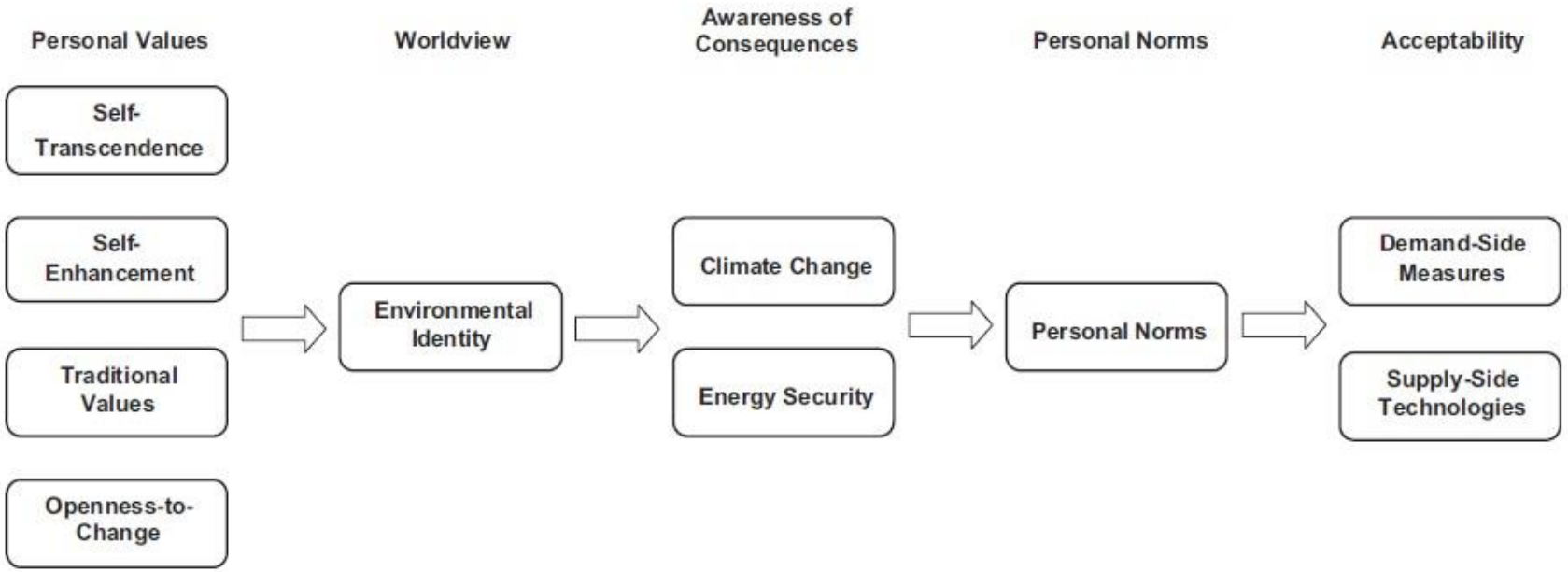

Fig. 1. Adapted Value–Belief-Norm model for the acceptability of demand-side measures and supply-side technologies to reduce carbon emissions.

3. Findings I: characteristics of individuals - socio-demographic characteristics

robust evidence

- **age:** younger more in favour

mixed evidence (not robust):

+ **gender**: women more in favour
+ **education**: positive
+ **income**: positive
+ **left** or **green** political orientation: positive

3. Findings II: policy characteristics– an example of discrete choice experiment

Instruments to reach 80% emission reduction by 2050

	Policy A (target will be reached)	Policy B (target will be reached)	Current policy (targets after 2020 won't be reached)
Approach used by the policy	Taxes on energy and emission	Subsidies or support for energy savings	Current already implemented measures
Distribution of costs among the Czech citizens	every citizen pays the same costs	the more a citizen emits above the limit, the more pays	
Use of revenues in the Czech Republic	environmental programs	public services (health, education)	
Increase in your household's monthly expenditures	25 € monthly	75 € monthly	0 € monthly
Which option would you prefer?	☐	☐	☐

(Ščasný et al. 2014)

3. Findings II: policy characteristics

Climate policy acceptability is greater:

- when **revenues are used for env. measures** (stimulation of energy efficiency, development of clean technologies) *(3 studies)* (not in general budget or for income redistribution).
  - issue linkage hypothesis: do not believe that the tax will improve environmental quality without earmarking
- when **cost distribution** follows the **polluter-pays principle** *(1 study)*- no convincing evidence on universal preference for one of the burden-sharing rules
- for policy instruments **resulting in lower prices** of env.friendly products and services (e.g**. subsidies** for renewable energy sources) opposite to instruments increasing the prices of those env. harmful (e.g. **fossil fuel taxation**).

3. Findings II: policy characteristics

Willingness to pay for a climate policy rises:

- with **policy effectiveness**, such as the temperature increase which should be prevented or annual percentage reduction in GHG emissions;
- with **probability of policy success** in mitigating climate change;
- when the **ancillary benefits**, such as positive impacts on human health due to reduced local air pollution, or deployment of **environmentally-friendly technologies** are described.

3. Findings II: Willingness to pay for a climate policy (Nemet, & Johnson, 2010)

- recalculated WTP on an equivalent basis across 25 studies
- range for WTP of **$22-$437/household annually, median of $135**
- American, Asian, and European samples
- environmental goods vary extensively (ranging from climate stabilizing policy in general, changes and food shortages through increases in gas prices, down to specific carbon sequestration mechanisms)

Table 2 Common explanatory variables across 27 WTP studies

Variable	Number of Studies
Environmental Engagement	*18*
Environmental Attitudes/Beliefs	*17*
Education level	*16*
Perceived Efficacy of Policy/Strategy	*10*
Political Views	*10*
Level of Certainty on Climate Change and Policy Outcomes	*8*
Expected Future Temperature/Precipitation Levels	*5*
Perceptions of Others' Efforts	*3*

3. Focus: Why are taxes rather unacceptable in some countries?

- perceived as **unfair, infringing on freedom, ineffective**- not only taxes: interventions in general (Cherry, Kallbekken, & Kroll 2012)
- a **lack of confidence** in politicians and other citizens;
- a **lack of understanding how a tax can reduce the externalities** and increase welfare. General public perceives taxes only as a way to increase revenues.

3. Focus: Why are taxes rather unacceptable in some countries?

- **distributional concerns**, especially concerns about regressive effects, however normative beliefs about distribution of cost or benefits are very variable;
- feeling that people **are not morally responsible** for reduction of negative environmental impacts;
- **"tax" label in contrast to "fee"** decreased acceptability of instruments with lump sum revenue redistribution, but not of instruments, which earmarks the revenues (Kallbekken, Kroll, Cherry 2011; Ščasný et al. 2014).

4. Conclusion: Support for Pigouvian taxes may be raised by…

- **taking into account distributional consequences,** especially protecting from regressive effects
- **strengthening trust in government and public organizations** (transparency, public participation, etc.; see literature on public governance and public trust)
- **support acquiring information** about how the taxes work, how they can reduce the externalities and increase welfare and about their effectiveness**;**
- **earmarking the revenues** for environmental measures and revenues are targeted to narrowly specified groups
- public investments in **environmentally friendly technologies**, transport infrastructure, and renewable energy.

4. General Conclusion

- Why we aim at identification of factors promoting public support for energy policies and transition?

To identify feasible policy options.

4. Factors and related policy options

- Knowledge: information campaigns, provision
  - mixed evidence – different treatments in the studies – different results
  - overall, there is not enough support for info-deficit model

- Attitudes; beliefs: ascription of responsibility, awerennes of consequences, specific beliefs, perceived fairness, environmental concern; norms (subjective, social, personal); perceived behavioural control; trust in (governmental) institutions; risk perception:
  - **persuasive/social marketing campaign** – to design campaign messages accordingly, target audience analysis (segmentation based on variables), communication channel identification

4. Factors and related policy options

- Structures:
  - incentive structures (taxes, subsidies, penalties)
  - facilitating conditions and situational factors (access to public transport etc.)
  - institutional context (rules, regulations, market structures)
  - social and cultural context (strength of community, family stability etc)
  - business practices
  - helping communities to help themselves
  - env. and social performance of governmental institutions

- Policy mix – combination of policy instruments – feasible but still effective

(Jackson, 2005)

4. Discussion of policy relevance of findings

- the summarized factors influencing public support for climate policies are **general findings** about different policies and instruments stemming from different countries
- to suggest ways to improve public acceptability of the EU's climate **policies detail analysis of introduction of a specific policy mix** is needed, which is one of the objectives of the CECILIA2050 project (FP7)
  - see http://cecilia2050.eu/
    - for further details about methods and results of this literature review see Zvěřinová, Ščasný, Kyselá (2014)

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Thank you for your attention

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