Energy Policy 39 (2011) 2966–2973

Contents lists available at ScienceDirect

Energy Policy

journal homepage: www.elsevier.com/locate/enpol

Public acceptance for environmental taxes: Self-interest, environmental and distributional concerns

Steffen Kallbekken*, Håkon Sælen

CICERO Center for International Climate and Environmental Research—Oslo, PO Box 1129 Blindern, 0318 Oslo, Norway

ARTICLE INFO

Article history:
Received 19 August 2010
Accepted 2 March 2011

Keywords:
Public support
Environmental taxes
Fuel taxes

ABSTRACT

While strongly recommended by economists, it has often been politically difficult to impose taxes on externalities. There is a substantial literature on public attitudes towards environmental taxes. There has, however, been few comprehensive attempts to understand attitudes towards environmental taxes.

The main research question in this paper is which factors influence support for fuel taxation. We propose a model of attitudes towards fuel taxation, and test this model as well as more specific hypotheses, using data from a representative survey of the adult Norwegian population.

Our results suggest that support for fuel taxation is best predicted by beliefs about environmental consequences, followed by beliefs about consequences to others. Beliefs about consequences to self (self-interest) is the factor that explains the least variation in support for fuel taxation.

The academically interesting result that support cannot be well explained without capturing a broad range of motivational factors is also highly policy relevant. It implies that there is no magic formula for increasing public support for environmental taxes. There are, however, some issues which can be addressed: trust in how well the government spends the revenue, and the perception that taxation does very little to change behaviour and thus to reduce environmental problems.

1. Introduction

Two things in life are supposedly certain: death and taxes. It might be certain that there will be taxes, but it is far from certain what will be taxed—and how much. While strongly recommended by economists, it has proven politically difficult to impose efficient Pigouvian taxes (i.e. taxes on externalities) because of opposition from both industry and the public. There are many examples of failed Pigouvian tax initiatives, such as the French carbon tax in 2010, road pricing in Edinburgh in 2005, a tax on fossil fuels in Switzerland in 2000, the fuel tax escalator in the UK in 2000, or the tax on energy in the USA in 1993, to name just a few examples. Opposition to Pigouvian taxation comes from both businesses and the public. The main motivation for this study is to better understand the factors that influence public support for Pigouvian taxation, and what can be done to make Pigouvian taxes more feasible.[1]

In this paper we present a model of public support for Pigouvian taxes, provide testable hypotheses, and use survey data to assess these hypotheses. We proceed with a review of the literature in Section 1. We introduce the model and our hypotheses in Section 2. We describe the survey and analyse the results in Section 3. Finally, we give our concluding remarks in Section 4.

2. Support for Pigouvian taxes: literature review

It is not straightforward to define what constitutes a "feasible" tax. It is simple only in the relatively rare situations when binding public referenda are held on the introduction of new taxes, although this was the case with the Swiss referendum on fossil fuel taxes in 2000 (Thalmann, 2004). In representative democracies, a politically feasible tax is a tax that generates enough votes in the parliament, congress or senate. In practise it is often difficult to describe exactly what is necessary for a tax proposal to be politically feasible. Businesses and special interest groups clearly have a strong influence. There are many theories that can explain the political opposition to taxes imposed on industries, among them public choice theories on rent seeking and special interest groups. These theories suggest that small interest groups with much at stake will be most effective in influencing government policy (Olson, 1965).

While the household opposition to a tax proposal might typically be less well organised and funded than that of industries, households

* Corresponding author. Tel.: +47 22 85 87 58; fax: +47 22 85 87 51.
E-mail address: steffen.kallbekken@cicero.uio.no (S. Kallbekken).

[1] The terms "support" and "acceptability" are used interchangably in this paper.

0301-4215/$ - see front matter © 2011 Elsevier Ltd. All rights reserved.
doi:10.1016/j.enpol.2011.03.006

hold significant political power because they vote. Gaunt et al. (2007) argue that for road user charging "commentators now acknowledge that the greatest impediment to implementation is public … acceptability". This supports the argument that at least for taxes levied directly on individuals, public support is essential to make a tax feasible. King et al. (2007) does not agree fully, and argues that "the idea that a policy cannot be approved in the absence of popular support is at odds with the way policies are actually advanced." Although the "political calculus" of environmental taxes might not be an exact science, it is still clear that it is politically risky to propose unpopular policies. List and Sturm (2006) find that "while lobby contributions [from industry] must undoubtedly be an important factor behind policy choices in many areas, it seems difficult to deny that politicians implement policies […] also to attract additional voters to their platform." Testing their model on environmental policy choices in US states they find that there are strong effects of electoral incentives (i.e. that politicians distort their policy choices in order to attract voters to their platform).

Given that voters influence environmental policy, which factors influence their voting preferences? There is a strong tendency in the political economy literature to assume that voters are self-interested, perfectly rational and perfectly informed. McAusland (2003) for instance assumes that voters are "aware of the general equilibrium consequences of policy and vote according to their own self interest". Similarly, using standard assumptions, in Congleton's model (1992) individuals prefer the environmental standard that will maximise their life-time expected utility (which includes environmental quality). Our results will, at least to some extent, challenge these assumptions.

2.1. Models of support for environmental taxes

Among the studies on support for Pigouvian taxes, very few are based on a theoretical model. Most studies are either exploratory—such as focus group studies attempting to identify which factors matter, experiments designed to test the effect of one or a few factors in isolation, or (the largest group) survey analyses based on more or less ad-hoc assumptions. Three important exceptions are the papers by Stern et al. (1993), Rienstra et al. (1999) and Schade and Schlag (2003).

Stern et al. (1993) provides a widely used theoretical foundation for explaining pro-environmental behaviour. They develop a social–psychology model where action in support of environmental quality can be motivated by egoistic, social–altruistic and biospheric value orientations. They go on to test the model using survey data. While they find general support for their model, they also find that when it comes to the willingness to pay through taxes, only self-interested motives are a reliable predictor.

Rienstra et al. (1999) create a conceptual framework to assess the feasibility of various transport policies. The framework has three main categories of factors explaining support for policy measures: personal features and current mobility pattern, perception of the effectiveness of policy measures, and perception of mobility as an individual/social problem.

Schade and Schlag (2003) use a "heuristic acceptability model" to identify and analyse determinants of the acceptability of road pricing. The model includes eight different factors: problem perception, aims to reach (e.g. financial and ecological), mobility related social norms (do your significant others think you should accept the strategy), knowledge about options, perceived effectiveness and efficiency of measures, personal outcome expectations, attribution of responsibility (to self or to others), and socio-economic factors. They find that the factors *social norm*, *personal outcome expectation* and *perceived effectiveness* are positively related with acceptability, and that these factors explain acceptability much better than the socio-economic variables they included.

2.2. Factors influencing support for environmental taxes

Among the papers that focus on identifying which factors influence support for taxation (rather than develop and test a model thereof), the results are relatively consistent. One important reason for public opposition to environmental taxes is that the public does not seem to understand – or trust – the main rationale for Pigouvian taxes. Dresner et al. (2006a) find that both the general public and business hold "a view of taxes solely as a means of raising revenue, rather than in terms of their incentive effects". It seems that people to a large extent do not understand how a tax can increase welfare (see also Kallbekken et al., in press), and furthermore that they do not believe taxes to be very effective in influencing behaviour. In partial contradiction to this, Kallbekken and Aasen (2010), find that most participants in a focus group study in Norway thought that the "main purpose of environmental taxes was to influence behaviour (provide incentives to substitute away from the polluting activity), rather than to raise revenue for the government". The majority of studies is, however, in line with what Dresner and his co-authors found. Gaunt et al. (2007), analysing the rejection of the Edinburgh road user charge, find that "the public were largely unconvinced that the scheme would have achieved its dual objectives of reducing congestion and improving public transport." Putting it quite simply: people typically do not believe that the price (or tax) elasticity of the taxed good is very high.

This result can be linked to the strong and consistent result that earmarking the revenues from environmental taxes for environmental purposes increases their popularity: if you do not believe that environmental taxes will improve the environment by altering behaviour, then earmarking the revenues for environmental purposes might do the trick. Another important reason for the strong support for earmarking might be public distrust in government. Rivlin (1989) made the general suggestion, that earmarking is popular because without earmarking taxpayers have no clear idea of what the money is spent on, and they might believe it is spent "wastefully or even fraudulently, or that a substantial part of it goes for services of which they disapprove". The result that earmarking the revenues would substantially increase support seems very robust and is confirmed by Dresner et al. (2006b), Hsu et al. (2008), Schade and Schlag (2003), Schuitema and Steg (2008), Steg et al. (2006) and Thalmann (2004).

One drawback of these studies is that while they can say how much support for a specific tax scheme would increase if the revenues were earmarked; they are unable to generate more generalised results or say much about which factors influence how much earmarking increases support. Using a choice experiment design Sælen and Kallbekken (2010) estimate the gain in support produced by earmarking the (additional) revenues for environmental measures. Without earmarking the majority of the people would prefer to reduce the current tax rate by around 20%, whereas Sælen and Kallbekken find that with earmarking the majority would prefer to increase the tax rate by about 20%.

Several focus group studies find that people would generally like more information about environmental taxes (e.g. Dresner et al., 2006a). While these studies come out in favour of providing information in order to increase support, Winslott-Hiselius et al. (2009) draw a somewhat different conclusion based on the experiences with the Stockholm congestion charge. They suggest that "trials, generally, may be a more useful tool than information in the process of implementing 'difficult' policy measures, such as congestion charges" (Winslott-Hiselius et al., 2009).

Two issues relating to fairness have been identified as having an effect on the support for policy instruments: the perceived distributional fairness of the tax (see Dresner et al., 2006a; Eriksson et al., 2006; Fujii et al., 2004), and the coerciveness of the instrument