



# Protest responses and community attitudes toward accepting compensation to host waste disposal infrastructure

Susana Ferreira<sup>1</sup>, Louise Gallagher\*

University College Dublin, Dublin, Ireland

## ARTICLE INFO

### Article history:

Received 3 November 2008

Received in revised form 20 August 2009

Accepted 21 August 2009

### Keywords:

Compensation

Community attitudes

NIMBY

Waste

Landfill

Incinerator

Contingent valuation

Protest zeros

Willingness to accept

Willingness to pay

## ABSTRACT

Despite the use of host community compensation to solve NIMBY (Not In My Back Yard) siting difficulties in many industrialised countries, the effectiveness of this policy is still being debated in academic and policy-making arenas. In this paper, we examine attitudes held regarding compensation in communities directly impacted upon by final waste disposal infrastructure projects (landfill and incineration) in Ireland using survey responses to two contingent valuation (CV) scenarios and a question relating to preferences for compensation delivery. We find that communities in the pre-construction planning phase for locally undesirable development are less accepting of compensation offers to host the facility than are communities who have lived with such developments to host an extension to the existing facility in their localities. However, many of our respondents who initially reject compensation offers in the CV question go on to accept at least one compensation package in the later compensation preference question. Using this information allows us to draw a distinction between 'Hardcore' and 'Switcher' protesters to illustrate a more subtle picture of rejection of locally undesirable facilities and compensation packages than has previously been articulated. Using probit regression analysis, we find that property rights or NIMBY concerns – specifically, the treatment of non-local waste at the facility is a concern for many residents – drive this rejection of compensation. Finally, contrary to previous studies concerning preferences for host compensation, community compensation is not always preferred to individual compensation payments.

© 2009 Elsevier Ltd. All rights reserved.

## Introduction

Despite the use of host community compensation to solve NIMBY (Not In My Back Yard) siting difficulties in many industrialised countries, the effectiveness of this policy is still being debated in academic and policy-making arenas. The role of compensation in siting procedures involves the recognition that the undesirable development can have potential negative impacts on the local community in which it is situated. It is also based on the assumption that compensation can return residents to their status-quo level of welfare, removing any need for local objections (Jenkins-Smith and Kunreuther, 2001). However, empirical evidence is conflicting as to whether siting procedures based on compensation incentives are more successful than zoning approaches. Often host communities do not accept either monetary or community gain offers willingly, which some interpret as failure of compensation schemes (White and Ratick, 1989; Portney, 1991). Yet other studies sug-

gest that the challenge is for policy makers to design a package of benefits (including a consideration of safety concerns) that will convince the local population to accept the infrastructure in question (Jenkins-Smith and Kunreuther, 2001; Mansfield et al., 2002).

This paper analyses survey data on attitudes held regarding compensation in four communities impacted upon by waste disposal infrastructure projects in Ireland using responses to two contingent valuation (CV) scenarios on receipt and payment of compensation and a question relating to preferences for compensation delivery.

The CV method is a stated-preference valuation method used by economists that directly surveys individuals or households to estimate the value placed on non-market goods or services by these entities. These types of surveys typically ask individuals to state their willingness to pay (WTP) for an increase in provision of a public good (i.e. environmental quality) or avoidance of a public 'bad' (i.e. pollution). A second approach also exists whereby 'consumers' are asked their willingness to accept (WTA) compensation for a decrease in a public good or their having to accept more of a public bad. WTA is the more theoretically correct of the two measures when it comes to ascertaining compensation payment levels to host communities for public infrastructure and therefore the emphasis of the paper rests on these responses. However, the

\* Corresponding author. Present address: UNEP Chemicals Branch, United Nations Environment Programme, 11-13 Chemin des Anémones, CH-1219 Châtelaine, Geneva, Switzerland. Tel.: +41 0229178764; fax: +41 0227973460.

E-mail address: [lgallagher@chemicals.unep.ch](mailto:lgallagher@chemicals.unep.ch) (L. Gallagher).

<sup>1</sup> Currently affiliated to the University of Georgia, Athens, GA 30602, United States.

WTP responses are drawn upon to identify respondents who are categorically opposed to compensation policy.

Our four survey communities are directly impacted upon by prospective nonhazardous landfill and incinerator developments—a valuable examination from the policy perspective. Two communities expect to host a disposal facility (one landfill and one incinerator) in the near future. The remaining two have hosted facilities for a number of years (7 and 8 years, respectively) but extensions to the facilities were being considered at the time of surveying in both locations. By comparing attitudes held in new and existing host communities this study generates a unique empirical analysis of attitudes to compensation offers for hosting solid waste disposal infrastructure and how these change over time.

While policy analysis and evidence-based policy making are becoming more common, there are few empirical studies on attitudes to compensation in NIMBY infrastructure host communities to aid national and regional planners in formulating appropriate compensation policy. Fewer still exist on the topic of solid waste disposal infrastructure and how attitudes in these host communities change over time. Earlier research, such as Mitchell and Carson (1986), discusses the theoretical aspects of compensation. More recent studies concentrate on the ability to compensate communities according to public finance budgets or ability to pay of the developer (Minehart and Neeman, 2002; Jenkins et al., 2004), with little recent work being carried out on assessing attitudes to compensation of host communities. Much of the attitudinal work carried out has focussed largely on hazardous waste facilities (Kunreuther and Easterling, 1990, 1996; Jenkins-Smith and Kunreuther, 2001), which possess a very different risk burden for host communities than nonhazardous treatment and disposal facilities. Moreover, research on this question of host compensation has largely a United States (U.S.) focus. Elliott et al. (1997) produce an excellent study on community attitudes to landfill development from a random sample of households, stratified by distance, in Milton, Ontario. The end sample is small (108) but open ended questions give a great deal of attitudinal data. Results show an ongoing process on appraisal leading to greater resignation to hosting the landfill site over time. However, this is a qualitative study which does not use a multivariate analysis methodology to identify most influential determinants of this increasing acceptance trend.

Furthermore, few existing studies approach this question from a European perspective. Of those European based studies, the majority examine hazardous facilities (for example, see the work of Frey et al., 1996). The value of an Irish study in a European and international context lies firstly in generating information concerning extraordinarily virulent public opposition to the siting of necessary public infrastructure. Secondly, while legislative and administrative frameworks exist within individual U.S. states, Germany and some other European statutory planning systems (Cowell, 1997, 2000; Kuiper, 1997; Wilding and Raemaekers, 2000; Rundcrantz and Skärbäck, 2003) differences exist in how this redistribution of costs and benefits is typically implemented in European countries relative to the U.S. The U.S. has a better developed compensation framework, and as such, more experience to draw from when determining compensation policy. Conversely, European countries currently moving towards compensation have fewer case studies to refer to. Thus where the decision has been taken to compensate host communities, this research will aid European policy makers developing appropriate compensation policies for regionally important infrastructure projects.

CV has been criticised as an inherently defective methodology because of the undermining effect that protest or 'value-expressive' responses have on the economic appraisal objectives of this valuation method—however these responses have been shown to reveal a great deal of information other than economic preferences

held by survey respondents (Blamey, 1998; Jorgensen et al., 1999; Jorgensen and Syme, 2000; Meyerhoff and Liebe, 2006).<sup>2</sup> In fact, Kahneman and Ritov (1994) have argued that statements of WTP are better viewed as attitudes rather than indicators of economic preferences—an argument that is further developed in Kahneman et al. (1999) and contrasts with other interpretations that suggest that CV responses that are not 'rational' typically result from poor study design and implementation (Smith, 1993; Diamond and Hausman, 1994). While this paper can not go so far as to support Kahneman et al.'s (1999) argument that CV "anomalies" are inevitable and that WTP data is better viewed as expressions of attitudes rather than indicators of economic preference, it does make an interesting contribution to the discussion on the information to be gleaned from analysis of a large number of anomalous CV responses in a 'real world' scenario.

Three broad examinations of attitudes to compensation are conducted. Firstly, we examine the descriptive statistics for acceptance and rejection of compensation across communities. Secondly, we discuss motivations behind respondents rejecting compensation based on literature and site specific considerations in our survey communities. All CV studies elicit 'zero' responses. Some of these are taken to infer a true zero valuation of the good but other 'protest zero' responses occur when a respondent offers a zero bid even though their true valuation is likely to be greater than zero (Jorgensen et al., 1999; Meyerhoff and Liebe, 2006). We identify 'protest rejection' responses in the WTA question as rejections related to some aspect of the hypothetical market, a lack of information concerning the compensation offer or belief that the money would not be paid and incorporate these into the debriefing question that followed the CV questions (as recommended by Arrow et al., 1993). Rowe et al. (1980) define respondents who reject compensation for these 'protest' reasons as requiring 'infinite compensation' ( $WTA = \infty$ ). 'True zeros' are responses in line with economic preference expression whereby the respondent rejects the monetary offer because the amount offered was insufficient ( $0 < WTA < \infty$ ), or a belief that the compensation is unnecessary because they are in favour of the development ( $WTA = 0$ ). In the third strand of the paper, we explore the nature of these 'protest' respondents, defining two groups consisting of those who initially reject but then later accept a compensation offer (expressing their economic preferences) and those 'protesters' who consistently reject any suggestion of host community compensation (consistently expressing attitudes or affective value<sup>3</sup>).

Willingness to accept (WTA) CV protest responses in the four communities examined were very high at between 65 and 90.3%—an unsurprising result given that they are non-neutral communities in this siting dilemma.<sup>4</sup> In exploring these protest responses, we observe that rejection of compensation in our host communities is related to facility rejection and the belief that compensation is inappropriate in the context of such developments which supports much of the previous findings of studies that explore NIMBY development siting (Frey et al., 1996; Kunreuther and Easterling, 1990). Rejection of compensation offers appears to be greater in communities who are awaiting a proposed development, compared to communities who have

<sup>2</sup> Work on explaining the motivation for protest responses thus far focuses on protests in 'willingness to pay' (WTP) CV studies rather than WTA studies (Blamey, 1998; Jorgensen et al., 1999; Jorgensen and Syme, 2000; Meyerhoff and Liebe, 2006). The primary focus of this study is the responses to the WTA compensation question.

<sup>3</sup> See Kahneman et al. (1999).

<sup>4</sup> It should be clearly noted that 'protester' is defined with respect to accepting compensation (or not being WTP) not the waste infrastructure per se, though rejection of the development may be one of a number of underlying causes for refusal to accept compensation offers.

Download English Version:

<https://daneshyari.com/en/article/93557>

Download Persian Version:

<https://daneshyari.com/article/93557>

[Daneshyari.com](https://daneshyari.com)