Ecological Economics 70 (2011) 2163–2174

Contents lists available at ScienceDirect

Ecological Economics

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

Analysis

Towards a unified scheme for environmental and social protection: Learning from PES and CCT experiences in developing countries ☆

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ARTICLE INFO

Article history:
Received 3 November 2010
Received in revised form 7 June 2011
Accepted 17 June 2011
Available online 28 July 2011

Keywords:
Payments for environmental services
Conditional cash transfers
Poverty
Conservation
Social protection

ABSTRACT

Environmental protection and poverty alleviation in the developing world are usually heralded as joint objectives. However, these two goals are often associated with different sectoral policy instruments. While so—called payments for environmental services (PES) are increasingly being promoted for environmental protection, poverty alleviation is increasingly addressed by conditional cash transfers (CCT) program. These instruments although aimed to achieve distinct objectives have a number of similarities and challenges in their design and implementation phases. This paper elaborates on these similarities and develops a unifying generic framework that is used to discuss the extent to which both approaches could be unified.

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1. Introduction

Environmental conservation and poverty alleviation are the two key policy areas that continue to receive increasing attention from governments, donors and NGOs in the developing world. The complex links between poverty and environmental degradation continue to be the focus of much research and debate and it is unlikely to be closed (e.g. Dasgupta, 2003; Duraiappah, 1998; Martínez-Alier, 2002; Ruijs et al., 2008). However, there is increasing consensus about the policy instruments to be used to tackle both problems, albeit in a rather piecemeal approach. The current thrust is mostly on payments for environmental services (PES) to correct market failures that lead to excessive levels of environmental degradation (Pagiola et al., 2005; Wunder, 2006, 2008).[1] While on the other hand, conditional cash transfer (CCT) programs are being implemented to correct market failures that lead to underinvestment in social protection in developing countries (Chapman, 2006; Farrington and Slater, 2006; GTZ/BMZ, 2005).

PES constitute economic transfers (in the form of monetary payments, or in kind rewards) aiming to compensate a target group (normally land holders) for the opportunity cost of providing positive environmental externalities (environmental services) to a group of actors that can pay by either creating a market or other informally devised institutional mechanism between private agents, as well as through the State's public funds for the environmental services they expect to receive. These transfers when properly designed and implemented link the payment with a set of environmental conditions and land management practices that promote the provision of socially valuable environmental services (Bulte and Zilberman, 2008; Engel et al., 2008; Muradian et al., 2010).

While PES programs are primarily cost-effective conservation strategies (Ferraro and Simpson, 2002), there is increasing interest on the potential positive effect of PES on the livelihoods of poor landholders (Grieg-Gran et al., 2005; Niesten and Rice, 2004; Pagiola et al., 2005; Wunder, 2008; Zilberman et al., 2008). However, PES programs have also received criticisms due to their potential negative effects in terms of maintaining asymmetric power distribution, and generating changes in the behavior of participants towards a vision linking conservation and rent seeking (e.g. Karsenty, 2004; Kosoy and Corbera, 2010; Pascual et al., 2010).

Conditional cash transfers (CCT) in developing countries, on the other hand, are primarily designed as a means to poverty alleviation

☆ The findings, interpretations and conclusions expressed herein are those of the authors and do not necessarily reflect the view of the World Bank Group, its Board of Directors or the governments they represent.

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[1] See three recent special issues by Engel et al. (2008) in *Ecological Economics*, Bulte and Zilberman (2008) in *Environment and Development Economics*, and Pascual et al. (2010) in *Ecological Economics*.

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doi:10.1016/j.ecolecon.2011.06.019

or more generally as social protection mechanisms. CCT programs are an innovative approach that promotes immediate and intergenerational poverty reduction based on the provision of monetary transfers to socially vulnerable households, promoting a minimum level of consumption and investments in human capital (Rawlings, 2005; Winters and Davis, 2009). Similarly to PES, they are generally linked to compliance with a set of conditions aimed at promoting investment in human capital. A typical application is offering cash transfers to households so that children attend school or are brought regularly to health centers (Das et al., 2004). However, it has also been argued that the direct provision of cash may generate disincentives to participate in the labor market and might not be a satisfactory solution to the poverty problem if the transfer promotes dependency on external aid (Medeiros et al., 2008). Cash transfers show enough versatility and have been adapted to different urban and rural contexts and circumstances (e.g. Schubert and Slater, 2006; Skoufias, 2005) and there is some emerging evidence of their positive impact on rural poverty alleviation (e.g. Rawlings, 2005; Veras Soares et al., 2008) and indirectly on the environment by investing the transferred money in land rehabilitation activities (e.g. Standing, 2007), restoring the capacity of the agroecosystem to provide goods and services such as food and pastures and improving livelihoods.

The evidenced effect of some PES schemes on the livelihoods of payment receptors has been the starting point of the exploration of its potential as a poverty reduction tool (Grieg-Gran et al., 2005; Suyanto et al., 2007), attracting the attention of donors not just for their positive environmental impacts but also for the hoped pro-poor effects of the payments (Wunder, 2008). In a similar way, due to the versatility of CCT programs, there is a call for revisiting CCT to take advantage of their positive effects on poverty reduction and also targeting aspects beyond human capital such as livestock and seeds which can have important environmental consequences (Cuesta, 2007; Handa and Davis, 2006).

The nexus between poverty and environmental degradation are complex (e.g. Martínez-Alier, 2002) but it is now considered that environmental degradation is a major barrier for poverty reduction and, at the same time, reaching environmental conservation goals requires progress in the reduction of poverty. Thus, in order to be successful, poverty reduction and environmental initiatives should be linked and implemented together (see Sachs and Reid, 2006). However, the usual policy approach is to deal with poverty and environmental degradation in separate ways through either CCT or PES. The CCT and social protection literature shows that linking programs might be desirable if they operate efficiently in the same geographic area and benefit the same population groups, these linkages usually reduce the transaction and operating costs, improve the flow of information and the level and type of support for the payment receptors (see Grosh et al., 2008). Thus, CCT are often linked to microfinance initiatives, public work programs, access to agricultural extension agents, or adult training, improving the overall impact of the intervention (World Bank, 2009).

The purpose of this paper is to build on the similarities of both approaches to shed light on the potential for linking CCT and PES. In this paper we bridge ideas that are well developed in the still largely separate CCT and PES literatures in order to develop a unifying conceptual framework that based on the high cost effectiveness of both programs could serve to design economic transfers to deal with both environmental protection and poverty alleviation in the same geographic areas. Of course such unified scheme should not follow a "one size fits all" and would not necessarily be applicable to all situations and contexts. Under some conditions individualized PES or CCT might be the best choice, while in some others decision makers might evaluate a unified approach if the potential reduction in costs, including implementation and transaction costs, might compensate the increase in complexity.

The rest of the paper is organized as follows, in the following section we review the conceptual similarities between PES and CCT. We then present a framework for unifying both approaches. Some important considerations for the design of money transfers are discussed, and some recommendations are proposed for designing a new breed of joint PES-CCT programs in rural areas of developing countries.

2. PES and CCT: From Concept to Practice

Although both have different objectives, PES and CCT instruments have similarities in terms of their respective conceptual designs. We argue that from a broad perspective both programs can be considered to be based on i) market based interventions aimed towards internalizing an externality in which ii) a number of payment receptors are identified in a targeting exercise to iii) receive a payment or reward in kind if iv) they fulfill a set of conditions. Table 1 sketches out the main characteristics of PES and CCT in terms of the four defining aspects identified above. Table 2 also presents a comparison between the transfer amounts, target mechanisms, conditionalities and monitoring of compliance of PES and CCT programs across countries in Latin America, Asia and Africa.

2.1. PES and CCT as Market Based Interventions

Both policy interventions aim at correcting market failures (under-provision of a valuable environmental or social service, respectively) by adjusting individuals' behavior through economic incentives. In CCT programs, interventions targeting poor populations are designed to match individual households' decisions on investment in human capital with wider social preferences, mainly in the areas of education and health (World Bank, 2009). It is argued that an increase in education or health by an individual generates positive benefits on others. This positive externalities are not rewarded by market forces, therefore it is expected that poor households under-invest in human capital from a social optimum perspective (Das et al., 2004; de Janvry and Sadoulet, 2004).

The core justification for the design and implementation of PES schemes is similar. It aims at internalizing environmental externalities generated by individual landowners due to their under-provision of environmental services (Engel et al., 2008; Muradian et al., 2010; Pagiola et al., 2002). PES aim at aligning the private and social incentives for investment in environmental assets through a direct payment or reward to individual landholders, thus facilitating the supply of improved environmental conservation outcomes.

2.2. Targeting the Payment Receptors of the Compensation Payment

Although CCT and PES interventions are based on voluntary participation, both programs are based on a prior targeting exercise of their payment receptors as a means of enhancing their cost-effectiveness.

The choice of a particular target mechanism depends on the type of information available about the potential payment receptors and the objective of the intervention. CCT and PES rely on both geographic and household/plot targeting approaches. Geographic targeting is relatively simple to administer as different areas are ranked by some indicative measure relevant to either CCT intervention, e.g. infant mortality rates, education levels, access to water or electricity, or PES-related goals e.g., biome distribution, biodiversity richness, landscape connectivity. Resources are then allocated in proportion to their expected impacts. Hence, in terms of CCT regions with poorer human capital indicators tend to receive higher per capita transfers, and as regards PES, land areas with higher potential to supply environmental services or being associated with a higher likelihood of degradation leading to the loss of valuable environmental services are usually eligible for PES, although the size of the payment might also vary due to other factors such as whether the areas are also targeted by other

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