ELSEVIER

Journal of Public Economics 90 (2006) 1725–1743

JOURNAL OF PUBLIC ECONOMICS

www.elsevier.com/locate/econbase

The progressivity of equalization payments in federations

Nicolas Gravel [a], Michel Poitevin [b,*]

[a] CSH (Delhi) and IDEP-GREQAM, 2, Aurangzeb road, 11 0011 Delhi, India
[b] CIREQ, CIRANO and Département de Sciences Économiques, Université de Montreal, Canada

Received 19 August 2004; received in revised form 21 November 2005; accepted 28 November 2005
Available online 24 January 2006

Abstract

We investigate the conditions under which an inequality averse and additively separable welfarist central government would choose to set up a progressive equalization payments scheme in a federation with local public goods. A progressive equalization payments scheme is a list of *per capita* net (possibly negative) subsidies – one such net subsidy for every jurisdiction – that are decreasing with respect to jurisdictions *per capita* wealth. We examine this question in a setting where the case for progressivity is a priori the strongest, namely: all citizens have the same utility function, inhabitants of a given jurisdiction have the same wealth and are not able to move across jurisdictions and there is no cross-jurisdiction competition in the setting of tax rates. We show that the central government favors a progressive equalization payments scheme for all distributions of wealth and population sizes if and only if its objective function is additively separable between each jurisdiction's per capita wealth and number of inhabitants. When interpreted for *a mean of order r* social welfare function, and assuming the absence of congestion in the local public good, this condition is shown to be equivalent to the requirement that the individual indirect utility function be additively separable between wealth public good price and be raised at the power $1/r$ before its agregation by means of the mean-of-order r social welfare function. Some implications of this restriction to the case where the individual's *direct* utility function is additively separable are also derived.

JEL classification: D630; H100; H200; H210; H410; H700; H730; H770
Keywords: Fiscal federalism; Local public goods; Equalization payments; Redistribution

* Corresponding author.
E-mail addresses: nicolas.gravel@csh-delhi.com (N. Gravel), michel.poitevin@umontreal.ca (M. Poitevin).

0047-2727/$ - see front matter
doi:10.1016/j.jpubeco.2005.11.005

1. Introduction

Many federal countries have developed *equalization payments schemes* by which a central government transfers money between jurisdictions. For instance, these equalization payments are entrenched in the Canadian and the German constitutions. They also underlie the design of the European Funds for Structural Development which are given to specific regions suffering from economic backwardness. The alleged purpose of these schemes is, as their name suggests, to equalize citizens' access to public services across jurisdictions.

It is usually thought that these equalization payments should somehow correct for the unequal distribution of wealth across jurisdictions. More specifically, most equalization payments schemes that we are aware of are progressive: they are designed in such a way that the (net) *per capita* subsidy received by a jurisdiction is decreasing with respect to its per capita wealth.[1]

There are of course many reasons to question the soundness of this progressivity from a normative viewpoint. One such reason is cross-jurisdiction taste differences. Why should the inhabitants of a jurisdiction who like the public good and who decide to contribute extensively to its financing be required to transfer money to people living in a slightly poorer jurisdiction who care very little about the public good and have all their money available for private consumption?

Another obvious source of skepticism with respect to progressive equalization systems is within-jurisdiction heterogeneity. Suppose jurisdiction A has a slightly higher *per capita* wealth than jurisdiction B but that the distribution of wealth within A is much more unequal than B. Suppose in particular that a significant fraction of A's population is extremely poor while nobody experiments severe poverty in B. Then, there is no reason to expect a transfer of funds from A to B. As a matter of fact, standard inequality aversion considerations, such as those underlying the ranking of Lorenz curves, could very well recommend a transfer from B to A in a case like this.

A third case that can be made against progressivity arises if there is mobility across jurisdictions. If citizens can easily move from one jurisdiction to the next, then progressive equalization payments may not be sustainable because it may induce citizens from net donator jurisdictions (who therefore receive less public good than the tax they pay) to move to recipient ones. In order to prevent such migration, the constitution maker may have to limit the progressivity of its scheme.[2]

There is also an important stream of literature on fiscal federalism (see, for instance, Boadway and Flatters, 1982; Flatters et al., 1974; Boadway et al., 2002) that recognizes the need of intergovernmental payment schemes for correcting the inefficiencies that may arise from the competition between jurisdictions' governments in selecting taxes and public good packages when households can move across jurisdictions. Since, in this literature, the equalization payments schemes are partially thought of as correcting these inefficiencies, we do not expect them a priori to be progressive.

[1] While all federal countries that we know have explicit systems of intergovernmental grants of some form, not all of these systems can be considered as equalizing. In the US, for instance, there are several "conditional grants" programs by which the federal government commits itself to match, at a predetermined rate, specific expenditures made by state governments in order to provide them with incentives to spend their money in specific ways. But, as noticed by Oates (1999), these programs "do not accomplish much in the way of fiscal equalization."

[2] It is not at all clear that allowing for cross-jurisdiction mobility would reduce the progressivity of the equalization payment scheme that a welfarist constitution maker would favor. If citizens living in relatively poor jurisdictions envy the package of public good and taxes of their wealthier neighbors, the constitution maker may have to increase progressivity in order to prevent the citizens of poorer jurisdictions to move to richer ones. The (difficult) analysis of the optimal equalization payments scheme when mobility is allowed across jurisdictions is the object of another paper (see Gravel and Poitevin, 2005).