Proportional and progressive income taxation
with utility-maximizing governments

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Introduction

In the Constitution of Liberty (1960), F.A. Hayek suggested that proportional taxation of personal incomes is compatible with a social order in which individual liberties are preserved whereas progressive taxation is not. He argued that proportional taxation, in itself, would exert a sufficiently constraining influence on the behavior of government in exploiting its inherent fiscal authority. We may infer from his discussion that Hayek would support a constitutional limit on the taxing power that would allow the levy of proportional income taxation but that would prohibit the imposition of progressive rates.

To our knowledge, the precise effects of such a constraint on the fiscal authority of government have not been fully analyzed. This paper is aimed at partially filling the gap. In highly simplified models, we shall examine the behavior of government under proportionality constraints and we shall compare this behavior with that predicted under progressive taxation. We shall analyze the effects of maximal rate constraints under both proportionality and progression. In the first part of the paper we shall ignore the effects of taxation on incentives to produce taxable income; incentive effects are introduced in the second part of the analysis.

Before we can make the analysis meaningful, some model of governmental decision-making is required, along with some specification of the nontax constraints on fiscal authority. We shall model governmental behavior in very general terms. We assume only that governmental fiscal decisions are made by some subset of the taxpaying citizenry, some less than all-inclusive coalition of the whole polity. The decision-making group may be conceived as a majority coalition representing one of two major political parties, with the total group of taxpayers being divided into members of this majority and members of the minority. Alternatively, we might consider the setting to be one where a ruling clique or committee (in the limit of one

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person) makes decisions for the polity, in which case the overwhelming majority of all taxpayers fall within the nonruling or potentially exploitable group. We do not need to specify anything about the relative pre-tax income levels of members of the ruling group and the ruled group. The ‘poor’ may or may not be members of the ruling coalition. All that is minimally required for our analytical purposes is that the population of all potential taxpayers be divided into two distinct sets. In the formal analysis of subsequent sections of the paper, we shall use the simplifying two-person setting with one person designated as the ‘ruler’, with the other person treated as the potential exploitee, the ‘ruled’, who has no influence on his own fiscal situation.

It is evident that a constraint or limit on the taxing power or authority of government means little unless this constraint or limit is also accompanied by constraints on the spending power. If a government can implement direct transfers in a discriminatory manner, then members of any ruling coalition can capture for themselves any desired share of the total incomes of the exploited group independently of any structural tax-side constraints that might be constitutionally imposed. In the analysis that follows, we explicitly restrict the spending power of government to the financing of public goods and services, defined in the classic Samuelsonian sense as embodying both complete jointness in consumption and non-excludability. This requirement may be relaxed to allow for the provision of both impure goods and even for fully divisible goods so long as we retain the assumption that all persons in the community share equally in the benefit flows of whatever goods and services government does, in fact, provide, and, further, that such goods and services are not retradable.

**Proportionality, no rate constraint, no incentive effects**

Consider a highly simplified two-person \((A, B)\) model with two goods, one private, \(Y\), and one public, \(G\). The public good is available at a constant per unit cost, \(C\), defined in units of the private good. Initial or pre-tax production of the private good (income) are in the amounts, \(Y_a\) and \(Y_b\), per period, and through our assumption that incentive efforts are absent, persons will continue to generate private goods or incomes in these amounts per period regardless of the tax-spending decisions that are made, or by whom.

Assume now that the constitution specifies that the same uniform rate of tax, \(r\), must be levied against the private goods incomes of both persons, \(A\) and \(B\), and that the proceeds of this proportional tax must be used exclusively to finance the purchase-provision of \(G\).

We shall initially assume that the tax-spending authority is vested exclusively in \(B\), who becomes the ‘governor’ or ‘ruler’. We can now proceed directly to solve \(B\)’s utility-maximizing problem in the setting postulated. Note that, under the assumptions of the model, \(A\), the ‘ruled’, confronts no