Economic Modelling 30 (2013) 814–824

Contents lists available at SciVerse ScienceDirect

Economic Modelling

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

Joint determinants of fiscal policy, income inequality and economic growth

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ARTICLE INFO

Article history:
Accepted 6 November 2012

JEL classification:
O40
D30
E62
C23
C33

Keywords:
Economic growth
Inequality
Fiscal policy
Panel data

ABSTRACT

This paper analyses the relationship between income inequality and economic growth through fiscal policy. To this end, we present and estimate two systems of structural equations with error components through which gross income inequality determines different fiscal policy outcomes, which subsequently affects the evolution of economic growth and net income inequality.

The empirical results, obtained using an unbalanced panel data of 21 high-income OCDE countries during the period 1972–2006, suggest that gross income inequality is a significant determinant of fiscal policy outcomes. Additionally, the results show that distributive expenditures and direct taxes may produce significant reductions in GDP growth and net income inequality reflecting the standard efficiency–equity trade-off associated to certain fiscal policy measures. Finally, the results also indicate that the most adequate fiscal policy strategy in a context of fiscal consolidation is to cut non distributive expenditure, since this could increase GDP growth while reducing income inequality.

1. Introduction

The reduction of economic disparities has emerged as one of the most challenging public policy topics in macroeconomic literature. A central concern of this discussion is the role that government policies may play in reducing economic inequalities, and determining the effects on economic growth rate.[1] In this context, the selection of a distributive fiscal policy strategy has become of crucial importance in achieving a broad-based stable path of economic growth across countries.

Nevertheless, fiscal policies vary considerably across nations. Some have low tax rates, others a sharply progressive fiscal system; in many countries the public sector is responsible for financing essential services (such as social protection, education, health, and housing), while others have left a large part to families, local communities, and employers.[2]

The choice of different public policies may be the outcome of the economic and political interests of different social groups. In this context, gross income inequality (pre-tax and government transfers' income inequality) could be an important determinant of economic policy decisions. In turn, these policy outcomes may be determinants of the joint evolution of economic growth and net income inequality (post tax and government transfers income distribution).

Growth and inequality political economy models relate income distribution with economic growth through fiscal policy (see Bénabou, 1996b). These models allow the incorporation of political and economic structures in the analysis of the relationship between growth and inequality. Thus, political processes capture the way in which citizens' preferences are transferred to different fiscal policy outcomes, while economic structures determine both the effects in terms of the efficiency and equity of these policies.

Despite its demonstrated relevance, few empirical studies have attempted to analyse the possibility of a mutually influential relationship between inequality and growth through the "fiscal channel".[3] Besides, most of this empirical evidence is based on separately estimated regressions, analysing the growth effect of fiscal policy,[4] or alternatively the distributive effects of fiscal policy.[5] None of these studies considers the role of gross income inequality on the determination of fiscal policy outcomes in a mutually influential relationship between growth and net income inequality, as we propose in this paper.

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1 See Bénabou (2000, 2002, 2005) and Seshadri and Yuki (2004).

2 See, for example, Hindriks and Myles (2006; chapter 3).

3 The joint response of economic growth and income inequality to fiscal policies has been largely overlooked, with significant exceptions in recent papers referring to a specific country (Ramos and Roca-Sagalés, 2008; Roca-Sagalés and Sala, 2011) or a panel of countries (Muinelo-Gallo and Roca-Sagalés, 2011b).

4 For a survey of this empirical literature see Myles (2009).

5 For a survey of these empirical studies see Atkinson and Brandolini, (2006; table 14.1).

0264-9993/$ – see front matter
http://dx.doi.org/10.1016/j.econmod.2012.11.009

Based on the approach by Bénabou (2000), the aim of this research is to develop and estimate a complete empirical model of joint determinants of fiscal policy, inequality, and economic growth. The study first analyses the importance of gross income inequality and other institutional, demographic and economic explanatory factors on the election of different fiscal policy outcomes. And secondly, it evaluates how effective these policies are in reducing net income inequality and also their effects in terms of macroeconomic efficiency. For this purpose, a complete system of three equations has been constructed for an unbalanced panel of 21 high income-countries for the period 1972–2006.

This paper's contribution is thus twofold. First, it analyses the importance of different institutional, demographic and economic factors in determining the fiscal policy options of an extended panel of high-income countries. Second, it allows us to identify the potential effects and policy implications of different fiscal policy strategies in a mutually influential relationship between economic growth and net income inequality.

The paper is organised as follows. Section 2 provides a theoretical framework, where different hypotheses concerning the determinants of fiscal policy and their impact on economic growth and net income inequality are discussed. Section 3 discusses the model, while Section 4 describes the database and details the empirical methodology. In Section 5, the empirical results are presented. Finally, Section 6 contains some concluding remarks.

2. Fiscal policy, growth and inequality

The theoretical priors underlying the empirical model come from the political economy literature, where fiscal policy, inequality and growth are jointly determined in democratic societies. These political economy models of inequality and growth stress how fiscal policy can play a major role in explaining the evolution of both macro aggregates. In this context, fiscal policy is an endogenous variable which reflects, through political processes, the voters' preferences for income distribution (each individual behaves like an economic agent and a citizen who votes on the distributive policies).[6]

Early political economy models under the assumption of perfect capital markets highlight a negative relationship between inequality and growth.[7] The main idea is that a more unequal democratic society demands a redistribution financed by distortionary taxes, and a rise in these taxes decreases private investment and consequently reduces economic growth. Later empirical contributions using cross-country data, however, do not seem very supportive of this traditional explanation, as they show that distributive policies are often correlated with income inequality in quite the opposite way to that predicted by these first-born models: among industrial democracies, more unequal economies tend to distribute less, not more.[8]

More recent models in the political economy literature sought to relax the main assumptions of the aforementioned approaches. Within this new literature, Bénabou (2000), in a context of imperfect capital and insurance markets and heterogeneous agents who vote on distributive policies, discusses how countries with similar preferences and technologies as well as equal democratic political systems, can nonetheless make very different choices with respect to fiscal policies. In Bénabou's model, there are two aspects relating inequality and distributive preferences to be taken into account. The first follows from the fact that, for some range of income inequities, the level of distribution that individuals vote for is a decreasing function of inequality, due to the accumulation process with imperfect asset markets. While imperfect credit and asset markets create a framework for efficient distributive institutions (as a way of providing social insurance and relaxing credit constraints), these institutions have much less support in an unequal society than a homogeneous one. Redistributing wealth from the rich (whose marginal productivity of investment is relatively low, due to decreasing returns on individual investments) to the poor (whose marginal productivity of investment is relatively high, but who cannot invest more than their limited endowments), would enhance aggregate efficiency and growth. These potential gains in efficiency, in turn, imply political support that varies with inequality in a radically different way from the traditional models of political economy literature. Intuitively, these “efficient” distributive policies receive a wide consensus in a fairly income homogenous society, but strong opposition in an unequal one.

In fact, according to Bénabou (2000), the relationship between inequality and distributive policy support is U-shaped. Thus, when income dispersion is relatively low there is near-unanimous support for the efficient distributive policy, and as inequality increases it also increases the fraction of agents rich enough to lose from, and therefore oppose, all but relatively low levels of distributive policies. And, at high enough levels of inequality, there are so many poor that they impose distributive policies beyond the point where it ceases to be efficient.

The second relationship stressed by Bénabou (2000) focuses on the process of human capital accumulation. Distributive and progressive fiscal policies relax credit constraints, allowing greater investment in human capital by poor individuals, thereby increasing their relative income. In this context, aggregate income inequality is a decreasing function of the rate of distribution.

Since these two relationships are decreasing functions of inequality, they may intersect more than once, rising to two stable equilibriums. One is characterized by low inequality and high government transfers (Welfare State), while in the other higher inequality is associated with lower levels of distributive spending (Laissez-Faire). These two societies are not Pareto rankable, and the one that has the faster economic growth depends on the balance between tax distortions to effort and employment, and the greater productivity of investment resources allocated to more severe credit constraint agents.

Considering the main implications of Bénabou's framework, the next section describes the empirical model considered in order to test the most relevant relationships between fiscal policy, inequality and growth. The proposed empirical model makes it possible to evaluate the main determinants of different fiscal policy outcomes, and simultaneously evaluates their impacts on the evolution of economic growth and net income inequality.

3. The empirical model

This section presents the methodological approach to empirically explore the relationship between fiscal policy, growth and inequality. Given the potential degree of interdependence between the variables, it is necessary to apply an empirical method that considers their mutual influence in order to avoid severe errors of specification. Consequently a full system for the joint determination of growth, inequality and fiscal policy has been considered. The next subsections describe the benchmark specifications, the equation systems considered, and the included control variables.

3.1. Benchmark specifications

The basic econometric specification consists of a series of three equations describing the relevant endogenous variables: economic growth, net income inequality and fiscal policy outcomes.

The macroeconomic analysis distinguishes basically two general theoretical approaches when analysing the capacity of fiscal policy to affect economic activity. From a neoclassical approach, several models

[6] For a complete discussion of these political economy models, see, for example, Drazen (2000; chapter 11) and Persson and Tabellini (2000; chapter 14).

[7] See, for example Alesina and Rodrik (1994), Bértola (1993) and Persson and Tabellini (1994).

[8] See, for example Alesina et al. (2002), Bénabou (1996a, 2000) and Perotti (1994, 1996).