Public education and redistribution when talents are mismatched

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A R T I C L E I N F O

A B S T R A C T

In democratic countries, elected policymakers determine public spending. The level of public spending depends on taxes that are decided by a voting mechanism. Policymakers also decide how to allocate funds among different policies, such as public education and pure redistributive transfers. How are the levels of funding for public education and redistribution determined in the political process? What impacts do votes on these two policies have on inequality, growth and social mobility? We develop a politico-economic model that highlights a novel mechanism: public education provides opportunities for the children of the poor to be recognized for their talent. This reduces the probability of a mismatch, which takes place when individuals with low talent who come from rich families find jobs that should go to people with high talent (and vice versa). Hence, the poor may prefer public spending on education to direct redistribution, while the rich prefer redistribution, as education implies more competition for good jobs from the poor.

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1. Introduction

In democratic countries, elected policymakers determine public spending. The level of public spending depends on taxes that are decided with a voting mechanism. Policymakers also decide how to allocate funds among different policies. Public education and redistributive transfers are major spending categories. In the context of imperfect information, where individual talents are unknown, agents belonging to different social classes (rich and poor) have different incentives to support these public policies. How are the levels of spending on public education and redistribution determined in the political process? What impact does voting on these two policies have on social mobility, growth and inequality?

We provide answers to these questions based on new insights. We start from the assumption that talents are not always correctly identified or recognized in society. The formation of social classes does not depend exclusively on a person's talent and ability, but also on family history, social relations and neighborhood networks (as summarized in the survey by Bowles and Gintis, 2002). These factors tend to give children from high-incomes families a better chance of being hired for good jobs, and hence of remaining rich, even when they have low talent. At the same time, these factors reduce the chances that poor but highly talented children will be able to improve their status. We argue that this "mismatch of talents" is affected by public spending in education. Public education may increase the capacity of a society to correctly recognize an individual's true talent, and thus to place them to the appropriate social class. By providing opportunities for the children of poor families to be recognized for their talent, public education increases exchange social mobility. This effect reinforces support for public education by the poor, who might prefer spending on education to direct redistribution as a result. Yet it also strengthens the opposition from the rich, who may be willing to accept some redistribution, in order maintain a high mismatch of talents and

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hence prevent exchange mobility. Given these preferences of rich and poor, we study the political equilibrium of a probabilistic voting game with an overlapping generation setup, where parents vote simultaneously for redistributive policies for themselves and public education programs for their children.

We find that when people with low talent are placed in jobs of high responsibility, the mismatch of talents generates efficiency costs in production, which are detrimental to growth. Thus, more public education implies higher growth not only because it increases human capital, but also because it induces fewer talent mismatches.

Previous studies have emphasized that the simple view that the poor support both public education and redistribution, while the rich oppose them, is misleading. Even the poorest may choose partial redistribution over full expropriation in order to limit the distortionary effects of taxation (Meltzer and Richard, 1981), while the rich may support public education. This may be because public education increases the overall level of human capital in the economy, or because capitalists gain from the higher human capital of workers in a production process characterized by capital-skill complementarities (Galor and Moav, 2006), or because the rich are able to redirect education expenditure in their favor. They may do this by skewing the public component of education toward tertiary education (Hansen and Weisbrod, 1969), or by making it only a partial subsidy (Fernández and Rogerson, 1995). Generational conflicts may also challenge the basic view. As young low income earners are more likely to prefer public education and elderly low income earners to choose income redistribution, the two programs may be supported by different coalitions consisting of some of the poor and the rich, whose main objective is to minimize public spending (Levy, 2005). The role of social mobility and of the "mismatch of talents" in shaping the preferences of rich and poor over redistribution and public education has, however, remained largely unexplored.

A large literature has studied how public education promotes social mobility (see reviews in Solon, 1999; Breen and Jonsson, 2005; and Checchi, 2006). However, in most of the previous contributions, the impact of public education on social mobility is due to capital market imperfections, which in a world where private education is possible, may prevent the poor from undertaking the same level of education investment as the rich (Becker and Tomes, 1986; Maoz and Moav, 1999; Restuccia and Urrutia, 2004). We choose to abstract away from capital market imperfections and private education, to focus on the role of public education in identifying the true talents[1] of individuals and to emphasize that the mismatch of talents is an alternative channel through which education increases social mobility. Our framework highlights that, in a world where education is mostly public, an equilibrium with high redistribution and low education expenditure may emerge because of the support of rich individuals who attempt to limit social mobility. In the conclusion, we discuss examples from European countries that are consistent with our predictions.

The emergence of the mismatch of talents in a context of imperfect information is also a novel contribution of this paper. There may be several causes of the mismatch of talents. For instance, children from richer families may have better access to education, or they may increase their skills by learning from their family and neighbors (see Calvó-Armengol et al., 2009; Calvó-Armengol and Jackson, 2005). We focus instead on the role of information, that is, on the identification of true talent. More precisely, in our overlapping generations model innate ability, in conjunction with family and social backgrounds, determines the economic attainment of children (as in Becker and Tomes, 1979; Loury, 1981; Bénabou, 1996). Unlike in most of the previous contributions, we explicitly model the genetic transmission of talent, using transition probabilities, which are assumed, together with talent, to be unobservable.[2] In this imperfect information context, we study the role public education has in identifying talents and reducing the mismatch. Although we focus on public education, it is worth noticing that the model provides a general framework that is useful for analyzing the role that other public policies, such as health, security or liberalization, may have in reducing the mismatch of talents.

The idea of a trade-off between education and redistribution is not new. Recent contributions in the political economy literature (Bénabou and Ok, 2001) have already emphasized the emergence of a trade-off between social mobility and redistribution: in socially mobile communities, where the poor have a greater chance of upward mobility, they may not be willing to support high levels of redistribution.

As a result, the level of redistribution arising in a more mobile society is lower than that arising in a less mobile society (Alesina and La Ferrara, 2005). Though this relation remains valid in our context, we endogenously derive social mobility, which depends on the two programs (public education and redistribution) voted upon by the two social classes (rich and poor).

The paper is organized as follows. Section 2 presents the model of talent mismatch, the formation of social classes and the role of public education; Section 3 explains the political competition and the political economy equilibrium; Section 4 studies the cost of the mismatch and the dynamic implications of the model; Section 5 concludes with a discussion of the robustness of our results.

2. Social classes, talent and public education

In this section we introduce an overlapping generations economy, where individuals are heterogeneous in innate ability, or talent, which can be high or low. Individuals live for two periods. In the first period, young individuals accumulate human capital, building on their innate ability; in the second period, depending on their human capital, adult

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[1] Although in a different context, this is similar to the idea of Hendel et al. (2005) that the looser the financial constraints in higher education, the more informative education is as a signal of ability.

[2] See Bowles and Gintis (2002), Sacerdote (2002) and Plug and Vijverberg (2003), and references therein, for papers and disputes about attempts to estimate the actual extent of genetic talent transmission.