

## A Second Chance at Success: A Political Economy Perspective

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## A second chance at success: A political economy perspective <sup>☆</sup>

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### Abstract

This paper characterizes a stationary Markov-perfect political equilibrium where agents vote over income taxation that distorts educational investment. Agents become rich or poor through educational investment, and the poor have a second chance at success. The results show the following concerning the cost of a second chance. First, when the cost is low, the economy is characterized by high levels of upward mobility and inequality, and a low tax burden supported by the poor with prospects for upward mobility. Second, when the cost is high, there are multiple equilibria with various patterns of upward mobility, inequality and redistribution. Numerical examples show that the shift from a high-cost economy to a low-cost economy may reduce social welfare.

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The following is a comment on the published paper shown on the preceding page.

## A Second Chance at Success: A Political Economy Perspective

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### Introduction

Why do western countries have different welfare programs although they share similar backgrounds? Who supports redistribution in these countries? How income inequality is related to redistributive politics? Hassler et al. (2003) and Hassler, Storesletten and Zilibotti (2007) developed a model that answers these questions based on the feedback mechanism between individual decisions and redistributive politics. The feedback mechanism creates a joint determination of inequality and redistribution, which results in multiple equilibria: a pro-welfare state and an anti-welfare state. In the pro-welfare (anti-welfare) state, expectations of higher (lower) redistribution lead to lower (higher) educational investment, and thus, a majority of the poor (rich); the majority of the poor (rich) then support higher (lower) redistribution. Which state is realized depends on the expectations of agents.

### Previous work

The model of Hassler et al. (2003) and Hassler, Storesletten and Zilibotti (2007) presents the cross-country differences in welfare programs among western countries sharing similar backgrounds. However, they abstract intragenerational mobility from their model and preclude the prediction that fits the POUM (prospect of upward mobility) hypothesis supported by the US data (Benabou and Ok, 2001; Alesina and La Ferrara, 2005): the poor do not support higher redistribution because of a hope for upward mobility in the future. In order to explain the differences in welfare programs among western countries, there is a need to develop a model that includes an equilibrium that supports the POUM hypothesis as well as multiple equilibria with different patterns of redistribution, mobility, and inequality.

Independently of the above-mentioned studies, Quadrini (1999) succeeded in providing a model including the POUM hypothesis, based on an endogenous growth model that produces multiple equilibria: the growing equilibrium with high mobility, high inequality and low redistribution, supporting the POUM hypothesis; and the stagnant economy with low mobility, low inequality and high redistribution, supporting the case of a pro-welfare state. A key to this result is the assumption that growth rate of the economy affects agents' preferences over redistribution policies and thus changes the ability of the agents to learn their positions in the future distribution of income.

The multiple equilibria in Quadrini (1999) predict a negative correlation between redistribution and inequality, and a positive correlation between mobility and inequality. The former prediction is supported by the empirical studies, but the latter is not necessarily supported by the data. The evidence shows

a positive correlation between mobility and inequality among sample countries. For example, the United States is featured by high mobility and inequality, and Finland is featured by low mobility and inequality. The difference between these two countries could be explained by the multiple equilibria in Quadrini (1999). However, the other European countries show various patterns of upward mobility and inequality. For example, for aged 25-34 workers, inequality is greater in the United States than in Denmark and Sweden, but the pattern of mobility is similar between them. This property could not be explained by the theory of Quadrini (1999).

### The aim of this study

Motivated by the above-mentioned discrepancy between theory and evidence, we aim to develop a model that includes the equilibrium supporting the POUM hypothesis as well as multiple equilibria describing different patterns of mobility and inequality among European countries. For this purpose, the paper utilizes a politico-economic framework that incorporates the endogenous determination of income distribution by individuals' educational investments (Hassler, Storesletten and Zilibotti, 2007) based on the concept of a stationary Markov perfect equilibrium. We extend their model by introducing a second chance at success. Agents, who live two periods, youth and old age, can become rich or poor by undertaking costly investment in youth. Successful agents can retain their status over their lifecycle. Unsuccessful agents, however, have second chances and thus can become rich in old age through reinvestment in education. Within this extended framework, we explore (i) the relation between upward mobility and inequality and (ii) welfare implications of upward mobility in society.

### Results

We obtain the following two results, which were not shown by the previous studies. First, we consider majority voting over redistribution policy and obtain the following result regarding the equilibrium properties. When the costs of a second chance are low, there is a unique, poor-majority equilibrium characterized by a low tax burden on the decisive voter and high levels of upward mobility and inequality, which supports the POUM hypothesis. Although the majority is poor, they support a low tax burden for redistribution because of a hope for upward mobility in the future. In contrast, when the costs of a second chance are high, there are multiple equilibria. The first is a poor-majority equilibrium featured by lower levels of mobility and inequality; and the second is the rich-majority equilibrium featured by higher levels of mobility and inequality. In the rich-majority equilibrium, the mobility depends on the costs of a

second chance; and the tax rate on the young is indeterminate in that it depends on expectations of agents. The multiplicity of equilibria and the differences in the costs and expectations jointly provide an explanation for different patterns of mobility and inequality in European countries.

Second, we show welfare implications of policies enhancing upward mobility. Mobility may be a good thing because higher upward mobility means that the current status of the poor is less persistent; however, mobility may also be viewed as a bad thing because higher mobility means larger income fluctuations and thus economic insecurity. Our framework captures the former aspect by modeling upward mobility and characterizing an equilibrium that supports the POUM hypothesis, but abstracts from the latter aspect by assuming no downward mobility and linear utility functions. Therefore, an intuitive prediction is that upward mobility is good for the economy. However, our analysis shows that a low-cost economy characterized by high upward mobility may be inferior to a high-cost economy featuring low upward mobility, at least in terms of social welfare.

The key to the second result is the education disincentive effect. A lower cost of a second chance implies a higher probability of being successful in old age. This gives agents a disincentive to invest in education in youth, which results in a lower number of successful young agents and thus a smaller size of the tax base. To keep the tax revenue from the young, the decisive voter imposes a higher tax rate on the successful young. The smaller size of successful young agents and a higher tax rate on the young jointly reduce the expected utility of the young and thus social welfare.

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