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The role of unions in an endogenous growth model with human capital

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Abstract

In this paper we study the relationship between unions and growth in a two-sector overlapping generations model with altruism and human capital. This relationship depends on the interaction between the technology in the sector that produces human capital and the degree of unionization of the economy. On the other hand, the operativeness of the bequest motive is increasing with the degree of unionization of the economy.

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1. Introduction

The purpose of this paper is to investigate the relationship between growth and the role of unions in a two-sector overlapping generations (OLG) model with altruistic agents where endogenous growth is driven by the accumulation of human capital.

We believe unionization can play an important role in the parent's decision of education of their offspring. As noted by di Nardo et al. (1996), de-unionization is one of the main factors in explaining the rise in wage inequality in the US from 1979 to 1988. In the case of men, the 39% decline in the unionization rate played a significant

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role in explaining the collapse of the middle of the distribution of wages. The contribution of de-unionization to the declining middle of the distribution of men's wages translates into a 14% change in the standard deviation of log wages, being the magnitude of this effect comparable to the results of both Card (1996) and Freeman (1993). The positive effect of parental income on school enrollment of their children is documented in many microeconometric studies and intercountry comparisons, as that of Mincer (1995). That is, the empirical evidence shows that de-unionization can lower the median wage, which in turn affects negatively parental income and thus school enrollment and investment in education.

There are two branches of the literature to which our paper relates. The first one combines altruism and endogenous growth based on human capital accumulation as, for example, Glomm and Ravikumar (1992). These authors present an OLG model where each parent has a bequest motive and values the quality of education passed on to the offspring. Eckstein and Zilcha (1994) develop a model where the human capital of the children is determined by the percentage of the leisure time that parents devote to their offspring. Zhang (1996) emphasizes the importance of the units of goods invested by the parent, the units of the parent's time spent, and the human capital of the parent on the human capital of the child.

The second branch of the literature addresses specifically the problem of unemployment in the context of growth models in unionized economies, but without taking altruism into account. [1,2] Bean and Pissarides (1993) develop a search model where matching frictions create unemployment. They find out that the relationship between growth and the relative bargaining power of workers is ambiguous, being the reason that the shift in income from entrepreneurs to workers could be compensated by an increase in savings, and therefore in the growth rate. The same result is achieved by de la Croix and Licandro (1995) in a model with irreversible decisions; they conclude that a raise in union power produces crowding-out of physical capital, but at the same time it raises the firm's value, and the physical capital as well.

This paper departs from these two approaches in the following sense. We develop a two-sector OLG model with intergenerational altruism and unions, where endogenous growth is generated by human capital accumulation in an educational sector. A crucial feature of the two-sector economy the existence of heterogeneous agents, since working in different sectors may imply earning a different wage. [3] The presence of altruism, in the sense that parents of a given generation will get utility from the utility of their offspring as the dynastic utility in Barro (1974), allows us to shed light on the role of unions on the operativeness of the bequest motive. [4]

[1] Aghion and Howitt (1994) study the interaction between unemployment and growth in a one sector model, whereas van Schaik and de Groot (1995) analyze the same question in a two sector model. None of them includes unions.

[2] Other models, that emphasize the effect of unionization on innovation and growth, are Ulph and Ulph (1994) and Acemoglu (1997).

[3] Thus it is not possible to make a welfare analysis.

[4] As an example, Caballé (1998) shows how economic growth rates change depending on the operativeness of the bequest motive, which in turn depends on the tax structure.