

## Population, unemployment, and economic growth cycles: a further explanatory perspective.

*By Luciano Fanti and Piero Manfredi*

This paper investigates the dynamic interactions among economic growth, unemployment, income distribution and population growth. The model combines i) rational behaviour of agents, ii) profits as the crucial determinant of the accumulation of firms; iii) endogenous fertility, iii) unemployment. In particular the supply of labour is determined by micro-founded fertility choices of the individuals. We first demonstrate, consistently with the empirical evidence, the existence of a positive income growth trend with cyclical oscillations, therefore providing an alternative explanation of the relation between growth and cycle. Moreover the model seems to provide interesting insight on the relation between unemployment and growth. Up to now results available in the literature have always found a negative relation between unemployment and growth (although it should be mentioned the exception of the positive relation arising in Schumpeter's "creative" disruption). On the contrary, we find a twofold action of unemployment (via its effects on population which is the engine of growth) on economic growth: this can be both positive or negative depending on the relative level of the cost of childrearing of employed and unemployed persons, and the level of unemployment benefits. This allows us argue that an increase of the unemployment benefit - as it has occurred in recent years in many countries as for example France and Spain – could lead to wide demo-economic fluctuations and to a positive effect of the unemployment on economic growth.