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Research in Economics

journal homepage: [www.elsevier.com/locate/rie](http://www.elsevier.com/locate/rie)

# A general equilibrium evaluation of the sustainability of the new pension reforms in Italy

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## ARTICLE INFO

### Article history:

Received 8 October 2008

Accepted 5 February 2010

### Keywords:

Pension reforms  
Applied OLG models  
Immigration  
Human capital  
Endogenous growth

## ABSTRACT

Most European countries have recently introduced pension system reforms to face the financial problem related to population ageing. Italy is not an exception. The reforms introduced during the Nineties (Amato Reform in 1992 and Dini Reform in 1995), even if they will produce a strong reduction in pension benefits, are generally considered not sufficient to adequately face the population ageing problem. For this reason, in 2004, the Berlusconi government introduced a new reform that increases the retirement age to 60 years from January 2008 onwards, to 61 years from 2010 and to 62 from 2014. In 2007, the left-wing government replaced this reform with a softer one that fixes the minimum retirement age at 58 from 2008.

Using an applied overlapping-generations general equilibrium model with endogenous growth due to human capital accumulation, we analyse the impact of the new reforms on the macroeconomic system and in particular on the long-run sustainability of the pension system. We show that the increase in the retirement age would permit to reduce pension deficits in the short and medium run, while in the long run these reforms would become completely ineffective.

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## 1. Introduction

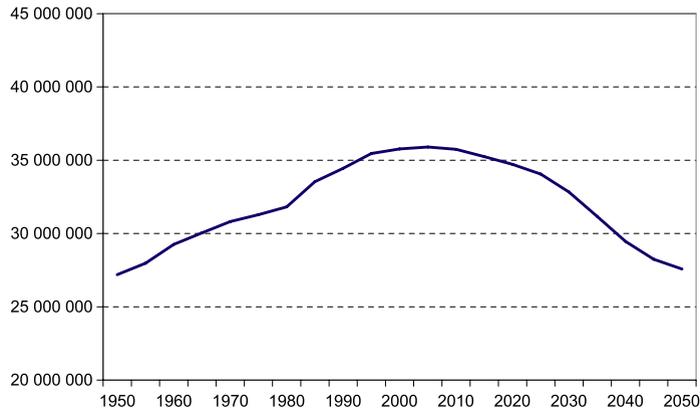
Industrialised countries will know a phase of significant demographic changes over the next 50 years. The increase in life expectancy, the reduction of fertility rates and, most of all, the baby-boom produced during the Fifties and Sixties have induced a population ageing that will put the financing of the social security systems under considerable stress. Italian demographics are quite representative of this largely European phenomenon. The demographic projections based on the central hypothesis presented by Istat (2006) show that the working age population – the number of people between 20 and 64 – will drop by 23% between 2000 and 2050 (Fig. 1) and the old-age dependency ratio – the ratio of the number of people aged 65 and more to the working age population – will increase from 28.9% in 2000 to 68.1% in 2050 (Fig. 2).

To face this problem, most European countries have recently introduced pension system reforms. Even if European pension systems remain essentially different, some similar measures have been introduced in order to reduce the pension expenditure burden: the indexation of pension benefits to prices, the increase in the retirement age and the increase of the role of private funding. However, the Pay-As-You-Go system is still largely the most important pillar of European pension systems.

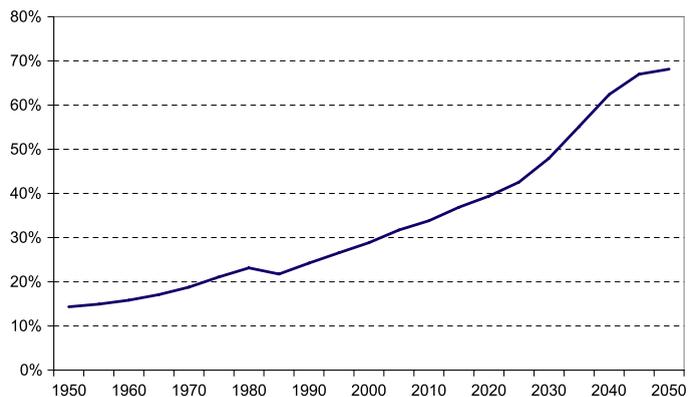
During the Nineties, two reforms of the pension system were implemented in Italy, the Amato reform (1992), and the Dini reform (1995). Even if these reforms would induce a significant reduction in future pension benefits, they are unanimously

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**Fig. 1.** Working age population.  
Source: Istat (2006).



**Fig. 2.** Old-age dependency ratio.  
Source: Istat (2006).

regarded as being non-sufficient in the medium run – because of the long transition phase imposed by the Dini reform that will produce important social security deficits – as well as in the long run: even when completely applied, the reforms cannot be expected to achieve the financial equilibrium of the pension system.<sup>1</sup>

In addition, the impacts on the macroeconomic system are likely to be negative: as shown by Magnani (2006), pension system deficits generate a fall in national savings, reduce capital accumulation and slow down economic growth.

As a consequence, a new pension system reform seemed inevitable and in 2004, the Berlusconi government decided to increase the minimum retirement age to 60 from January 2008 onwards. The Berlusconi reform, even if it would produce a significant reduction of the pension expenditures in the short term, has been considered deeply unfair with respect to the generations born after 1948. For this reason, and given the pressure exerted by Italian's trade unions, the left-wing Prodi government replaced in 2007 the Berlusconi reform with a softer one: the minimum retirement age is fixed at 58 from January 2008 and will gradually increase over time up to 62.

The aim of this paper is to evaluate and compare the Berlusconi and the Prodi reforms. We evaluate the effects on the pension system and on the macroeconomy of the increase in the retirement age proposed by the new reforms. We show that the Prodi reform induces an important reduction in pension deficits in the medium run, but less important than the reduction that could be induced by the Berlusconi reform. However, these two new reforms become completely ineffective in the long run.

Our assessment is based on simulation exercises using an applied overlapping-generations general equilibrium model. A dynamic general equilibrium perspective is indeed required in order to evaluate the effects of pension reforms on the macroeconomy and on the pension system, since population ageing will significantly affect labour supply (and thus the evolution of wages) and capital accumulation (and thus the evolution of investments, interest rates and GDP). The evolution

<sup>1</sup> A partial equilibrium analysis carried out by the Italian Ministry of Labour and Social Policies (Nucleo di Valutazione della Spesa Previdenziale, 2006) shows that, even by considering very optimistic assumptions (the revision of the transformation coefficients, a 1.8% long run productivity growth rate, and an increase in the employment rate of people 15–64 from 57.5% in 2005 to 67.9% in 2050), the ratio of pension expenditures to GDP will deeply increase in the period 2010–2035, then it decreases and in 2050 the ratio displays the same value as in 2005.

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