

# On the Aggregate Effects of Immigration in Spain

Juan F. Jimeno

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1. INTRODUCTION

2. FACTS

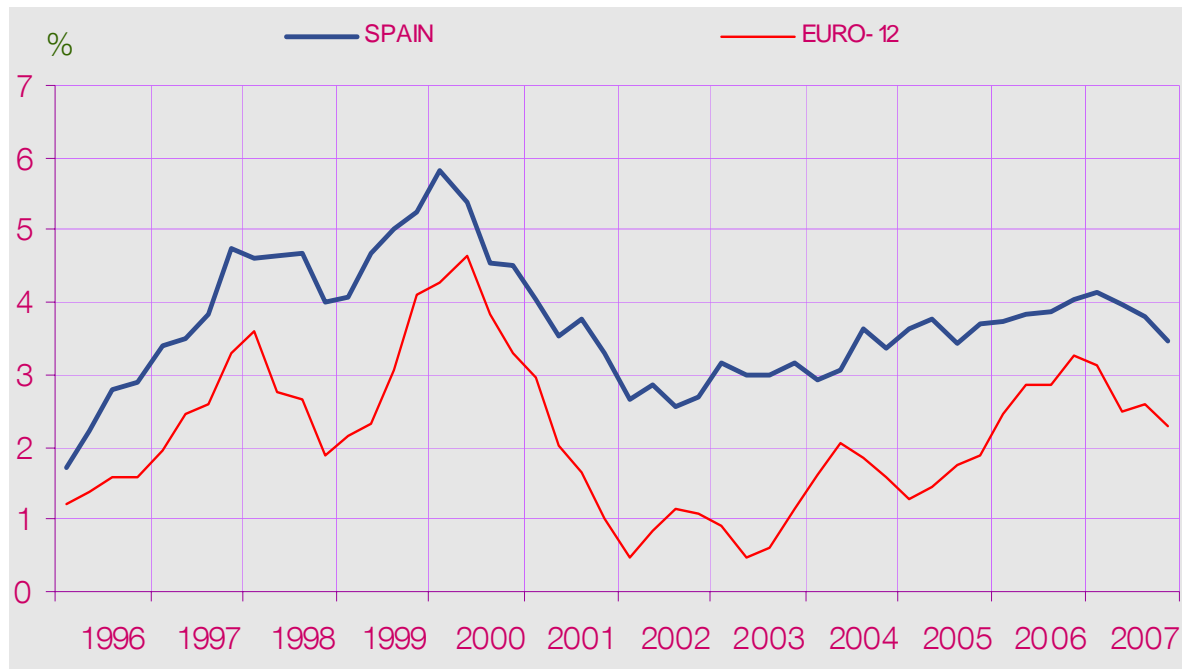
3. ALTERNATIVE APPROACHES TO THE ANALYSIS OF IMMIGRATION

4. A MACROECONOMIC FRAMEWORK FOR THE ANALYSIS OF IMMIGRATION

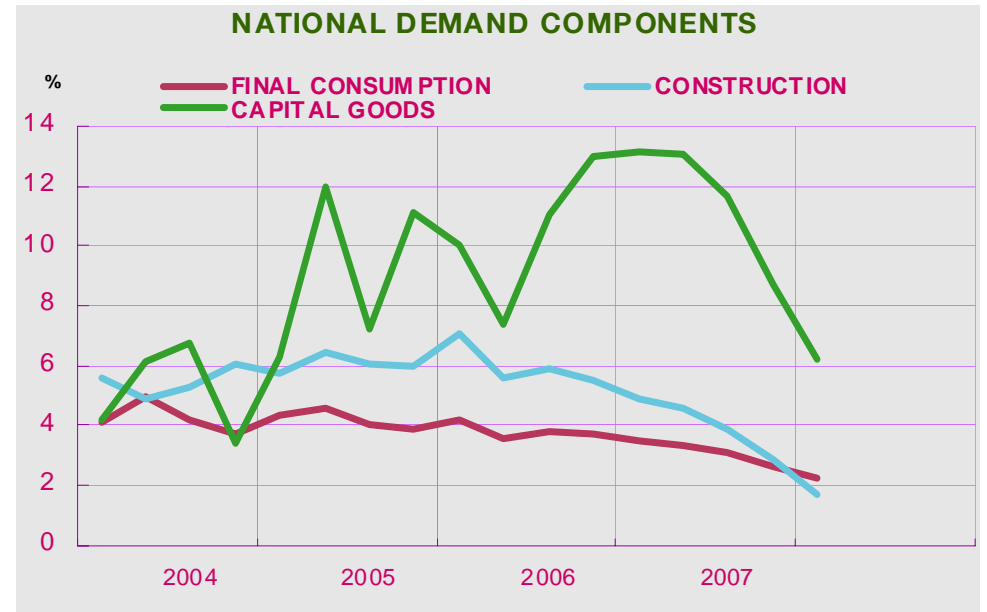
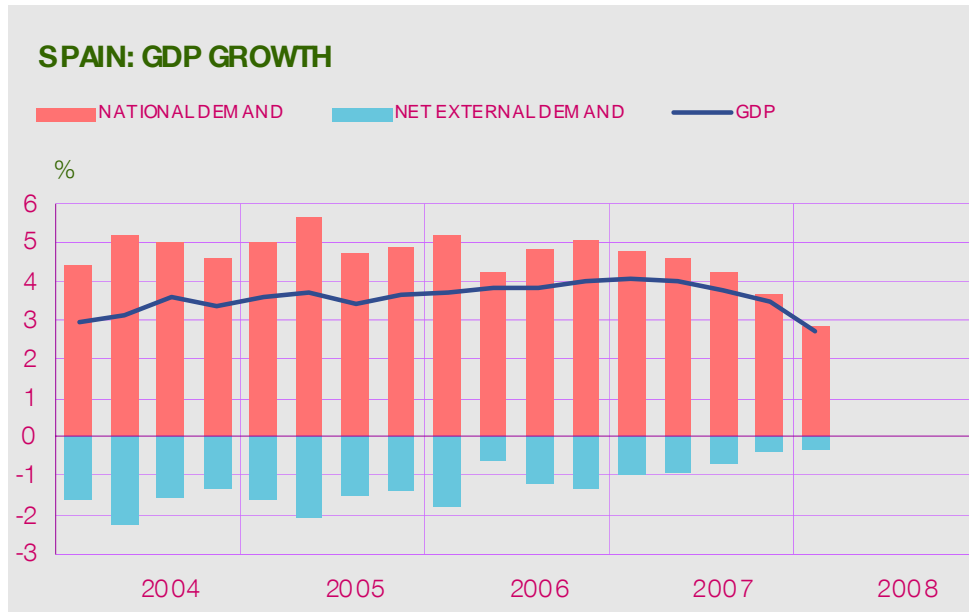
5. CONCLUDING REMARKS

# Facts

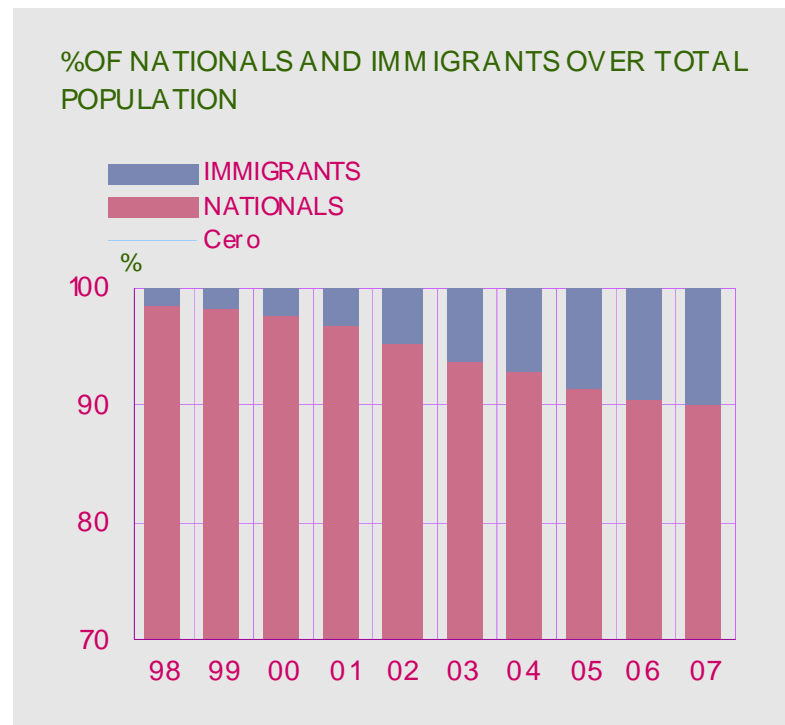
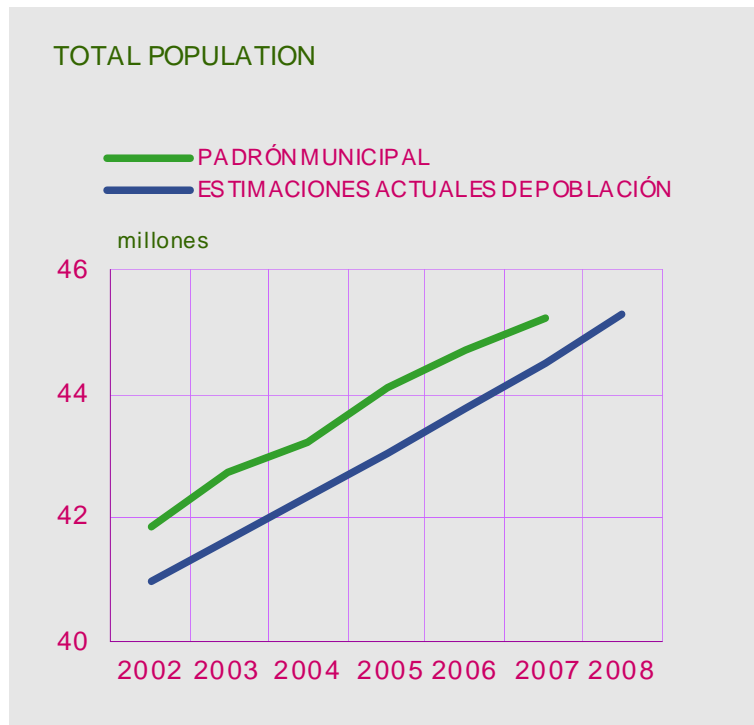
- Strong output growth



- Strong domestic demand: private consumption and construction

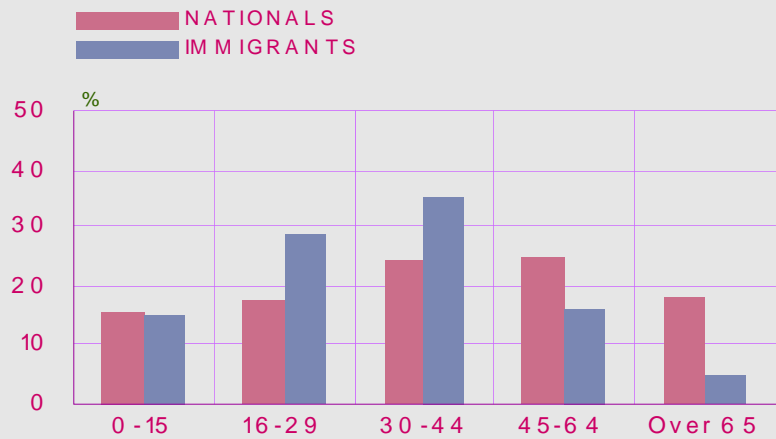


- Labour supply: Intense immigration flows caused a considerable increase in population

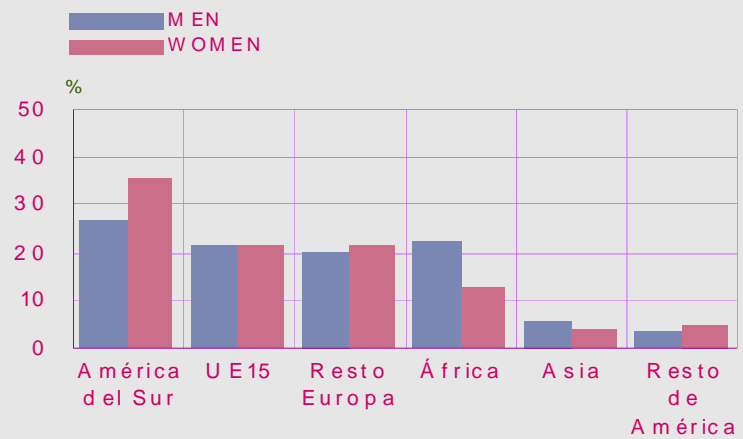


- Immigrants are younger than nationals, relatively dispersed by origin, and have relatively higher aggregate employment rates

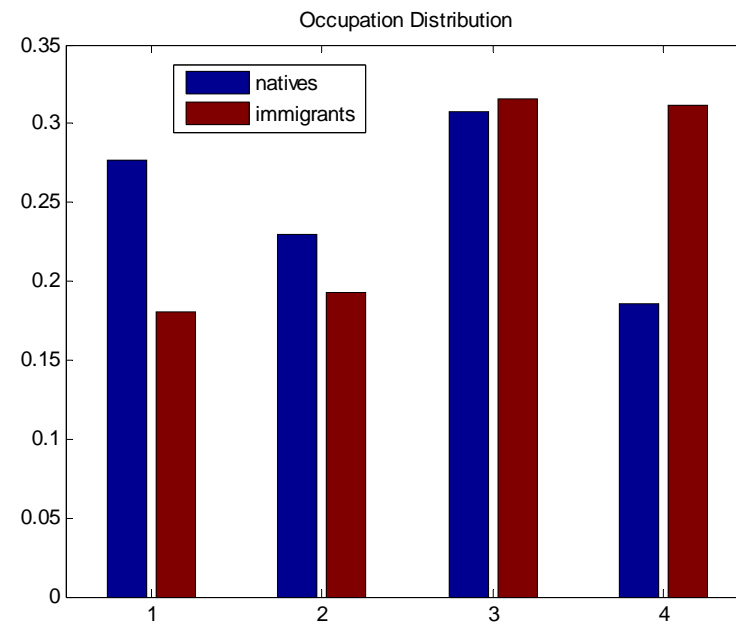
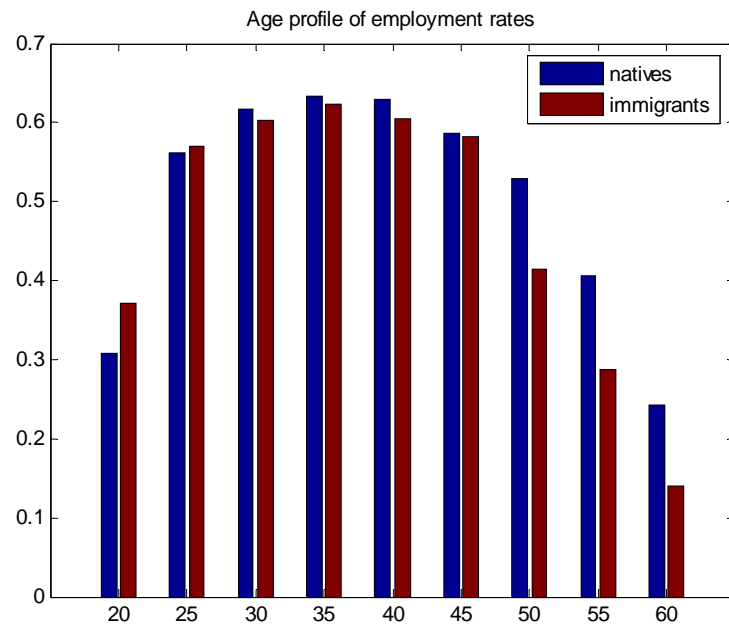
STRUCTURE OF THE POPULATION BY AGE.  
YEAR 2007



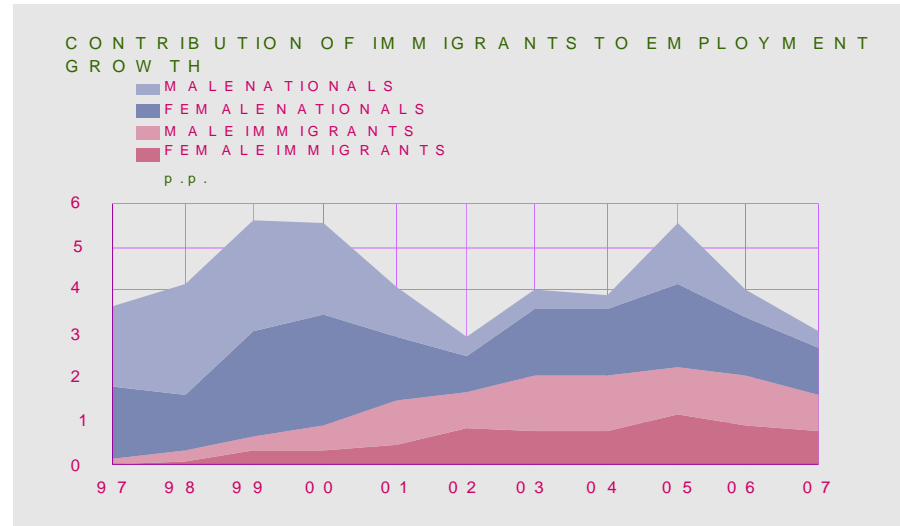
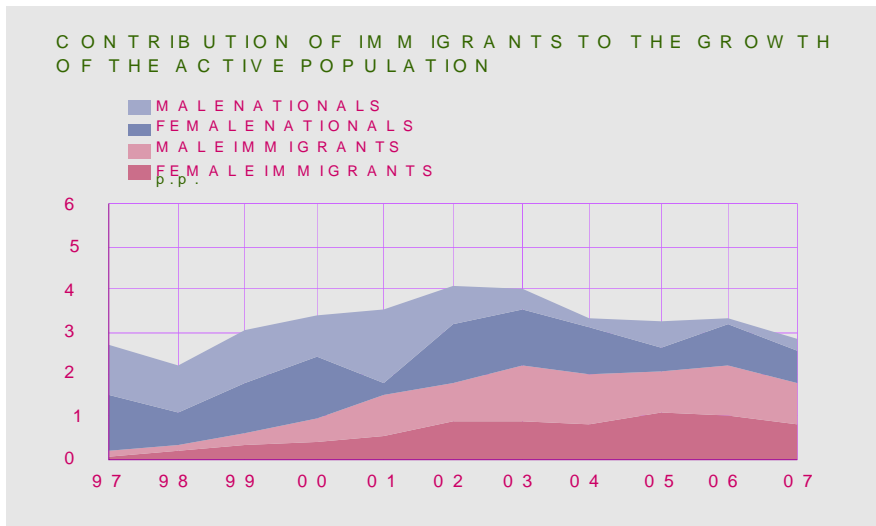
STRUCTURE OF IMMIGRANT POPULATION  
BY NATIONALITY AND GENDER. YEAR 2007



- ...have relatively higher aggregate employment rates and are more prone to occupy non-qualified, manual jobs



- Immigration contributed significantly to labour force and employment growth



## Analysis of immigration: Micro studies

- Mostly on labour market effects: Impact of immigration flows on employment and wages of natives
- Assimilation of immigrants
- Microeconomic studies on "immigration and demand of social services", "immigration and crime", etc..

# Analysis of immigration: Macro studies

- Accounting exercises

Contribution of immigration to GDP growth per capita (2001-05)			
GDP per capita	COMPONENTS		
(1)+(2)+(3)	Demographic factor (1)	Employment rate (2)	Productivity (3)
Whole the economy			
1,70%	0,16%	1,06%	0,48%
Contribution of immigration to the whole economy			
0,40%	0,31%	0,27%	-0,18%

Source: INE and own elaboration

# Analysis of immigration: Macro studies

- General equilibrium models
  - Calibration and Simulation exercises (Izquierdo, Jimeno, Rojas, 2008) (*more to follow*)
  - Immigration, and the inflation-unemployment tradeoff (Bentolila, Dolado, Jimeno, 2008):
    - \* Without inmigration, inflation would have been about 2 p.p. higher

## A Macroeconomic Framework: General equilibrium models

- There are those that have studied the implications of world demographic projections for the pattern of international capital flows like Attanasio, Kitao, Violante (2006) and Krueger and Ludwig (2006). They find that global aging will decrease the world real interest rate AND countries with higher growth rates in the labor force tend to be characterised by current account deficits.
- Others have studied the implications of aging and immigration for the social security system (Storesletten, 2001)
- However, *immigrants are not modelled explicitly* or the environment is a *closed economy*.

## Izquierdo, Jimeno, Rojas (2008)

- Small open economy that takes the world interest rate as given.
- Individuals optimally choose consumption and leisure. Agents reach adulthood at 16 and live up to age 100, after which death is certain. Each model period corresponds to 1 year.
- Immigrants are heterogenous in terms of *age*, *productivity* and *age when entering the country*. Same preferences as natives. Same Fertility and mortality risks
- No assimilation of immigrants (wage gaps constant through time)

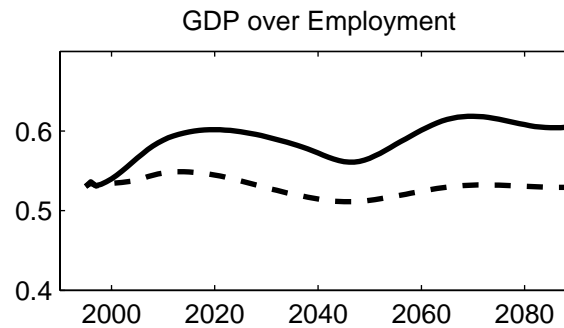
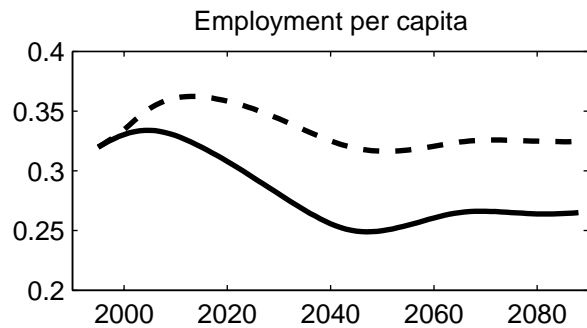
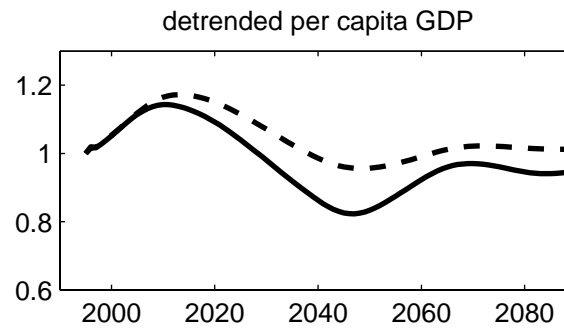
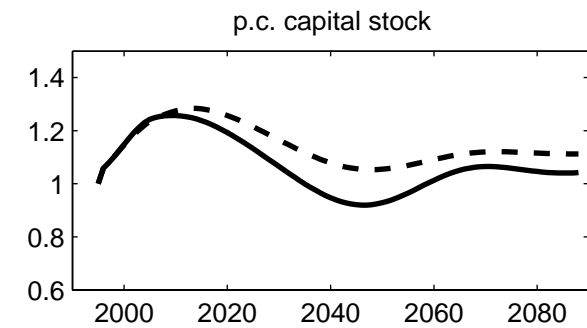
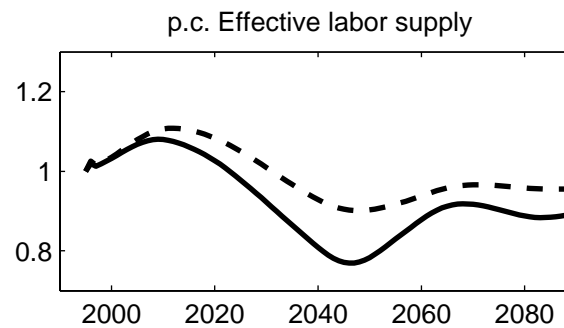
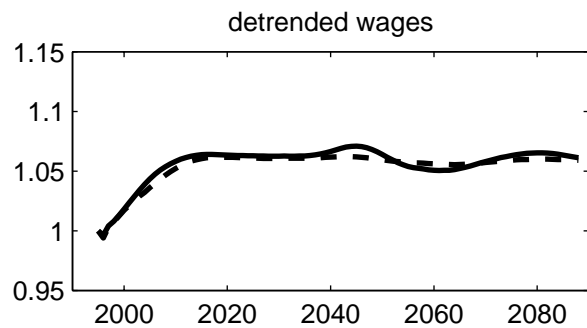
# Baseline Experiment

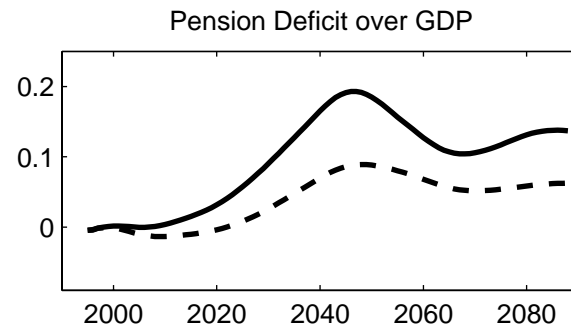
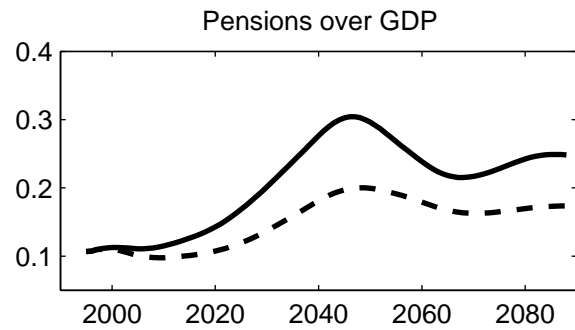
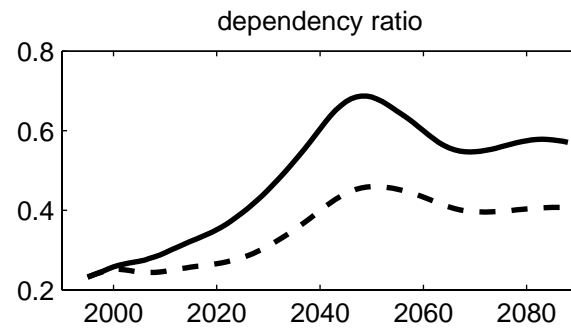
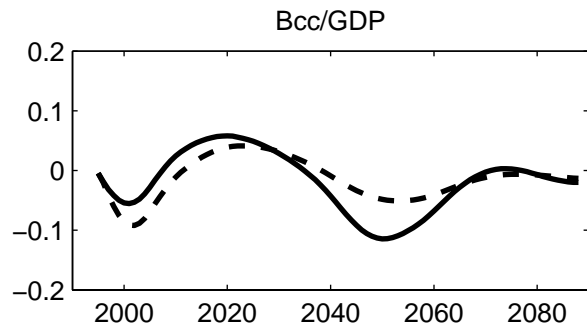
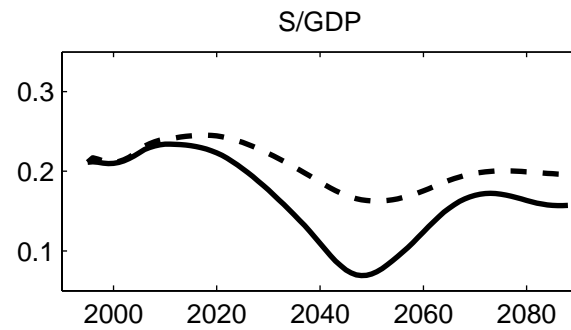
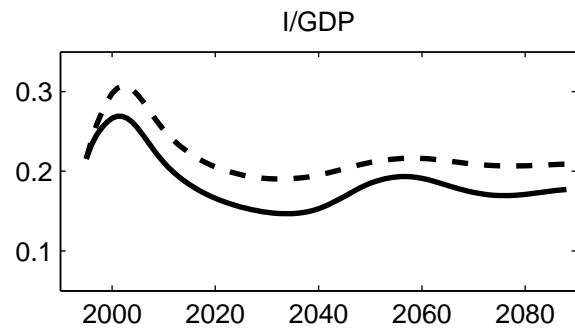
1. Initial Steady State 1995. In 1996 the population starts changing according to the immigration, fertility and mortality scenario published by the *Instituto Nacional de Estadística*.
2. Expected decline in world real interest rate over the next 50 years:
  - Krueger and Ludwig (2006): 1 percentage point
  - Attanasio, Kitao and Violante (2006): 4 percentage points
  - Kara and Von Thadden (2006): Between 1 p.p. and 1.5 p.p.
3. Our Experiment: A Reduction of almost 2%.

## Comparing the model and the data between 1995 and 2005

	Data		Model	
	1995	2005	1995	2005
Current Account/GDP	-0.33%	-7.4%	-0.44%	-6.9%
Investment/GDP	21.8%	29.53%	21.6%	29.59%
Pensions/GDP	8.54%	7.82%	10.6%	10.1%
	2000-2005		2000-2005	
Average p.c. GDP growth	2.11%		2.22%	
Employment p.c growth	1.70%		1.03%	
Labor productivity growth	0.40%		1.17%	

Results: Comparing Escenario 1 and 2 (without immigration)





## Concluding Remarks

- Intense immigration flows: Large demand and supply shocks to the Spanish economy, with implications in many fronts.
- Macro analysis: Some noticeable impact of immigration on:
  - GDP per capita (+), Employment rate (+), Productivity (-)
  - Investment rate (+), Current account deficit (+)
  - No impact on pension expenditures over the medium run

THANKS!!