

# Health and Life Expectancy differences: Portugal, Spain, Italy and France

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# Main purpose

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- This research main purpose is to analyse the Portuguese life expectancy evolution within the scope of the convergence framework
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# Data and Methods

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## METHODS:

- ❑ Decomposition techniques developed by Arriaga (1984) and Pollard (1988)

## DATA:

- ❑ Human Mortality Database (HMD) life tables
  - ❑ Cause of death statistics by age and sex from the EUROSTAT data base
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# Mortality Gap between Portugal and Europe

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- The convergence trend in the mortality progress was an established view associated to the demographic transition theory and the modernization perspectives clearly recognised in the 70's
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# Mortality Gap between Portugal and Europe

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- However, the convergence hypothesis has been challenged in recent research
  - In several countries the tendency for increase in life expectancies had stopped or even reversed, as a consequence of political, economic and health factors
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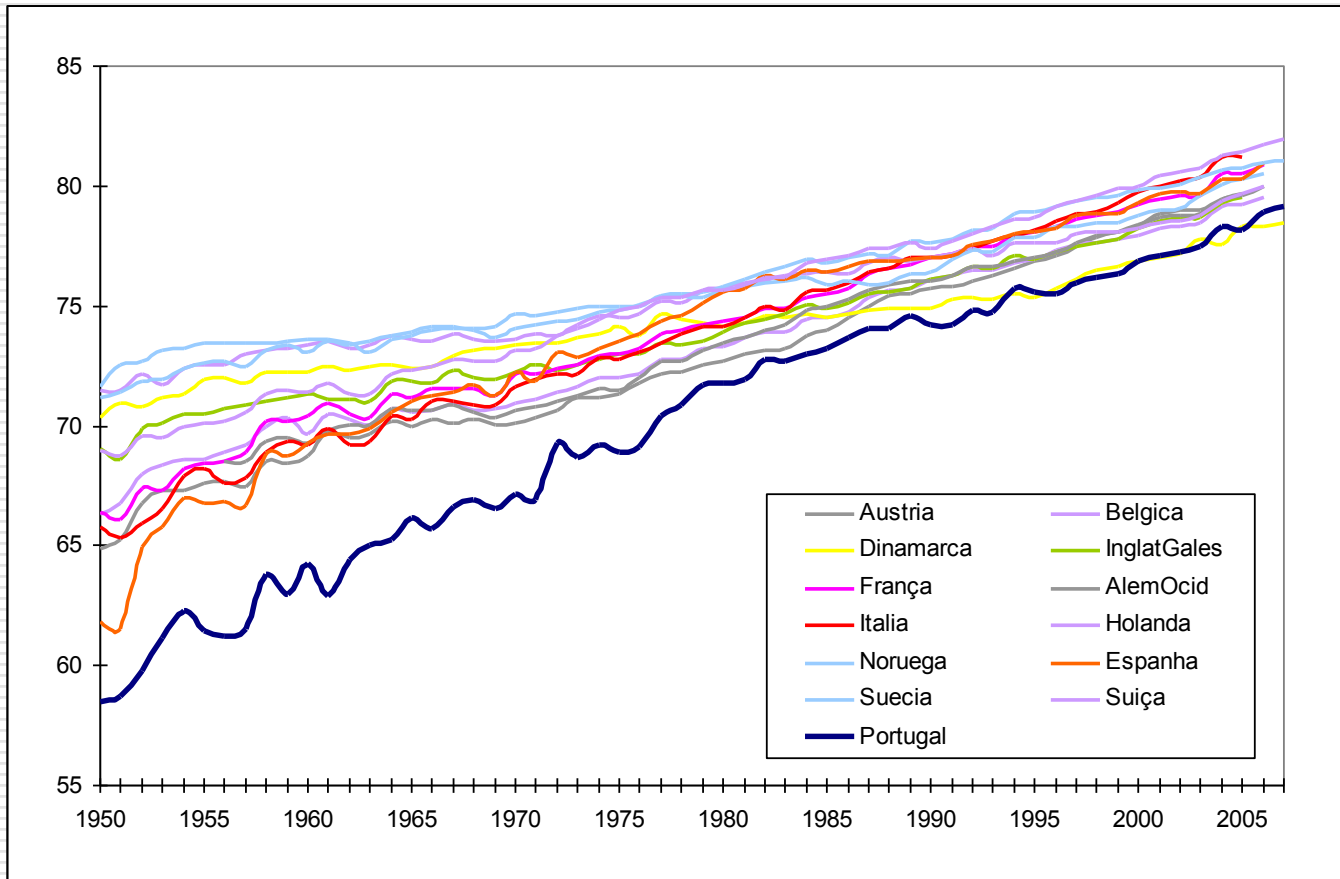
# Mortality Gap between Portugal and Europe

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- The recent divergence in mortality patterns is clearly associated to the setbacks in the sub-Saharan Africa and in the Eastern Europe
  - In this investigation, we will discuss the particular path observed in Portugal within the context of the Western Europe and particularly in the South European region
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# Life expectancy at birth between 1950 and 2005 (source: HMD)

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# Mortality Gap between Portugal and Europe

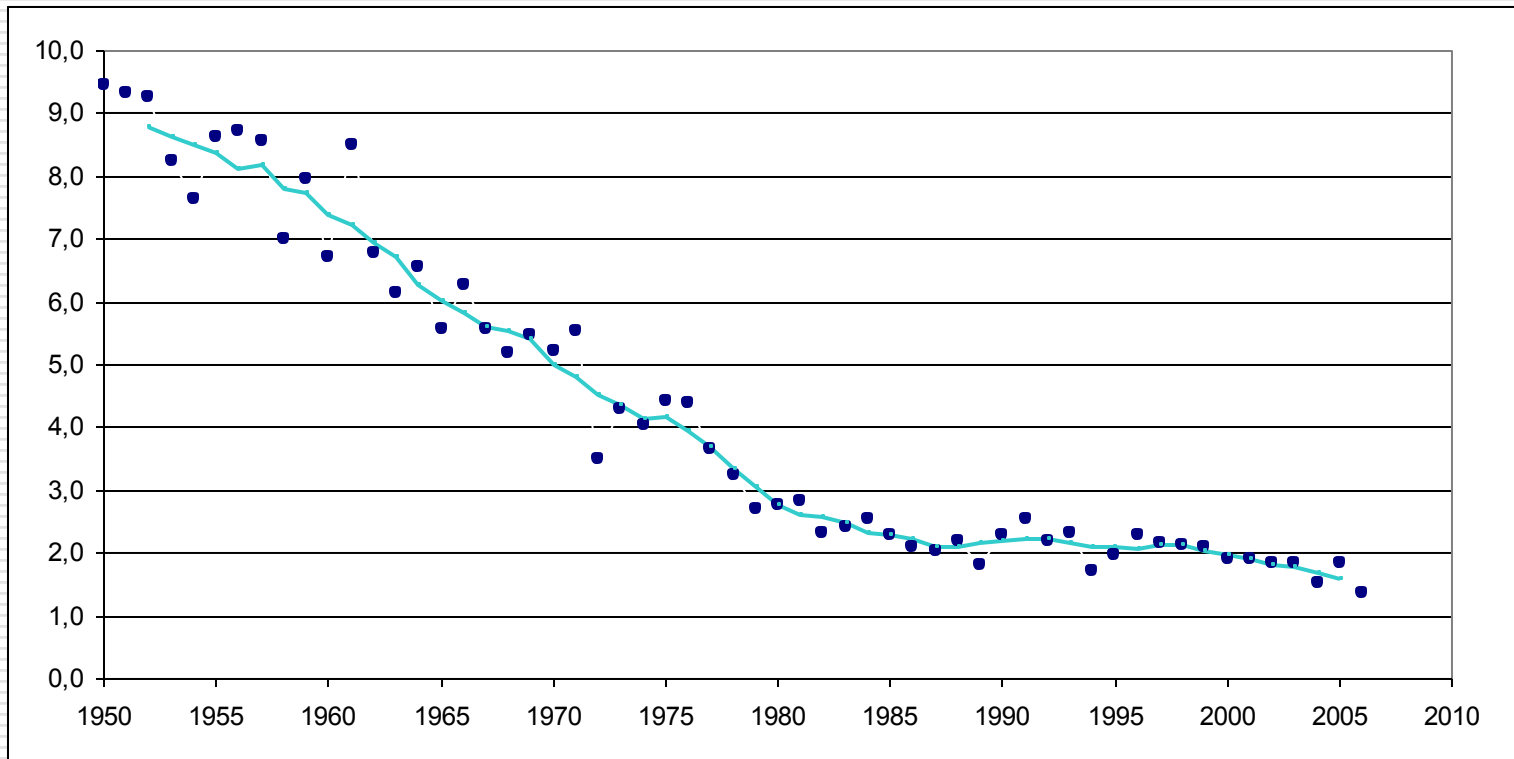
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- All the countries have a positive evolution in the life expectancy and the diversity founded in the 50's had diminished
  - In the Portuguese case, the remarkable discrepancy, observed in the 50's had gradually narrowed to 2 years in the mid 80's
  - Since then, the divergence between Portugal and the other European countries had remained almost the same
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# Life expectancy differences between Portugal and the other European countries

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# Mortality Gap between Portugal and Europe

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- In these circumstances the key question is to understand the stalling in the mortality convergence trend
  - Is the Portuguese interruption an exceptional case or a typical situation?
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# Mortality Gap between Portugal and Europe

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- Currently, in the Western European countries there are no tendency for divergence and
  - The unusual situation of the Portuguese life expectancy does not rely on a specific setback - the interruption of the convergence process - due to national specificities, but rather to a global trend to stop the convergent trend in mortality levels
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# Age and Cause Contributions to the Portuguese Mortality Gains

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- The comprehension of the Portuguese current position within the European countries can only be achieved after an examination of the age and cause contribution to the life expectancy gains in the last decades
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# Age and Cause Contributions to the Portuguese Mortality Gains

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- The period between 1980 and 2005 enlighten important gains in male and female life expectancy at birth
  - Since the 80's until now, the growth in life expectancy, between 1,0 and 1,5 years for each 5 calendar years, has been moderated but consistent
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# Age and Cause Contributions to the Portuguese Mortality Gains

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- These differences in the life expectancy can be decomposed to get an improved perspective on the observed differences.
  - Our analysis is based in 3 different groups: young people (0-14 years), adults (15 to 59 years) and older persons (60 years and above).
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# Age and Cause Contributions to the Portuguese Mortality Gains

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- The key feature from this analysis is the diminishing importance of *infant and child mortality*, the main source of the life expectancy evolution during almost all the late XX century
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# Age and Cause Contributions to the Portuguese Mortality Gains

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- In the last five years the female adult mortality evolution tends to have a higher effect in the life expectancy, and this trend is particularly clear for the oldest age groups
  - In the male case, the adult mortality improvements are as important as the old age improvements in the last decade, and largely superior to the infant and child mortality ones
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# Age and Cause Contributions to the Portuguese Mortality Gains

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- These gains in life expectancy can also be decomposed by cause to understand the relative contributions from each cause of death
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# Age and Cause Contributions to the Portuguese Mortality Gains

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In the first half of the XXI century

- the raise in the male life expectancy is mainly due to the improvements in the *circulatory system deceases* (47%) – as in the former period, these gains are concentrated in the elderly- and also in the external causes of death (11%)
  - the female mortality gains are particularly determined by the achievements made in the *circulatory system deceases* (more than 75%), mainly after the 75 years.
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# Age and Cause Contributions to the Portuguese Mortality Gains

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To sum up

1. the main source of life increase, both for females and males, in the last decade was the improvement in the treatment of the *circulatory system* diseases. This cause of death was responsible for *above 50%* of the gains in life expectancy.
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# Age and Cause Contributions to the Portuguese Mortality Gains

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2. Almost all of the causes of death have positive contributions to the mortality gains, however in this period a specific cause of death – the endocrine, nutritional and metabolic diseases – have the opposite effect in the life expectancy. This new tendency can be observed both for the women and male analysis
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# Age and Cause Contributions to the Portuguese Mortality Gains

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3. The *external causes* of death were also an important driver of the health evolution, particularly in the 1995-2000 period, and particularly in the male case (this cause of death was mainly associated with car accidents).
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# Age and Cause Contributions to the Portuguese Mortality Gains

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4. The decline in the deaths by *neoplasm* also contributed positively to a longer life, particularly in the women population, but the importance of the gains from this origin tended to be smaller
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# Age and Cause Contributions to the Portuguese Mortality Gains

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5. The magnitude of the *ill defined causes of death* constitutes a major problem in the analysis of the causes of death contribution, even in Portugal, were the relative level remain almost constant in the last decade
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# Gap between Portugal and Other European Countries

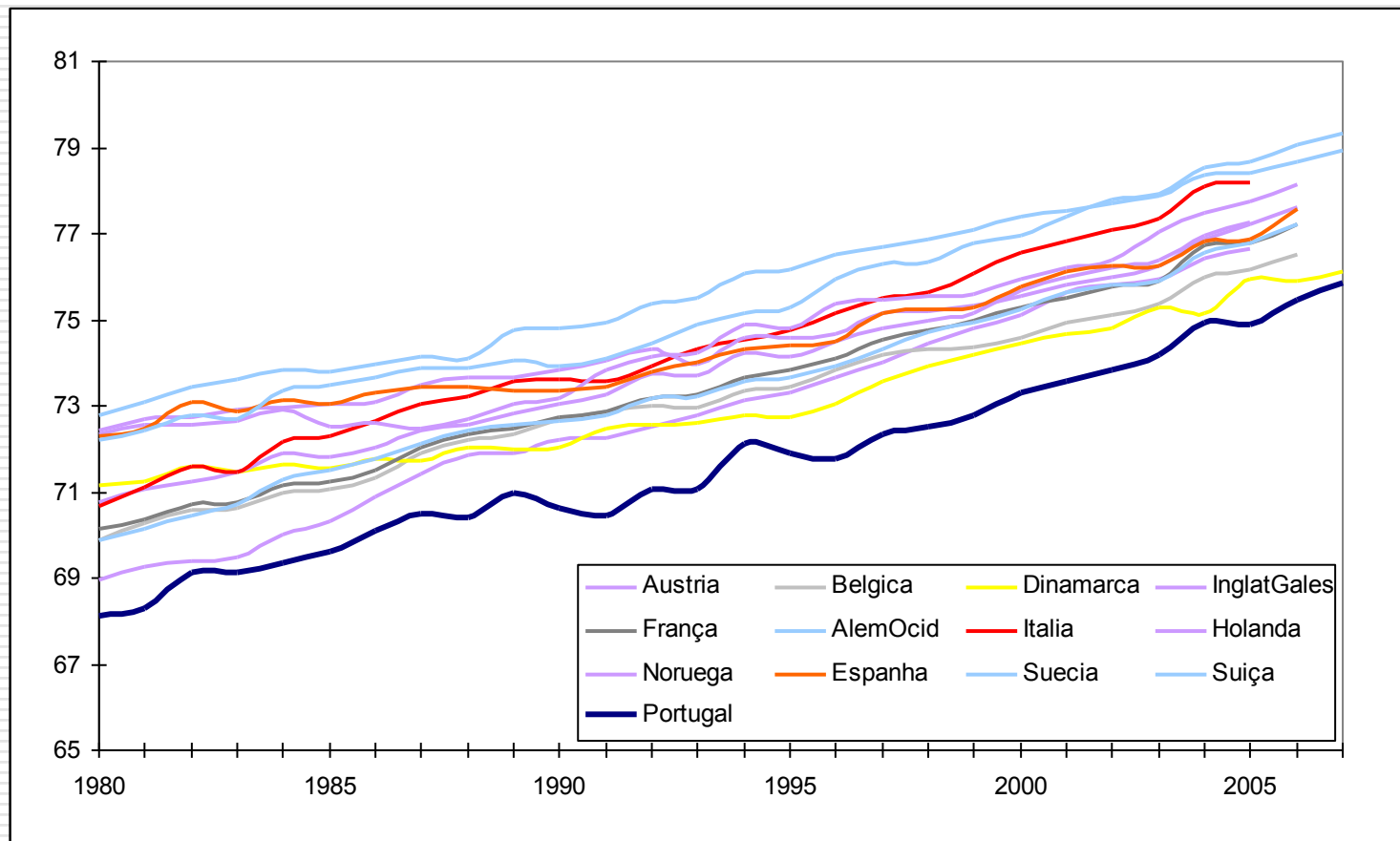
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- Since the 80's the discrepancies in life expectancy between Portugal and the other European countries tend to remain around the same values
  - As you will see, for males, the life expectancy in Portugal is clearly below the values observed in the other countries in the South of Europe
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# Male life expectancy at birth (1980-2005)

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# Gap between Portugal and Other European Countries

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As for the age contribution to the observed differences, we can see the results from a decomposition analysis. So:

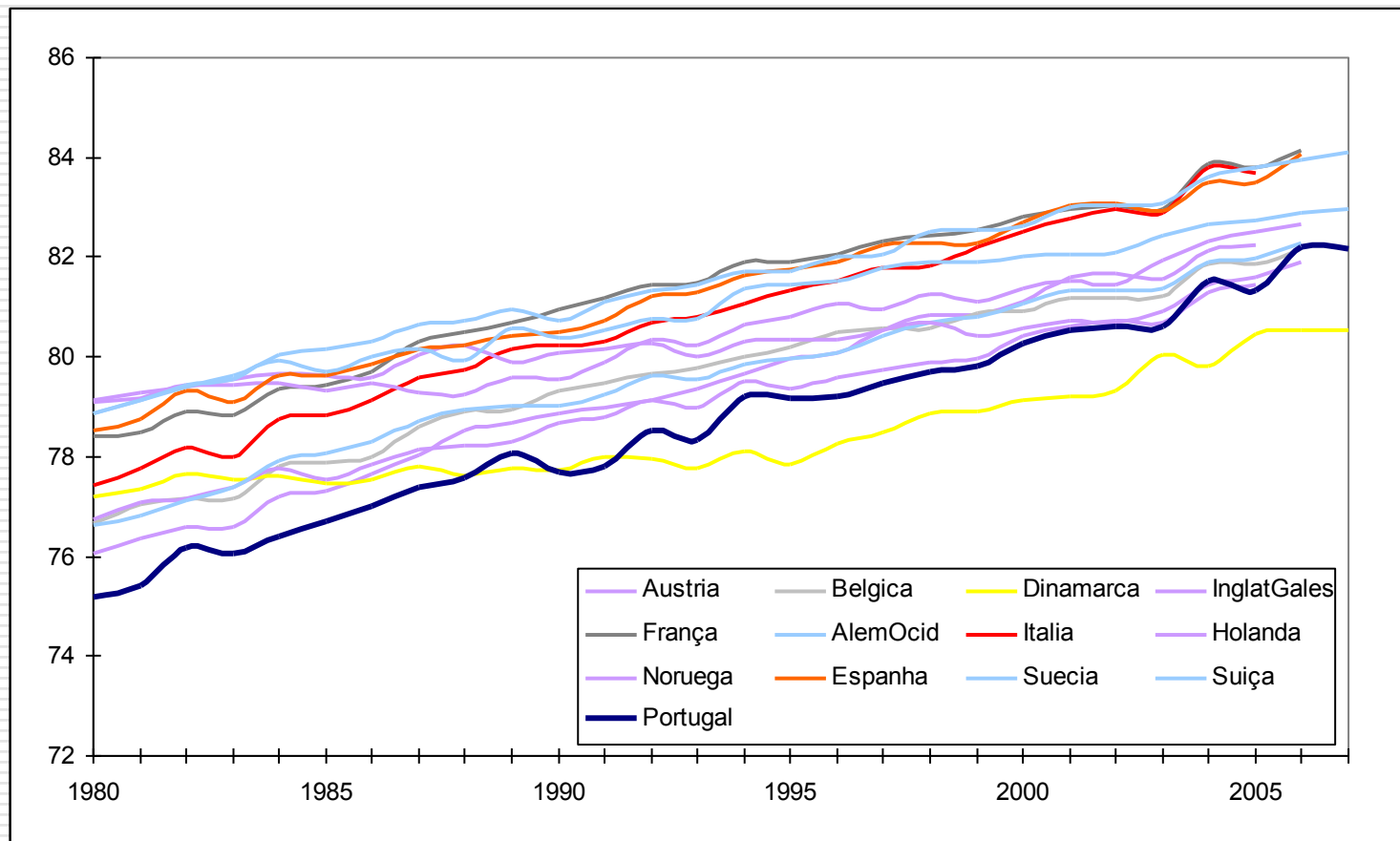
- Infant and youth mortality remain the most important source of the observed differences for a longer period than in the female case
  - The elderly mortality became increasingly significant but, even in nowadays, it is not the most important one
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# Gap between Portugal and Other European Countries

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- The Portuguese female life expectancy had continued to converge with most European countries
  - However, the Portuguese gap with the other countries in the South of Europe remains important
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# Female life expectancy at birth (1980-2005)



# Gap between Portugal and Other European Countries

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- In nowadays, the most important source of the differences in life expectancy is the elderly mortality
  - Within the elderly mortality, the contribution from the oldest ones, above 75 years old, is particularly significant, and attends for half or more of the inter country differences in female life expectancy
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# Conclusions

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- In the 50's the difference between the life expectancy in Portugal and the mean value in Europe was about 9 years; this discrepancy had gradually narrowed to 2 years in the mid 80's
  - Since then, this difference had remained almost the same
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# Conclusions

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- The Portuguese female life expectancy is the smaller one comparing to the other countries in study
  - The mortality above 60 years old is the source of approximately 75% of the observed differences in life expectancy between Portugal and Italy and Spain and, 95% of the difference between Portugal and France
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# Conclusions

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- For the male life expectancy, the Portuguese values are the smaller ones, and adult mortality is the major source of the observed discrepancies in the male case
  - Almost 70% of the difference with Italy, almost 55% of the total difference with Spain and only 30% regarding France.
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