

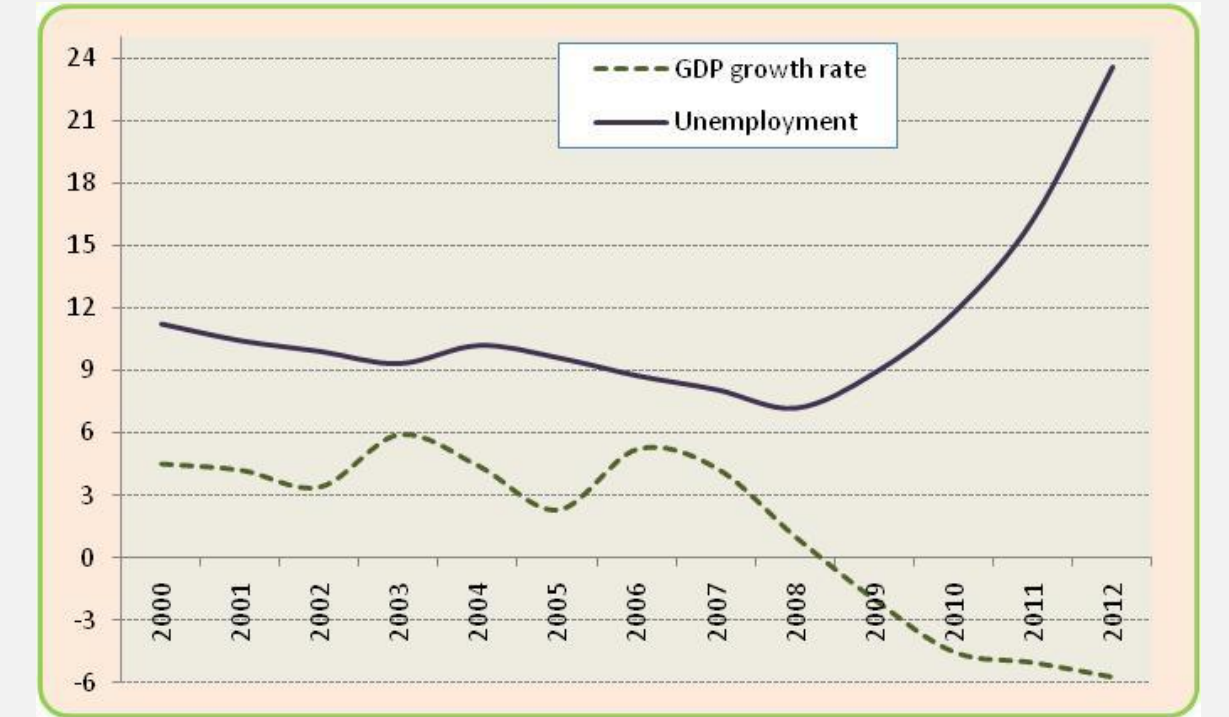


AGE AND CAUSE-SPECIFIC MORTALITY RATES IN RECESSION YEARS: Evidence from Greece

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Rationale & Objectives

The potential for severe economic downturns to significantly affect the aggregate death rates has been the focus of much research. The ample relevant literature is rich in methods applied and ambiguous in respect to the evidence provided. Since 2009 Greece has been found at the turmoil of a severe economic recession. This study examines whether the massive economic changes affected trends in all-cause and cause-specific mortality.

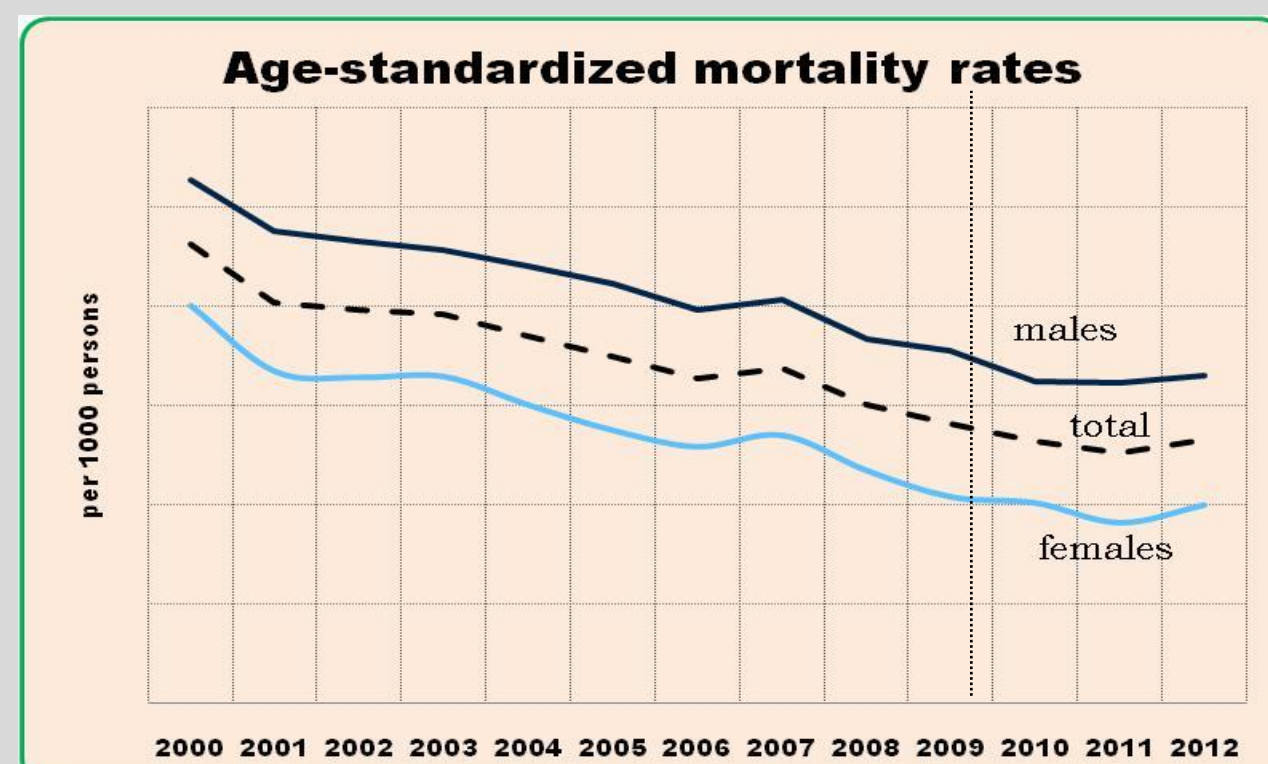


Data & Methods

Analysis relies on mortality statistics by age, sex and cause of death annually provided by the Hellenic Statistics Authority (EL.STAT). Causes of death are coded according to the rules specified by the International Classification of Diseases System. Data are grouped together under eight major causes of death: all cancers, circulatory diseases, respiratory diseases, digestive diseases, mental and behavioral disorders, endocrine-nutritional-and-metabolic diseases, and all external causes. Specific attention is paid on two sub-categories: suicides and car accidents.

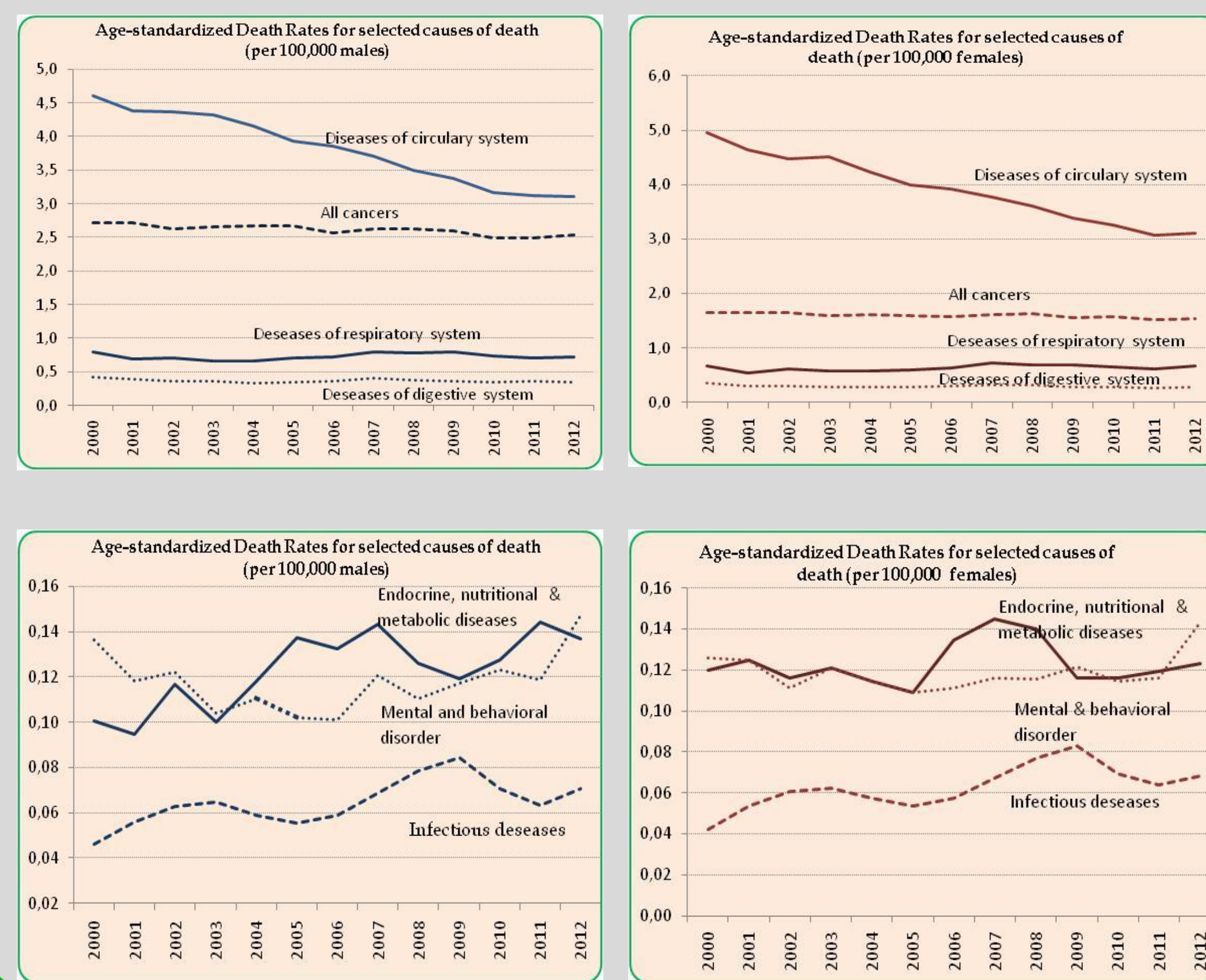
Main Findings:

Age-standardized mortality rates have been steadily declining for both sexes, despite the outburst of recession in 2009, ...

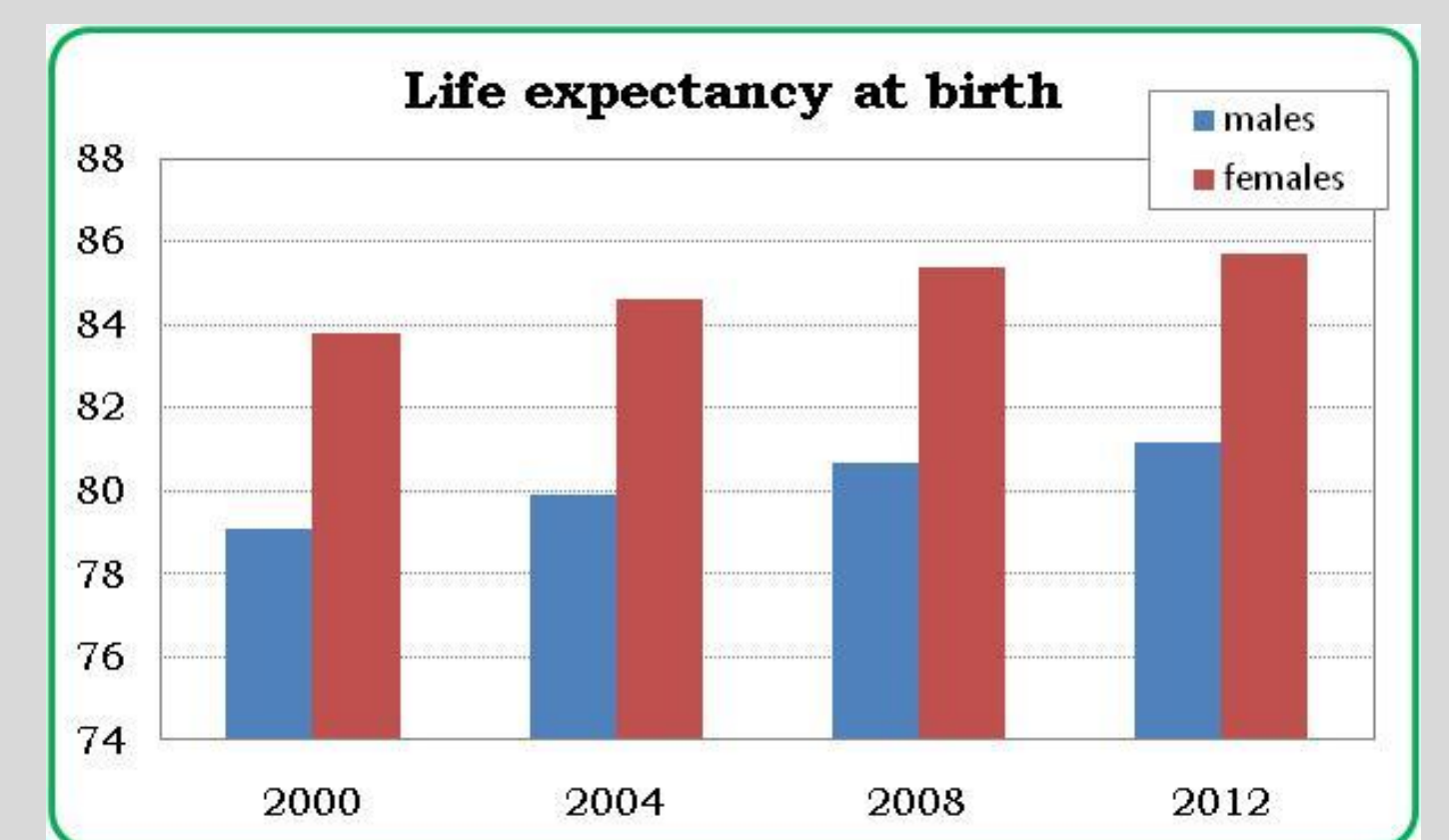


...at least until 2011. Some first signs of reversing trend appeared in 2012

For most of the major causes of death, age-standardized mortality rates have been decreasing, with the exception of mental disorders, infectious diseases- especially for men



Life expectancy at birth before and during crisis



Decomposition of the gain (in months) by age group and sex

| | Males | | | Females | | |
|---------------------|---------|---------|---------|---------|---------|---------|
| | 2000/04 | 2004/08 | 2008/12 | 2000/04 | 2004/08 | 2008/12 |
| Less than 1 | 1,8 | 1,0 | 0,0 | 0,7 | 1,5 | 0,0 |
| From 1 to 14 years | -0,4 | 0,6 | 0,2 | 0,0 | 0,2 | 0,0 |
| From 15 to 34 years | 0,9 | 0,6 | 1,7 | 0,1 | 0,7 | 0,2 |
| From 35 to 49 years | 1,0 | 0,0 | 1,1 | 0,1 | 0,7 | -0,2 |
| From 50 to 64 years | 0,7 | 1,2 | -0,6 | 0,7 | -0,1 | 0,3 |
| From 65 to 80 years | 3,8 | 3,4 | 1,0 | 3,8 | 3,6 | 1,7 |
| above 80 years | 2,1 | 2,5 | 2,3 | 4,2 | 2,7 | 1,9 |
| TOTAL | 10,0 | 9,3 | 5,7 | 9,7 | 9,3 | 3,8 |

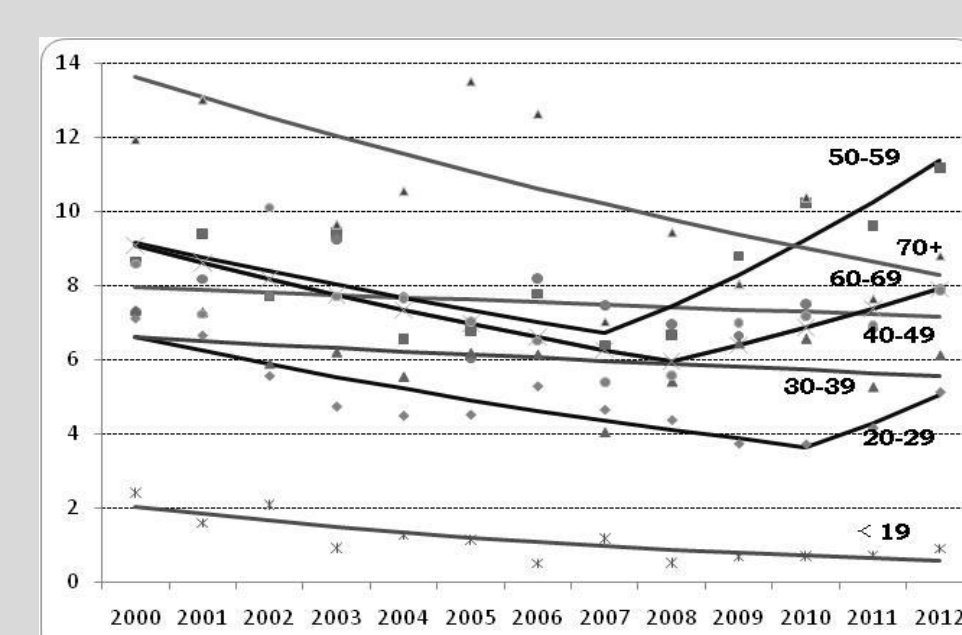
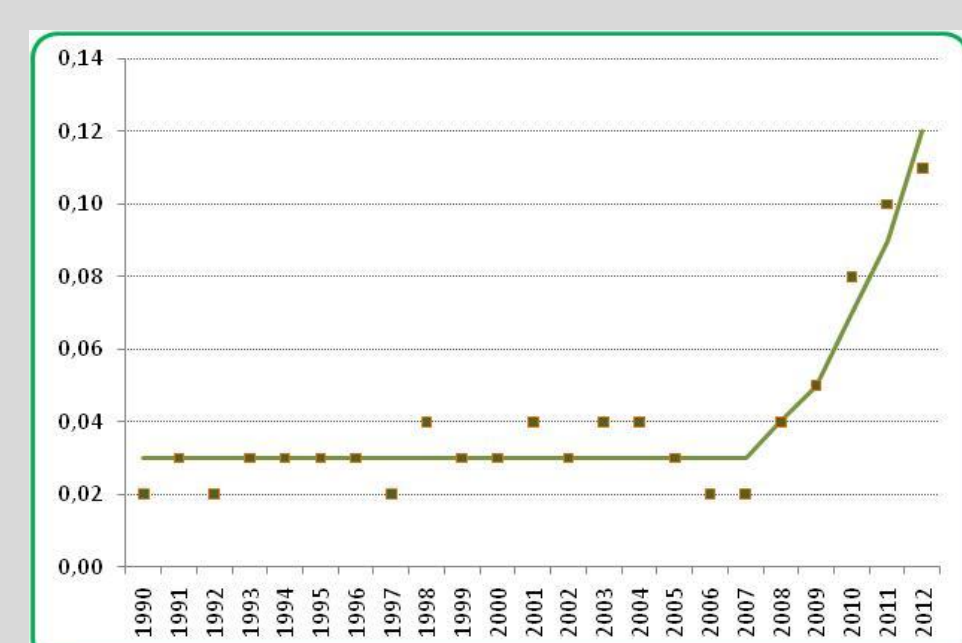
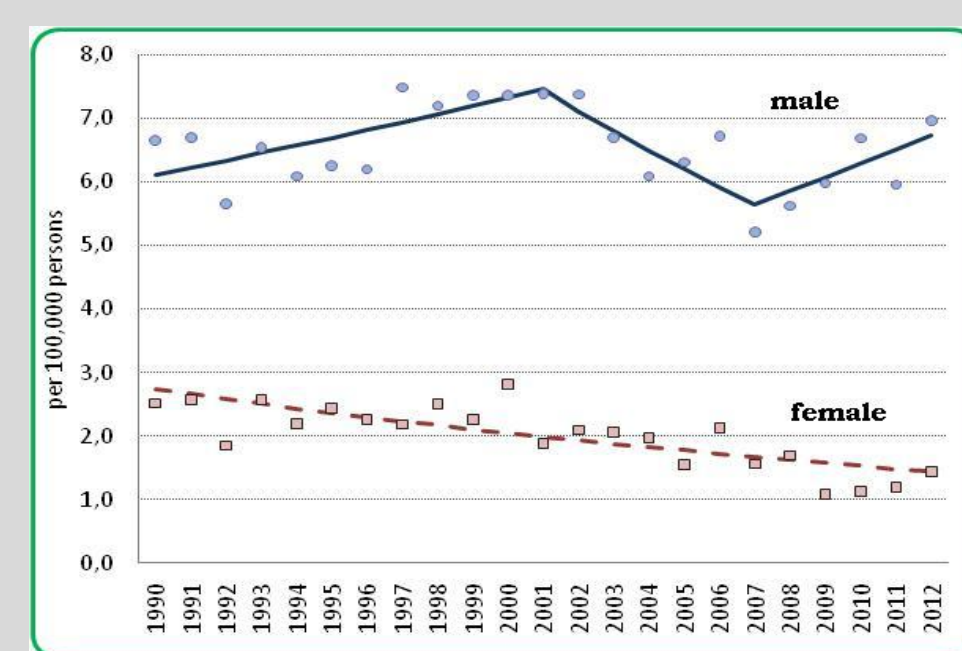
Focusing on : Suicides

❖ Since 2000, suicide rates have been steadily and significantly declining for women

❖ Changes in suicidal behavior have been by far more important for men who register a significant increase since 2007

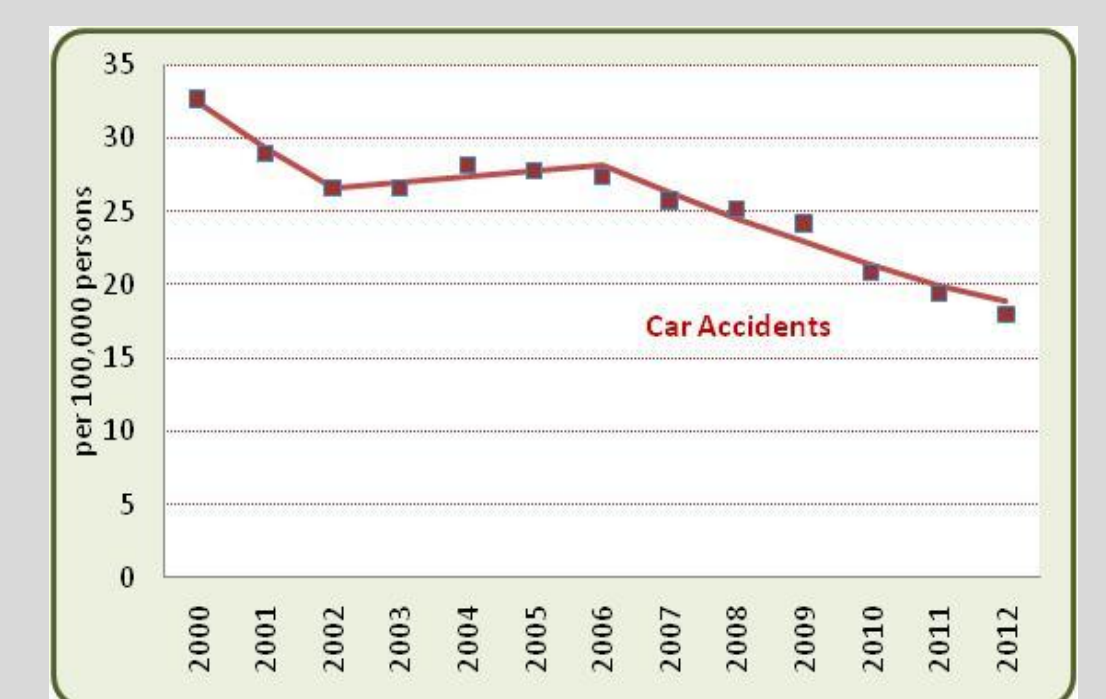
❖ Is that an economic crisis effect? Probably yes, since the share of suicides with financial motives has been increasing after 2008

❖ Yet, not all men are equally vulnerable: Suicide rates have significantly changed for three specific age-groups: young adults aged 20 to 29, elder workers (50-59) and young retirees (60-69 years of age).



Car Accidents

The remarkable decrease in car accidents is possibly related to declining numbers of daily commuters due to increasing joblessness and heightening gas prices

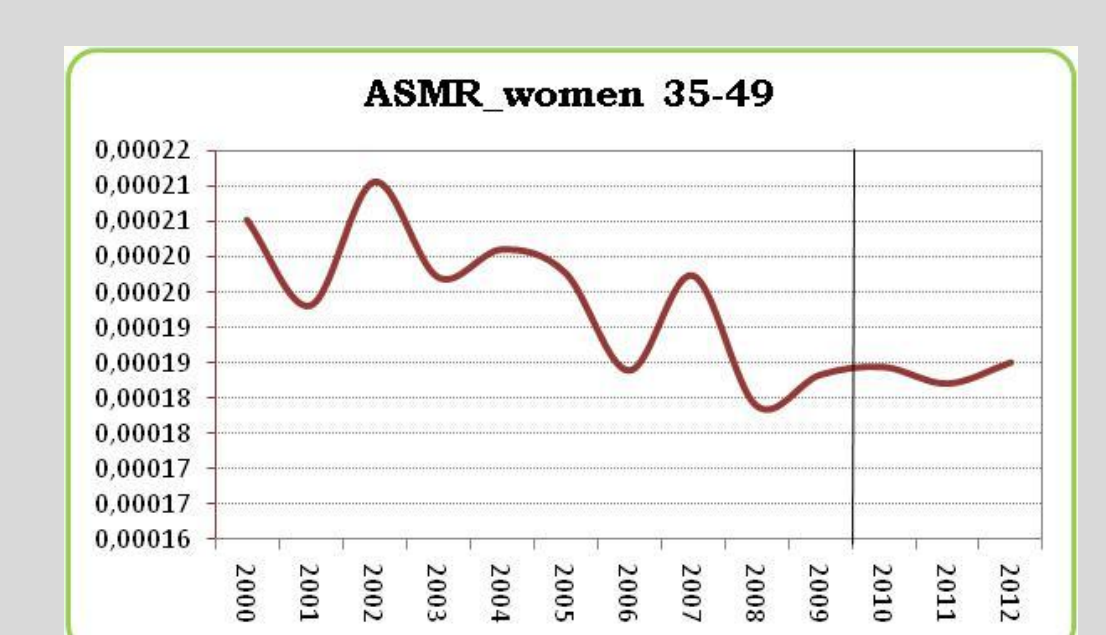
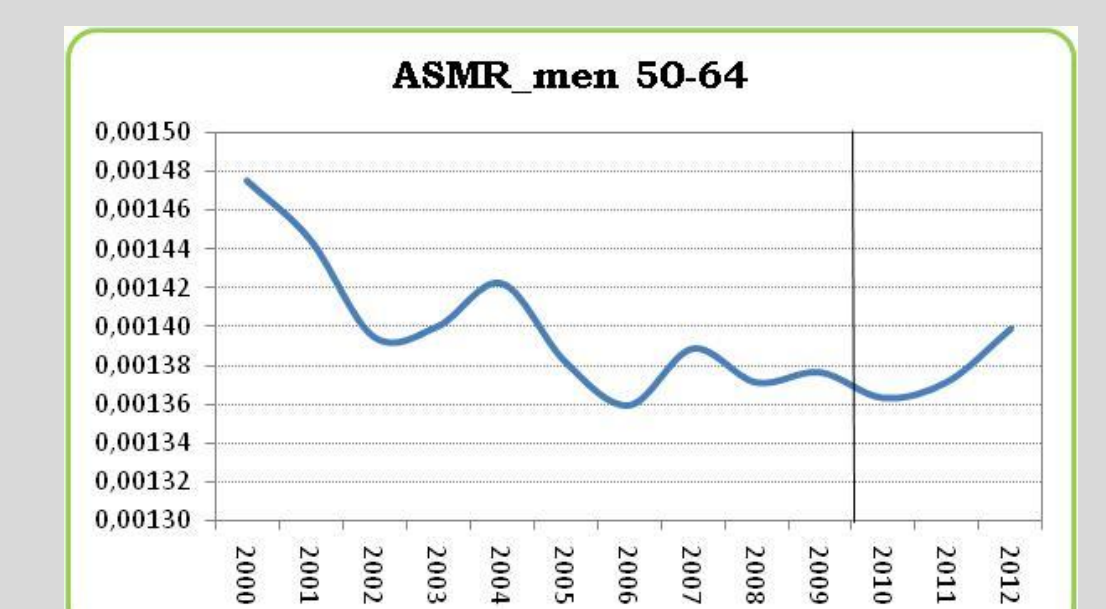


Specific age-groups

In contrast to the overall declining trend, since 2009 mortality rates have increased for specific age-groups.

Men between 50 and 65 and women from 30 to 49 have seen their risk before death to increase.

The main cause behind this trend is the same for both sexes: mental and behavioral disorders; a cause of death possibly associated with the pressure from recession.



Conclusions

First evidence suggest that despite the deep and long economic recession Greece has been experiencing since 2009, overall mortality rates have continued to decline and life expectancy kept increasing, though at a slower pace. This is the case for almost all major causes of death and for most of the age-groups. Nevertheless, certain alarming signs, such as the increasing risk of death for men between 50 and 64, the higher intensity of suicides and mental disorders as well as the halt in decreasing ASMR, should not pass unnoticed.