

Comparing Longevity and Mortality Levels at Highest Ages with the Help of HMD

Michel POULAIN and Anne HERM



TALLINNA ÜLIKOOL
TALLINN UNIVERSITY

Eesti Demograafia Instituut
Estonian Institute for Population Studies

UCL

Université
catholique
de Louvain



Assessing the mortality risks for the oldest olds may be challenging for several reasons :

- Data accessibility
- Data comparability
- Data reliability

Data availability

- Data aggregation
- Open class for the oldest olds
- Only period life table and not cohort life table

Data comparability

- Data collection for death at oldest ages may vary from country to country
- Various data sources for the at risk population also often being specific to a given country

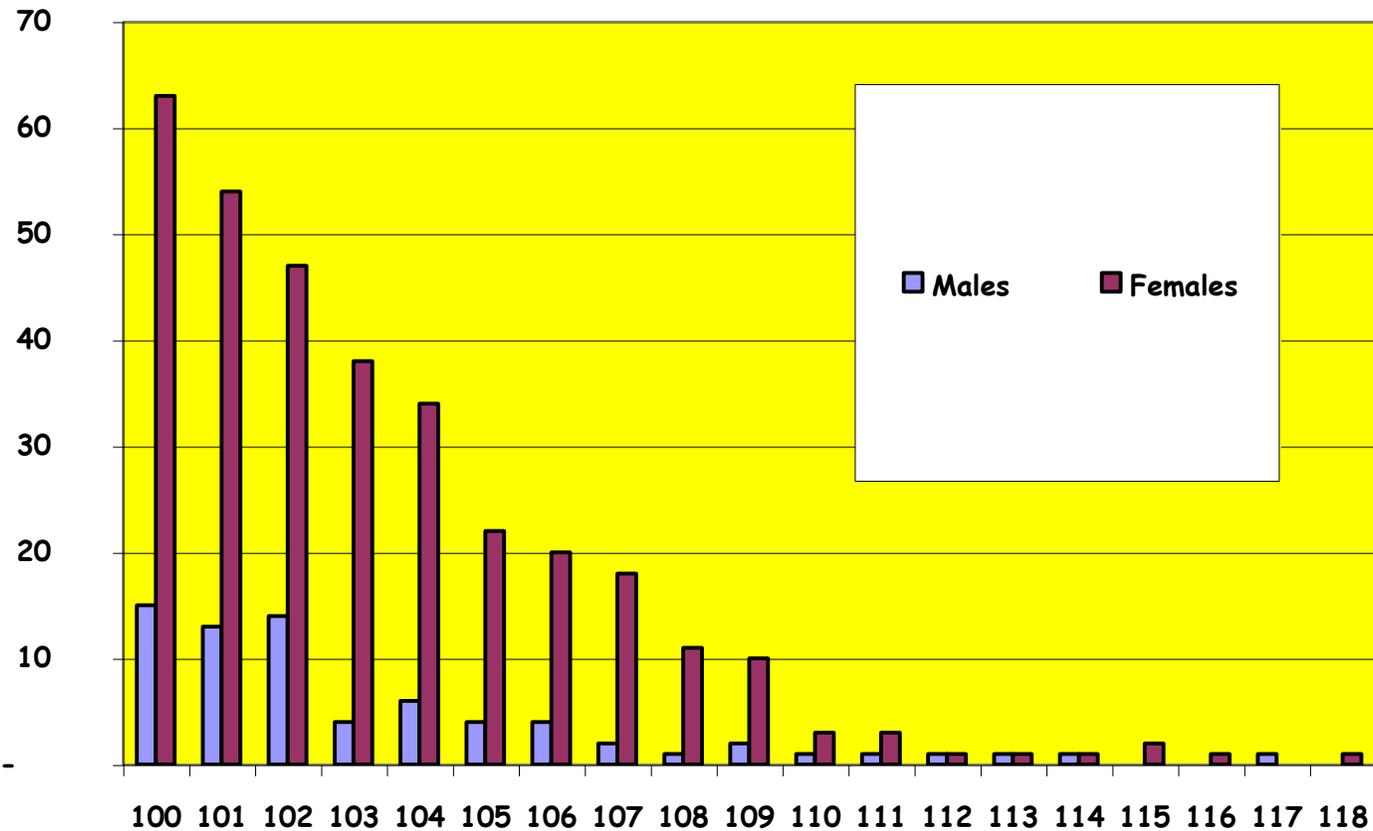
Data reliability

- Age validation is crucial
- False centenarians exist
- Over-estimation of the at risk population

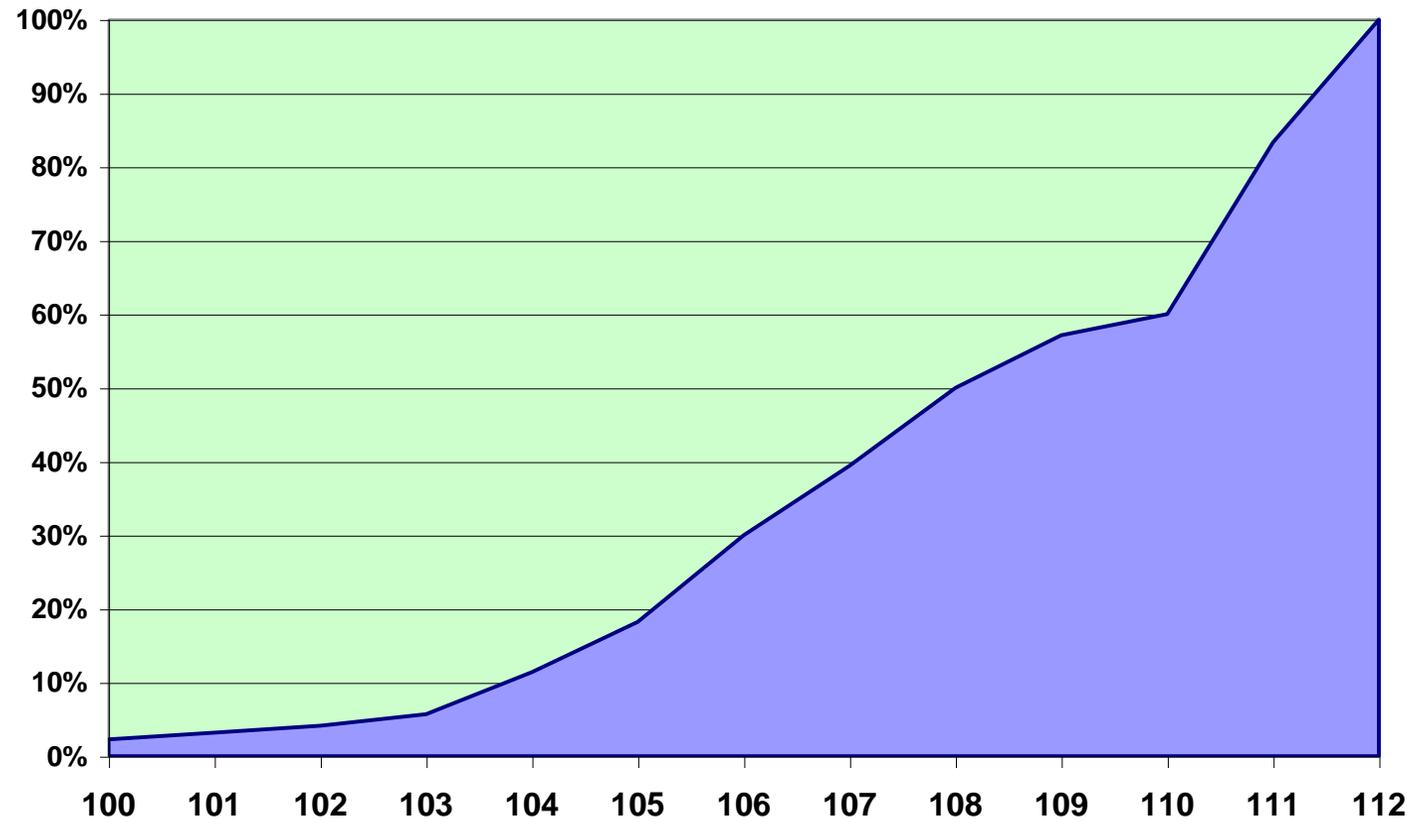
125 years... better than Jeanne Calment ?



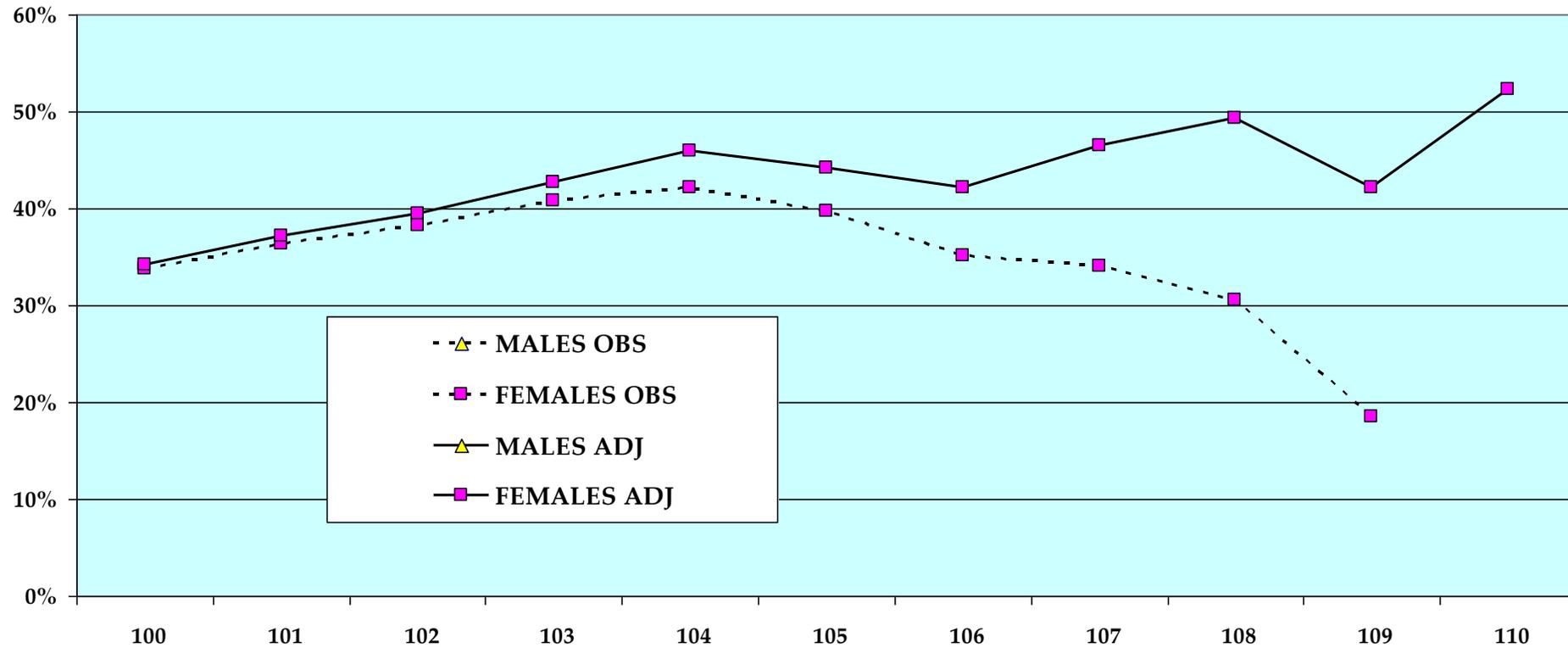
How many false centenarians did we met in Belgium ?



The proportion of false centenarians in Belgium



Observed and adjusted mortality rates for female centenarians in Belgium



HOW TO BECAME A FALSE CENTENARIAN

- Late recorded death
- Emigration and death occurring abroad
- Erroneous date of birth with possible age exaggeration

Data reliability is a key topic for late-life mortality

Late-life mortality is underestimated because of data errors

Leonid A. Gavrilov *, Natalia S. Gavrilova 

The combined efforts of HMD and IDL

Since 2000, the [Human Mortality Database](#) aims at collecting and disseminating the larger dataset of reliable data on mortality in a strict comparative way at country aggregated level, following the work developed by Kannisto and Tatcher,

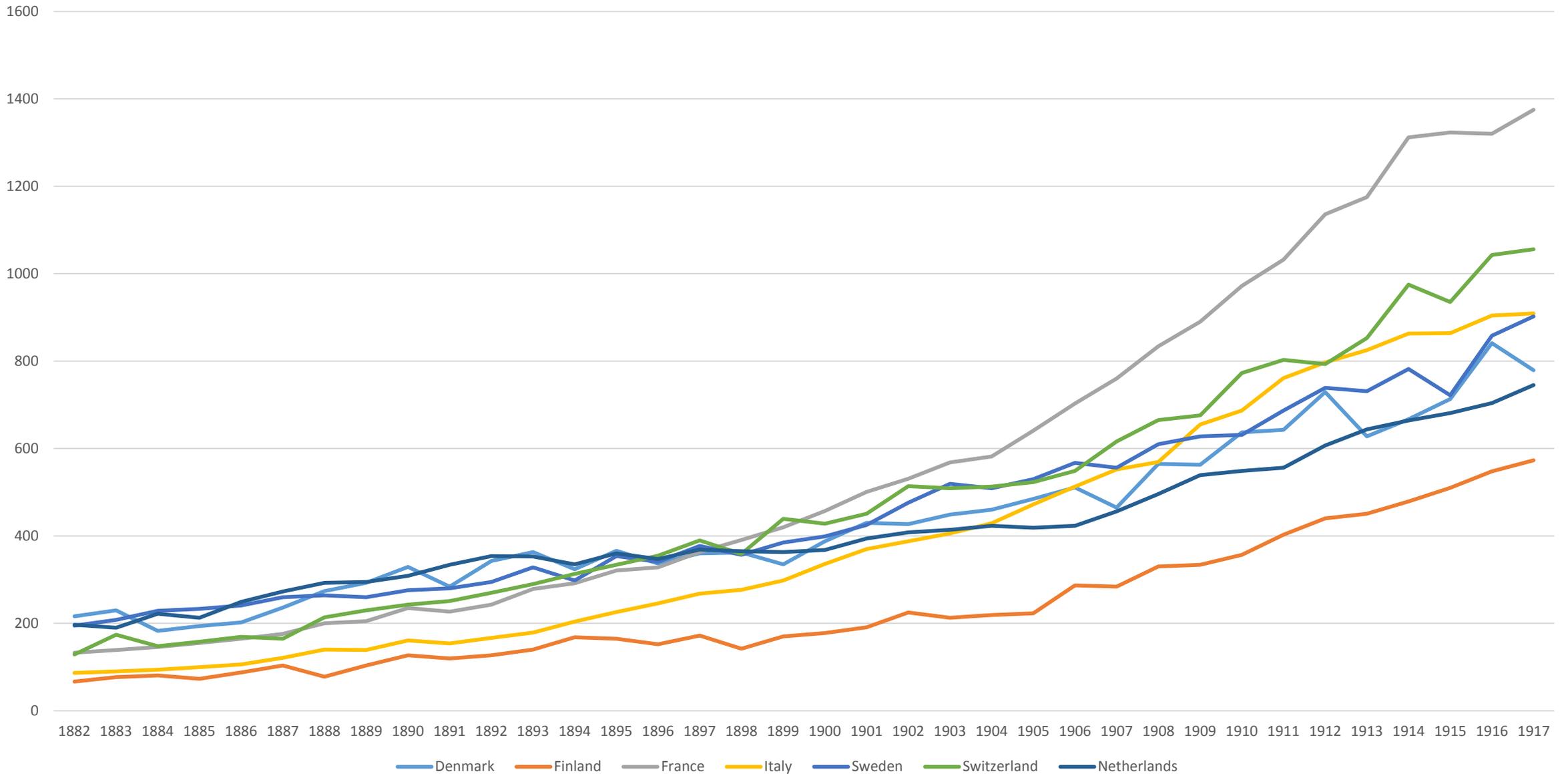
Whereas the researchers involved in the [International Database of Longevity](#) try to ensure the reliability of data related to the survival and mortality risks of the oldest olds at individual level.

Using the Human Mortality Database

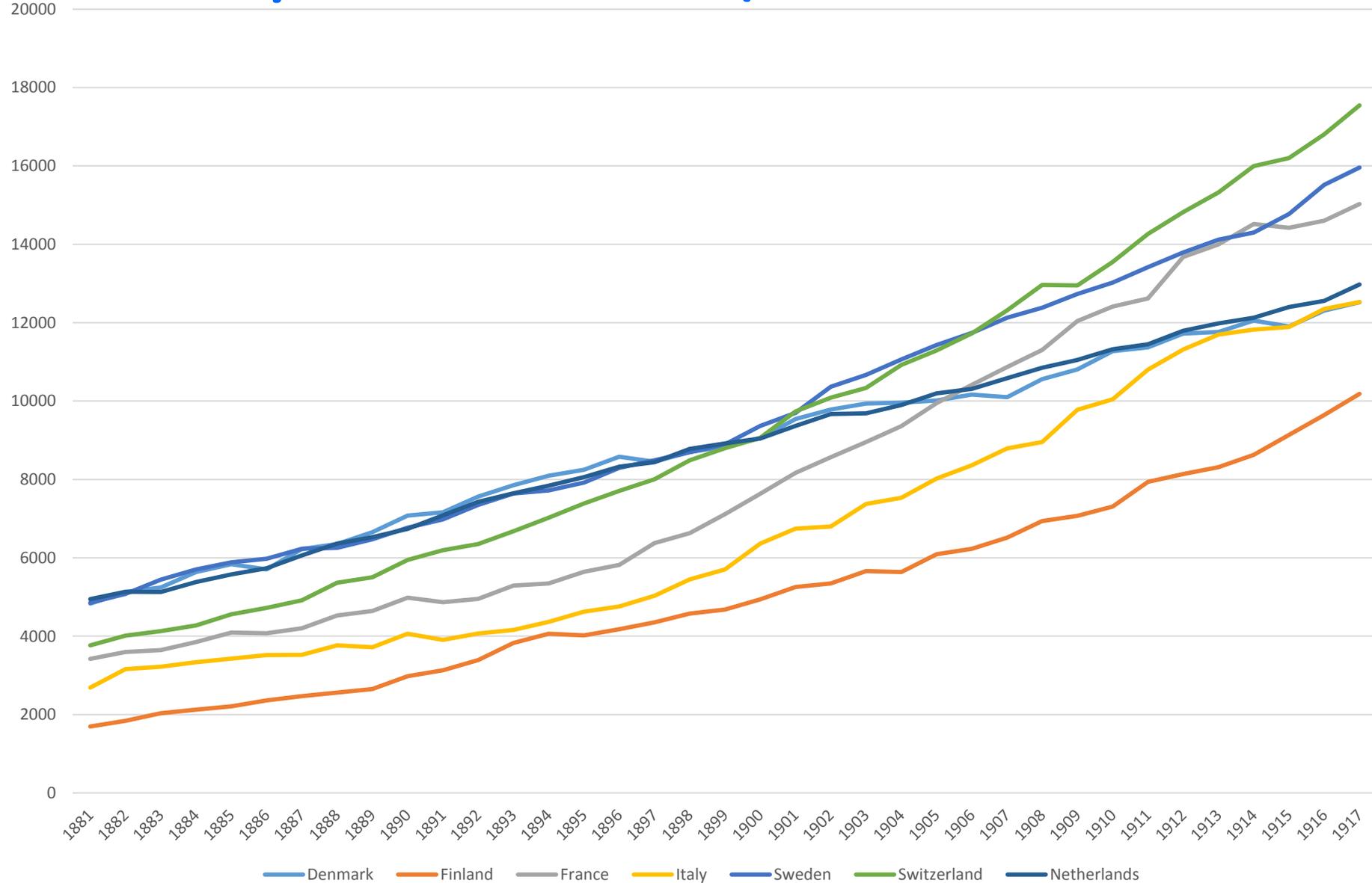
And the different cohort life tables available on line

To compare the probability to reach ages 90 and 100

Probability to reach 100 (HMD Cohort life tables)

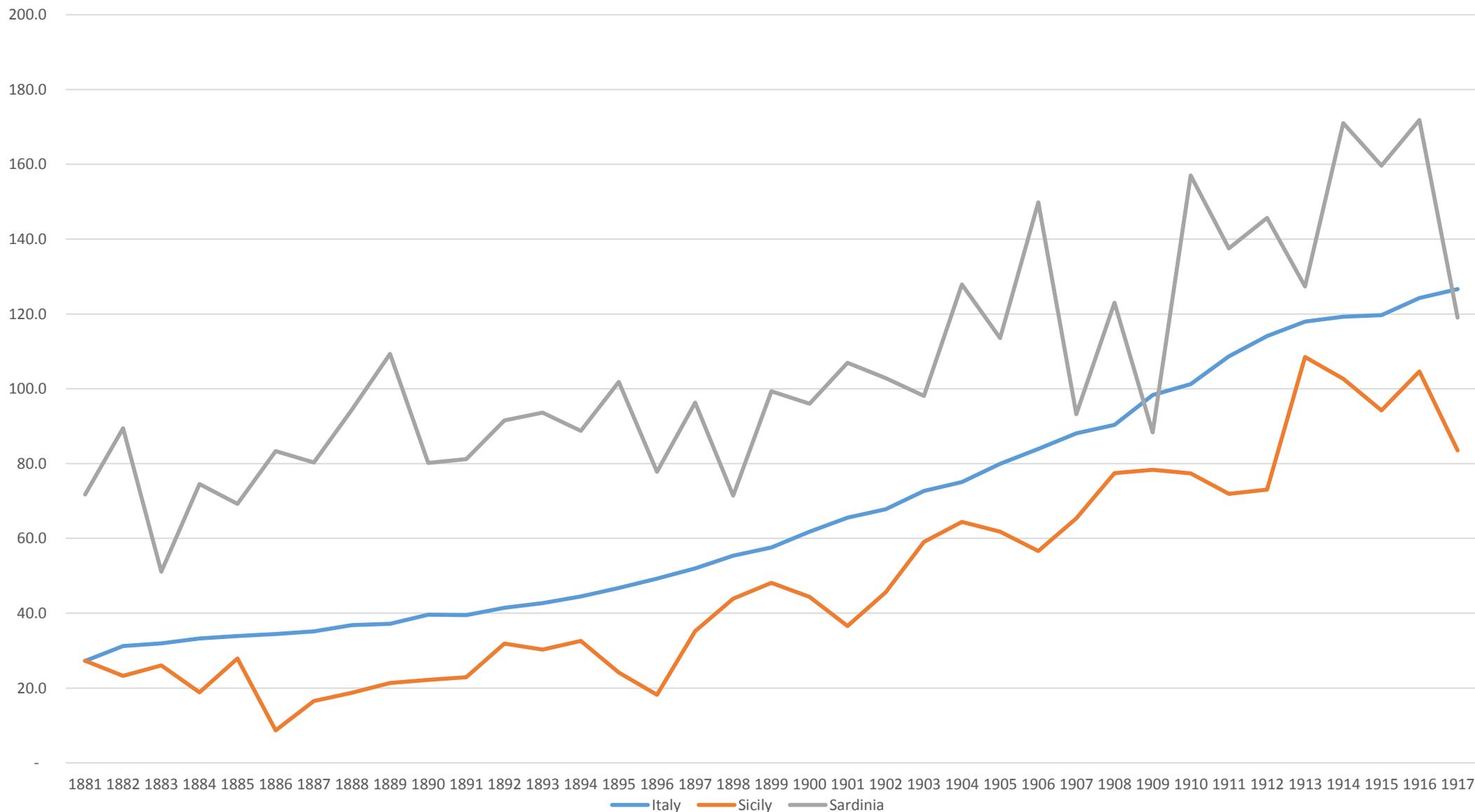


Probability to reach 90 (HMD Cohort life tables)



HMD figures as reference to validate a Longevity Blue Zone

The probability to reach 90 in 6 villages of the Sardinian BZ and in 6 villages in Sicily (Parco della Madonie)



Conclusions

Assessing and comparing extreme longevity levels between different populations is a challenging task.

The key problems are related to data availability, completeness and reliability.

The HMD may serve as reference and comparative tool whereas the work undertaken within IDL may help to improve the reliability of the original data itself.

Scientists are encouraged to interpret the large differences observed between countries and recent trends worldwide.

A scenic landscape photograph of a rocky coastline. In the foreground, a dark goat stands on a large, light-colored rock. The ocean is a deep blue, with sunlight reflecting off the water's surface, creating a shimmering effect. The sky is filled with large, white, fluffy clouds. The coastline is rugged and rocky, extending into the distance. The overall mood is serene and natural.

TANKS AND SOON