

E-Level Technical Exercise Part II

How long do World Bank retirees live?

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There are at least three major problems in this email when the author tries to compare retiree age at death in the World Bank to after-65 life expectancy in the US.

First, retiree age at death and life expectancy after reaching 65 years old are two fundamentally different concepts. Since the former also includes retiree who died *before* 65, its average is mathematically lower than the mean of age at death after 65. In addition, it is possible that people already reaching 65 are in general healthier than a sample consisting of all people after retirement at their 50s. For these reasons the comparison made by the author may be meaningless.

Second, while all retirees in the Bank's sample are deceased, it is unclear whether this is also the case for the US data quoted here, given the information provided. If the latter includes both healthy and deceased Americans reaching age 65 in the US, then the Bank's retirees are likely to die earlier simply because they are all deceased and the author compares it to a partially deceased US sample.

The third problem is associated with other demographic features of the two samples compared. The Bank retirees may consist of people from more diverse nationalities than the US. Chances are that most of the Bank's retirees come from developing countries. After retirement, they may reside in their home countries where healthcare services and facilities are much less advanced and comprehensive than that in the US. This factor may also lower the average life expectancy of deceased retirees at the Bank.

All the above possibilities render the author's interpretation of the Bank's retiree data less convincing than it appears to be. In addition to incomparable samples, it also fails to control other factors that result in bias such as health condition. Data availability permitted, the author needs to choose a proper sample of the Bank's retiree. A better approach, for example, may be to use the age at death for all retirees after reaching 65, regardless of their health condition. Besides, the sample should be limited to retirees who permanently work and reside in the US, if the author insists on comparing it with the US population. If not, then an alternative would be to compare individual retiree's life expectancy to that of the country he/she lives after retirement, not just the US. Finally, statistical error such as standard errors should also be noted as it occurs in any comparisons between summary data drawn from samples.