Lifespan inequality and the first demographic dividend

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Abstract

This paper investigates how inequalities in life expectancy affect the timing and extent of the first demographic dividend. Beyond the expected direct influence of the age structure on the support ratio, lifespan inequality imposes various unexpected influences on the dynamics of the support ratio.

Inequalities in life expectancy are often caused by socio-economic inequalities. Socio-economic status has a significant influence on life expectancy. People with higher income and education tend to have better health literacy and better access to healthcare and resources that promote healthy living. We apply a formal model that allows for an analytical investigation of the combined influence of inequalities in life expectancy and declining fertility on the dynamics of the age structure. This framework is capable to project the characteristics of the first demographic dividend under different scenarios with respect to lifespan inequality and the life table in general, but also with respect to other relevant parameters such as the speed of fertility decline, generation length, or age at entering and leaving the labour market. This investigation provides insights into the influence of inequalities within a population on the demographic dividend.

We use continuous analytical survival functions with the capability to incorporate changes in lifespan inequality. We then examine how these inequalities affect the age structure of populations with declining fertility. The analysis shows that higher inequality in life expectancy leads to an earlier peak, but at the cost of a shorter beneficial period, lower intensity and lower overall gains. Therefore, in addition to the overall benefits of reducing inequalities in life expectancy, the benefits from the first demographic dividend increase as inequalities become smaller. This means a benefit for the economy and for the population as a whole.