

Dr. Vegard Skirbekk
International Institute for Applied Systems Analysis "IIASA", Österreich

Productivity over the Life Cycle. The Changing Importance of Age-Specific Abilities

Abstract:

We present a survey of research on the relation between age and productivity, including estimates based on supervisors' ratings, work-sample tests and analyses of employer-employee datasets.

The causes of age variations in productivity are addressed with special emphasis given to cognitive abilities and experience.

To address some key problems with earlier approaches studying age and productivity, a method of estimating the relation between age and productivity-potential is discussed.

This method is based on age-differences in factors that influence productivity and the relative labour market importance of these factors. We consider experience, mathematical skills, the ability to discriminate between visual stimuli, leadership, as well as physical skills-finger and hand movement as well as body coordination. While experience accumulates with age, other abilities decrease.

It is estimated that job performance follows an inverse U-shaped pattern, where the peak is one where one has sufficient experience but has so far not aged enough to be affected by cognitive decline. The shape and peak of the curve varies over time and according to occupation due to differences in the labour market importance of abilities. For example, skill biased technological change could increase the importance of certain cognitive abilities and lowers the relevance of long experience. If the importance of long experience should decrease, peak productivity shifts towards younger ages.