

Ageing and Productivity

by

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Executive Summary

Our study deals with the relationship between population ageing and productivity at the level of the individual and the level of the firm. We contribute to the discussion on this relationship in two ways. First, we present a 'grand view' in which we discuss the various components of productivity in detail and look at long term historical developments where we take changing economic structures into account. Second, we present results from an empirical analysis of a variety of productivity measures. Our main findings are the following. Productivity is multidimensional and age affects various skills differently. The productivity effects of ageing depend on the extent to which age-induced changes in cognitive and non-cognitive abilities are relevant for work performance. In the past century the structure of work has changed a lot and therefore the relationship between age and productivity is also changing. Our empirical analysis shows that younger workers tend to have a higher number of absences while older workers are less absent but have longer durations of absences. The overall effect of age on absenteeism is concave. Sick leave increases with age up to age of 45 and flattens out afterwards. Age not only has an effect at the individual level. More age diversity within a group of workers leads to more individual absence. Rotation of older workers to tasks that are less physically demanding may improve the perceived working capacity and may even improve actual productivity. Productivity at work is monotonously decreasing with age but this decline in productivity can be compensated if workers remain in the same plant and accumulate job-specific experience. So tenure is good for productivity ("intensive margin") but not for absenteeism ("extensive margin"). From our analysis, we conclude that individual productivity deteriorates if no investments are made to

keep human capital up-to-date. The main lesson from our study is that labour market behaviour is more important than demographic changes. And, labour market behaviour can be influenced through flexibility in mandatory retirement ages, human resource management, employment protection legislation and wage policies. All in all, we think that the potential negative effects of ageing on productivity should not be underestimated. Nevertheless, they should not be exaggerated either. The decline of productivity with age is partly endogenous and subject to policy influence. In that sense the way productivity is affected by age is determined more by choice than it is an exogenous phenomenon.