Skill demand and the comparative advantage of age: Jobs tasks and earnings from the 1980s to the 2000s in Germany

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We study age-variation (among males) in adaptation to the rapid technological progress that occurred in Germany from 1986 to 2006. We use a task-based approach to describe the consequences these changes had for the type of work these men were carrying out and age-trends in the relative wages they received. Technological changes implied less physical job demands, growing demand for cognitive skills, particularly tasks where fluid abilities are important. A number of earlier physiological and cognitive studies suggest younger workers perform have a comparative advantage in terms of physically demanding work and tasks intense in the use of fluid cognitive abilities. In the 1980s, 50- to 59-year-olds were less likely to perform work tasks intense in the use of cognitive abilities than 30- to 39-year-olds. In the following two decades, those in their 50s experienced a more rapid growth in cognitively intense work tasks than those in their 30s – also tasks intense in the use fluid abilities indicating an adaptation to changing skill demands. These changes are found to explain part of the divergence in earnings between workers of different ages over this period – where wage growth among workers in their 50s was higher than among workers in their 30s.