

**CIRANO note on a report by Benoit Dostie and Pierre Thomas Léger, February 2012**

We use longitudinal linked employer-employee data and find that the probability of participating in firm-sponsored classroom (FSC) training diminishes rapidly for workers aged 45 years and older.

There are two basic theories as to why FSC training might decline with age. The main and first one explains lower training incidence as due to a shorter amortization period of investments. In a Becker-type model, human capital investments should occur early on in an individual's life in order to maximize the returns from such investments over a maximum amount of time.

Second, it is possible that FSC training declines with age simply because its contemporaneous returns also decline with age. That is, younger workers may benefit more from training than their older counterparts at any moment in time. This could be due to decreased ability to learn with age or simply because younger workers have more to learn from the current forms of FSC training than older workers. Either way, if such is the case, increasing training for older workers will unlikely yield meaningful productivity gains. That is, firms may be optimally setting FSC training at lower rates for older workers simply because of its decreased returns. If such is the case, subsidies to such programs may encourage inefficiently high levels of training for certain groups.

We show that older workers are much less likely to undertake FSC training than their younger counterparts. In addition to the shorter time to recoup their training investment, we underscore two additional, yet related, reasons why this is so:

both the wage training premium and the productivity gains to classroom training diminish with age. Furthermore, we show that the decrease in productivity gains is much greater than the decrease in the wage premium with age. This last result reflects the fact that workplaces reap most of the gains from training for younger workers and that the productivity premium of FSC training for older workers is close to zero.

Collectively, these results suggest that increasing the levels of FSC training for older workers is unlikely to yield large productivity gains.

An interesting issue that warrants further investigation is whether the decline in the productivity returns with age is due to reduced abilities to learn by older workers or a lack of productivity enhancing FSC training toward older workers.

Finally, there are also a number of channels other than productivity through which classroom training could have beneficial effects on the workplace. An interesting possibility would be the presence of complementarities in training younger and older workers. It is also possible that classroom training for older workers has beneficial impacts on other measures of workplace performance such as innovation or the retention of older workers (Picchio and van Ours (2011)). Such questions are left for future research.

The complete study can be found on the CIRANO Website at the following address:

<http://www.cirano.qc.ca/pdf/publication/2011s-69.pdf>