



European  
Research Area

# EUROPEAN POLICY BRIEF

## SPINTAN – Policy Brief No. 4

**SPINTAN**  
smartpublicintangibles

**The effects of survival rates on education in a simple life-cycle model\***

**March 7, 2015**

### SUMMARY

#### **Objectives of the research**

The purpose of this research was to understand how far the rise in educational participation observed during the twentieth century may have been a response to greater longevity.

#### **Scientific approach / methodology**

The main thrust of approach was to develop a simple life-cycle framework which explored both the decision to finish education and the decision to retire as economic choices, the first being based on the return to education and the second on the increasing welfare cost of work as health deteriorates in old age.

#### **New knowledge and/or European added value**

The analysis suggested that, while it is possible to account for the majority of the increase in years of education comparing those born in 1906 in the UK with those born in 1982, economic forces themselves may not lead to the extension of education much beyond present levels.

#### **Key messages for policy-makers, businesses, trade unions and civil society actors**

A key message is that policies to extend education further may need justification in terms of non-economic benefits from education.

\* This Policy Brief is based on the SPINTAN Working Paper No. 4: Weale, M. (2016): 'The effects of survival rates on education in a simple life-cycle model', available on the SPINTAN website <http://www.spintan.net/c/working-papers/>.

**Objectives of the research**

During the twentieth century there were three major changes in the pattern of work. The first is the increasing duration of education and the second is the movement in the retirement age which fell during the second half of the twentieth century but has since risen again. The third major change is the increased participation of women. This study sheds light on the first two changes, taking the experience of the United Kingdom as an example.

**Scientific approach / methodology**

The basic structure underlying the study is provided by the life-cycle framework. This suggests that education will be pursued while it seems a sound investment, i.e. while the return in terms of future earnings and any other welfare gains exceeds the current costs of devoting time to education which could have been used for working. It also suggests that people will choose to retire when the discomfort of working, perhaps as a consequence of declining health more than offsets the benefit in terms of extra spending. Declining mortality rates therefore both increase the benefit of education, because the expected benefit of higher wages is increased and, to the extent that they are also associated with increased health, also are likely to delay retirement. Generally rising wages, on the other hand, are likely to make leisure more attractive, making retirement earlier and thus reducing the incentive for education. There is some evidence that education itself affects mortality rates, and that may also affect the take-up of education. The magnitude of this effect depends on how much weight people put on the "joy of living".

**New knowledge and European added value**

The results draw attention to the way in which retirement decisions are a balance between a desire for leisure, which increases as wages rise, and the effects of rising longevity, which lead to delayed retirement; at present the longevity effects are probably stronger than those of wage growth. They show that on their own variations in lifespan have relatively little effect on the demand for education. If however education has effects in addition to those on earnings, more powerful effects can be found. For example, a direct influence on survival makes it possible to explain the majority of the increased length of education in the UK, comparing men born in 1906 with those born in 1982. Mortality rates are, however, now so low except in old age that this effect is unlikely to have much more influence. The effect of discounting is such that, even if there is a substantial impact on mortality rates late in life, the benefit seen

**Key messages for  
policy-makers,  
businesses,  
trade unions and  
civil society actors**

---

from the perspective of someone close to the age at which education is completed is small.

---

When making decisions about education, policy-makers need to consider the full range of benefits arising from it, and not just focus on the returns to education. Rising longevity is likely to lead to a considerable extension of working life, unless wages also rise substantially, in which case people will choose to retire earlier than would otherwise be the case. This is, however, unlikely, itself to induce much further increase in the duration of education.

---

## SPINTAN – Smart public intangibles

<b>Coordinator</b>	Instituto Valenciano de Investigaciones Económicas (Ivie), Spain
<b>Consortium</b>	<p>Instituto Valenciano de Investigaciones Económicas (Ivie), Spain</p> <p>National Institute of Economic and Social Research (NIESR), United Kingdom</p> <p>LUISS Libera Università Internazionale Degli Studi Sociali Guido Carli (LUISS), Italy</p> <p>Istituto nazionale di statistica (Istat), Italy</p> <p>Imperial College of Science, Technology and Medicine, (IC), United Kingdom</p> <p>The Conference Board Europe (TCBE), Belgium</p> <p>Organisation for Economic Co-operation and Development (OECD), France</p> <p>Zentrum für Europäische Wirtschaftsforschung (ZEW), Germany</p> <p>Deutsches Institut für Wirtschaftsforschung (DIW), Germany</p> <p>Wiener Institut für Internationale Wirtschaftsvergleiche (wiiw), Austria</p> <p>Forum för reformer och entreprenörskap, (FORES), Sweden</p> <p>Kopint-tarki Konjunkturakutató Intezet (Kopint), Hungary</p>
<b>Duration</b>	Project started on December 2013 and will end in November 2016
<b>Funding Scheme</b>	SSH.2013.1.1-2. Intangibles in the public sector - an unrecognised source for innovation, well-being and smart growth
<b>Budget</b>	3,260,536.40 €
<b>Website</b>	<a href="http://www.spintan.net">www.spintan.net</a>
<b>Further reading</b>	
<b>Related websites</b>	
<b>For more information</b>	<a href="mailto:info@spintan.net">info@spintan.net</a> or <a href="mailto:matilde.mas@ivie.es">matilde.mas@ivie.es</a>