

Discussion of Fertig & Kluve, “The Effect of Age at School Entry on Educational Attainment in Germany”

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What is the Rationale for Compulsory Schooling Laws?

- If education is an investment, and there are no positive externalities, then compulsory schooling laws will restrict choice and reduce welfare among individuals for whom they bind.
- Under this view, families and their children make optimal decisions about when to start and stop school. We should respect the fact that people have different discount rates.
- **But** if young people underestimate the value of staying on at school – or parents underestimate the value of starting them early – compulsory schooling laws may raise their individual welfare.
- (NB. It is also possible that the social rate of return to education is higher than the private rate of return. In this case, compulsory schooling laws may raise net welfare.)

Why School Attendance Laws Matter

- Early studies asked the question: What is the rate of return to schooling, taking into account ability bias?
- Previously, twins studies had been the main way of answering this.
- Compulsory schooling laws are an alternative approach – they provide a source of variation in schooling that is plausibly unrelated to ability.
- In the US, Angrist & Krueger (1991) used regression discontinuity (quarter of birth), and find that an extra year of schooling boosts earnings by 9.2%.
- Looking at Britain, Canada, and the US, Oreopoulos (2003) used diffs-in-diffs (provincial changes in school leaving ages), and found that in all three countries, an extra year of schooling boosts earnings by 10-15%.

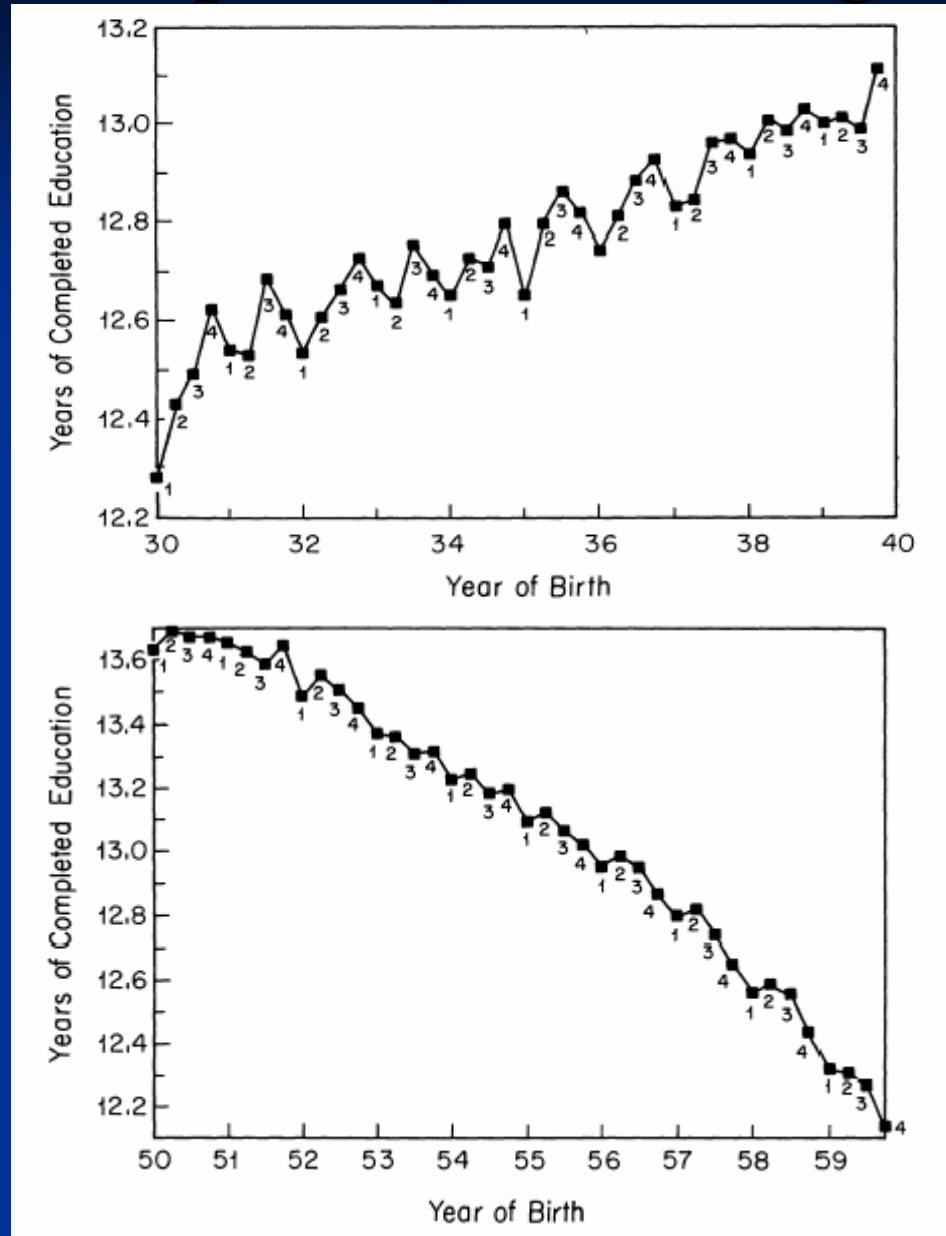
But Germany is Different

- Pischke and Von Wachter (2004) use *diffs-in-diffs* to look at school *leaving* ages among West German states. Soon after WWII, some states started to add a compulsory 9th grade. It was introduced in different states at different times, and was not universally in place until 1970.
- They find that:
 - a one-year extension in mandatory schooling boosts school attainment by 0.17 to 0.6 years
 - the returns to compulsory schooling in Germany are zero or very small.
- Why? Germany is different to the Anglo-Saxon countries:
 - “The decision to leave school early is not taken at age 14 or 15, but effectively at age 10 or 11 when students have to choose a secondary track”
 - The alternatives after leaving school are very different in Germany. Few on the basic track take an unskilled job when they leave school.
- But this still leaves the question: why do Pischke and Von Wachter find that school *leaving* ages increase actual schooling, while Fertig and Kluge find that school *starting* ages do not?

Three Possible Explanations

1. Schooling is poorly measured in the *Young Adult Longitudinal Survey*. Instead of years of education, the measures are high schooling/low schooling/repeat class. Insufficient variation.
2. For those born after 1960, compulsory schooling laws don't bind.
 - Oreopoulos uses Americans, Britons and Canadians born **1900-1960**.
 - Pischke and Von Wachter use Germans born **1930-60**.
 - Fertig and Kluve use Germans born **1960-74**.
 - Angrist & Krueger show how their instrument gets weaker over time.

Compulsory Schooling Less Likely to Bind



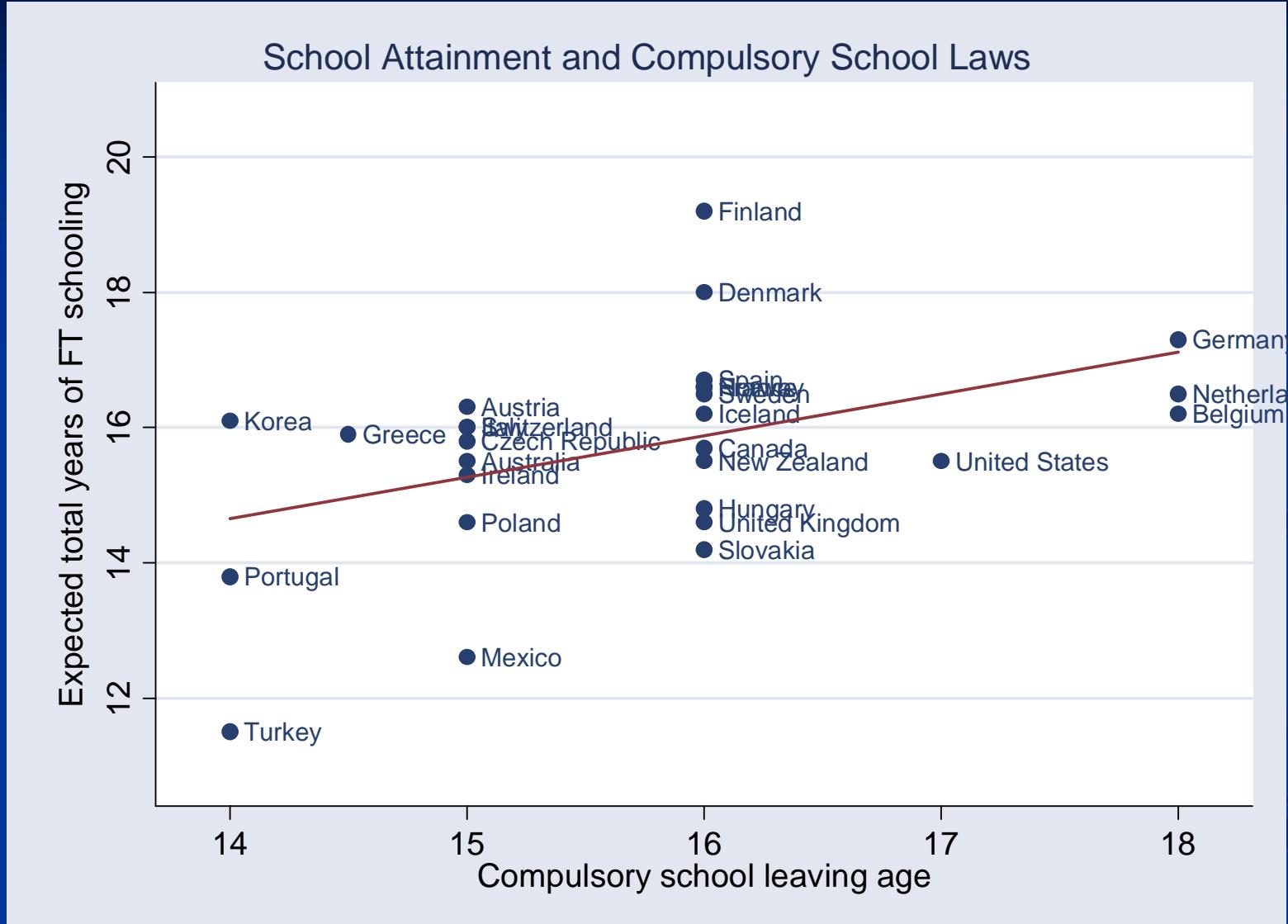
Source: Angrist & Krueger (1991). Figures show those born 1930-40, and those born 1950-60.

Note: Compulsory schooling laws should cause those born in quarters 3 and 4 to get more schooling than those born in quarters 1 and 2.

Three Possible Explanations

3. School finishing laws may matter more than school starting laws. If you make me start earlier, I'm likely to stop earlier too. But I can't shift my starting date if you tell me I can't stop before a certain point.
 - For a simple test of this, we can look at patterns across the OECD. Laws are potentially endogenous to a country's taste for schooling, but may tell us something all the same.

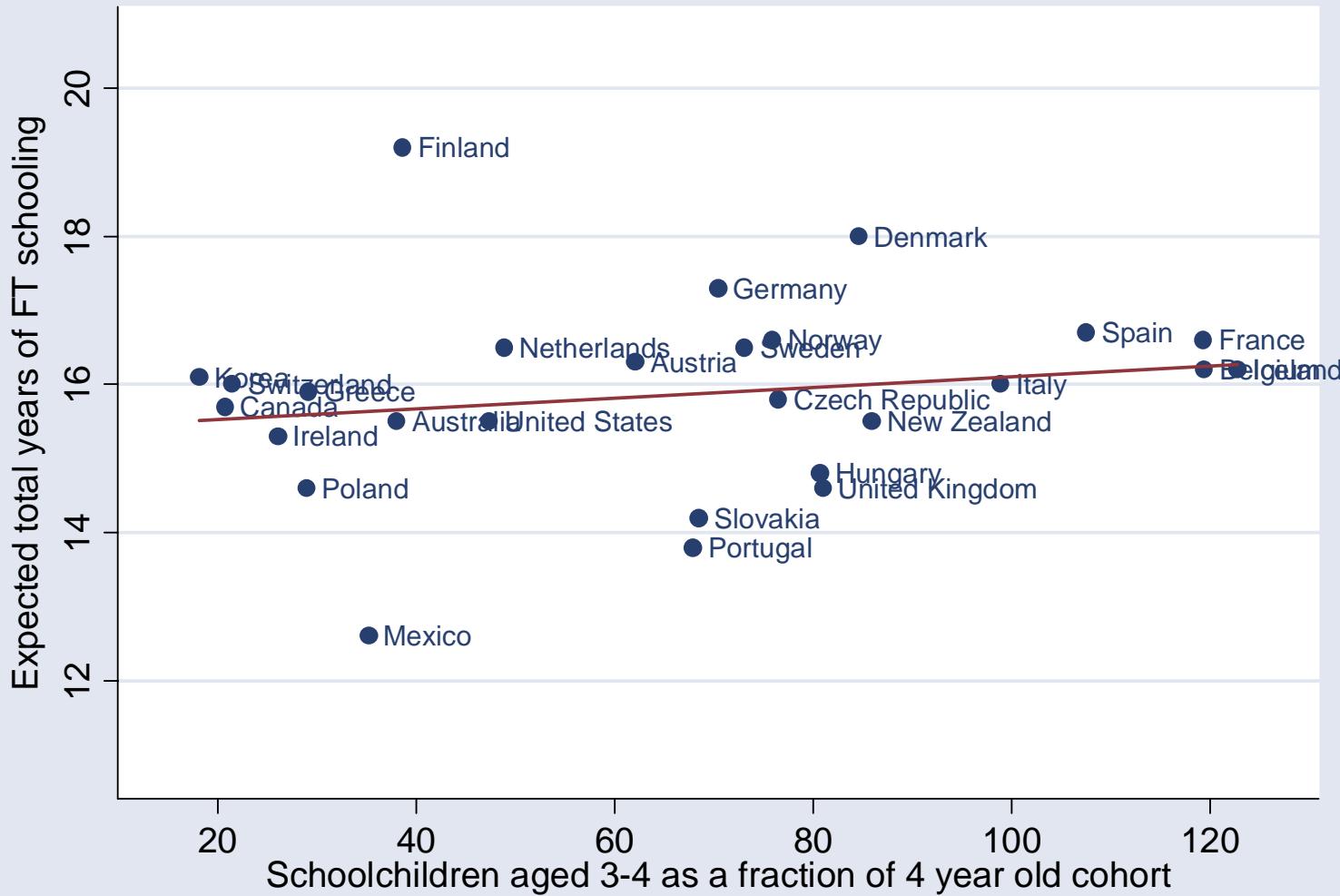
Leaving Age Effects



Beta=0.61 (P=0.02)

Age at School Entry Effects

School Attainment and Fraction of Under 4's in School



Beta=0.007 (P=0.23)