

Resources for Lifelong Learning and Tertiary Education

Stefan C. Wolter¹

**Swiss Coordination Centre for Research in Education, University of Berne and
IZA Bonn**

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Introduction

Tertiary education plays a nonneglectible role for lifelong learning in many respects. Tertiary education institutions offer lifelong learning and in many countries this part of their overall offer has become a very important source of revenues. In my speech I will, however, concentrate on another aspect of tertiary education with respect to lifelong learning: tertiary education as prerequisite for successful lifelong learning on the individual level. I will first assess the importance of tertiary education for individuals to get into lifelong learning and then treat some of side-effects this has on people with no tertiary education. I will then go into the financial aspects of getting additional adult learning, the incentives for lifelong learning and conclude with some policy related remarks on the importance of tertiary education as the base for lifelong learning. The empirical part of this paper relates to Switzerland but holds in most respects also for other European countries with comparable labour market structures.

Tertiary education as the entry ticket to Lifelong Learning

Lifelong learning not only has become indispensable for individuals working in good jobs, it has also become in it's form more and more structured and formal. Although the classic on-the-job training has not lost it's importance, formal and structured courses provided by professional suppliers are needed to overcome rapid technological or organisational changes. These courses, however, often take place outside the workplace but during working time. If an employee wants to keep his

human-capital up-to-date in such conditions he needs the support of his employer, otherwise the financial and time constraints are too heavy to bear. Consequently job-related and formal training has become predominantly an employers market, where employers decide whether to invest or not to invest in a specific employee. This is true even more in labour markets that are characterised by compressed wage structures, like the ones in Germanic countries. As described by Acemoglu and Pischke (1999), compressed wage structures offer incentives to employers to invest in training but the back side of the medal is that they do not offer big incentives to workers to invest themselves in their own human-capital. In other labour markets, wage structures per se are not a disincentive for employees, but rather credit market constraints hinder them to pay for very expensive training programmes.

In such a situation where employers' selections decide whether an employee will get training or not, it is important to look at the patterns of such selections. Economic logic would predict that employer would select those employees that promise the highest increase in their productivity through training. Tertiary education plays in this respect the role of a signal for high trainability or from a more pedagogical viewpoint one could argue that you need some basic educational foundations in order to use more training in a productive way.

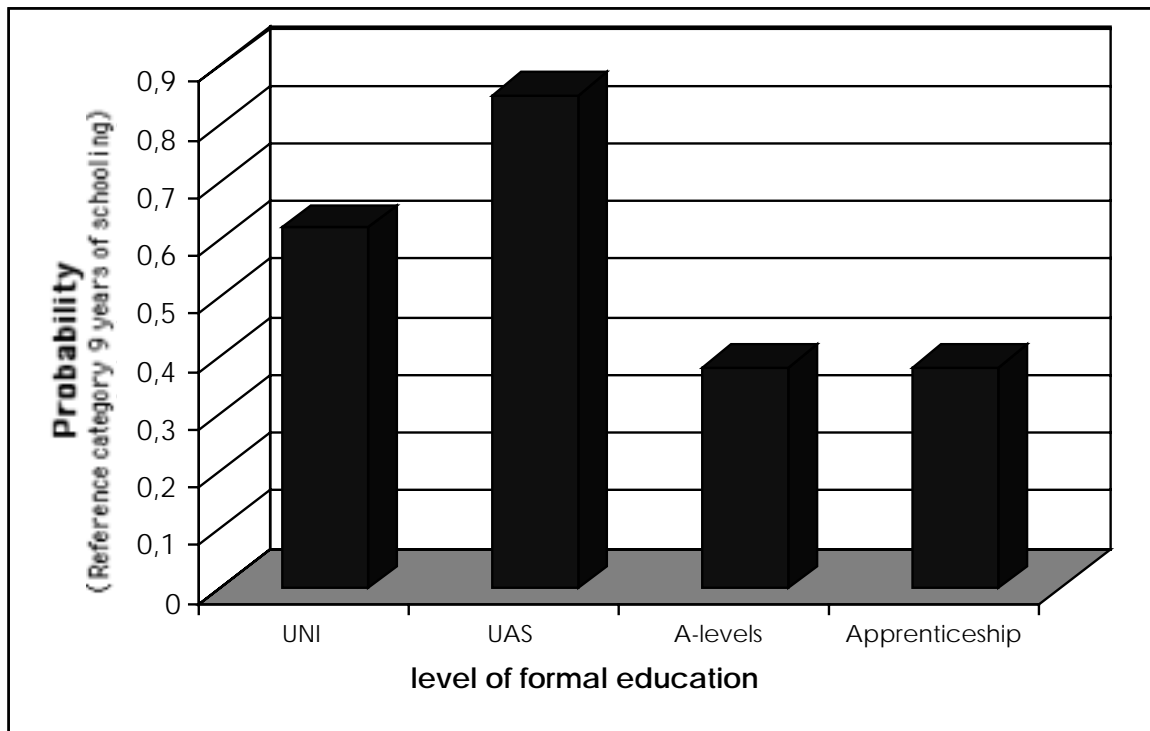
From our research it seems to be the case, that the minimal requirement for this initial education has risen over time. Very often providers of training require tertiary degrees as entry qualifications in their courses.

The combination of employers' selection decisions and providers requirements has made of tertiary education the entry ticket to lifelong learning provided or paid for by employers.

In Switzerland the probability of getting firm subsidised training due to educational differences is almost the double for employees with a tertiary level educational background compared with those with a degree on the secondary II level (see Graph 1). In these calculations the education effect is singled out by controlling for firm specific and socio-demographic aspects of the employees. We can deduce from the fact that some of the other explanatory variables, like hierarchy level in the company are also linked to the formal educational background, that the overall effect of the initial education is even bigger than showed in graph 1.

¹ Address: SKBF, Entfelderstrasse 61, CH-5000 Aarau, email: stefanwolter@yahoo.de

Graph 1: Probit estimates of firm-subsidised training (Switzerland, 1996)



Source: Wolter (2001)

What happens to those without training?

Not having been selected by your employer for continuous education has clear consequences, although not primarily of financial nature. Our calculations show that employees without firm-subsidised training have a significantly reduced job-security that means a significantly higher risk of being laid-off.

Once laid-off, the society is confronted with an unemployed person that lacks the necessary skills for immediate reinsertion into the labour market. The answer to this problem has been a massive rise in state provided labour market training in most European countries over the last two decades. These programmes are, however, due to at least three factors problematic in respect to their efficiency and efficacy:

- 1) Training after being laid-off occurs in most cases too late. Individual biographies of non-training can only be compensated by costly and time-consuming interventions, whereas governments are interested in a rapid reintegration of the unemployed in the labour market.

- 2) Research shows that most employees lack after the (sometimes) traumatic experience of unemployment the motivation for labour market training. Without the necessary motivation, training efforts are often wasted.
- 3) Public training programs are often criticised for not being adequately tuned to the needs of the economy.

If poor initial educational background leads to a lower probability to get training from the employer and this increases the risk of unemployment and if public programs that aim to compensate for the lack of lifelong learning are limited in their efficacy two alternative ways are open for remedy:

- 1) Increase the level of individual efforts of those not getting the training from their employers.
- 2) Rise the initial level of education.

Can and will employees compensate for the lack of firm-subsidised training?

Looking at the probit estimates of the determinants of training that is paid for by employees, we can not detect any pattern of compensation regarding the educational level. People with lower probability of getting training from their employer do not seem to be more active on their own than other employees (graph 2), except for people with an university entrance diploma.

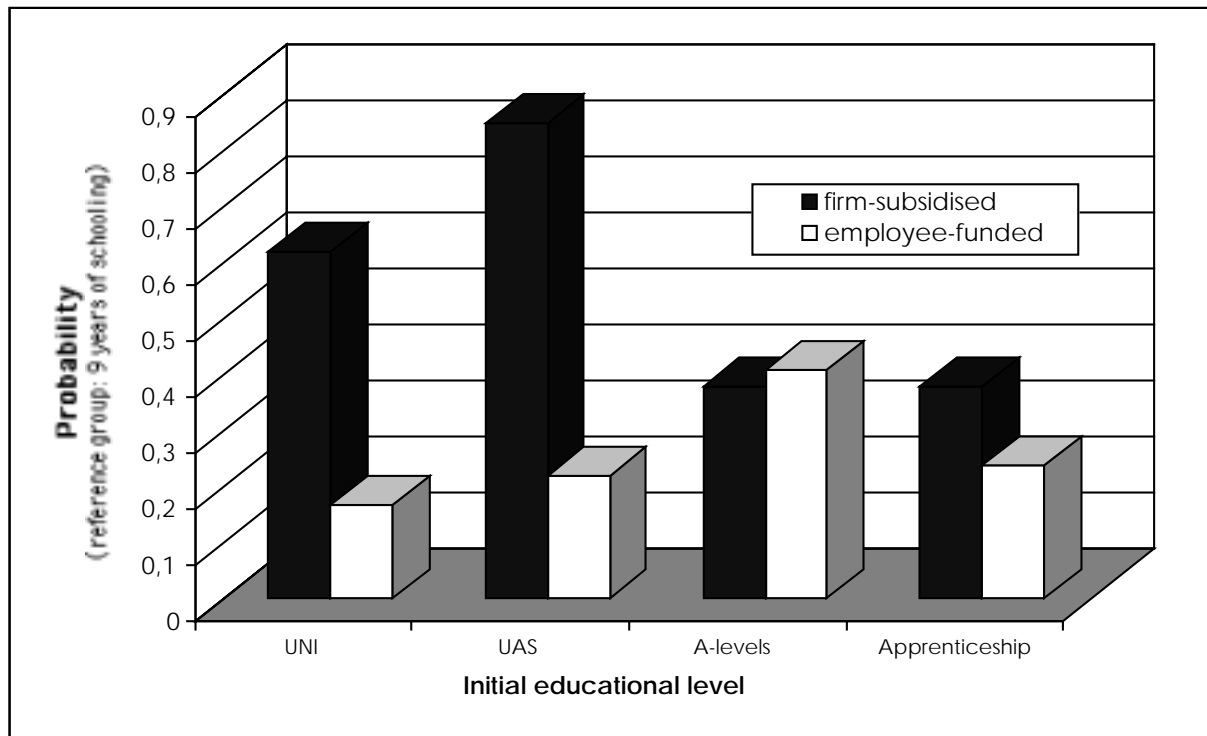
Several reasons are plausible for this non-activity of employees with lower initial educational formation. In the ranking of their popularity those explanations go from:

- 1) I learned everything that was necessary "on-the-job".
- 2) My boss never told me so.
- 3) I had no time.
- 4) It was too expensive.

The first to reasons are popular misunderstandings from the part of employees. On-the-job was sufficient as long as the technological change didn't depreciate the human-capital at a very high rate. Today spells in formal education and training are

necessary to master changes of paradigm in the global economy. The fact that the employer never asked for training does not mean that training was not necessary, it just meant that he regarded the specific cost-benefit ratio for this particular employee not favourable enough to invest in costly training measures.

Graph 2: Probit estimates of firm-subsidised and employee-funded training (Switzerland, 1996)



Source: Wolter (2001)

The last two reasons hold only, if the rise in productivity and hence in wages due to training does not offset the investment in training. We investigated these points in an earlier simulation of life-incomes in the case of formal training taking place at the age of 40. The life-income or also the rates of return to education differ from those who trained at the earliest possible point for a number of reasons:

- 1) The opportunity costs increase with age, i.e. a period of no employment will have greater weight.
- 2) The time in which income advantages may be obtained and thus investments allowed to depreciate will be shorter.
- 3) The wage difference with the training level just below is greater immediately after the training has been completed, since with increasing age the gap between the

wages of different educational levels grows larger. This has a positive effect on the net present value of a life income – in the case of high discount rates in particular.

A priori there are arguments in favour of increasing returns just as there are arguments for the opposite case. Only an empirical examination can show therefore in which direction a training decision at a later stage will shift the rates of return on education.

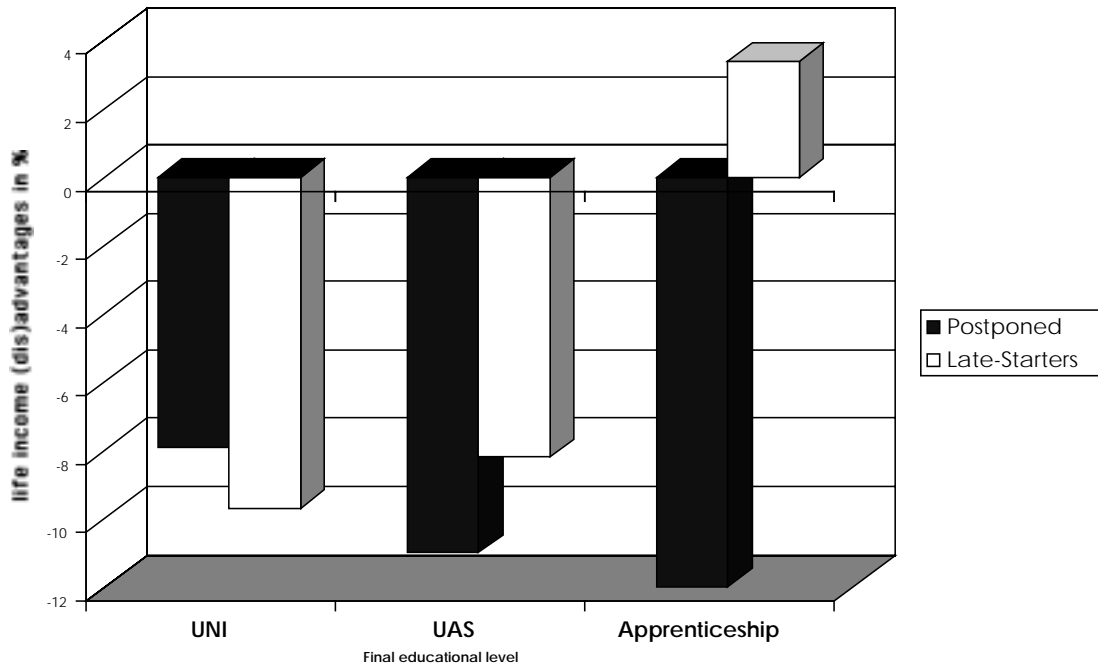
Wage regressions with training dummies show no significant wage gain due to employee funded training. However, this empirical finding might mask a potential gain if the content of the training measure is not really job- and/or work-related. Additionally, most of these reported training measures are of a limited nature, short in time and narrow in their scope.

To overcome some of these shortcomings, we simulated therefore the rates of return to training for the case that an employee would engage in a formal course at the secondary II or even tertiary level at the age of 40.

Graph 3 (women) and 4 (men) show the results of such calculations. The white column shows a comparison in life income advantages in the case that education has been postponed to the age of 40. The column shows the difference in life income of this group (postponed) with the life income of persons that have attained the same education level at the earliest possible point in time. The black column shows the life income (dis)advantages for individuals who train at 40, compared to those who remain at the educational level immediately below. In this case we can call individuals that trained later as "late-starters".

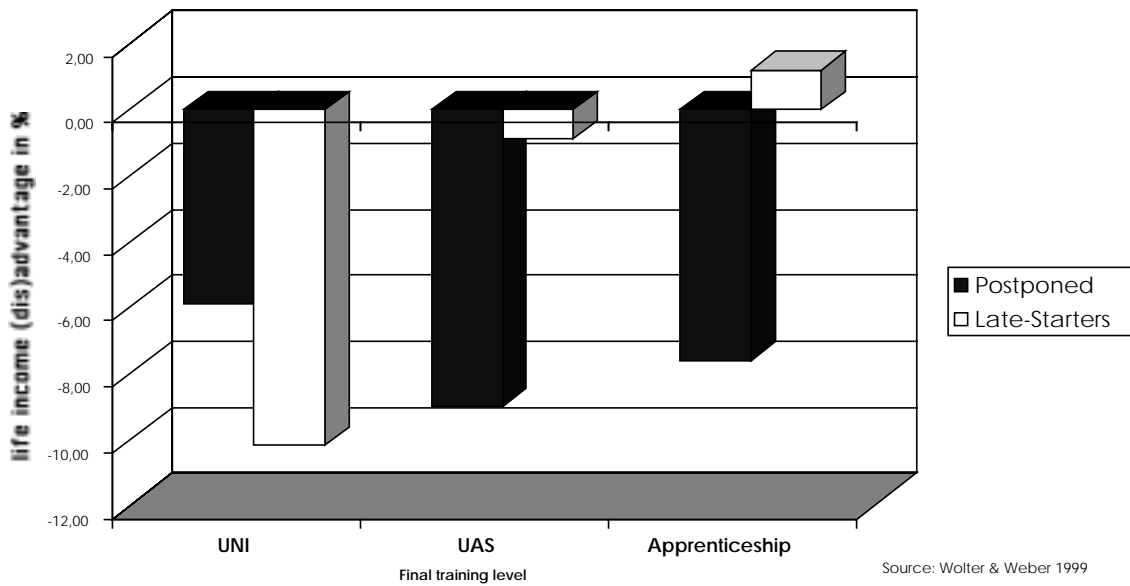
Following our results, we see that with regard to the life income advantages, shows high losses – especially for higher levels of education (UNI and UAS). This is due to at least two reasons: first, tertiary education is the longest educational option, with correspondingly high opportunity costs.

Graph 3: Relative life income (dis)advantages for individuals who train at 40 (women)²



Graph 4: Relative life income (dis)advantages for individuals who train at 40 (men)

Relative life income (dis)advantages for individuals who train at 40 (men)



Second, the median nominal wage of graduates in this age group ends up feeding tax progression, which amounts to a noticeable reduction in the expected life income. Looking at these figures it is all too clear that labour markets with compressed wage structures, whatever their social benefit in the form of less wage inequality may be, do not offer the proper incentives for individuals to invest themselves in their human-capital. If this has to be overcome measures that reduce the opportunity and direct costs while training or that substitute failing credit markets (e.g. learning accounts). All these measures are important and at the same time difficult to implement. They are the main reason of this conference.

Rise initial training

If mending for non-education at a later stage in lifetime is difficult, measures that rise the initial levels of education are all the more important.

Although there is a strong positive trend in enrolment rates in most industrialised countries, policy trends are not the same everywhere. In most European countries the tradition was to have no or only symbolic tuition fees for tertiary education. Due to budgetary constraints most governments have, however plans to rise fees substantially and make students pay for their studies. In the long run this might not be a problem, because wage differentials would grow on the labour market and compensate those who have invested in their education. The problem will be the reaction of students in the short run. So far we do not possess much empirical insight in enrolment decisions of (potential) students. From the few studies that were made, we know that:

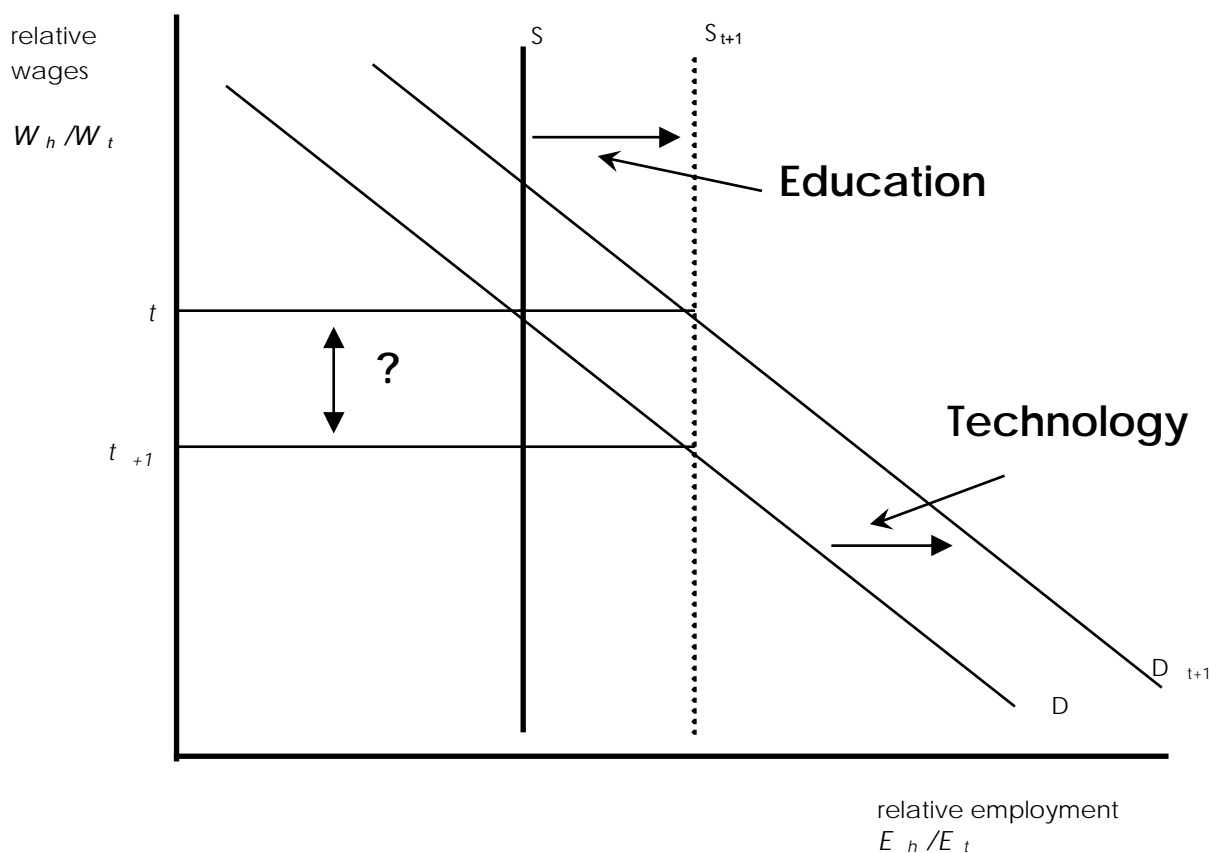
- 1) Economic factors are less important than the socio-demographic background of parents but nevertheless matter.
- 2) Students seem to have a rather accurate view of the current wage distribution and the evidence points in the direction that it is the current cross-section of wages that determines enrolment.
- 3) Opportunity and direct costs play a more important role than future earnings, i.e. students seem to have rather high discount rates. They are especially high for people with a poor socio-demographic and –economic background.

² UNI = University Education; UAS = Universities of Applied Science.

Especially the last point should make politicians more cautious when redefining the rules of admission to tertiary education.

Against those, who advocate for more initial training and for higher enrolment rates in tertiary education are those who warn of inflationary numbers of students and the problem of overeducation.

Graph 5: Race between technology and education



These arguments are valid points and should be taken seriously. It is clear that if we want to have more tertiary educated people we will have to invest in them, just by awarding university diplomas to everyone, the qualifications of our workforces will not be better. Therefore we need incentives and not disincentives to attract young people to choose the more demanding way. If the rise in enrolment would not only be quantitative but also qualitative, overeducation would only a valid argument if we would forecast a slowing in the demand for higher qualified people. Macrostudies for European countries show so far no signs of this. In the contrary, relative demand for

tertiary educated people grew between 1980 and 1995 at an annual rate of some 4%, which is quite substantial (exception U.K.). In the famous race between education and technology (Tinbergen; see graph 5) there seems to be a close finish so far. On the microlevel, overeducation is therefore rather a sign that formal education compensates for lacks in other qualifications than an oversupply of students.

Summarising I would say that there are founded fears that the expansion of the tertiary system was not always accompanied with the expected rise in qualifications but that the labour markets seem far away of being saturated with highly qualified labour.

Conclusions

We tried to look at the role tertiary education plays for lifelong learning and what financial implications this has. In our analyses we focused on the individual and argued along the following lines:

- 1) Lifelong learning is costly from the point of view of financial resources and time.
- 2) In this context employers determine more and more who is getting training by the provision of resources.
- 3) In their selection process the initial educational level plays an important role ...
- 4) therefore tertiary education becomes more and more a prerequisite for getting paid or subsidised lifelong learning.
- 5) Individual strategies to overcome the lack of employers' resources are limited in their effect and especially in labour markets with compressed wage structures there is a lack of financial incentives for private investments.
- 6) Those who are not getting trained and do not invest privately have a higher risk of unemployment and end up sooner or later in public labour market training programs. These programs are in general less efficient and effective than timely and adequate training while working.

- 7) Higher enrolment rates in tertiary education are beneficial also from the point of view of lifelong learning. Initial education at the tertiary level should therefore (also financially) be stimulated.

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