

Rapport till Finanspolitiska rådet
2010/6

Regular Education as a Tool of Counter-cyclical Employment Policy

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ISSN 1654-8000

1 Introduction

This report is about the suitability of regular education as a “counter-cyclical policy tool”. By this it is meant the use of post-compulsory education as a destination for workers who would otherwise be unemployed, on government-sponsored programmes or, more generally, facing a bigger threat of unemployment than in normal times. Given the current climate, the main interest is whether the government should sponsor additional regular education for young people who, in more normal times, would have left school and entered the labour market.

In an economy operating under normal conditions of aggregate activity, the usual cycle for school leavers is job search followed by job “hopping”, until a regular job is found. Durations of both job search and job holding for young people are usually short, at least when compared with those of adults. This process of frequent job search and job change is healthy, both for the individual and for society, as skills and preferences at a young age are still uncertain, and the features of available jobs are also uncertain. A “good match” in the labour market requires time and effort.

Recession puts at risk the matching process for young people. Because of skills that are specific to the job accumulated by older workers, employment protection legislation or union agreements, and generally loyalty towards one’s own long-serving employees, recession hits hardest the market for young people. The big sufferer is job creation. Job loss may increase by small amounts in recession, and attract the headlines, but in terms of human suffering and skill deterioration it is the absence of job opportunities that hits hardest. Job loss would matter very little if new job creation was abundant and the displaced workers obtained new jobs quickly. But in recession new entrants, and workers who lose their jobs as part of the normal course of events, often have to wait for several months before new opportunities present themselves. Waiting for a new job can disenfranchise the worker from the labour market and destroy the willingness to work, if not the ability. For young people seeking their first regular employment this process can be detrimental.

Governments react to recession with a number of measures for young people. Training programmes, subsidized employment, help with job search and information gathering are common across the OECD. The question that we investigate here is whether regular education beyond the minimum school-leaving age should be added to the list of “active labour market measures.” In particular, whether the government should sponsor additional years of schooling for young people completing the minimum education cycle, presumably on demand.

Several factors enter the decision whether to take up this policy. Timing and duration are probably the most critical, when more education is compared with other measures. College and university capacity may be limited and expansion

of places to accommodate new entrants is not likely to be a quick and easy matter. Additional education needs additional teachers, and this is another matter that will need to be addressed by policy-makers. The education selection process, the decision to apply and enter higher-degree programmes, their duration and the possibility of dropping out before the degree programme is completed are factors that will enter the decision of young people whether to take up the education route out of recession. The issue of how much help the government should give, and whether at this level the decision should be left to the private sector, are also important in the selection of government policies for young people.

In this report I take up each one of these issues separately. In section 2, I describe the process of individual decision making and how recession is likely to affect it. In section 3, I ask whether private decisions in response to recession are likely to be socially efficient, or if individuals demand too much or too little additional education in response to recession. In section 4, I consider government policy in response to the increase in the demand for education. In section 5, I discuss the types of education provision that the government may want to sponsor in response to recession, and the implications that these have for the labour market for young people and older workers. The implications of government choices in the expansion of education are further discussed in section 6, with questions about the timing of the expansion and the risk of locking labour in to educational programmes when recovery comes. Finally, section 7 addresses the question of the quality of educational standards in a temporarily expanded system.

2 Private decisions

Even since the seminal work of Becker (1964), the decision whether to continue with education or stop and enter the labour market is modelled as an investment decision. The benefits from continuing are the higher wages and lower unemployment that characterize the market for more educated workers. The costs are the earnings in the market for lower skills that are foregone during the education and any direct costs that there might be (for example, tuition fees).

The literature usually measures the benefits from continuing with education as a percentage rate of return from one more year of schooling. Two individuals are compared, who are identical in all respects except that one has had one more year of education than the other. The rate of return to education is the percentage by which the hourly earnings of the more educated individual exceed those of the less educated one. The typical method for measuring this rate is the “Mincer equation”. The log of wages is regressed on years of schooling and some other control variables that pick up differences between individuals. The coefficient on years of schooling is the rate of return to education.¹

¹ The main other control is experience in the labour market. See Mincer (1974) for the original contribution and Psacharopoulos (1994) for estimates from several countries.

An important refinement to this estimate takes into account the incidence of unemployment. It is known from unemployment research that unemployment incidence falls with years of schooling. So by acquiring more education an individual reduces the probability of becoming or remaining unemployed and avoids the loss of income and other costs of unemployment. Adjustments to the Mincerian rate of return to education for the different unemployment incidence at different education levels add small but significant amounts to the rate of return to education.²

Several other refinements are made to the rate of return estimates or to estimation methods, but these are not important in the debate whether education should be used as an anti-cyclical device or not. One that may have some bearing on the issue is the impact of the quality of education. Quality, as measured by class size or student-teacher ratios, is an important influence on the rate of return to education. One more year of schooling in a small class can add more to earnings than a year in a crowded one.

An optimizing individual chooses whether to stay one more year in school by comparing the rate of return to education with the cost, expressed, like the rate of return, as a percentage of unskilled earnings. The cost is mainly the foregone earnings during the year of education and any out-of-pocket costs. Foregone earnings depend on unemployment in the unskilled market. If the probability of becoming unemployed is higher, the foregone cost of education is lower for the obvious reason that the unemployed do not earn a wage. Any unemployment compensation or other type of subsidy that might be available by the government increases the cost of education by reducing the cost of unemployment to the individual.

Equilibrium in the market for education is reached at the point where a sufficient number of individuals choose the extra year of education until the rate of return goes down to the level of the cost. The rate of return falls with the number of trained individuals because of diminishing returns to production. As the number of workers of a certain level of education increases, the expected earnings of those workers decrease. It also falls because of ability differences. Higher-ability individuals command a higher rate of return from a given education if ability and learning are complements (that is, if higher-ability individuals make better use of their learned skills in employment and become more productive than lower-ability individuals with the same education). Alternatively, higher-ability individuals may benefit from their ability to learn faster, as in the signalling theory of Spence (1973). Whatever the reason, higher-ability individuals have an advantage over lower ability ones in the education system and are likely to enter colleges and universities first.

² See Ashenfelter and Ham (1979), Nickell (1979) and Weber (2002) for estimates for the United States and several European countries.

The impact of recession on private decisions

The impact of recession on the private decision whether to stay on at school or not is threefold. First, a higher probability of unemployment in the immediate future reduces the foregone costs of education. Second, less well educated individuals experience more unemployment than the better educated ones, so recession has a bigger impact on those with less education. And finally, in recession family incomes are lower and to the extent that young people finance their education out of family incomes, the financing becomes more difficult to obtain. We take each in turn.

If we ignore risk aversion and the differential incidence of unemployment, the higher unemployment during recession reduces everyone's costs by the fall in expected annual earnings due to it. If the individual chooses labour force entry instead of education, her expected earnings are total earnings in the fraction of time that she expects to be employed. If now, because of recession, youth unemployment is (say) ten percentage points higher, expected earnings fall by about ten per cent.

But this impact of unemployment on the decision to stay on in school is not likely to be a very big one. First, the numbers involved are not very big. Even large increases in youth unemployment, like the ten percentage point rise in the preceding example, have a fairly small impact on expected costs. If we take into account the government programmes that are usually available to young unemployed workers, and the family support that is provided, the fall in expected earnings will not produce a very big fall in the costs of staying on at school.

But the incidence of unemployment is not evenly spread. A ten percentage point increase in unemployment does not reduce every new entrant's income by ten per cent. The majority of workers will not experience unemployment beyond an initial short period of job search. Those who have longer durations of search, or experience repeated spells, suffer much more than a ten percent fall in earnings. With longer durations of unemployment, current incomes suffer disproportionately and uncertainties about future income and employment prospects (the "scarring" effect of unemployment) are also bigger. The costs of unemployment rise fast with duration, as skills are forgotten, unemployment compensation is either exhausted or becomes more difficult to obtain and programme participation becomes compulsory. Although most research finds that the scarring effect of unemployment on young workers is not as large as it is on older displaced workers, there is still a large effect on earnings several years after the unemployed youths go back to work.³ Nordström Skans (2004), in a study that uses the differential experience of

³ See the introduction by Arulampalam, Gregg and Gregory (2001) and the papers in the same special issue of *The Economic Journal* for evidence from the United Kingdom, Card and Lemieux (2000), Ellwood (2000) and the other chapters in the same book for evidence from the United States, and Ryan (2001) for a survey. A conclusion from this literature is that the scarring effect from unemployment depends on duration. It is weakest in North America, where average unemployment durations for youths is short, and strongest in European countries with longer durations.

siblings to identify the scarring effect of unemployment on young Swedish workers, finds substantial scarring effects. For each percentage point rise in the incidence of unemployment, he finds that earnings five years later are about 6 per cent less. With risk aversion and imperfect (or, more likely, entirely missing) insurance markets for young people, these uncertainties about the duration of unemployment and its impact on current and future earnings could generate a large demand for education.

A second reason that also exerts a positive influence on the demand for education is the fact that the incidence of unemployment in later life falls with the level of educational attainment. The correlation between employment prospects and educational attainment makes people “buy insurance” against future unemployment, by staying on at school. However, since recessions do not last long and a recession now does not increase the chances of future recessions, this is an important factor only if individuals reaching the end of their schooling cycle expect the recession to continue until after they graduate. Alternatively, information may not be complete and the recession and job loss by adult workers makes young people more aware of the risks of unemployment in later life if they dropped out of school too soon.

A practice common in Sweden and some other countries (increasingly so in Britain) that is likely to be affected by recession because of the link between education and unemployment is the “gap” year. Young people finishing high school get a job for a few months, and use the income to travel before entering university the following year. The fact that recession hits hardest the employment prospects of school leavers implies that those intending to take a job temporarily before entering university may revise their plans and enter university immediately. The chances that a large fraction of the gap year might be wasted looking for a job leads to a higher demand for education, postponing perhaps the activities associated with a gap year until after graduation, when a job would be easier to get. The fall in the take up of a gap year adds more cyclical in university applications than would be implied by the net increase in demand. At the end of recession more school leavers take up a gap year and those who would have come back from their gap year to apply for places are already in university.

Against the two reasons for a positive impact of recession on the demand for education is the argument that family income suffers in recession. In a world with perfect capital markets and inexpensive loans available to young people, family income should not be an influence on the education decision of young people. Like other investment decisions, the demand for education is a forward-looking decision: it should primarily depend on future income prospects, on the cost of time and the cost of borrowing to pay for it and finance consumption.

But capital markets for young people in school are not perfect and their education is to a large extent financed by their family. Families that suffer an income loss in recession would be less inclined to finance additional education

for their children. In contrast, when the uncertainty attached to family income is increased because of recession, the family may jointly decide that older children completing the minimum educational cycle should enter the labour market to reduce the overall income risk attached to the family as a unit. This additional participation is sometimes known as the “added worker” effect, and it is a form of household insurance against the increased uncertainty in recession.

The impact of unemployment on the demand for education is the topic of most published empirical research on the implications of recession for education. Most published research finds strong evidence that enrolments in higher education institutions increase in response to an increase in unemployment. The other important variable in these regressions is the differential between the earnings of degree holders and school leavers. But this differential is not a cyclical variable. Although it shows large swings in most countries, they are unconnected with the regular unemployment cycle.⁴

Most of the empirical work is for the United States. The elasticity with which unemployment influences enrolments varies across studies, and the definition of unemployment also varies. For example, youth unemployment would be a more appropriate measure of the cost of education, but because total unemployment is more widely available and better measured, it is sometimes used as the explanatory variable for the cycle. The general conclusion, however, is that current unemployment is a positive influence on the demand for education.⁵

The empirical work on the impact of recession on unemployment, however, does not exploit the full, forward-looking nature of the Becker model. The impact of unemployment on enrolments should depend on the expected duration of the recession, on the impact of recession on the incidence and duration of unemployment, on the availability of alternative income sources – or training programmes – for young unemployed people and on the impact of recession on family incomes. These are factors that are usually ignored when the enrolment regression is estimated.

Another relevant factor that is usually not reported in the empirical papers is the quantitative impact of unemployment on the demand for education. Although unemployment elasticities (or semi-elasticities) are estimated, empirical work in this area is still a qualitative exercise that is looking to test the model's predictions rather than estimate how many more people will stay on in school as a result of recession. In other words, although there is an impact of recession on the demand for education, it is not computed quantitatively how much difference it really makes to the educational attainment of the cohort. As

⁴ See among others, Betts and McFarland (1995) for evidence from the United States, Kodde (1998) for Dutch evidence, Fredriksson (1997) for Sweden, and Pissarides (1982) and Whitfield and Wilson (1991) for England.

⁵ An exception is Micklewright, Pearson and Smith (1990) who find that although youth enrolment rates went up in Britain when unemployment increased sharply, the increase could not be attributed to the rise in (local) unemployment. However, their study was for a cross section of youths and it did not have relative earnings for graduates and non-graduates, so their estimates of the impact of economic incentives on education suffered from omitted variables.

a consequence, the published empirical work does not give a guide as to whether a universal scheme run by the government will provide a substitute or whether it will be much more comprehensive than the private response to recession.

3 Social efficiency

Social efficiency has to be seen in the context of missing markets, or of mistakes in private decisions. In a complete rational expectations setting and with perfect capital markets, the private decisions to increase educational attainment in recession must be socially efficient. A distinction must be drawn here between social inefficiencies that might exist even in normal times, and social inefficiencies that might arise because of recession. Our concern in this paper is with the latter, but the former cannot be ignored because recession may change the intensity of social inefficiencies that are present in better times as well. More specifically we could ask, first, in a benchmark world where private decisions before the recession were socially efficient, is the increase in the demand for education in recession socially efficient as well? And second, does recession justify an increase in government support to education and training along the lines of the steady-state support that they receive, or is a change in policy warranted?

The cost of education to society is mainly the foregone output from those who take education and the human and physical capital invested in teaching, which could be invested elsewhere. The benefit is that the extra education makes workers more productive. If foregone output now falls because of less job creation, it necessarily implies that the social cost of education is lower and so more people need to stay on at school to reduce the rate of return to education to a new equilibrium. Complimenting this, the productivity of human and physical capital elsewhere is now also lower, leading to the conclusion that there should be more investment in teaching to balance the rates of return to labour and capital across sectors of economic activity. Where might there be a social failure in this scenario, that might imply either under-education or over-education?

In the benchmark world of this example, where in the steady state education decisions are efficient, social failures might arise because of increased unemployment risk during recession, which is uninsurable in private markets, and increased moral hazard from publically provided insurance. In recession there is increased uncertainty about job prospects. As argued in the preceding section, the increased uncertainty in recession and the fear of unemployment are important components of the costs of education. In the absence of unemployment insurance for new entrants, individuals overreact to the risk of unemployment and demand too much schooling to shield themselves against it. Education here acts as a second-best insurance market for young people. The socially efficient response requires only that private demand increase in response to the fall in expected costs. But if new entrants fear that they might suffer long durations of unemployment with low income support, they will

increase their private demand by far more than the required social increase. The additional increase could be avoided with perfect income support, namely, by a policy that distributed the lower expected income from recession equitably across all labour market entrants. But such a policy (whose existence has become a common and widely accepted assumption in the search and matching literature under the heading “large family assumption”) creates disincentives and moral hazard.

Education is clearly not a good insurance instrument from society’s point of view. Absent moral hazard, insurance provided by pooling risks is the optimal response. The key question in the debate whether it is socially efficient to support the increase in private education demand is reduced to the question whether the costs of moral hazard from the pooling of risks are less than the costs of the extra education.

The answer to this question requires a properly specified quantitative model which can be used to compare the marginal costs of education with the marginal costs of the moral hazard from insurance. Such models do not exist. But given the large costs of education: foregone output during the learning process, externalities on others learning if the supply of teachers and classroom space is not flexible, and a larger than optimal entry of “over-educated” workers a few years later; and the many ways in which the moral hazard from insurance can be reduced through active labour market programmes; one might speculate that a generous unemployment insurance system backed up by active measures to reduce moral hazard would dominate the use of education as a shield against the risk of unemployment.⁶

A second social failure is due to the reliance on family income for educational financing. In a complete markets scenario family income should not matter because education is a forward-looking investment. In recession family incomes suffer and this might lead to withdrawals from education that are suboptimal. We saw that empirically this effect does not appear to be a dominant one, but of course, this does not imply that it is absent. As not every school leaver decides to stay on at school in recession, it is possible that some withdraw because of loss of family income. It would be difficult to estimate this effect empirically and identify the impact of this channel because of the data requirements. One would need a panel of individuals with both family income and the educational decisions of younger members reported.

Finally, myopia in individual decisions – or lack of foresight due to the complexities of forecasting future prospects – would also lead to inefficiencies. Richard Freeman (1976) in a series of publications made the argument that the demand for education is subject to a “cobweb” response to earning incentives. Individuals respond to current earning prospects and unemployment, not paying due attention to the fact that by the time they graduate their earnings will be determined by new supply and demand conditions. In particular, if enrolments go up in response to recession, when these workers come out the

⁶ See the next section for more discussion of the disincentives effects of unemployment insurance.

economy would have recovered but there would be a bigger supply of graduates. With bigger supply graduate earnings would not recover as much as the rest of incomes in the economy, and so the demand for education in the recovery phase would fall by too much.

This argument is not for too much or too little education demand but for inefficient cycles in it. The relevance for recession is that there is over-reaction to the fall in earnings and rise in unemployment. Too many young people stay on at school compared with a rational expectations equilibrium where the cobweb cycle is anticipated. Potential school leavers see the rise in adult unemployment and stay on at school to increase their employability through more education, although the recession will be over by the time they complete their education and apply for jobs. Betts and McFarland (1997) estimate strong adult unemployment effects that they attribute to this channel. Although this might be so, the estimate might also be a reflection of the fact that the national unemployment rate is the headline figure reported and the more reliable indicator of cyclical labour market conditions. It might be picking up youth unemployment effects.

Developments in the financing of higher education and the growth in living standards may have diminished the importance of family income for higher education. In most countries higher education is generously subsidized by the government, through grants or student loans. The loss of family income through unemployment is compensated by the government, especially when there are documented needs, like children in school. So even if the capital markets needed to facilitate the financing of higher education are absent, government policy or accumulated personal savings compensate for it.

But the other reasons for social inefficiency, risk aversion and myopia, are more difficult to counteract with policy. Both these imply that in recession the private demand for higher education is too high. Education is a poor insurance instrument against the uncertainties of job finding, because of the high social costs that its acquisition imposes. Income transfers to those actually becoming unemployed, or subsidized help with job finding, are better instruments.⁷

4 Government policy in the provision of education

A high fraction of both men and women enter higher education in Sweden. In terms of numbers this entry is likely to rise over the next three years because of an increase in the cohorts reaching the relevant age. Moreover, education is largely government financed, with more than 80 per cent of costs covered by the government. Standards are high by international criteria. So realistically, if education is to be used as a counter-cyclical device and standards are not to be allowed to fall, the government would need to provide more funds for it.

⁷ One should expect to see more cyclicity in the demand for education in countries that do not offer unemployment insurance or active measures to support the transition to work, because of the risk aversion motive. But this prediction has not been tested with data.

There are a number of issues that are relevant to the question of how proactive the government should be in the provision of additional higher education funding in a recession. The first is whether the government should attempt to accommodate private demands and so provide funding for all the additional places demanded. Of course, not everyone who applies to enter higher education is successful. By meeting the additional demand we mean that a sufficient number of new places is provided to maintain the rejection rates at their normal levels.

There is widespread evidence from schooling that the quality of education, measured by such things as class size or teacher-pupil ratios, affects the productivity and wages of those obtaining it. This evidence, however, is for schooling, and not for higher education. For higher education the focus is usually on governance and funding issues, with the main findings pointing to more international success when more independence is given to the university to run its own degree programmes, choose its own entry standards and make its own faculty appointments.⁸ Sweden is one of the more successful countries in the world in this respect, despite extensive government funding. With the independence that Swedish higher institutions enjoy, and the quality of their degree programmes, it follows that if education is to be encouraged as a counter-cyclical device more resources should be provided by the government; otherwise either the additional students applying for places would not be successful or standards would fall for everyone.

The important issue then is whether the increased demand for education in recession is socially efficient, and whether it is the best alternative open to the government. On the social efficiency issue we have argued that there are grounds to support an expansion of higher education in recession, but the private demand probably over-reacts to the rise in unemployment. Rather than not make places available in recession, however, the government would be moving closer to social efficiency if it dealt more directly with the factors that cause the over-reaction to the demand for education

We have argued that the increase in the demand for higher education that is due to the fall in costs is socially efficient, but the demand due to the insurance motive is not. A response to this would be, rather than expand higher-education places sufficiently to accommodate all demand, to expand the insurance provision against youth unemployment to curb the insurance demand. An obvious way of doing this is to pay more unemployment insurance to young unemployed persons. But this introduces moral hazard, another social failure. There is considerable evidence for disincentive effects of unemployment compensation, both in Sweden and elsewhere. Carling, Holmlund and Vejsiu (2001) find that in Sweden a five percentage point fall in the unemployment replacement ratio in 1996 (the ratio of benefits to the mean wage) increased the transition from unemployment to employment by about 10 per cent. Meyer (1990) found that in the US, a ten percentage point increase in the replacement ratio increased the duration of unemployment by one to

⁸ This claim is mainly based on the evaluation of the research performance of universities. See Aghion et al (2007).

one-half weeks. Other US estimates imply smaller disincentive effects. Given mean US unemployment durations, this is a smaller effect than in Sweden, corresponding to about 8-10 per cent reduction in the transition rate. Layard and Nickell (1991) report that a ten percentage point increase in the average replacement ratio implies a 1.1 percentage point higher unemployment, which in turn implies a bigger disincentive effect of about 20 per cent on the transition rate. However, in the Layard and Nickell study the total effect includes wage effects from unemployment insurance, whereas the other studies are micro econometric studies focusing on individual moral hazard.⁹

Given these disincentives from unemployment insurance, it is clearly not the case that the optimal response to the over-reaction of the demand for education in recession is an unconditional increase in the provision of unemployment insurance. The insurance motive for more education is mainly driven by the fear of long durations of unemployment. If young people knew that jobs would be quickly found after labour-force entry or after job loss, unemployment would not be sufficiently costly for them to enter a degree programme to protect against it. It follows that government policies designed to protect young people from the income uncertainty due to unemployment should focus on duration. But if there are also strong liquidity effects from unemployment, these policies should be combined with generous replacement ratios.

There is evidence that as an individual is moving closer to the date when unconditional unemployment benefits are exhausted and programme participation begins, the transition to employment increases.¹⁰ The literature on the effectiveness of programme participation is divided, but there is some evidence that programmes are more effective if they involve job subsidies and actual employment experience. They are also more effective for younger participants than for older ones. Assistance with job search is universally found to be effective, whereas training (especially off work training) is not, except for some evidence that there might be some long-term beneficial effects on youths.¹¹ Once such programmes are in place for young people, the insurance demand for higher education would fall. But the demand due to the fall in the foregone earnings due to unemployment would still remain and the government would be acting optimally if it supported this demand with more funding.

⁹ Chetty (2008) recently challenged the literature that attributes these effects to moral hazard, finding evidence that the biggest disincentive effect from unemployment insurance is due to liquidity effects. This may be particularly relevant for the youth labour market. His claim implies a new approach to the design of optimal unemployment insurance, which he takes up to find higher optimal insurance than previous researchers found.

¹⁰ See Carling et al (1996), Meyer (1990), Forslund and Nordström Skans (2006) and Geerdsen and Holm (2007). The last two also suggest that the “fear” of programme participation is one of the incentives for faster transition to employment as unconditional benefits approach exhaustion.

¹¹ The literature on programme evaluation is too large to summarise or even list. See Calmfors et al (2004) and Larsson (2003) for a summary of the effectiveness of programmes in Sweden in the 1990s and Sianesi (2008) for a good evaluation study. Forslund and Nordström Skans (2006) find some evidence of possible long-run effects on youths, but they are sceptical about their generality. More supportive evidence for long-run (after 10 years) effects of youth training programmes was found by Strandh and Nordlund (2008).

Another issue of relevance is whether subsidies and loans given to students should change in response to recession. There is no apparent reason for this to happen. An exception might be made in the case of a fall in family income, when more generous support may be provided. But even in that case, it would be beneficial to deal with the fall in family income directly with the family, rather than by providing more assistance to students coming from those families. In general, there are no apparent reasons that dictate that the per student education subsidy should fall (or rise) in recession.

5 Types of education and implications

Choosing the type of education involves looking at both the costs of the provision and the outcome, in terms of the employability of the degree holders. The “flexibility” of the type, namely whether expansion and contraction can be achieved quickly and without cost, is also relevant. If the type is left entirely to private demand, the applicants will choose on the basis of outcome and their interests. The government subsidy to students ensures that the differential costs of providing places does not affect the costs that students pay. Governments should therefore pay attention to the cost of provision beyond any desire to satisfy private demand.

Since the expansion of education for cyclical reasons is likely to be temporary, it would be appropriate to subsidize the increase of places in areas where costs are smaller and there is no requirement of large infrastructure. For example, it would not make sense to build more science laboratories in recession to accommodate the counter-cyclical demand for education, if they are to be underutilized at the end of recession. In contrast, areas that attract large numbers of applicants in Sweden, like medical and social care services, can be expanded and contracted at little costs.

Costs are highest in areas that are not likely to attract a lot of additional numbers in recession. These include medicine and the sciences. Medicine is an area where competition for places is hardest. But new applicants for places who turned away from the labour market because of recession are not likely to look to become doctors, which takes long to complete and requires high entrance qualifications. The demand for science places has been declining in Sweden as elsewhere, so again this is not likely to be a high demand area. So overall, although costs should enter the choice of areas for expansion, the education courses that are less expensive to provide are also the ones that are likely to be most demanded. Providing more places where there is currently more demand will probably prove the best option overall.

General education gives the broadest base from which the school leaver can apply for jobs. The more specific knowledge required for the job can be acquired on the job. A combination of more general types of regular education with more specialist training programmes through subsidised firm employment seems to be the best policy. This combination gives also some choice to the

individual, whether to opt for the shorter and more specialized training programmes or the longer and broader degree courses.

In terms of labour market implications, counter-cyclical variations in regular education take more young workers out of the active labour market in recession, and introduce more college leavers in the market a few years later. In recession, the withdrawal of workers from the youth labour market has positive externalities on the employability and earnings of those that remain. Although in the long run changes in labour supply do not have an impact on unemployment and earnings levels, because of changes in the capital stock, in the short run restricting the entry into the labour force can have substantial effects. Job creation and investment in the short run and in the middle of recession are not likely to respond to the size of the entry into the labour force. A fall in entry through the expansion of regular education almost certainly reduces the number of job applicants one-for-one. With fixed number of job openings, the chances that those who remain will get jobs increase.

The expansion of education also has implications for the cost of government support programmes for young people. Since the unemployment of young people is lower with the expansion of education, the cost of government support programmes that are available to young unemployed people is also lower. Whether the savings from such programmes are sufficient to cover the costs of the additional education is a matter of degree and coverage. One should expect, however, that the increase in the number of young people in school will not be reflected one-for-one in a reduction in the number of young people on government support programmes. Employment is also likely to fall when fewer young people enter the labour force, especially if those who are successful in gaining entry into colleges and universities are the more able ones.

The fall in labour force entry may also have an impact on the adult labour market. Previous research has found that the market for young workers is complementary to the market for women (Boeri et al 2007), so there might be some benefits in the women's market from the fall in the number of young workers. This is especially important for Sweden, where large numbers of women enter the labour force in the areas which are likely to attract more demand from young people, such as social and medical services.

6 Timing issues

The issues of when to sponsor educational programmes and for what duration are important because of the length of the educational cycle. The educational cycle is such that entry is usually once a year, whereas the duration of courses is usually more than a year. The annual cycle implies that the response to recession cannot be instant, whereas the long duration implies that the government may be forced to continue sponsoring education programmes long after the end of recession. Training within firms has an advantage over regular education in this respect. Is this likely to be important?

For practical purposes the educational entry decision has to be made at the end of the school year, and that is the time that the government has to make the additional places available. From the policy point of view the starting and stopping dates are difficult to choose, because both need some advanced planning. They depend on the timing and length of recession too, which are difficult to forecast. Some issues may be brought to bear on this choice. First, it is unlikely that students will decide to apply for higher degree programmes in anticipation of recession. It is more likely that they will respond to recession like older workers do when they lose their job. They first look for another job and only if they are unsuccessful for a sufficiently long period of time they become “discouraged”. Similarly with young people coming out of school; they will look for job opportunities, apply for jobs and only if unsuccessful after a few attempts will they be “discouraged” into more education.

It follows that government should plan to begin its expansion of education after the beginning of recession. But since the increased demand for education is likely to take place at the end of the first school year following the start of recession, it needs to be ready as soon as it becomes clear that a recession with job shortages has started, in anticipation of the discouragement of the school leavers.

The same applies with the end of support for counter-cyclical purposes. When recession is over and job opportunities become more plentiful, school leavers are likely to drop their demand for more education and enter the labour market. Depending on the type of investments that government supported in recession, the winding down of the expansion should be planned well ahead.

Given the likelihood that young people will drop out of the labour market and apply for degree programmes with some delay, the government might consider the possibility of allowing some delayed entry into educational programmes. The short break between the end of the school year and the beginning of degree courses may not be long enough to persuade school leavers that more investment in education is a better response to recession than the risk of unemployment.

A second issue is the long duration of degree programmes. Even one-year programmes might be too long if recession were to end before the end of the year. But two or three year courses are more common. The evidence of Betts and McFarland (2002) shows that in an unregulated market the increased demand for education is mainly for shorter courses, and that once students have started they do not drop out before the end of their degree. This makes intuitive sense. Those who are buying more education because the costs are temporarily down will want to retain some flexibility to re-enter the labour market as soon as conditions change, rather than commit to a long-term programme of study. But once they have chosen a programme and spend time on it, they will want to complete it, and take full advantage of the new qualification when they re-enter the labour market.

So although there is a risk of lock-in effects when students commit to long-term programmes, it is not likely to be a serious risk. Students are unlikely to commit to long-term programmes, unless they were intending to do so in the first place. And once they have started, they are likely to realise that in order to enjoy the full additional return from the programme they need to complete it. Society also benefits from education, through higher productivity. In that case, far from being concerned about lock-in effects, the government should rather be concerned with ensuring that its supported programmes are seen through to completion.

7 Educational achievement

Educational standards and achievement could be put at risk if the quality of education is allowed to fall because of the temporary expansion. Governments might be tempted to do this, because of the need to cut spending in recession, when tax revenues are down. Achievement is also likely to be less because the new students entering are likely to be less able than the ones already in the system. This is inevitable in any expansion of student numbers, and it is likely to be a consequence of the temporary expansion due to recession. A number of steps might be taken to reduce the risks of falling standards.

First, the expansion needs to be supported by an increase in teacher places, perhaps offering jobs on fixed-term contracts. Space also needs to be expanded as class size is an important quality indicator. Second, universities need to be left alone to pick candidates following their normal admission criteria. In Sweden, as in most other countries, higher-degree places go usually to people from a more privileged background. This does not mean that they have better quality than people from less privileged backgrounds. Perhaps recession forces many young people from less privileged backgrounds to apply for places, and they end up being very successful. In order to ensure that candidates are admitted to places that are best suited to their abilities and interests, normal admission criteria have to be respected.

Finally, even a small fall in achievement levels because of recession may be a better alternative to unemployment. In fact, one can also make the case that it is desirable. Recession worsens outcomes for new entrants to the labour market. By definition, standards of living and well-being cannot be the same everywhere in recession as in an economic boom. The government needs to spend money to support incomes due to more poverty, more programmes for the unemployed and more education. Revenues are down because of falling taxation revenues, and the globalisation of financial markets act as a severe constraint on debt financing. Inevitably standards have to give somewhere. There are no strong arguments why standards of government service should fall elsewhere and not on education institutions. The lowering of standards in some degree programmes can reduce some of the adverse effects of recession in the labour market, and this may be a good way of diversifying the losses. Otherwise, governments may not have enough resources to allow a large enough expansion of educational places to satisfy the extra demand. It is

important, however, that university governance and resources are maintained at the usual high standard after recession, in order to avoid reducing standards for those in the system in steady state.

8 Conclusions

There are sound arguments for making use of regular education as a counter-cyclical device. The main one is that the foregone cost of education, the social output that young workers would produce if they entered the labour market instead, fluctuates with the cycle. In recession unemployment is high, and reducing entry into the labour force by expanding the places in higher education benefits both those who take up the places and those who join the labour force.

There is a large amount of evidence that the private demand for education increases in recession. Moreover, the students who enter colleges and universities because of the risk of unemployment usually remain in school until they complete their course. In countries where university places depend on government funding, the government ought to provide the additional funding required to accommodate the increased demand for places. But government policy towards the expansion of regular education in recession ought to be part of a more general anti-recession policy that includes unemployment insurance and active programmes for the young unemployed. Countries that do not have alternative support mechanisms for young people out of work are likely to experience an increase in the demand for education above the socially efficient level, the level that would be chosen by a social planner on the basis of the fall in the costs of education.

Questions about what type of education should be provided, and how long degree courses should be, depend partly on demand and partly on overall government policy towards education and training. On balance it appears that the most beneficial kind of regular education is a general one, leaving the acquisition of specific skills for training at the firm level. This is because of the difficulty in forecasting specific needs and the time lags involved in regular education. Educational standards should also be preserved by allowing colleges and universities flexibility to choose their own candidates and degree courses. But some temporary fall in standards in recession is inevitable, and perhaps desirable, because of the admission of less able people that would have entered the labour force had there been jobs, and because recessions reduce well-being across the economy, and diversifying between the labour market and education is more equitable. The temporary expansion and contraction of good quality regular education is not a straightforward matter, but there is no reason to believe that it is more difficult to achieve than other active labour market policy measures.

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