Summer is a busy time for the British higher education institutions. First, most campuses are awash with summer schools and non-academic events, organised to generate much-needed additional funding. Second, as soon as the A-level results are made public, most universities engage in a fierce competition to attract students who did not fulfil the grade requirement to obtain their original place of choice. For universities short on applicants, these busy few weeks of ‘clearing’ are essential to achieve their targeted number of students and hence ensure their funding.

In 2006 the end of the summer was anticipated even more than usual as the prospective student cohort was the first to be affected by top-up fees (up to and in almost all cases £3000 a year). While it is too early to assess the impact of these fees on the number of students, their choice of institution or their choice of subject, the following discussion concentrates on the issue of funding higher education, and why fees were introduced. To a large extent most countries rely on public funding of higher education institutions. However, with the expansion in the number of students enrolling in higher education prevalent in the last couple of decades, this financial arrangement that was created for an elite system is showing its inadequacies. The state higher education budgets have not increased at the same rate as the number of students, or in some countries have even decreased as a proportion of gross domestic product (see Global University Network for Innovation [GUNI], 2006 for details). Funding per students has thus generally declined substantially as the number of students increased. For example, in Britain the annual public contribution to funding per student has been reduced from £8000 in 1989 to £5000 in 2000 (Department for Education and Skills [DfES], 2003). While some of the reduction in funding has been absorbed by improved efficiency in the provision of higher education, the concern has been that the quality of education may have suffered as a result of underfunding. To solve the conundrum of offering higher education to a larger proportion of the population but keeping the higher education budget under control, additional sources of funding need to be found.

In Britain, the expansion in the number of students has been especially brisk, and the last couple of decades have seen several reforms of higher education funding.[1] This discussion on the funding of higher education, whilst based mostly on the English experience, is hopefully also relevant to a larger audience. This discussion has been triggered by two recently published books

FINANCING HIGHER EDUCATION

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Higher Education in the World 2006: the financing of universities
Global University Network for Innovation (GUNI),
Series on the Social Commitment of Universities, 2006
Houndmills: Palgrave Macmillan
384 pp., ISBN 0230000460, £29.99

Financing Higher Education: answers from the UK
N. BARR & I. CRAWFORD, 2005
London: Routledge

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Review Essay

that discuss the issue of higher education financing in detail. Barr & Crawford state the importance of the issue by picturing a large ticking bomb on the cover whilst the collegial work of the Global University Network for Innovation (GUNI) went for a less controversial picture of Barcelona. The two books differ in more than their covers. The GUNI book is a report – mostly non-technical and rather factual – on the state of higher education funding around the world. As is usually the case with such collegial work, most of the effort has been put into the collection of data, making it a valuable source for cross-country comparisons. The book provides an overview of different financing systems and evidence of regional differences. Barr & Crawford, on the contrary, focus almost exclusively on the English experience. Their book is a collection of articles – academic and for the general media – forming a well-crafted argument providing various economic reasons in favour of the authors’ thesis. Barr & Crawford detail the evolution of higher education funding in England and its expected, and at times unexpected, consequences as a way of demonstrating that there is only one solution, specifically their solution, to the problem.

Higher Education in England

England has recently experienced various reforms of its higher education financing. It forms thus a good basis for discussing this issue. Higher education originally catered for an elite group of students representing a fraction of their cohort. These students, as well as the faculty staff, enjoyed a somewhat luxurious life cut off from the rest of the world. The state financed the system on the grounds that such an elite would generate externalities[2]—even though higher education was mostly seen as a consumption good, enjoyed for its own benefit, rather than an investment in human capital. The taxpayers did not object to the (rather small) total cost of higher education. After the nineteenth-century expansion and the creation of the ‘red brick’ universities, the system remained unchallenged through the post-war period.

The pressure to expand higher education in the 1960s, as middle-class children pushed to gain access to university, did not alter this arrangement. The state was favourable to some expansion as a more educated workforce was seen as a way to increase the competitiveness of the nation, and new institutions were created throughout the country, mostly in areas where the provision of higher education was short. It also became apparent that limiting access to higher education to the higher social class was wasting the talents of poorer pupils. A system of publicly financed grants allowed students not to live in poverty. These grants were ‘means tested’ as some parental contribution was expected from the wealthiest parents. However, as participation increased slowly to reach about 14% of a cohort attending higher education, the grant system became less generous.

During the 1980s, the expansion of higher education was seen as a prime objective to guarantee technological progress and higher productivity at a time when the demand for a highly skilled workforce increased. Conscious that such an expansion was not affordable with the current financing arrangement, the need to reform the financing of higher education became clear. Whilst deregulation and denationalisation was the leitmotiv of the Conservative governments during the 1980s, this did not apply to higher education. The Education Act of 1988, whilst allowing room for universities to expand their number of students, also reinforced the role of the state to keep control of the higher education budget. More importantly, the reform started the phasing out of grants to be replaced by subsidised loans. Expansion of higher education continued at an increasing pace, partly fuelled by the transformation of polytechnics to fully-fledged universities (Further and Higher Education Act, 1992), so much so that by 1993 more than 30% of a cohort was attending higher education—a doubling of participation over a five-year period.

However, the financial situation of universities did not improve and it became rapidly clear that additional sources of funding were needed. Additionally, the expansion in the number of students had done nothing to close the social gap in higher education participation. The Dearing report of 1997 paved the way to the introduction of entry fees—capped originally at £1000 a year, the removal of grants and a system of subsidised, income-contingent loans to be repaid as soon as graduate earnings reached £10,000. The 2004 Higher Education Act, which was implemented in 2006, pursues the same objective of increasing university revenues coming from the individuals who benefit from higher education. This reform increased the fees to a maximum of £3000 a year but, in order to improve access for poorer students, the fees are not paid upfront by the student.
Instead, the fees are paid by a ‘student loan company’. Part of the fees is intended to be used by the universities to improve the access of pupils from lower social backgrounds to higher education. The repayment threshold was also increased to £15,000. When annual earnings of the individual reach this threshold, reimbursement of the loan starts. The reimbursement is calculated as a proportion of the earnings – rather than based on the sum borrowed. The aim of these reforms is to strike a balance between opening the access to university for individuals from lower social backgrounds but also to increase the resources available to higher education institutions in order to guarantee the quality of their research and teaching in a market that has become increasingly global and competitive.

In the last 20 years, England has thus been an interesting laboratory moving from a system of free access and generous grants, to students financing their education via subsidised loans, to the current system with entry fees and income-contingent loans. It is therefore interesting to survey the theories underlying the various financing arrangements and how they have fared in England.

**Tax-Based Funding**

Education, including higher education, benefits individuals in more than one way. First, and maybe foremost, the increase in acquired skills leads to increased productivity and higher earnings. Second, education has some intrinsic non-financial benefits: it improves health outcomes (Grossman, 2005), changes attitudes, improves civic sense (Milligan et al, 2004) and benefits the second generation (Currie & Moretti, 2003; Black et al, 2005). In addition to these benefits enjoyed by the individuals investing in higher education, individuals that are not directly affected by education also benefit from interacting with more educated individuals. The social returns can be direct if, for example, an educated individual increases the productivity of his or her fellow workers by sharing his or her knowledge, or indirect if, for example, an educated individual creates a new process that increases the productivity of the less educated workers. These social returns are difficult to quantify but are potentially important (Acemoglu & Angrist, 2000). These returns to education are thus shared between the graduate but also – and perhaps mostly – the state in terms of increased productivity, tax base and reduced expenditures. As the state benefits from having a more educated workforce, it seems fair that the state should subsidise education. However, following the same argument, it becomes evident that individuals should thus pay for part of their own education. The financial benefits to education are substantial; having a degree on average increases earnings compared to an individual with a secondary school qualification by 20-40% (Walker & Zhu, 2005) in the United Kingdom and similarly in the rest of the western world (Harmon et al, 2000).

So why should the state intervene in the market for education? The explanation lies in the fact that the market for education is not perfect and suffers from some failures. Several market failures have been advocated. First, individuals may have imperfect information about the costs and benefits of education. For example, the social gap in higher education attainment could be partly due to differences in the information set available, with individuals from lower social backgrounds overestimating the costs and underestimating the returns. The information failure may be true at the level of primary and secondary education, especially when parents make decisions for their children (which may not fully take into account the ability of their children) but becomes less compelling for higher education where a large amount of information is available to prospective students. Second, consumers may not be able to recognise the quality of education, and remedial policies to correct initial underinvestment or poor quality tend to be lengthy and costly. Again, this argument is probably valid at the lower levels of education but lacks credibility for higher education where several criteria to judge the quality of the institutions are easily available – league tables or the government-sponsored teaching assessments and research assessments. Moreover, the market for higher education is competitive. Students are free to attend the university of their choice and institutions truly compete to attract students. Third, the most credible argument to warrant a tax-based funding of higher education is that individuals are financially constrained and cannot borrow against future income. It is worth investigating this last claim in some detail. In order to provide a loan, banks need collateral – assets that can be seized if the individual fails to repay. However, in case of a loan to finance an individual’s education, whilst this investment on
average generates high returns, the bank has nothing to sell to recoup its costs if the student fails to repay. Only individuals from more favourable backgrounds would be able to either directly finance their education or take a loan secured on some parental assets. Due to the difficulty in securing loans for education, the state should thus finance it. This is basically the argument put forward by stakeholders arguing that in order to equalise access to higher education, education should be provided for free to all students, with a system of grants to lift students out of poverty. Whilst this argument is basically true at lower levels of education, as schools should provide a homogeneous good, it is flawed for higher education. The main reason to object the tax-based funding of higher education is that it is an unfair and regressive system (the poor pay disproportionally more than the rich). It is unfair in the sense that graduates represent less than 20% of the taxpayers. This in itself is not enough to oppose tax funding of higher education, since taxation is all about making individuals pay for services that they may not use themselves. The regressivity of this form of financing is a more compelling argument. Why should a poor household pay for the education of a middle-class child and reinforce the inequality in earnings for their children? Moreover, free access to higher education does not guarantee that pupils from poorer backgrounds can attend higher education. Decades of free higher education did not dent the social gap in attainment. This is because, as the purse master, the state will cap the number of students. Entry is then likely to be based on academic merit. Children from lower social backgrounds tend to attend schools of lower quality, and not benefit from additional tuition (which middle-class parents will be glad to pay for in order to secure free higher education for their offspring), and will lose out on entry. The deadweight loss – amount of public money that individuals would have paid personally to obtain a given outcome if no public provision/support had been made available – is potentially large. In order to make free education compatible with the expansion of higher education, the only solution will be to drastically reduce the per-student funding, which will impact on the quality of the education provided. Thus, free education is unfair and not compatible with a large proportion of students going to university, unless the quality of the provision of higher education is drastically reduced.

**Student Loans**

Since the benefits of higher education are shared between the graduates and the society at large, it seems fair that the cost of education should also be shared between these two groups. At the same time higher education institutions are short of cash to guarantee the quality of their research and teaching. So the first apparent solution is to introduce fees. However, as discussed above, students are poor and introducing fees will just make them poorer or even price them out of higher education unless they can rely on parental contributions, or loans are made available to students. Relying on parental contributions reduces access to higher education to middle-class children only and generates a waste of resources in terms of clever-but-poor pupils being prevented from attending higher education. Commercial loans are also undesirable. First, the need for collateral to secure the loan implies that children from lower social backgrounds will still be financially constrained. This difficulty can be solved by introducing need-based grants which can be financed out of general taxation, and to further remove the link between students and their parents’ financial situation, a state guarantee of the loans – i.e. the state reimburses the banks in case of students defaulting on their loan. Second, commercial loans will impose a large risk on students. Education is an investment which may fail to generate financial returns. Circumstances may also change throughout life, making the reimbursement of the loans potentially difficult. Female graduates, for example, would be constrained in the fertility decision as having children will prevent them from reimbursing the loan. In such a system, unless some generous grants for poorer students are available, the number of students is likely to plummet and the social gap in participation to increase dramatically. Such a system may solve the underfunding of universities, but it is plagued by negative outcomes concerning access to university. It is also likely to be deeply unpopular politically as both the middle-class and the poorer pupils lose out. The middle-class students lose because the costs dramatically increase and the students from poorer backgrounds lose because access is only possible if a grant is obtained. To make it more palatable, the state may be tempted to subsidise the interest rate on the student loan. Since the interest subsidy comes out of the share of
the budget that the state is setting aside for higher education, subsidising loans will lead to a reduction in the direct funding of universities – and thus a possible drop in their quality – or a reduction in the number of grants allocated, which penalises the poorer students that the subsidy was designed to help. In fact, a subsidised loan does not improve students’ welfare, since graduates instead of students are enjoying the financial gain. Since graduates enjoy higher wages, subsidising loans is a deeply regressive policy, providing a subsidy to the richer individuals. Finally, and more importantly, such a financing system imposes large financial risk on students, which on its own should reduce the number of graduates rather than increase it.

Rather than a commercial loan, for which the reimbursements are solely a function of the sum borrowed and independent of the financial situation, the debt should be made income contingent. Hence, rather than paying fixed monthly instalments, graduates’ reimbursements are defined as a proportion of their income with a minimum income threshold under which no reimbursement needs to be made (similar to the way taxes are calculated). Thus, successful graduates will pay back a larger sum each month than their less successful peers, and reimburse their loan in a shorter period of time. Moreover, non-working graduates or those on a low income do not need to reimburse until their financial situation improves. If throughout his or her working life a graduate never manages to pay back the loan – and thus defaults on the loan – then the state guarantee should be exercised and the debt cancelled. An income-contingent loan thus eliminates the financial risk of taking a loan for the student.

Such a financing of higher education is not a disengagement from the state as tuition fees are still subsidised – students should not be expected to pay the full price of their tuition since some of the benefits are captured by the state. Here Barr & Crawford are overly negative, and recent research has been conducted to measure the externalities of higher education, as mentioned above. However, I agree with Barr & Crawford that the share of the subsidy is a point to debate for society. Second, the state eliminates the financial risk for the lenders. Financing education with a mix of state subsidies, upfront student fees and income-contingent loans was basically the position adopted in England after the recommendations of the 1997 Dearing report. A variation of this type of financing is to introduce a ‘graduate tax’ – as implemented in Australia. The two systems operate in similar fashion; the difference is in the length of the reimbursement. In the loan system, reimbursement stops as soon as the loan is paid back whilst in the tax system, payment carries on for a fixed period or throughout the working life. For the poorer graduates, the systems are thus equivalent, but for the most financially successful graduates, the graduate tax generates additional payments. These payments can be used to cover the shortfall generated by the least successful graduates who fail to pay back their loan.

Either variation has the advantage of eliminating the financial risk associated with taking a student loan and disconnecting the ability to finance higher education from parental background. Thus, this should reduce the social gap in higher education attainment. However, by making students pay upfront for their fees, they still need to rely on their parents’ financial resources. Also, as was the case in England, if the loan system fails to provide students with an income to lift them out of poverty, parental contribution, as well as part-time employment, may be needed. Hence, this system of financing higher education is still likely to fail to reduce the social gap in attainment.

Grant, Loans and Deferred Fees

The main drawback of making students pay fees upfront is that at that point in their life cycle they are still poor or at least financially dependent on their parents. In order to remove this intergenerational link and improve the access to higher education for individuals from lower social backgrounds, university should be free at the point of entry. One solution could be to ask students to pay their fees after they have experienced the good – as when buying a good on credit. Whilst this solves the financial constraint issues for the students, it does not improve the universities’ budget in the short run, which was the major reason for introducing fees in the United Kingdom in the first place. In order to solve financial constraints for both the students and the university, the fees need to be paid upfront – to improve the financial situation of the university – but not by the student. The fees could be paid by a third party (a state agency) and then added to the debt of the students, or simply, the loan could be used to pay the fees. It appears that the only way to solve the
conundrum of underfinanced higher education, increasing participation and guaranteeing equality of opportunity is to charge students ‘top-up fees’ (in the sense that they do not pay the full tuition cost but top up the state contribution) and introduce a system of income-related loans. Critics of this system suggest that crippling students with debt will affect their choice of subjects towards topics guaranteeing higher financial returns. I do not find this argument compelling, first, because when viewed against lifetime earnings the student’s debt is modest; the annual repayment is calculated as 9% of earnings above £15,000. So an individual earning £20,000 will reimburse £450 a year, which is easily affordable. Second, even when education is free, it is still a costly investment in terms of three years of lost earnings – which dwarf the tuition fees – so it is unclear why the additional payment will lead to a dramatic change in the investment decision. Moreover, the wages of graduates in specific subjects reflect the demand for individuals with such skills and hence students’ reactions to such signals improve the efficiency of the market. Finally, as stated by Barr & Crawford, making students pay makes them more demanding customers and will lead to improvement in the delivery of services by the universities, higher quality and greater flexibility.

Additional Issues

If a system of loans is put in place, is there still scope for introducing grants? Grants could be offered by universities in order to attract particular students: either high ability, or poorer students who may be more risk averse at taking loans. Various reasons could be behind the resistance of poorer students to take loans, for example, the family experience with loans, misconception about their future income, or fear of not succeeding at university.[3]

The loans are introduced in order to pay for fees and other costs associated with education, but also to lift students out of poverty; so the maximum to be borrowed should be set high enough to warrant these objectives. If the loan cap is set too low, the students will have to rely on parental contributions – thus fuelling the social gap in attainment – or will have to rely on part-time work with potential negative effects on their academic performance.

When introducing loans, governments usually face some opposition from the public, which they tend to sweeten with the promise of subsidised loans. Barr & Crawford rightly show that a reduction in the interest rate on the loan does not help students but only graduates, who tend to be in the higher part of the income distribution, so the rationale for the subsidy is unclear. Moreover, in a system of income-based reimbursement, the reimbursements are not a function of the size of the loans remaining but only of the current income. Hence a subsidised interest rate has no effect on the monthly reimbursement but only reduces the time it takes to reimburse the loan. So amongst graduates, those who gain the most from a subsidised loan are the most financially successful whilst the poorest – especially those who fail to reimburse the loan – do not gain anything. Thus, a subsidised interest loan is a deeply regressive policy, benefiting mostly the richest graduates. Not only do subsidised loans hinder students but they even penalise them. Subsidised loans are expensive, and ‘eat’ up the education budget, leading to a reduction in the number and size of loans and grants – policies that help the students.

Another point of contention is whether the fees should be allowed to vary between universities, and how much freedom the institutions should be granted in deciding the fee level. Arguing that for fairness reasons the fees should be the same in all universities is everything but fair. It is based on the assumption that all degrees, in all institutions, are of the same quality and bring the same returns. Setting a unique price means that students going to less prestigious universities are overcharged whilst those who graduate from the highest quality institutions are undercharged; which once again is a very regressive policy. In other markets you would expect to pay different prices according to the quality of the good purchased – for example, a Fiat and a Ferrari car, whilst both are built by the same company, have different prices – so why should higher education adopt a unique price? Additionally, granting universities freedom in setting the price fosters competition between the universities, which will enhance the quality and efficiency of the education provided. In a fixed-fee world, the universities are limited in their strategies to improve quality since the associated costs cannot be recouped. The role of the state is, like in any other market, to guarantee that the market works and that there in no collusion between higher
education institutions, that the quality of the product does not fall below some agreed standard, and that information regarding the product is freely available.

Similarly, one may argue that the prices should be allowed to vary by the type of subject. More popular subjects could be charged more to subsidise less popular subjects. Moreover, the state could increase its contribution – and thus pay part of the students’ fees in subjects for which the social returns are the highest, and the supply of graduates is unbalanced with the demand – nursing, teaching, physics …

Finally, as stated in the introduction, universities have been encouraged to find alternative sources of funding, either research related or just using the physical resources (mostly in terms of building and facilities) of the institution. Whilst these activities generate additional funding, they may also distract universities from their core mission of providing education to students and improving knowledge. On its own, it is not a route that can be used to secure free university education for all.

**Conclusion**

Higher education funding has various conflicting objectives. First, the universities need greater funding in order to maintain or even increase the quality of education in the face of increasing participation. Second, as the state cannot bear all the costs of higher education, additional sources are needed, including a contribution from the students. Third, university pricing should be such that students should have the same opportunity to participate independently of their family background. We have seen in this essay that the free university does not lead to any of these objectives. Any system forcing students to pay upfront creates barriers to entry into higher education for individuals from lower social backgrounds. The only financing system that can sustain the three objectives of quality, expansion and fairness of access is to have loans that can be used for fees as well as living expenses. The fees will improve the funding of universities and increase competition between institutions that will benefit the students. The loan – if the reimbursement is based on income – does not impose undue risk on the students and allows them to become financially independent from their parents. Since the state intervention is more limited, the higher education budget is thus more likely to be able to accommodate the expansion in the number of graduates.

This financing is basically the thesis advocated by Barr & Crawford, and their book takes the reader through the tortuous journey of the authors’ campaign to convince decision makers and inform the general public in the last couple of decades. The book can thus appear sometimes repetitive and could have benefited from some editing, but it is also edifying to see how the authors manage to win (hearts and) minds over their radical project of reforming the financing of higher education in England. The book is thus a must-buy for students interested in public economics and those specialising in the economics of education. It is also a lesson for policy makers on how to present arguments. Finally, the book also demonstrates how technical arguments can be presented in a simpler way to the general public. The authors successfully demonstrate – using economic theory in a compelling but non-technical manner – that this financing system is the fairer in terms of equality of access while guaranteeing the high quality of the education provided to a larger share of the population. What Barr & Crawford’s book lacks is a more general overview of the other solutions that have been adopted around the world and whether they achieve the twin aims of fair access and adequate funding of higher education. This is where GUNI becomes an interesting complement to Barr & Crawford.

GUNI has a much wider scope than Barr & Crawford’s book, not only geographically but also in the financing options presented, looking, for example, at international expansion, the role of philanthropy and importantly, the role that the private sector can play in the provision of higher education. It also highlights the similarity and differences in the constraints faced by higher education financing in the developing and developed countries. However, GUNI tends to be mostly descriptive and lacks a clear line of direction in the analysis. The breadth of data provided is also overwhelming and would have gained from a clearer argumentation; this may be due to the collegiality of the authorship and the need to reflect various experiences. However, their review of the financing of higher education around the world would have benefited from a concluding
chapter providing a clear overview. The policy advice provided (the survey of ‘experts’) falls short of a clear policy recommendation. Nonetheless, GUNI provides a wealth of information which will be of interest to all participants in the debate about the funding of higher education.

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Notes

[1] Higher education policies are devolved between the four regions of the United Kingdom. Scotland and Wales, for example, do not charge top-up fees for their home students. The discussion will focus on England, which represents 80% of the population. Further details on the United Kingdom universities can be found at http://www.universitiesuk.ac.uk

[2] Education externalities are outcomes that are due to the investment decision of some individuals but affect individuals who did not invest in education themselves. For example, if a graduate invents a new drug that improves the health of the nation this will be viewed as an externality of education.

[3] Evidence on the greater aversion to debt by students from lower social backgrounds is limited (Norton, 2000). Chevalier (2006) shows, for example, that students from poorer backgrounds tend to underestimate their ability relative to their university peers.

References


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