

Is Going to University in Britain a Wise Investment?

Dennis A. Ahlburg

Department of Economics

Trinity University

San Antonio Texas U.S.A.

and

Oxford Centre for Higher Education Policy Studies

University of Oxford

In his article in this journal Alan Ware claimed that for most students higher education was not worth the cost.ⁱ It is important to critically evaluate Ware's claim because similar scepticism has been expressed in the media in the U.K., the U. S., and elsewhere. However, this view is inconsistent with the empirical evidence on the value of higher education. If students reject higher education because of views such as Ware's they, and society, will underinvest in higher education.

Ware maintains that there are four myths- or claims- surrounding higher education:

- 1) There is a 'need' for all to be more highly educated.
- 2) Higher-education qualifications result in higher incomes for those who have them.
- 3) There is a good fit between the skills needed in the labour market and those acquired in Britain's education system.
- 4) Educational credentials can facilitate social mobility.

He argues that 'none of these myths has much basis in fact.' This is a bold statement and is largely false.

In her rebuttal to Ware, Alison Johnston argued that on both empirical and theoretical grounds there is a good fit between the skills employers seek and those produced in higher education. She cites survey data from employers that they are satisfied with some skill sets acquired by graduates but, of course, would like more. She also notes that universities create new skills. She briefly touches upon Ware's second claim, rejecting it, and concludes that 'the stakes of not obtaining a degree are higher for school leavers than ever before' (p.487). Ware and Johnston, as do I, agree that the British labour market has become polarised by skill level and that 'soft skills' such as critical thinking are increasingly valuable. As Johnston pointed out, this labour market polarisation resulted from skill-biased technological change which was complementary to higher education. Ware is more sceptical than Johnston or I as to whether 'soft skills' can be developed in universities today. I explore the importance of these 'soft skills' below. Johnston and I believe that the polarization of the labour market creates an incentive to invest in higher

education. Ware does not. For Ware, higher education is purely positional competition, that is, the only incentive to acquire higher education is to differentiate yourself from others in the labour market. He seems to reject the notion that graduates build up human capital at university and favours a signaling or filtering theory of higher education. His view of the incentive for investing in education leads him to false conclusions. Johnston does not discuss the fourth claim. I am much more sympathetic to Ware's position on this claim than on his other views and expand on this below.

Like Ware and Johnston I focus on the private economic returns to higher education, not because there are no other returns to higher education, indeed a recent study calculated that the public returns exceed the private returns (and there are non-quantifiable returns as well), but because for the vast majority of students (and parents) the economic returns are primary, a belief shared by the Treasury which views higher education as a private good where the returns are higher earnings. A very utilitarian approach but the dominant one.

I disagree with Ware in his rejection of the first three claims, although I will present evidence that we could find some agreement on a much modified version of the first two claims. In particular, I agree with him that 'not everyone needs a highly academic form of education.' But this does not lead to the conclusion that no one does. As mentioned, I am largely, although not entirely, in agreement with him on his fourth claim. A further issue that Ware discusses at length in his response to Johnston is that there is no incentive for the Government or the universities to provide the information on earnings that would allow prospective students to make informed judgements on whether or not to attend university. He describes this as 'a swindle of the Emperor's clothes variety'. I agree wholeheartedly with him that there is no incentive for most universities to do so but disagree that there is no incentive for the Government to provide such information. In fact, the Government has taken steps (June 13 2017) to rectify this shortcoming and I will discuss them below.

The first and second claims are connected. In a market economy one way to judge 'need' is whether there is demand for whatever may be 'needed'. If education is not 'needed' employers will not pay for it and students will not undertake it. There is considerable evidence that students and employers in Britain are willing to pay for higher education qualifications, and indeed any education qualifications obtained in formal education. Blundell, Dearden, and Sianesi report an average return of 27 percent for those completing higher education relative to anything else.ⁱⁱ They also find average returns of 18 percent for O-levels, 24 percent for A-levels, and 48 percent for higher education relative to leaving school at age 16 without qualifications. Chevalier and colleagues at LSE found that the returns to higher education compared to A-levels have varied over time from 12 percent to 18 percent for men and from 19 percent to 31 percent for women.ⁱⁱⁱ A recent report on graduate earnings released by the Department for Education also found very substantial earnings advantages for graduates.^{iv} Ware also claims that postgraduate qualifications have 'relatively small' value added to employers. If this were true, the postgraduate premium would not be substantially higher than the graduate premium. It is. These and similar findings refute Ware's claims that higher education is not needed and does not result in higher earnings.

I think Ware reached his erroneous conclusion on the value of higher education because he emphasises only one side of the labour market: supply. Ware stresses the increase in the number of graduates- 'too many graduates'- and concludes, incorrectly, that for most students 'there is no graduate premium'. However, his claim largely ignores demand. For him the labour market is a zero sum game, thus his belief that higher education is purely positional competition. His is a simple supply story: if more people have degrees they are less valuable, that is, the earnings advantage of graduates over non-graduates falls. In fact he states 'education credentials are worthless if everyone has them'. A direct examination of the hypothesis that the increase in the supply of graduates resulted in a fall in the higher education premium found no evidence in support of it.^v

Another misunderstanding of the functioning of the labour market is Ware's prediction of the impact of the 'explosion in the proportion of degrees awarded in the upper range, with the 2.2 becoming uncommon and the third class nearly extinct'. He predicts a devaluation of 'good' degrees as they become more common and further unproductive investment in postgraduate education as students try to distinguish themselves from the mass of graduates. As mentioned, he asserts 'education credentials are worthless if everyone has them' and predicts that future graduates will not earn the returns of days gone by when there were relatively few university graduates. However, the market has rewarded university education more highly even as more people acquired it. The return to university education is higher now than it was in the 1970s when relatively few people attended university and the value of a First Class degree and an Upper Second has increased even as they have become more common.^{vi} Again, growth in the demand for educated labour explains these results. One cannot explain market outcomes by only looking at one side of the market.

I do agree with Ware that the return to education is not the same for everyone. For him, it is high for those from wealthy families and those that attend high status institutions but negligible for most other graduates. Graduates from higher income families earn 25 percent more than those from lower income families but when the institution attended and course taken are controlled for the difference decreases to ten percent.^{vii} Most of the difference in attendance rates at higher status institutions is explained by pre-university differences in academic achievement so the 'access failure' is less at the university level- although there is some- than at the primary and secondary level. Returns differ with the quality of university attended. Graduates from the top 25% of universities earn 10% to 16% more than graduates from the bottom 50% of universities.^{viii} Britton and colleagues have estimated that there are 23 universities where the median graduate earnings for males are below the median earnings of non-graduates and nine such institutions for women. It is also true that average rates of return differ markedly by subject studied. For example, for men, maths and computing, engineering business, and

medicine have returns that are from 20 % to 35 % higher than for Arts, sciences and languages. For women education, medicine, architecture, maths, and business have much higher returns than Arts.^{ix} So perhaps one could agree with Ware that the market has less 'need' for Arts graduates than graduates in other areas- and shows it. This does not mean that there is no return to a degree in Arts or that the returns are of a nonfinancial nature. It is clear that subject choice and choice of university affect future earnings: there are subjects where university matters a great deal and some universities where the choice of subject is important. I agree with Ware that students must have information on earnings by subject and university to make informed choices and this point is discussed below.

While I disagree with Ware that 'for many there is no graduate premium', it is true that for *some* there is no graduate premium. The dispersion of returns to graduate education discussed above increased substantially from the mid-1990s to the mid-2000s.^x That is, the distribution of returns is broad and is becoming broader over time. Consequently, some students will earn substantially less than the average but some will also earn substantially more. In the US, it has been estimated that one-sixth of college graduates will earn less than the average high school graduate.^{xi} A study by Britton and colleagues estimated that earnings of graduates exceed those of non-graduates for about 80 percent of graduates. That is, there is a graduate premium for *most* graduates. This is the opposite of Ware's assertion. In the UK- and the US - the increase in the variation of returns to university education is due to an increase in the proportion of graduates in the labour market. Returns to those at the lowest level of graduate education decreased and increased for those at the top, consequently earnings inequality among graduates increased. This decrease in earnings for the lowest earning graduates is consistent with the expansion of graduates coming disproportionately from less prestigious institutions and from courses with lower rewards in the market. Thus the increase in the supply of graduates has led to an increase in the *variation* in returns to higher education but it is not correct to conclude as Ware does that

overeducation is so extensive that 'during the course of their working lives a large minority of graduates will earn relatively little'.

Nor is 'overeducation' as simple as Ware assumes- graduates in non-graduate jobs because the skills they possess do not fit those needed in the labour market. A distinction must be made between graduates who are not in traditional graduate jobs but fully utilise their skills and those who are not in traditional graduate jobs and do not fully utilize their skills. The latter, perhaps one in ten of graduates, suffer a much larger earnings penalty than the former. As the number of graduates has increased more graduates are taking jobs for which their qualifications are not formally required but in which they are able to make use of their skills. They do not earn as much as graduates in traditional graduate jobs but this is not the same as them making no return on their university education.

In her rebuttal to Ware, Alison Johnston also addresses his third claim- the provision of skills needed by employers. Ware and Johnston agreed that the proportion of high-skilled jobs was increasing but they agreed on little else. However, their classification of jobs as either high-skilled or low-skilled is too simple and may mislead labour force and educational policy. Recent job analysis has adopted a classification of jobs as cognitive/manual and routine/ non-routine rather than skilled/unskilled. Routine jobs are those that can be summarized as a set of specific activities accomplished by following well-defined instructions and procedures, that is, those that can be replaced by machines. Cognitive skills are formal analytical skills, written communication, and specific technical knowledge. Routine jobs-both cognitive and manual- are declining and non-routine jobs are growing. Despite Ware's assertion to the contrary, these changes are occurring at a speed that affects an *individual's* calculations as to the (financial) value of obtaining a degree. A series of surveys of American CEO's reported that less than 20 percent of them believe a narrow vocational focus is the best education for long-term career success. These CEO's emphasise the importance of 'soft skills', that is, critical thinking and analytical reasoning,

complex problem solving, ability to communicate, and the ability to apply knowledge to real-world settings.^{xii} . The skills that are acquired at university, cognitive skills, problem solving skills, communication skills, are more likely to prepare students for non-routine cognitive jobs than the non-university education seemingly favoured by Ware.

The final claim explored by Ware is that of social mobility- the degree to which people's social status changes between generations. There is debate about whether this concept is best measured by income or by class and whether it has decreased or remained stable over time.^{xiii} With the expansion of university education, one may expect that mobility, however measured, increased. This did not happen. Over time the correlation between family income and children's higher education has increased so that the expansion in university education has disproportionately aided children from more affluent families. In 1981 6% of children from the poorest families had completed a university degree and 20% of children from the richest 20% of families had done so. By the late 1990's the percentages were 9% and 46%. The gaps by social class were not as large but were still substantial. Although more poor children acquired a university education many more wealthy children did so. Disadvantaged students are underrepresented at Oxbridge and the Russell group universities where the returns to education are higher than elsewhere. As noted above, a significant portion- but probably not all- of this underrepresentation is explained by differences in previous academic achievement. That is, it is related to poorer performance at primary and secondary school but also to inadequate advice in preparing for admission to university. So it is likely that it is not university education primarily that is failing to fuel social mobility but education at the pre-university level and at less selective institutions. Interventions need to begin in pre-school and high-ability disadvantaged students need to be identified and assisted in applying to more selective universities.

Heeding Ware's call to move the discussion of higher education forward, I offer observations on the two key policy areas Ware mentioned: making access to higher education more socially just and dealing with the 'social waste' from too much higher education.

To make access more socially just Ware suggests a policy that would replace or modify A-levels and the Baccalaureate as criteria for university entry by a 'recognised minimum standard of competence' because 'there is no direct connection between grades and a demonstration of competence for future study'. Students from low income households would be awarded state scholarships on a sliding scale and each university would have to accept a quota of these students. There are several problems with this proposal. The minimum standard is not defined and, given the significant difference in the 'quality' or selectivity of universities, a separate standard would have to be determined for each of them. But Ware's recommendation is based on a fundamentally incorrect assertion. Grades are in fact the best predictor of university performance and, as shown in the recent Department of Education report, also a good predictor of earnings five years after graduation. The current system of determining entry may be imperfect but it is better than Ware's alternative. Quotas imposed on universities do nothing to address the fundamental cause of what Ware sees as socially unjust admission to university, especially prestigious universities, and would undoubtedly lead to failure among those with a 'minimum standard of competence'. Another option to increase access for low income students much discussed since the introduction of university fees and adopted by the Labour Party among other groups is to return to free university attendance which, in modified form, has just been instituted in New York State in the US. A major problem with this idea is that free tuition/fees is a boon to the wealthy and middle class and represents a large transfer of funds from those lower down the distribution of income to those much higher up it, hardly a socially just policy. The current income contingent loan scheme gives protection to those for whom a university education does not pay off while allowing many to make and pay for a successful investment in higher education. Surely, this is a more socially just scheme.

I reject Ware's claim of 'too much higher education'. As I have argued, university education is an attractive option for many if not most secondary school leavers. However, we must not oversell the returns to higher education, although on average they are historically high. Students must be informed of the variability of returns and, particularly, the variability of returns by institution and degree program within an institution. Like other investments, higher education does not come with a guaranteed return for all but information can help improve decision making. As Ware noted, the provision of league tables in the 1990s and the knowledge of differences in reputation they provided affected the behavior of employers and prospective students. But league tables are not sufficient. As Ware noted, students had become members of 'a club with different levels of membership, and where the likely benefits accruing varied enormously', however, until now, students had no clear idea how much these benefits varied and essentially each member of the club paid the same price - unlike the US where tuition varies greatly between public and private institutions and within public and private institutions. Some of these institutions are highly academic and some serve the demands of the business sector closely. Palfreyman and Temple have described the UK higher education system as being afflicted with 'filiopietism', that is, institutions all want to be Oxbridge or the Russell Group and charge accordingly.^{xiv} To charge less would be interpreted as a signal of lower quality. Thus most students at all universities accumulate a similar amount of debt but graduate with very different earning prospects with which to pay off their debt.

The publication on June 13, 2017 of earnings data one, three, and five years after graduation by sex, higher education institution, and for 23 subjects combined with information on earnings for those who do not attend university will greatly enhance a student's ability to make informed decisions about whether to attend university and what to study and where to study it. The data go beyond median earnings to provide maximum, minimum, lower quartile, and upper quartile earnings. Thus a student can get an idea of the distribution (variability) of earnings by subject and institution. Although a huge advance in informing student decision making these data still do not allow the student to answer the

most pertinent question, that is, 'what can a student like me expect to earn taking this subject at this university?' nor do they allow for full accountability because they do not control earnings for differences in the pre-university achievement of students nor the school backgrounds from which they came. In the jargon, the data do not measure 'value added' or 'contextualized value added'. However, an attempt to do so is made by reporting for each university a rough estimate of the average attainment of students prior to commencing studies and an indicator of disadvantage of the area from which students came.

In principle students now have information that will allow them to make better economic choices. The demand for courses and universities that outperform others should increase and decrease for the underperformers. If this does happen then fees for underperforming courses and underperforming universities should fall. But under present conditions, they cannot rise at 'overperforming' courses and universities. Perhaps they should be able to. I said 'in principle' because it is asking a lot of 17 or 18 year olds (and their parents) to process all this information, especially the value added adjustments.

Conventional economists assume that more information is better than less but behavioural economists argue that people have a limited capacity and ability for dealing with complex data. In this case there may be a role for the Government. The Government can use data available to it to estimate for each course and university what expected earnings would be and then determine which courses and universities outperform expectations (as was done by Britton et al. in their study). The Government could publish these estimates and then leave it to the market to make the necessary adjustments. But the Government's role may need to be more direct. A recent study of first year university students in the US disclosed that 20 percent of those with government loans reported that they did not have any loans. How they could then make informed decisions about their further education is a mystery. If British students similarly lack the skill to make informed decisions about investments in higher education based on the recent data released then there is an argument for the Government to do so perhaps by ranking courses and universities by earnings (or value added) and establishing fee bands commensurate with

earnings or to selectively limit the size of loans available, as is done in Australia. Perhaps loan limits is a better option because it impinges less on free choice (even if it is not fully informed). The Government could also use loan non-repayment rates (RABs) for this purpose. In this way the Government could reduce the 'social waste' discussed by Ware because it is the public who pays for loans that students cannot repay.

In conclusion, I disagree with Ware that for most graduates there is no return to higher education in Britain. Nor is higher education a guarantee of higher earnings for all graduates but there is now information that can help students make much more informed decisions about attending university and help minimize the 'social waste' decried by Ware. The evidence I have presented here supports the conclusion reached by Britton et al.: 'there is no doubt that a degree offers a pathway to relatively high earnings for a large subset of graduates, from across a range of institutions', that is, for most students going to university in Britain it is a wise investment.^{xv}

i²A. Ware, 'The great British education 'fraud' of the twentieth and twenty-first centuries', *The Political Quarterly*, Vol. 86, No. 4, 2015, pp. 475-84. A. Ware, 'Yes, a fraud: A response to Johnston', *The Political Quarterly* Vol.86, No. 4, pp.489-92. A. Johnston, 'Is British mass higher education really a 'fraud': A rebuttal to Ware', *The Political Quarterly*, Vol. 86, No. 4, pp. 485-88.

ii²R. Blundell, L. Dearden, and B. Sianesi, 'Evaluating the effect of education on earnings: Models, methods, and results', *Journal of the Royal Statistical Association A*, Vol. 168, pt. 3, 2005, pp. 473-512.

iii²A. Chevalier et al. 'The returns to higher education teaching', London School of Economics, Centre for the Economics of Education, 2002.

iv²Department for Education, 'Employment and earnings outcomes of higher education graduates by subject and institution: Experimental statistics using the Longitudinal Educational Outcomes (LEO) data', SFR 18/2017, June 13 2017.

v²I. Walker and Y. Zhu, 'Education, earnings and productivity: Recent UK evidence', *Education, Earnings, and Productivity Labour Market Trends*, 2003, p145.

vi²R. A. Naylor, J. Smith, and S. Telhaj, 'Graduate returns, degree class premia and higher education expansion in the UK', London School of Economics, Centre for Economic Performance working paper 1392, 2015.

vii²J. Britton, L. Dearden, N. Shephard, and A. Vignoles, 'How English domiciled graduate earnings vary with gender, institution attended, subject and socioeconomic background', IFR working paper W16/06, 2016

viii²H. Iftikar, S. McNally, and S. Telhaj, "University quality and graduate wages in the UK", IZA discussion paper no. 4043, Bonn Germany, 2009

ix²N. C. O'Leary and P. J. Sloane, 'The return to university education in Britain', *National Institute Economic Review*, 2005.

x²F. Green and Y. Zhu, "Overqualification, job dissatisfaction, and increasing dispersion in returns to graduate education", *Oxford Economic Papers*, Vol. 62, 2008, pp. 740-63.

xi²S. Baum, "*Higher education earnings premium: Value, variation, and trends*", Washington, D.C., The Urban Institute, 2014.

xii²Association of American Colleges and Universities and Hart Research, 'It takes more than a major: Employer priorities for college learning and student success', Report, Washington D.C., 2013.

xiii²J. Blanden, P. Gregg, and S. Machin, 'Educational inequality and intergenerational mobility', in S. Machin and A. Vignoles, eds, *What's the Good of Education? The Economics of Education in the UK*, Princeton, Princeton University Press, 2005, pp. 99-114 and R. Erikson and J. H. Goldthorpe, "Has social mobility in Britain decreased? Reconciling divergent findings on income and class mobility", *British Journal of Sociology*, Vol. 61, no. 2, 2010, pp. 211-30.

xiv²D. Palfreyman and P. Temple. *Universities and Colleges- A very short introduction*, Oxford: Oxford University Press, 2017.

xv²Britton et al, op. cit., p.54.