

Higher education, the recession and austerity: efficiency in the inputs and outputs of
the graduate production process

Background

The expansion of the UK higher education system that began in the late 1980s and continued throughout the 1990s and into the last decade occurred on an unprecedented scale. Participation rates in 1989 were 19%; by 1993 they had jumped to 33%. Although an increase in the number of graduates in the labour market was encouraged by policymakers who were convinced that the UK's economic fortunes rested on the development of a 'knowledge economy', the magnitude of this increase was not fully anticipated. If we view the economic role of universities as a producer of skills, then its rapid growth, combined with a common underlying incentive structure, may have led to a system which developed in inefficient ways.

As with all industries, inefficiencies in production processes are easy to ignore during a period of economic boom. However, the system now faces a number of pressures as a consequence of the current recession. In particular, as the Coalition government seeks to reduce the existing deficit and pay down the UK national debt, the constraints on expenditure make it increasingly important that resources are deployed as efficiently as possible. This is doubly important as universities are increasingly seen as a key part of the economy returning to growth, particularly in terms of supplying the necessary skilled labour that will improve productivity and raise output.

The research

A key area, given these pressures, is whether all of the skills produced by universities could be produced more efficiently elsewhere. The rapid growth of the sector led to an increase in the number of institutions offering traditional academic courses and a move towards degree-level programmes in areas where training and education was previously more vocational. There is also some evidence that newer universities have created occupationally relevant degrees linked closely to the training needs of employers in certain sectors (Chillas, 2010). As a consequence, some occupations have seen a large growth in their employment share of graduates. Table 1 shows the

occupations with the largest percentage point increase in their share of graduates between 1995 and 2008.

Table 1: Share of graduates in select occupations, 1995-2008

Occupation title (SOC 2000)	1995	2008
Media associate professionals	21.1%	52.8%
Corporate managers	33.8%	60.7%
IT service delivery occupations	6.3%	29.8%
Health associate professionals	7.4%	29.4%
Sales associate professionals	10.2%	31.0%
Public service professionals	37.5%	56.8%
Artistic and literary occupations	34.6%	51.8%
Teaching professionals	63.4%	78.9%
Design associate professionals	34.0%	48.6%
Research professionals	70.0%	83.1%
Administrative: communications	3.8%	16.4%
Functional managers	34.2%	46.5%
Managers in farming and horticulture	4.4%	16.5%
IT professionals	46.5%	58.0%
Administrative: government	9.0%	20.0%
Sports and fitness occupations	15.2%	26.1%

Source: UK Labour Force Survey

The presumption is that university graduates are more skilled and perform better in occupations where alternative routes still exist or previously existed. This depends on whether jobs graduates enter into can adapt or be adapted to take advantage of the skills generated through studying at university that would not have been available had the worker entered the labour market by an alternative route. There is some evidence that this is not always the case (Mason 1996, 2002; Tholen *et al* 2012).

A second concern is that the production processes that generate skills in universities are not efficient. During the expansion of university education, the dominant model remained one of three-year full-time programmes. However, survey evidence (for example, Bekhradnia *et al*, 2006) report that the average UK student spends 26 hours per week on study activities, a figure which is lower in some subject areas (social studies, business, mass communications) and which exhibits a great deal of variation

across institutions. If the input requirements of the skill production process in terms of student hours of study vary to such an extent, then an argument could be made on efficiency grounds for encouraging shorter, cheaper courses in these areas.

The methodology and preliminary results

This paper presents findings from our current project on higher education after the recession, which focuses on the two concerns noted above.

The paper will largely focus on an analysis of labour market data on earnings and employment of graduates and non-graduates in the same narrowly-defined jobs. Our preliminary analysis of occupations is shown in Table 2. We test whether graduates experience an earnings premium, conditional on belonging to a particular occupation. In a number of occupations, graduates and non-graduates are on similar earnings – corporate managers, for example, no longer exhibit any difference in the mean earnings of otherwise similar graduates and non-graduates. It is notable that this occupation saw a huge increase in the number of graduates during the time period.

Table 2: Occupational graduate premia, 1995-2008.

		2008	
		Graduate gap	No graduate gap
1995	Graduate gap	Functional managers, IT professionals	Corporate managers
	No graduate gap	IT service delivery occupations, media, health and sales associate professionals, administration: government	Public service professionals, design, and sports associate professionals, artists, administration: communications

Source: UK Labour Force Survey

Our analysis will attempt to explain these patterns further, looking at other differences between graduates and non-graduates in these occupations (for example, controlling for other forms of education and training that has been undertaken). In addition to Labour Force Survey data, we will analyse data from the National Child Development Study and the British Cohort Study, which features extensive information on individual and educational background and allow us to perform a longitudinal analysis of the transition between different forms of education and the workplace. We

will also use data from the Destination of Leavers from Higher Education (DHLE) survey to analyse differences between types of institution and patterns of skill utilisation as graduates enter these different occupations.

The second strand of work in this project looks to examine hours and modes of study across different institutions in greater detail. The survey evidence noted above has provided some insight into the hours of study in UK universities. Our suspicion is that this estimate represents an upper bound on the true time input in many areas, if respondents are concerned about the use of this data. We are developing a diary study for undergraduates to record their hours of study and the modes of study this time is split between, from which we hope to have some preliminary results.

References

Bekhradnia, B, Whitnall, C, and Sastry, T, (2006), The academic experience of students in English universities, HEPI Report Summary 27. Oxford: HEPI

Chillas, S, (2010), Work-readiness: what employers really want from graduate employees, Paper presented to the International Labour Process Conference, Rutgers University, New Jersey.

Mason, G, (1996), Graduate Utilisation in British Industry: The Initial Impact of Mass Higher Education, National Institute Economic Review 156, pp 93-103.

Mason, G, (2002), High Skills Utilisation Under Mass Higher Education: Graduate employment in service industries in Britain, Journal of Education and Work 15(4), pp. 427-456

Tholen, G, James, S, Warhurst, C and Commander, J, (2012), Graduate skills or the skills of graduates, what matters most? An analysis from a graduatising occupation, conference paper presented at the 30th International Labour Process Conference, Stockholm University, March 28th.