



The Skills and Knowledge of the Graduate Economist

Findings of a survey conducted on behalf of the Royal Economic Society and the Economics Network

June 2007

Richard O'Doherty
Deborah Street
Chris Webber

University of the West of England, Bristol
Frenchay Campus,
Coldharbour Lane,
Bristol
BS16 1QY

1. Background

This study was commissioned jointly by the Royal Economic Society and the Economics Network in October 2006. The initial desk research was undertaken during November while interviews were conducted in December 2006 and January 2007. An online survey was set up in February 2007 and ran until the end of March 2007. The research team consisted of Deborah Street and Chris Webber of the ASQM Consultancy Unit based in the University of the West of England (UWE) and was led and coordinated by Dr Richard O’Doherty, Head of Economics in the Bristol Business School at UWE. We would wish to acknowledge the help and support we have had from many sources but, in particular, from John Sloman of the Economics Network. The study was prompted by concerns as to whether the (revised) Benchmark Statement for Economics reflects the full range of skills and knowledge required by employers, and also whether it takes account of the developing HE teaching and learning environment with new obligations such as PDP and employability initiatives. Indeed a criticism of the current Economics Benchmark Statement (cited in HEA Economics Network 2007) was that it ‘confines itself to identifying only the subject specific and cognitive skills of the discipline’.

Recent studies (HEA Economic Network 2004, HEA 2005) have attempted to assess the student experience and also students’ attitudes towards their HE Economics programmes and employability profiles. Whilst these studies have insight into the skills and knowledge that students recognize from their programmes, the focus has been on the students’ perceptions rather than the views of employers. To an extent, the HEA Economics Network 2004 study did interview recruiters, finding that problem-solving skills and understanding of core principles are seen as important to employers, but that ‘(Economics) graduates are not particularly good at applying knowledge’ to any ‘real-world application’. This study also found that employers perceive Economic graduates as ‘not particularly strong in the development of communication skills or working effectively in teams’ due to the lack of experience of suitable learning activities on ‘traditional’ taught courses. The study goes on to

suggest that ‘developing these skills through the Economics curriculum could be an important step forward’. There is therefore some evidence of a mismatch between employers’ requirements and what is delivered by way of opportunities for development through the current Economics curricula. What is clear through a review of published work on this topic is how little research has been undertaken involving employers who employ Economics graduates.

2. Aim

The broad aim of this project was to attempt to understand employers’ requirements of Economics graduates, to establish whether they think these graduates generally possess the required skills and knowledge and to reveal any clear shortfalls in order to inform the UK Economics academic community. The current Benchmark Statement was taken as a starting point for the survey and was to be critically appraised as to its continuing relevance.

3. Survey approach and methodology

3.1 Outline

Given the limited budget, the steering group agreed that a two-phase project would best address an appreciation of employers’ attitudes by incorporating an initial stage of in-depth interviews with a small number of key employers and a second stage involving the use of a web-based survey questionnaire to a wider range of employers.

Stage One: In-depth interviews

The initial part of the project concentrated on employers’ comprehension of the Economics curriculum, drawing on a range of sources such as the latest revised Benchmark Statement, Craven (1993), Economics Network (2004) and Grant (2006).

The aims of Stage One were:

- To understand employers' experience of Economics graduates in terms of their skills.
- To understand employers' experience of Economics graduates in terms of their knowledge.
- To identify any skills/knowledge deficits.
- To establish whether recruitment processes identify issues.
- To establish whether training programmes suggest that these graduates are deficient in necessary skills or knowledge.
- To obtain feedback on the Benchmark Statement and the draft questionnaire.
- To use this information to help develop the survey questionnaire.

The aims of Stage Two were, in terms of

Employers' Requirements:

- To establish the **skills** that employers are looking for in a graduate Economics student (skills list supplied by interviews and Benchmark Statement).
- To establish what **knowledge** employers are looking for in a graduate Economics student (knowledge and understanding supplied by interviews and Benchmark Statement).

Employers' Assessment

- To establish the **skills** employers believe their current Economics graduates bring with them to employment.
- To establish the **knowledge** employers believe their current Economics graduates bring with them to employment.
- To establish whether employers believe there is a skills/knowledge deficit and to identify any areas in which this occurs.

3.2 Contacts

The main challenge to this work was locating the sample frame for both the interview and survey stages. This was achieved in a number of ways: through known contacts from the project initiators, contacts available through the careers services of a number of universities, *The Personnel Managers Year Book 2006*, recruitment agencies, the Society for Business Economists (SBE) and by drawing data from internet sites for known employers.

3.3 Interviews

The interviews were conducted with senior staff from the Government, Finance and Consultancy sectors. These were arranged between December 2006 and January 2007. Four 90-minute interviews were undertaken by the project team. The focus was generally on the employers' experience of Economics graduates through their recruitment, training and employment processes. The interviewees were also asked to comment on a draft questionnaire to check for comprehension and coverage. Here we were testing their familiarity with the skills and knowledge listed in the Benchmark Statement and their assessment of the questionnaire for our own purposes. It was notable that all those interviewed were generous with their time, opinions and contacts.

3.4 Survey

To ensure a wide range of opinion was assembled, the project team undertook an exploratory survey of employers. Much preparatory work concentrated on collecting contacts for the survey. It was agreed that an online survey would be the most efficient way to collect data for both the respondents and the project team; the interviews and discussions with careers/recruitment staff confirmed that a response was more likely in this format. The survey was published online with the Economics Network and details were e-mailed to those contacts identified. The SBE was also able to advertise the survey through their newsletter; in addition those interviewed had agreed to forward the survey details to colleagues and associates. Although the initial response was disappointing, follow-up telephone and email contact resulted in an acceptable number of completed questionnaires from a broad spectrum of major employing sectors.

4. Interview Responses

The respondents tended to focus on the following areas:

4.1 Application of knowledge to problem-solving processes (framing)

There was a general consensus that Economics graduates are weak in the area of applied problem solving with questions raised about the teaching and learning methods applied at undergraduate level. It was suggested that more case-study work might be appropriate. Two questions were developed for the survey from this: whether Economics graduates can apply economics knowledge and whether they can apply economics knowledge to the real world.

4.2 Communication/presentation skills

It was generally acknowledged that graduates came with limited experience in communication styles from their undergraduate experiences. This related to both the quality/accuracy of their written work and to the variety of communication formats they understood; presentations, report writing, drafting styles and journalism.

4.3 Employability & Recruitment Process

Interviewees noted that the application process identified many Economics graduates who did not appear to have the ability to promote themselves in the job market. This was generally observed in substandard application form completion, inability to write an accurate and relevant covering letter, inadequate preparation for interview (such as failing to research into the company or job requirements) and poor interview skills. The employers specifically indicated that 2/3 of applicants are dismissed due to lack of attention to detail in the application process.

Employability was seen as a key concept too; graduates would be expected to turn up on time, look smart and contribute to the working environment. Internships and placements were useful but employers indicated that, as most students work in some type of temporary part-time employment, of

equal importance was the ability of students to communicate how their employment was relevant to their personal development and employability after graduation.

Arising from comments made in the interviews, it was decided to include two additional questions in the online survey not covered by the Benchmark Statement; graduates’ knowledge of developments in economic policy and their relevance to specific employers, and debating skills.

5. Survey Results

5.1 Overview

The organisations that took part in the online survey represent employers of approximately 1000 Economics graduates in the 2006 recruitment round. Table 1 below gives a breakdown by sector and by number of employees.

Table 1 Number of employers by sector and size of organisation

Employment sector	Size of organisation			Total
	0 – 49	50 – 249	250+	
Consultancy	8	11	3	22
Banking	0	0	3	3
Financial services	0	2	2	4
Government services	1	0	7	8
Professional services	0	0	1	1
Recruitment agency	1	1	0	2
Research	1	0	0	1
Data management	1	0	0	1
Total	12	14	16	42

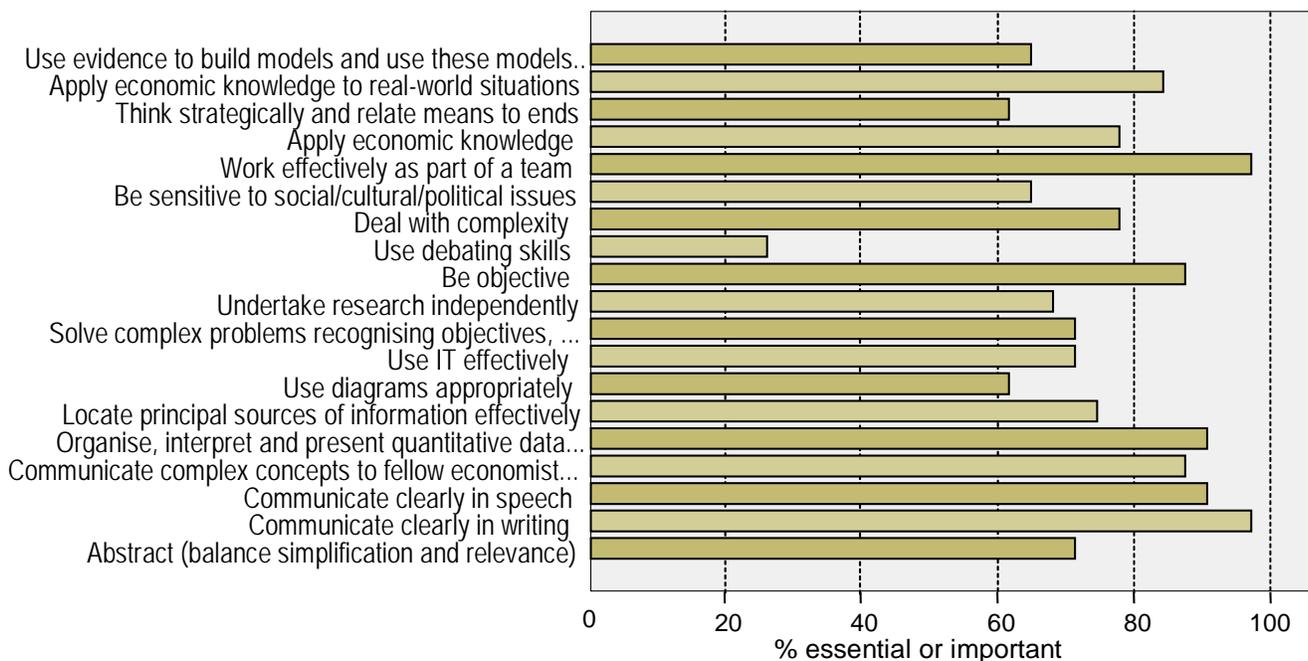
Half of the respondents indicated that they targeted specific universities for their Economics graduate recruitment and, of these, 55% indicated that this was because of the skills, knowledge and employability of the graduates (see Table 1, Appendix 1). Whilst this does not relate directly to the Benchmark Statement, it does indicate that there is an impression amongst recruiters that particular universities provide Economics graduates with particular capabilities.

In general the results indicate that the Benchmark Statement is appropriate for employers. Although highlighted at the interview stage, the survey response suggests that ‘debating skills’ are not a core requirement since only around 30% of respondents deemed this Essential or Important. However, knowledge of ‘developments in economic policy’ did appear as Critical or Very Important to a significant number of respondents.

5.2 Skills

Respondents were asked to rate required skills on a four point scale; Essential, Important, Desirable or Useful. The percentage of employers indicating Essential or Important is given below in Figure 1:

Figure 1 Skills Requirements



In order to assess whether there is a perceived skills deficit, respondents were also asked to rate achieved/perceived skills in graduates on a four point scale; Excellent, Strong, Average and Fair. The percentage of those who considered Economics graduates to be Excellent or Strong in that skill was calculated for those who thought the skill was Essential or Important. Table 2 shows the results of

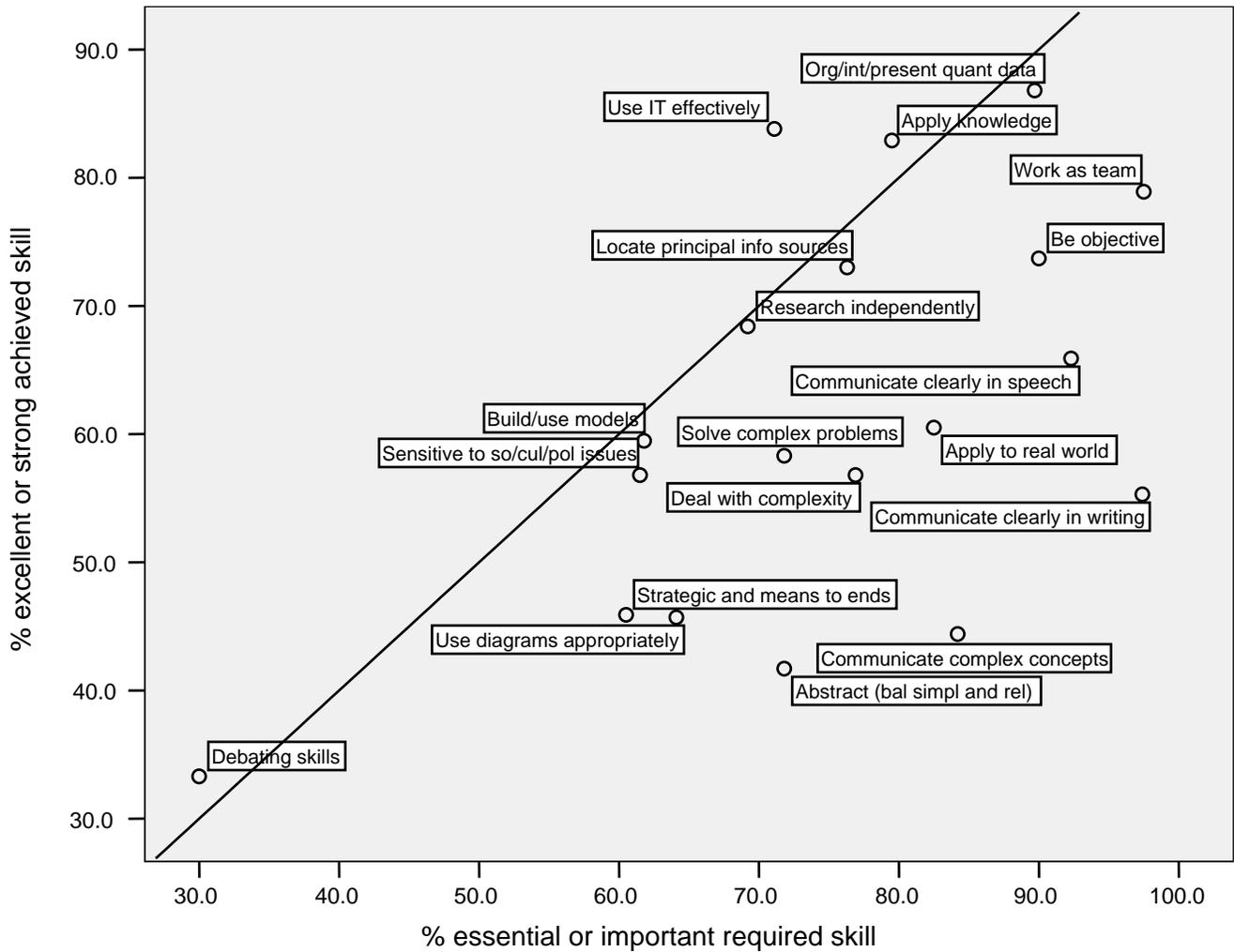
this filter analysis. Figure 2 provides an alternative view of the disparity between the perceived importance of skills (horizontal axis) and the perceived strengths (vertical axis) with a 45 degree line superimposed to indicate where strengths and importance are equal.

Table 2 Skills Deficits

*Of those who thought the skill was **Essential** or **Important** what % considered Economics graduates to be **Excellent** or **Strong** in that skill?*

Skill	%
Communicate complex concepts to fellow economists and lay people	41
Communicate clearly in writing	54
Think strategically and relate means to ends	57
Abstract (balance simplification and relevance)	58
Use diagrams appropriately	60
Apply economics knowledge to real world situations	63
Deal with complexity	66
Communicate clearly in speech	68
Solve complex problems	69
Be sensitive to social/cultural/political issues	70
Use evidence to build models	71
Be objective	72
Use debating skills	72
Undertake research independently	77
Work effectively as part of a team	79
Locate principal sources of information effectively	83
Use IT effectively	85
Organise, interpret and present quantitative data	85
Apply economics knowledge	87

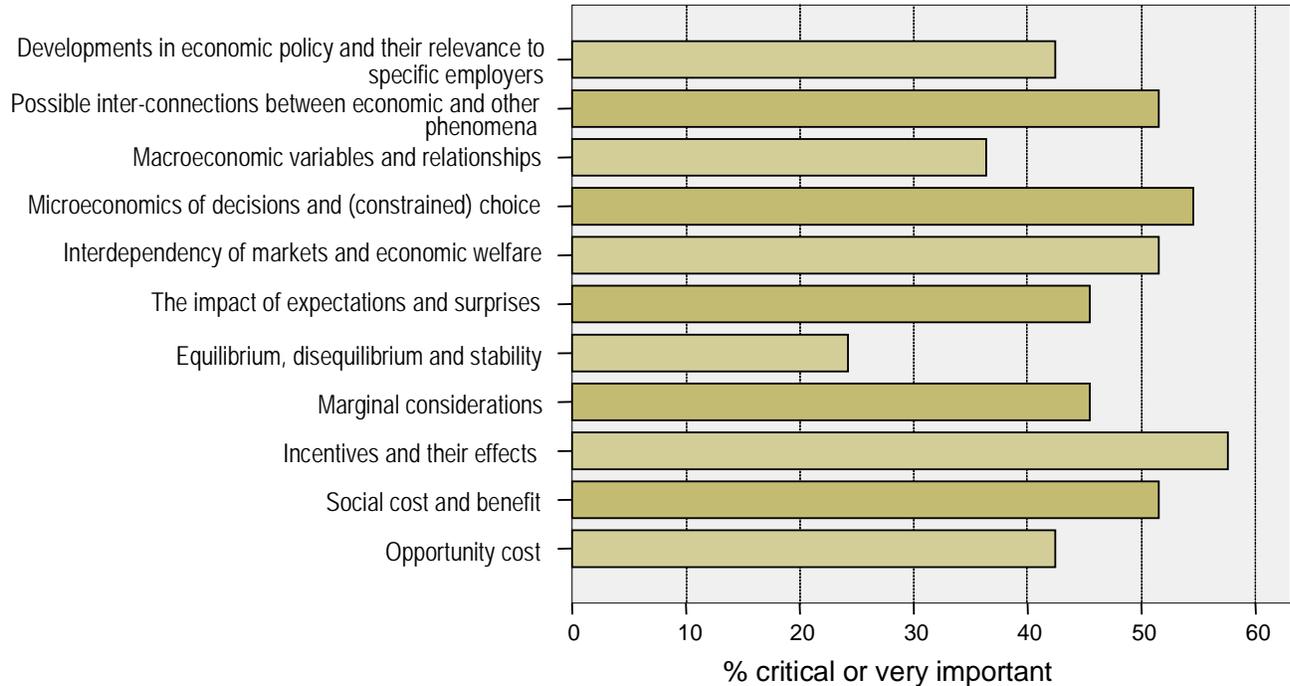
Figure 2 Disparity between the skills of students and their importance to employers



5.3 Knowledge

As with the skills analysis, respondents were asked to rate various areas of required knowledge on a four-point scale; Critical, Very Important, Important and Unimportant. The percentages indicating Critical or Very Important are given below in Figure 3:

Figure 3 Knowledge Requirements



Using a similar filter analysis as that used for skills, an indication of the perceived knowledge deficit was found by determining the percentage of those who considered Economics graduates to be

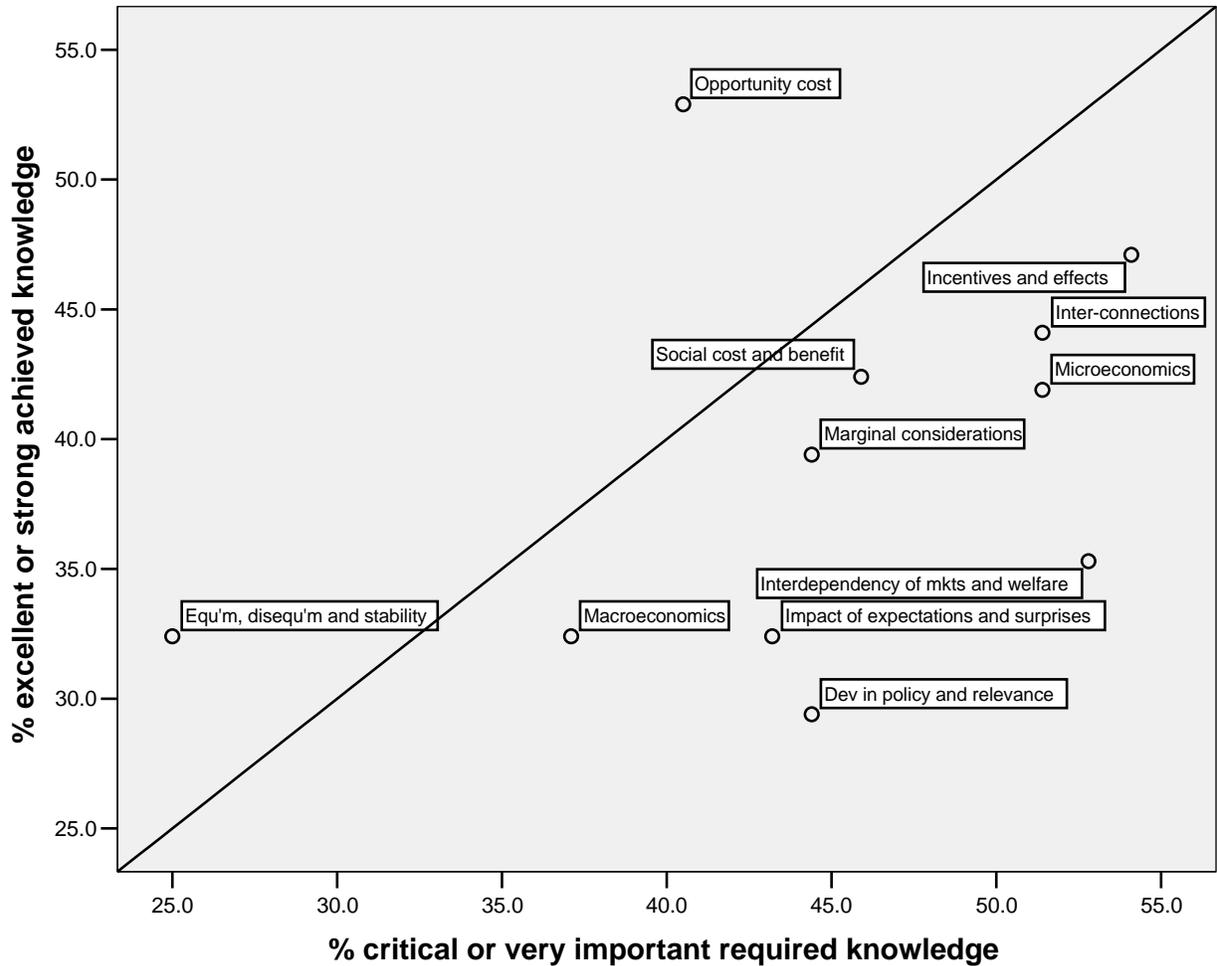
Table 3 Knowledge Deficits

Of those who thought the knowledge was **Critical** or **Very Important** what % considered Economics graduates to be **Excellent** or **Strong** in that knowledge?

Knowledge	%
Interconnections between economic and other phenomena	50
Developments in economic policy and their relevance	50
Marginal considerations	53
Impact of expectations and surprises	53
Interdependency of markets and economic welfare	53
Macroeconomic variables and relationships	54
Microeconomics of decision and constrained choice	59
Social cost and benefit	65
Incentives and their effects	65
Equilibrium, disequilibrium and stability	67
Opportunity Cost	71

Excellent or Strong in that knowledge area based on those who thought the skill was Critical or Very Important. The results are shown in Table 3 (above) and Figure 4.

Figure 4 Disparity between the types of knowledge of students and their importance to employers



5.4 Summary of comments

Comments made on the survey support the key findings in the interview phase in terms of application of knowledge to problem-solving processes, communication skills and employability (see Appendix 2).

Application of Knowledge to the Problem-solving Process

‘I have a real concern that too narrow a set of theories and models is taught in top UK universities and that opportunities to help students develop a better understanding of the world are missed.’

‘I would like to see more interaction/case-study practice developing skills (team work, communication at different levels) and thinking across subjects. The knowledge here is pretty standard for all those we have employed so far but the graduates offer little in the way of application to real situations.’

‘Graduates are weak in this area. Perhaps more concentration on case study work?’

Communication Skills

‘Some economics graduates we have recruited have had poor writing skills. This includes not being able to think clearly through an issue, structure a report and identify key conclusions’

‘Attention to accuracy in written work is imperative and often lacking.’

‘It’s the quality of the writing, it’s the accuracy ... you know a number doesn’t mean anything unless you’ve got the source, year and context.’

These comments are also relevant to the recruitment and employability issue where respondents indicated that failure to adhere to the application format and to submit applications without errors was disappointing.

Training in the application process was perceived as inadequate. Candidates either did not get interviews or failed in interviews because they:

- had not completed the application form appropriately (fully or without spell checking).
- did not conduct sufficient research on the company and job.
- had poor interview skills.

One respondent also indicated the extent of the issue:

‘Attention to the application process and requirements is inadequate by three quarters of all applicants.’

6. Conclusions and recommendations

6.1 Benchmark Statement

- In general, the Benchmark Statement has been found to be robust and relevant to current employers.
- With the exception of *debating skills*, all skills were rated as being ‘essential’ or ‘important’ by at least 60% of respondents (and by over 70% for all but six of the listed skills, see Table A1 in Appendix 1).
- The ratings of ‘critical’ or ‘very important’ for knowledge items were recorded by a lower proportion of respondents (see Table A2 in Appendix 1) suggesting a greater tolerance in respect of required knowledge. Indeed, only four of the identified knowledge areas were considered to be ‘critical’ or ‘very important’ by more than 50% of respondents (and the highest was only 54%).
- The only additional knowledge item to be considered is knowledge of the *development of economic policy*, which was considered ‘critical’ or ‘very important’ by 44% of respondents.

6.2 Perceptions of Skills and Knowledge of Economics Graduates

- The proportion of respondents considering the skills brought to employment by Economics graduates to be ‘excellent’ or ‘strong’ varies widely by type of skill and knowledge (see Tables A1 and A2 in Appendix 1).
- The range for skills is from 33% (*debating*) to nearly 87% (*manipulation of quantitative data*) with nearly half of the identified skills being scored at >60%.
- The range for knowledge is much narrower with figures from 29% (*development of economic policy*) to nearly 53% (*opportunity cost*). In general, less than half of respondents considered Economics graduates to be ‘excellent’ or ‘strong’ in any of the identified knowledge areas.

6.3 Skills and Knowledge Deficits

- An indicator of deficit has been based upon a comparison of the percentages of respondents giving the two highest ratings to importance (essential/important or critical/very important) and possession (excellent/strong). Concern may be felt if the proportion of respondents judging a skill/knowledge to be of high importance is not reflected in the proportion that consider Economics graduates to possess that skill/knowledge at a high level.
- In general, both skills and knowledge appear to present many examples of deficit using this criterion (see Figure 2 on p10 and Figure 4 on p12).
- Three skills which appear to require the most attention are *abstraction*, *communication of complex concepts* and *communication in writing*, although others are also apparent.
- Deficits in knowledge are not so extreme, although this may in part be due to low expectations on behalf of employers. The two knowledge areas which stand out are *developments in economic policy* and *interdependency of markets and economic welfare* (along with, perhaps, *impact of expectations and surprises*).

6.4 Employability

- Although this aspect was not a direct aim of the study, so many comments were made during the duration of the research that some brief summary in the conclusion is felt to be necessary.
- Employers were very critical of Economics graduates' performance throughout the application and interview process. A lack of communication skills (both written and spoken) as well as inadequate preparation for the interview were remarked upon many times and given as reasons why applicants were either not given, or performed badly in, interviews.
- It would appear that some attention should be given to this aspect even though it may not be solely related to Economics graduates.

References

Craven, J., (1993), 'The Skills of an Economist', *Royal Economic Society Newsletter*, 4–5 April.

Grant, S., (2006), *Teaching and Assessing Skills in Economics*, Cambridge University Press.

Economics Network, (2004), *What You Need and What You Get in Economics Higher Education* (results of graduates and employers survey), [online] available at http://www.economicsnetwork.ac.uk/projects/alumni_survey2004.pdf, accessed on 3/2/07.

HE Academy, (2005), *Student employability profiles: A Guide for Higher Education Practitioners*, [online] available at <http://www.heacademy.ac.uk/3556.htm>, accessed on 3/2/07

Economics Network, (2007), 'The Challenge for Economics Departments' in *The Handbook for Economics Lecturers*, [online] available at <http://www.economicsnetwork.ac.uk/handbook/pdp/52.htm>, accessed on 3/2/07.

Appendix 1

Figure A1 Targeting Specific Universities

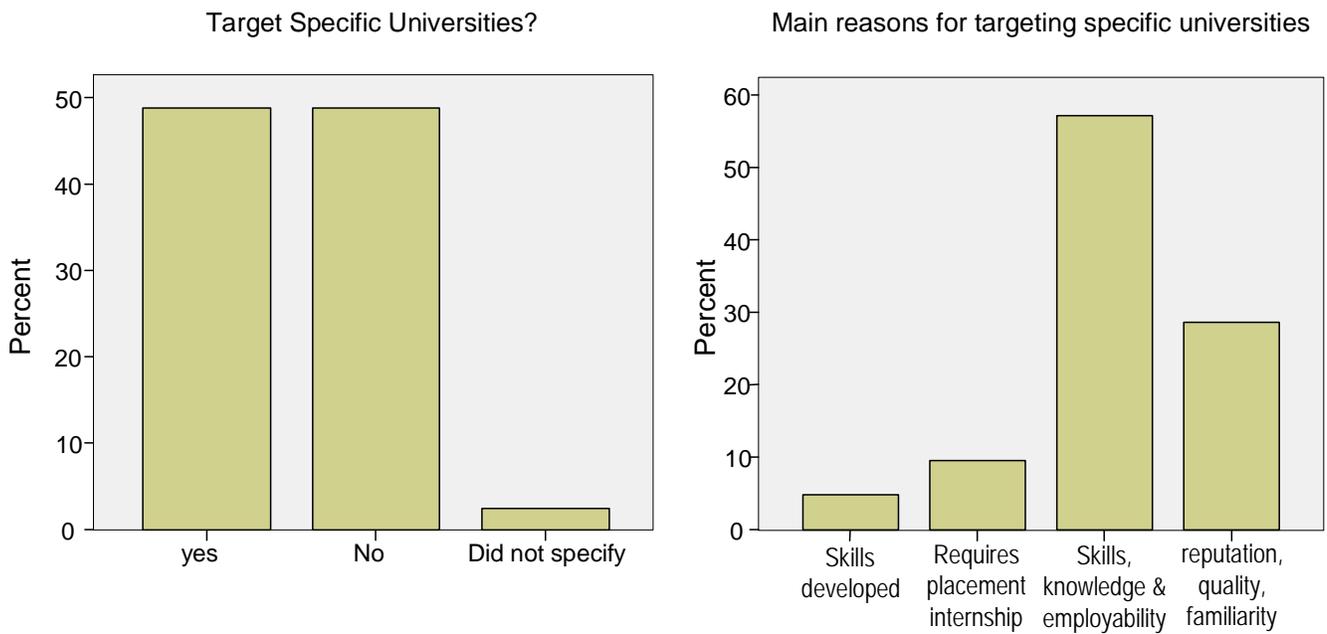


Table A1 Case Summaries: Skills

Skill type	% essential or important required skill	% excellent or strong achieved skill
Work as team	97.5	78.9
Communicate clearly in writing	97.4	55.3
Communicate clearly in speech	92.3	65.9
Be objective	90.0	73.7
Organise/interpret/present quantitative data	89.7	86.8
Communicate complex concepts	84.2	44.4
Apply to real world	82.5	60.5
Apply knowledge	79.5	82.9
Deal with complexity	76.9	56.8
Locate principal information sources	76.3	73.0
Solve complex problems	71.8	58.3
Abstract (balance simplification and relevance)	71.8	41.7
Use IT effectively	71.1	83.8
Research independently	69.2	68.4
Use diagrams appropriately	64.1	45.7
Build/use models	61.5	59.5
Sensitive to social/cultural/political issues	61.5	56.8
Strategic and means to ends	60.5	45.9
Debating skills	30.0	33.3

Note: Percentages refer to % of valid responses for each skill taken separately.

Table A2 Case Summaries: Knowledge

Knowledge type	% critical or very important required knowledge	% excellent or strong achieved knowledge
Incentives and their effects	54.1	47.1
Interdependency of markets and welfare	52.8	35.3
Inter-connections	51.4	44.1
Microeconomics	51.4	41.9
Social costs and benefits	45.9	42.4
Developments in policy and relevance	44.4	29.4
Marginal considerations	44.4	39.4
Impact of expectations and surprises	43.2	32.4
Opportunity cost	40.5	52.9
Macroeconomic variables and relationships	37.1	32.4
Equilibrium, disequilibrium and stability	25.0	32.4

Note: Percentages refer to % of valid responses for each knowledge item taken separately.

Appendix 2:

Full Set of Comments

Application of Knowledge to Problem-solving Processes

‘All of these (*benchmark statements*) play some role. I would like to see more enthusiasm and imagination from economics graduates for economics in a wider range of application areas.’

‘I have a real concern that too narrow a set of theories and models is taught in top UK universities and that opportunities to help students develop a better understanding of the world are missed.’

‘I would like to see more interaction/case study practice developing skills (team work, communication at different levels) and thinking across subjects. The knowledge here is pretty standard for all those we have employed so far but the graduates offer little in the way of application to real situations.’

‘We get the odd outstanding individual who really lives economics. The others are key because of their knowledge areas and we can train them to suit our needs.’

‘We only employ people with excellent economics but I am often surprised by the number of applicants we interview (with good degrees etc) who are unable to explain micro concepts such as consumer welfare, allocative or productive efficiency and so on.’

‘an ability to think about novel situations in relation to economic theory.’

‘graduates who see economics in the world around them and don’t need the parameters spelt out.’

‘Graduates are weak in this area. Perhaps more concentration on case study work?’

Communication

‘Some economics’ graduates we have recruited have had poor writing skills. This includes not being able to think clearly through an issue, structure a report and identify key conclusions.’

‘We know there isn’t a huge emphasis on communication skills ...we therefore look for potential.’

‘They don’t have a wide enough range of presentation skills ...we need communication over a range of methods ... oral, written, reports, drafts, proposals, journalism versus technical reports.’

‘Inclusion of a dissertation indicates some ability in communication.’

‘Attention to accuracy in written work is imperative and often lacking.’

‘It’s the quality of the writing, it’s the accuracy ... you know a number doesn’t mean anything unless you’ve got the source, year and context.’

Numeracy/Quantitative methods

‘I have been most disappointed by the ability of recent graduates to handle data sensibly ... almost to the point of wondering whether they have ever tried as part of their studies.’

‘For me what is important is number sense. Experience about how data interrelate and some sense of what the answers to questions might be expected to be. I am surprised that this is not on the list. Beyond that I require problem-solving capacity and the ability to absorb modelling frameworks.’

‘Of greater interest is the quantitative skills and business awareness of economics graduates ... rather than module/knowledge- specific skills.’

IT Transferability

‘Ability to use essential software packages such as Excel, Stata and SAS is quite important as well. In general, an ability to learn such software easily is desirable.’

‘Modelling knowledge or some experience is desirable.’

Employability

‘The graduate market has changed over the past 20 years. In the past it was generally good enough to have a degree but in view of the growth in the graduate market it is now additional features that make a graduate stand out.’

‘Employability says they turn up smart, on time, their soft skills are good, they can listen, diagnose ...have an ability to think.’

‘They don’t regurgitate what you have told them ... they have an ability to think.’

‘an ability to demonstrate the worth of any work experience (not necessarily internship or placement).’

‘the fact that they have worked and understand what it means to them in terms of skills and experience.’

‘Training in the application process is needed – they fail to get or succeed in interviews because, one, they haven’t completed the application form appropriately (fully or without spell checking), two, they do insufficient research on the company and job and three, they have poor interview skills ... you can see the difference between those who have received training and those who have not.’

‘Attention to the application process and requirements is inadequate by three quarters of all applicants.’

Macro

‘Macro is vital for many here; macro awareness and understanding is vital for rounded economists.’

Micro

‘We specifically look for a general understanding of industrial organisation/economics and a very good grasp of microeconomic theory. Good econometrics skills are also important.’

Markets and Competition

‘An understanding of ‘market processes’ or ‘the nature and effects of competition’ is important to us and, I suspect, to others employing economists. In this area, I find that graduates have been exposed to a rather poor and narrow training in what competition is and what markets do.’