Economic Issues, Vol. 19, Part 1, 2014

Why do Students Study Economics?

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ABSTRACT

This paper presents a chronological, adaptive and reflective investigation into students' perceptions of and motivations for choosing to study economics. Applications of multiple quantitative and qualitative techniques to student-level primary survey and focus group data reveal the following. First, students' perceptions of economics are on average somewhat negative, although there is considerable variation. Second, they regard economics as having value, in terms of providing insight, specialist knowledge, and skills of argumentation (all of which are perceived to be superior to peers). Third, they recognise the subject yields financial and other career advantages and has kudos. Fourth, they suggest that the relevance and usefulness of economics is important and consequently that excessive theorisation and a lack of practicality are problematic. These findings have considerable implications for how economics is taught, and for the nature of the subject itself.

1. INTRODUCTION

ACADEMIC ECONOMICS REPRESENTS A PARADOX. As a discipline it is dominated by a focus on the allocation and distribution of productive and consumptive resources, with a particular concern with how these resources can be affected in order to increase income, satisfaction, welfare, wellbeing or change behaviour within an interactive or market setting. However, most academic economics departments do not possess knowledge about how they can allocate resources and influence the market in order to increase the demand for their *own* services: we do not know why students study economics! Yet, as recruitment slumps in the 1980s and 1990s showed, academic economists have a profound need to understand their market.

This paper aims to begin to address this lack of understanding. It draws on the fine strands of literature about academic departments and their students, offers economics departments information on why students may study economics at their universities, and suggests that economics departments could benefit from knowing their market better. It presents a chronology of adaptation

and reflection in mixed-methods research undertaken to illuminate this topic.

We began by employing a questionnaire to seek answers to seemingly simple questions, such as: which topics do students dis/like?; which teaching methods/approaches do students dis/like?; do students like the nature of the subject?; is the way the subject is taught crucial to students' perceptions of it?; and thus how should economics departments market their subject? We briefly disclose answers that are constructively critical of the subject. Areas are revealed that are worthy of further investigation. The paper builds on Webber and Mearman (2012)'s quantitative study of an international data set, drawing on a sub-set of that data set. It also augments the qualitative investigation of Mearman et al (2011) into the benefits of pluralist curricula.

In order to deal with the limitations of the questionnaire, a number of focus groups are established to further explore issues related to what economics students consider to be the strengths of the subject, whether they perceive they have benefited from their lessons and whether they perceive they could have benefited more from a reorientation of the subject; and, if so, what that reorientation should be. Answers to these questions and understanding of these issues are vital pieces of information for economics departments' knowledge of what their current consumers want, for their impending student recruitment rounds, and for the future of the subject. However, the focus groups generated issues that questioned the usefulness of the generalities identified using the questionnaire, and this made us revisit and re-estimate models using the questionnaire data.

These analyses contribute to the literature by improving our understanding of students' perceptions of economics, emphasising the perceived strengths and weaknesses of the subject, and suggesting a reshaping of the subject to respond to students' demand for a more useful and relevant subject that retains its kudos amongst their peers and beyond. Accordingly, this paper highlights students' negative perceptions of economics, but contemporaneously their high valuation of the subject. A corollary of these findings is that student recruitment and retention may well improve if research attention is redirected onto topics that are deemed most important to students. These are pertinent issues because of increasing costs for students of university places in many countries and increasing competition for student recruitment between disciplines, especially when entering students consider disciplines as potential substitutes. More broadly, our findings suggest issues to consider for the discipline, viz. the realisticness of economic analysis and the role of mathematics. These questions are extremely pertinent in the light of the re-examination of economics that followed the financial crisis (see Coyle 2012).

2. Background

Though economists have shown concern about the teaching of the discipline for some time, a surge in research activity followed a worldwide crisis of recruitment of undergraduates in the subject, in the 1980s and 1990s (cf.

Salemi and Siegfried 1999; Siegfried 2008). This falling undergraduate student recruitment led to a number of economics teaching initiatives designed to help boost recruitment and retention. Some discussed the content of economics curricula, for instance by rationalising content to focus on 'core' concepts (Helburn 1997; Salemi and Siegfried 1999) or by reforming content (Coyle 2012), often in favour of more non-mainstream material (Ormerod 2003; Fullbrook 2004). However, the vast majority of initiatives leave the content essentially intact, concern teaching process, and focus on the practice and modes of teaching.

Subsequently, the economic crisis has made financial crises and monetary and fiscal policy common water-cooler conversation topics. Furthermore, the discussion of other economics topics, such as cheating in games (after Levitt and Dubner 2005), the effects of advertising on cigarette demand, and the decision to supply arms to rogue nations is not atypical. Therefore, it would be reasonable to assume that the contemporary importance of the subject might make economics a more attractive subject.

Indeed, recruitment to economics at UK universities recently has experienced an upswing. This is *prima facie* evidence of the effect of an economic crisis on recruitment; however, it is unclear whether the increased popularity of the subject reflects greater interest in it, or merely applicants paying more attention to the relative salary premium enjoyed by economics graduates. It could be argued that the question becomes even more pertinent at present, given the impact of the increase in university tuition fees on university participation - something to be tested empirically (for a more detailed discussion on this issue see, for example, Dearden *et al* 2010; Walker and Zhu 2011).

Given these pressures, finding out what students feel about economics, what makes them want to study more economics and how useful and relevant they feel the subject could be in their future careers may be crucial information that could shape the direction, nature, curriculum and pedagogy of economics teaching. Despite these being pressing concerns, there is still relatively little literature that asks key stakeholders (i.e. students) about their motivations for choosing to study the subject and their perceptions of the subject while *in situ*. Examples of this literature include works from Colander and Klamer (1987) and Colander (2000), who asked students about their thoughts on the economics subject and often received negative responses. Siegfried and Round (1994) also investigated students' perceptions without however asking what students think about economics. In the UK, The Economics Network has also acted, by organising surveys of student views on economics, rather than typically with a focus on teaching. However, despite these exceptional efforts, in short we do not understand the factors which drive demand for economics. This absence echoes a relative lack of empirical evidence in the sub-discipline of economics education. There has been an evidential turn in the literature (Davies and Guest,2010; Garnett and Mearman 2011) with most of the literature cited above simultaneously presenting and evaluating economics educa-

tion innovations. A favoured method of evaluation is through testing differences in assessment performance between randomly selected groups (see, for example, Marburger 2001) and often this work is experimental. Other work examines specific cases in which alternative curricula are delivered; this analysis tends to be more qualitative (Barone 1991; Earl 2000; Garnett and Mearman 2011). We choose to follow the latter path and set out to investigate the characteristics of economics as perceived by students, with particular emphasis on why students choose economics.

One of our conjectures is that one of the crucial factors in attracting students will be relevance and realisticness.[2] Developments in experiential and service-learning (see Ziegert and McGoldrick 2008) and problem-based learning (see Forsythe 2010) highlight the importance of relevance for engaging students. Specifically, our tenets are that realistic theories may be superior to unrealistic ones and that greater realisticness means more learning potential. However, at the same time, economics may be dominated by people who do mathematics and statistics and do not understand the economy (Colander and Klamer 1987); and, the distance from economics to realisticness may be growing. Yet, Colander and Klamer showed further that a large majority of students chose their PhD dissertation in order to understand some economic phenomenon — underlining a desire for relevance. Thus, even committed graduate students may become frustrated with too much mathematics and not enough relevance. One of the research questions driving this study is to ask whether students find either realisticness or relevance important in affecting their perceptions of economics.

We now proceed to discuss the data collection carried out, and the analysis. These develop in stages, as parts of an evolving structure of the study. The first element is the deployment of an international online survey.

3. Deployment of an online survey

We start from the premise that the objects under study (economics and student perceptions of it) are both complex. Students' perception of economics are likely to be affected by many factors, including the characteristics of economics, the way it is taught, their perceived chances of success in it, and wider cultural norms of good education.

As an initial step, we designed a questionnaire (see Appendix) containing semi-closed questions (with closed answers, plus an option to comment), with Likert scale responses quantified *ex post*. However, the final two questions are open, inviting creation of free lists. The quantitative questions were of two types: biographical and perceptual. Biographical questions addressed dimensions such as nationality, course of study and career aspirations. Perceptual questions addressed students' views of economics. The questionnaire was predicated on the presumption that students regard the relevance of economics to them as important in forming their view of the discipline.

Although the emphasis was placed on understanding why students do economics, the questionnaire had several motivations and central research questions. We use as a proxy for 'wanting to do economics' the question 'I would do more economics if possible' (hereafter called '*MoreEcon*').

Drawing on Webber and Mearman (2012), the study employed a range of statistical analyses including ordered and binary logistic regression, factor analysis and different types of cluster analyses. Webber and Mearman's analysis suggested that students found economics frustrating and limitedly useful, unless they had prior work experience. Indeed, those students who think economics will help with their future career, and help them make better decisions and understand others, want to study more economics. However, these results are the product of analysing empirically the whole data set, which contains responses from students across the world. Further, because it seemed reasonable *a priori* that students in different countries might act differently, this study focuses on students studying in only one country: the UK.

The online questionnaire employed convenience sampling[3] and thus no claims are made of representativeness or fully-generalisable results, even within the UK; but general conclusions are drawn in the spirit of case-based methods (see Byrne and Ragin 2009). While we would not expect the sample to be completely representative, it is worth considering whether it actually is. Although this is difficult to assess, because the questionnaire does not map directly on to any data source, UK Higher Education Statistics Agency (HESA 2007) data do offer some basis for comparison, as summarised in Table 1. From this comparison, it can be deduced that in our online survey there are slightly more females, more UK students and fewer first year students than in the HESA Network data.

Table 1: Comparison of data sets

Parameter	*Survey*	*Focus group*	*HESA/Economics Network*
Age	73% aged17-21	Average age 27	80% of students start course before 21
Gender	59% Male	52.2% Male	65.1% Male
Nationality	98.6% UK students	66.6% UK students	61.6% UK students
Type of course	86% economics related	95% economics related	N/A
Year of study	30% in the first year	81% in the third year	35% in the first year

The principal advantage of the survey tool was to be able to capture a snapshot of economics and students' perceptions of it, and to assess relationships between the different perceptions and the biographical details of stu-

dents. For this purpose the analysis of the survey responses was structured in three parts including descriptive statistics, ordered logistic regression analysis and cluster analysis.

Table 2 presents descriptive statistics from the survey's (*ex post*) quantified questions. The sample is comprised of students who can be characterised generally as studying for an undergraduate degree, having work expe-

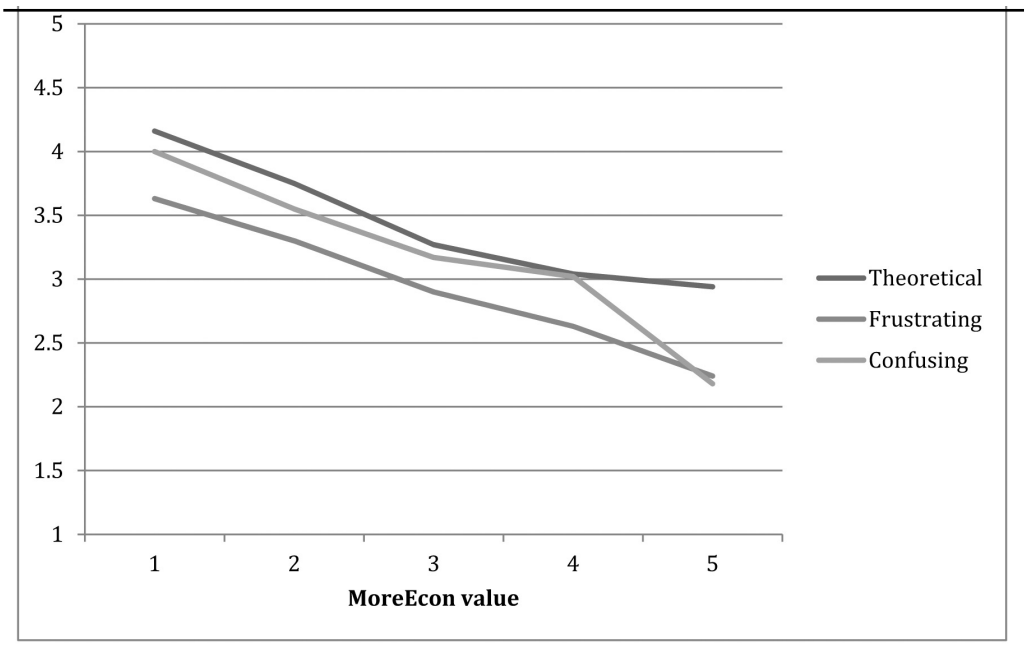
Table 2: UK descriptive statistics

Variable	*N*	*Mean*	*St. Dev.*	*Min*	*Max*
Male	291	0.588	0.493	0	1
Age 17-21	291	0.729	0.445	0	1
Age 22-26	291	0.196	0.398	0	1
Age 27-31	291	0.034	0.182	0	1
Age 32+	291	0.041	0.199	0	1
UG	291	0.876	0.330	0	1
Year 1	291	0.296	0.457	0	1
Year 2	291	0.237	0.426	0	1
Year 3	291	0.344	0.476	0	1
Year 4	291	0.117	0.322	0	1
Year other	291	0.007	0.083	0	1
Work experience	291	0.632	0.483	0	1
Had PT job	291	0.790	0.408	0	1
Economics background	291	0.684	0.466	0	1
Private job	291	0.656	0.476	0	1
Public job	291	0.203	0.403	0	1
Self-employment	291	0.117	0.322	0	1
Easy	291	3.120	1.015	1	5
Theoretical	291	3.515	1.146	1	5
Future career	291	1.859	0.869	1	5
Better decisions	291	1.948	0.887	1	5
Frustrating	291	3.062	1.068	1	5
More Econ	291	2.636	1.165	1	5
Understanding	291	2.491	1.078	1	5
Confusing	291	3.351	1.080	1	5
Recent economics	277	2.282	0.978	1	5
Policy	291	0.110	0.313	0	1
Macro	291	0.065	0.247	0	1
Monetary	291	0.100	0.300	0	1
Real	291	0.034	0.182	0	1
History	291	0.038	0.191	0	1
Development	291	0.041	0.199	0	1
Kudos	291	0.430	0.812	0	4
Simple	291	0.612	1.012	0	4

rience, a part-time job and wishing to work in the private sector. On average students find economics somewhat easy, theoretical and confusing but do not think that it will help their future career, help them make better decisions or improve their understanding.

Of immediate note is that the mean score for *MoreEcon* is about 2.6, indicating that economics students are, on average, weakly against studying more economics. However, the variation of response is high (*MoreEcon* has the highest standard deviation of all general discipline variables). As such it is worth exploring the data more closely, partly because of the desire to examine what factors affect *MoreEcon*. In Figures 1 and 2, the average Likert scale values of economics perceptions for each Likert scale category of MoreEcon are graphed, where a value of 5 represents a strong desire to study more economics. This evidence, based on the UK sample, corroborates the international results in Webber and Mearman (2012). Figure 1 presents those perceptions that are associated with a negative correlation between each perception and MoreEcon: stronger perceptions that economics is theoretical, frustrating and confusing are associated with lower desires for more economics study. Figure 2 illustrates that the perceptions that economics is easy, is helpful in their future career, helps the student make better decisions and improves the student's understanding of others' behaviour, are all associated with greater desires for more economics.

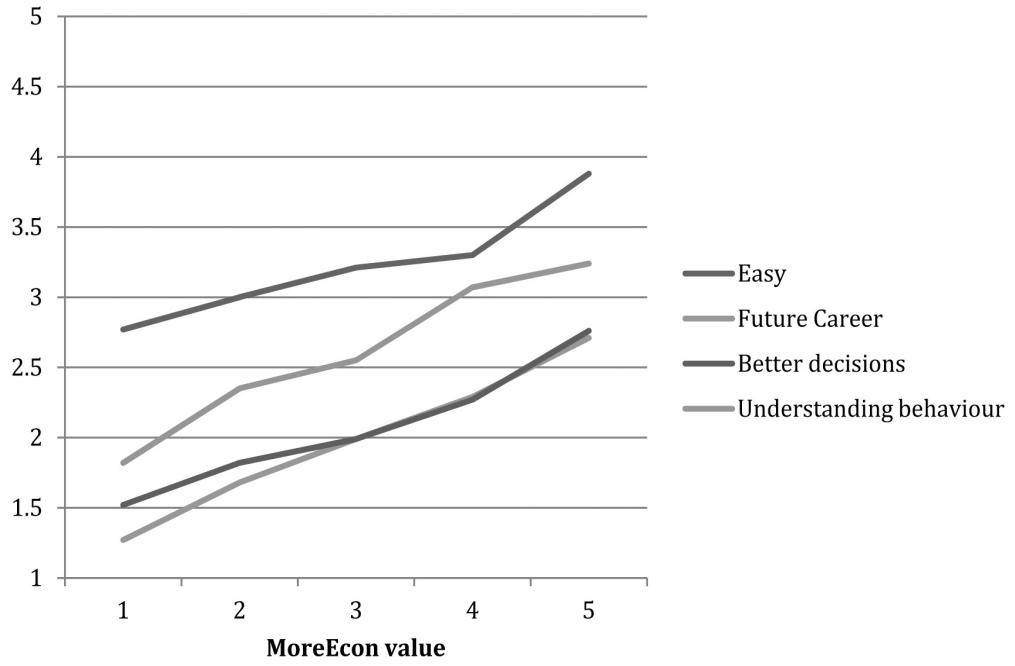
Figure 1: Variables negatively correlated with *MoreEcon*



Note: The number of observations for *MoreEcon* are 56, 84, 78, 56 and 17 when *MoreEcon* takes the value 1, 2, 3, 4 and 5 respectively.

It appears that highlighting usefulness and relevance, by stressing how economics can help future careers and improve decision-making and understanding of the world, may enhance the likelihood that a student will want to study more economics. Presenting economics in an abstract, theoretical manner where the complexities of the issue are confusing and, potentially, frustrating for the student, especially if they are unable to identify the relevance of the information, may result in students being less likely to want to study more economics. We will return to these issues below. At this point, it is worth examining the relationships between perceptions more closely, and for this we employ cluster analysis.

Figure 2: Variables positively correlated with *MoreEcon*

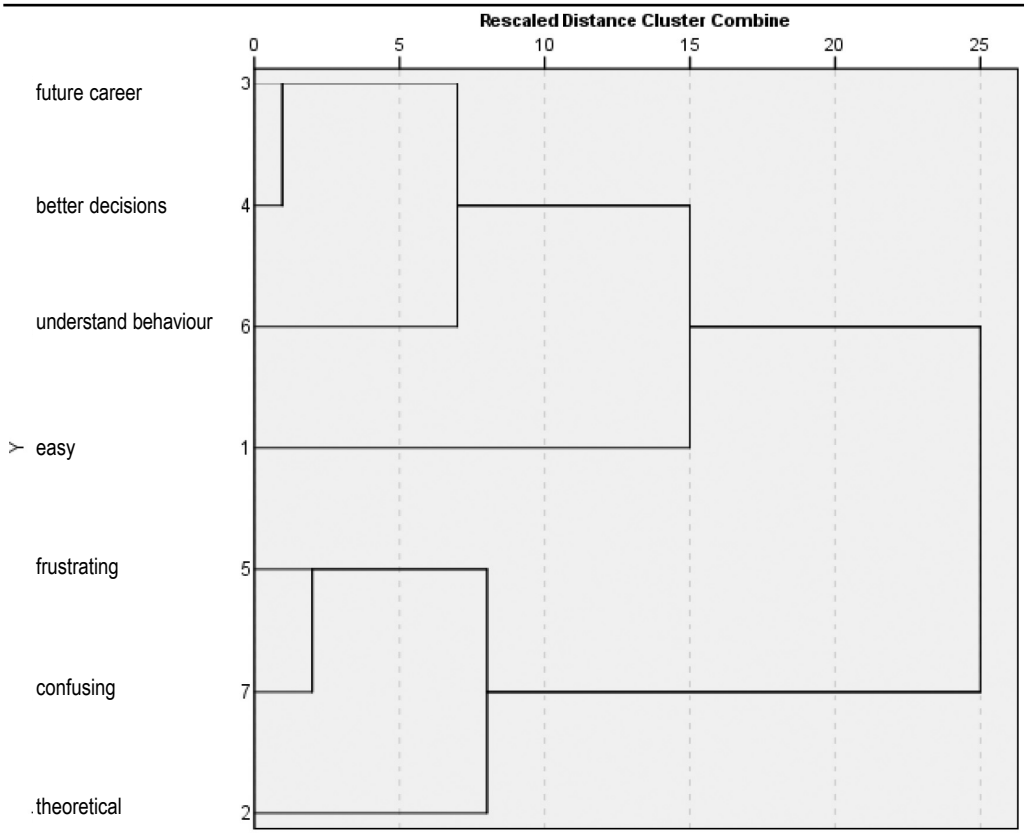


Note: The number of observations for *MoreEcon* are 56, 84, 78, 56 and 17 when *MoreEcon* takes the value 1, 2, 3, 4 and 5 respectively.

Cluster analysis (see Hair et al 2006; Webber and Mearman 2012) is a technique that measures (dis)similarity between objects. These objects may be variables but more often are cases. Application of hierarchical clustering analysis to our data permits the production of a dendrogram that illustrates the extent of dissimilarity of the perceptions, as shown in Figure 3. Although a number of arguments and interpretations can be based around the dendro-

gram, it appears clear that some perceptions of economics are more closely related than others. For instance, understanding behaviour is more closely associated with *future-career* and better decision-making while *frustrating* and *confusing* are more closely linked with *theoretical*; the perception of easiness is arguably not very strongly related to any other perception.

Figure 3: Dendrogram using average linkage (between Groups)



To probe more deeply into the correlations between the perceptions of economics, consider Table 3, which presents simple correlations; and Table 4, which presents pooled within-groups correlations where the groups are defined by the MoreEcon Likert scale value. A number of issues can be identified. First, there is a great deal of similarity between the simple and pooled within-group correlations, albeit with the simple correlations being further away from zero. This implies that although the correlations between perceptions are similar between

and across groups, the correlations between perceptions are actually weaker within groups. More specifically, although stronger perceptions that Economics help students in their future career are associated with stronger perceptions that knowledge of economics helps student make better decisions, this does not hold as strongly in the pooled within-group correlations (as the correlation coefficient is less than the threshold of 0.5). This suggests that a combination of these parameters does not imply a strong desire for more Economics. This again supports the belief that the students are heterogeneous. This heterogeneity is explored further below, via the clustering of students.

Table 3: Perception correlations

	Easy	*Theor-etical*	*Future Career*	*Better Decisions*	*Frustr-ating*	*Understan-ding behaviour*	*Confusing*
Easy	1.000	**-0.184**	**0.187**	**0.198**	**-0.503**	**0.176**	**-0.567**
Theoretical		1.000	**-0.405**	**-0.377**	**0.396**	**-0.368**	**0.297**
Future Career			1.000	**0.567**	**-0.269**	**0.416**	**-0.303**
Better Decisions				1.000	**-0.244**	**0.406**	**-0.262**
Frustrating					1.000	**-0.272**	**0.630**
Understanding Behaviour						1.000	**-0.258**
Confusing							1.000

Note: Bold indicates statistically significant at the 1% level

Table 4: Perception correlations - pooled within groups

	Easy	*Theor-etical*	*Future Career*	*Better Decisions*	*Frustr-ating*	*Understan-ding behaviour*	*Confusing*
Easy	1.000	-0.105	0.085	0.122	**-0.456**	0.086	**--0.526**
Theoretical		1.000	**-0.290**	**-0.289**	**0.303**	**-0.263**	**0.178**
Future Career			1.000	**0.489**	-0.118	**0.287**	-0.146
Better Decisions				1.000	-0.130	**0.314**	-0.141
Frustrating					1.000	-0.144	**0.564**
Understanding Behaviour						1.000	-0.115
Confusing							1.000

Note: Bold indicates statistically significant at the 1% level

First though, as in Webber and Mearman (2012), we apply ordered logistical analysis to the whole UK sample, to explore any general associations between *MoreEcon* and some of our hypothesised influencing factors. The results of regression analysis, as shown in Table 5, with *MoreEcon* as the dependent variable performed on the UK survey, show that students who have undertaken work experience, would like to find work in the private sector, believe that economics will help their future careers and help their understanding of others, are more likely to want to study more economics than those who have not. Overall, these results show that students who find economics useful or illuminating want to do more of it. However, those students who find economics frustrating or confusing are less likely to want to study more economics. These results echo those in Webber and Mearman. This is perhaps unsurprising, as the UK data are a subsample of their international data. On the other hand, there are *a priori* reasons to believe that country-specific data would exhibit less heterogeneity, because economics and attitudes to it may be culturally-specific. The data do not support that hypothesis.

Table 5: Ordered logistic regression results

	Coefficient	*(Standard error)*	*Odds ratio*
Work experience	0.765	(0.252)***	2.164
Part time job	0.128	(0.280)	1.121
Economics background	-0.160	(0.253)	0.852
Private job	0.902	(0.294)***	2.399
Self-employment	0.150	(0.426)	1.131
Easy	-0.054	(0.138)	0.952
Theoretical	-0.181	(0.116)	0.833
Future career	0.695	(0.175)***	1.979
Better decisions	0.014	(0.173)	1.028
Frustrating	-0.295	(0.148)**	0.765
Understanding	0.437	(0.125)***	1.546
Confusing	-0.470	(0.152)***	0.623
Cut1	-1.514		
Cut2	0.380		
Cut3	2.021		
Cut4	4.212		
Log likelihood	-364.284		
Pseudo R^2	0.172		
LR chi^2	151.27***		
N	291		

Notes: These results take into account age, gender, and year of study (none of which are statistically significant).

These results highlight that students who have undertaken work experience are 2.164 times more likely, respectively, to want to study more economics than those who have not. The odds-ratio is substantially greater (and the latter slightly smaller) than the comparable statistics generated under the full sample. Students who believe that economics has helped their future careers (help them make better decisions) are 1.979 (1.028) times more likely to want to study more economics relative to those who believe the opposite, while those students who suggest that economics has helped their understanding of others are 1.546 times more likely to study more economics relative to those who do not suggest this is the case. However, those students who find economics frustrating (confusing) are 1.307 (1.605) times less likely to want to study more economics than the reverse.

To summarise our findings so far, our statistical analysis suggests that students have an overall ambivalent or even somewhat negative view of economics; that there is an apparent association between perceptions of economics as being on the one hand, useful and illuminating but, on the other hand, overly theoretical and frustrating. Further, we have some evidence that those students who perceive economics to be useful want to do more of it, whereas those who find it frustrating do not. These results are perhaps not surprising, but are of interest nonetheless. However, they do not explain why economics is perceived in these different ways.

4. Focus groups

The quantitative analysis reported in section 3 offers some interesting results. However, they are subject to several caveats. Principal amongst these is that the analysis is strictly quantitative and does not allow the deeper exploration of the topic area, although it does suggest patterns for deeper exploration using other data. It is difficult using the data we have to draw any stronger conclusions about the meanings of students' responses or indeed about the reasons why they chose to study economics. Thus, after reflection on the questionnaire methodology, we decided to develop a follow-up qualitative analysis. This is consistent with the methodology of mixed-methods research (see, for example, Downward and Mearman 2007; Byrne and Ragin 2009).

The knowledge obtained from a preliminary investigation of the UK sample led to a further exploratory investigation through focus groups. In this way, the paper clearly augments the contribution of Webber and Mearman (2012). Focus groups allow group dynamics to generate debate and some degree of consensus. Further, a series of focus groups allows themes to be explored and for theoretical positions grounded in the data to emerge.

Focus group participants were identified via contacts made from the responses to the call for participants in the survey. Focus group members sometimes knew each other, sometimes not. Focus groups always involved students from the same university in each case. Students were paid 20

pounds Sterling for their participation. All five of the focus groups took place in different UK universities, including one in Scotland. The five universities occupy the middle 50 per cent of most publicly available rankings schemes. Three of them would be considered 'old' (existing pre-1992) universities. However, no significant differences were apparent between the 'old' and 'new' universities.[5] Summary statistics about the composition of the focus groups are shown in Table 1. Students originated from various nations but all studied in the UK.

The focus groups were semi-structured around a single open question: 'How effective is economics in creating understanding of real-world issues?' The responses from focus groups have been maintained in their raw form, apart from being coded into qualitative groups. They have then been subjected to various qualitative analyses, such as narrative analysis, thematic analysis, open and in vivo coding, and analysis of key words.

Consistent with qualitative analysis, to some extent themes were allowed to emerge in and from the focus groups. However, inevitably some priors did affect both the conduct and analysis of the focus groups. Many of these flowed from the questionnaire. Overall, the analysis of focus groups has generated three key themes: valuable education, the prestige of difficulty, and realisticness and relevance.

Valuable education

Somewhat surprisingly, while our survey data report generally low satisfaction with economics, our focus groups are more positive. The explanation for this could be fourfold. It could be attributable to self-selection bias and social desirability bias, given that the focus group moderator was one of the authors. Another explanation could be the publicity the economic crisis attracted during the conduct of the focus group discussions. A further explanation for the positive reaction to *MoreEcon* in focus groups is that students want to feel that their education has been valuable, or at least not wasted. Indeed, our students may be engaged in *ex post* rationalisation of their choice. Education can be valuable in many senses: clearly it can generate financial rewards. The graduate wage premium is well established and there is an additional wage premium for economics graduates relative to many other subjects (Economics Network 2013).[6] The regression results above for our '*Future career*' variable corroborate that this is a concern for students, as those who believe economics will assist their careers are more likely to demand more of it. With UK tuition fees rising, these are likely to be growing concerns of students.

Other meanings of value emerged from the focus groups: economics must offer deep, non-trivial insight into the world (implying that it must be applicable) and it must enhance career prospects (which relates to the financial value of education). Of these two aspects, the value of insights offered by economics is of particular interest. We shall discuss below the importance to students of application and relevance within economics, but first it is useful

to illustrate how students feel that economics confers on them special wisdom and insight. Moreover, it appears that students feel that economics provides understanding not available to other students. The insight comes in two forms.

First, economics confers distinct benefits pertaining to the understanding of real events, for instance through policy analysis. As one student commented:

> I see the whole world very differently now to what I did before I did the economics because I always think there's economics behind that, why markets are failing, why things aren't working. (Male, 30, British national)

Second, economics confers analytical and critical faculties within them which are not found in other subjects. Mearman *et al* (2011) discuss how pluralistic curricula might generate critical and other cognitive faculties more effectively than monist curricula. However, the critical capacities developed by economics appear to be seen by students as inherent to it. Students often made favourable comparisons between economics and other disciplines in terms of the intellectual development they enjoy:

> Economics has helped me at the personal level as well, in understanding things that I would not otherwise recognise or even take into consideration before I started studying economics, it is probably the reason why I dropped management and started doing pure economics. (Male, 22, Norwegian)

Students may well be consoling themselves that their choice of subject has been a wise one. Several discuss having opted for economics at a crucial juncture while others express regret that they opted for joint degrees in which economics is downplayed. These students feel inferior to single honours economics students: many of them make pointed use of examples of areas of economics of which they know little or nothing and that the kudos available to students is not exploited fully. Significantly, many of these areas are technical. Some students worry that their mathematical training is inferior to some of their peers as they worry that they are inadequately trained. It is noteworthy that this complaint is made even when students express concern that mathematics is itself problematic (see below).

Perceiving economics as having kudos is important for a number of reasons. One relates to financial value, as discussed. Another reason relates to social status. Many students imply that they are intellectually superior to their friends. More often, participants cited their ability to argue more effectively with their parents. They clarified that this new empowerment was specifically a feature of their having studied economics, rather than merely reflecting their greater maturity:

> I think it did make me think again about a lot of things that I took for granted, I started disagreeing maybe with some of the things that my parents were saying, that, you know, this is the first thing that shows you that something's changing. Age could be one factor, but another factor is definitely, I think, you know, studying that subject gives you these skills. (Male, 21, French)

So, for our students, economics confers social status and distinction; an interesting question is: why? As already discussed, students see economics as providing insight into real world issues. Additionally, economics provides skills of argumentation and judgement, which allow them to understand and negotiate often very complex debates. This suggests that students see economics as making them better decision-makers. Note that the questionnaire survey results (Table 5) suggested that the perception that economics helps in making decisions was associated with students wanting more economics study.

One focus group discussion concluded that people skilled in economics would be able to manage their lives better than people without economics training. Even if having knowledge of economics would not have changed the decision made, participants held that they would have understood it better and perhaps been more efficient in how they made it. Here, arguably, students engage in ex post rationalisation of past decisions, even efficient ones.[7]

Significantly, students see economics as being able to provide purchase in bigger decisions. Some participants cited the access to power which economics provides. Recent discussion of the value of the PPE degree would reinforce that view.[8] One student mentioned that (then future Prime Minister) Gordon Brown had some training in economics. Macroeconomics and policy were found to be generally more popular in focus groups. One of the reasons for this is that policy analysis allows access to powerful decisions and thereby the ability to influence real events. Having said that, focus group participants were torn as to whether the knowledge of economics as taught improved this influence; in some senses they did not like the potential conflict and confusion between policies and they preferred a definite answer; but equally they did want economics to be 'scientific'.[9]

The prestige of difficulty

We argue here that, as perceived by students, the value or kudos of economics resides in multiple dimensions: as we have seen, improved decision-making and understanding is one angle; employability is another; relevance and realisticness is yet another (see below). However, another aspect of the kudos of economics is that it is perceived to be difficult. But, difficulty has many dimensions, some of which conflict with the kudos of relevance and application. As discussed above, one dimension is that economics can involve confusing debates. Our students felt that it is the skill of the economist that they can negotiate these debates. This finding appears to run contrary to the generally negative role of confusion in the questionnaire survey data.

Another dimension of prestige is that economics may be considered a science. In two of the five focus groups, participants discussed (unprompted by the moderator) whether economics is a science. In both cases, the final conclusion was that indeed it is a science, albeit not the same as, say, physics. Indeed, in one discussion, it was considered evidence of the kudos of eco-

nomics that it is scientific in a unique way:

> …so it's true like it's an endless debate to call it a science, or an art, that's what makes it special I think. That's what makes it interesting… (Male, 21, French)

Yet another dimension of difficulty (and indeed of traditional scientificity) is the mathematical content of economics. Focus group participants were highly ambivalent about mathematics. On the one hand, drawing on the association of mathematics with science, and also reflecting the perception of mathematics as difficult, the mathematical content in economics is seen by many students as conveying prestige. It is part of the distinctive tool kit of economists, and something which separates them from 'softer' social science, humanities or even business disciplines. It is interesting to note that the prejudice, commonly held to exist, that business subjects are intellectually inferior to economics, is evident in these focus groups. Most of the focus group participants (see Table 1) were doing some combination of economics on its own or with another subject, often a business discipline such as marketing. Where a preference was expressed, students favoured economics over their other discipline.[10]

So, mathematics confers prestige on economics by being perceived as difficult, both by students of economics and (some) other disciplines. This difficulty confers two psychological benefits, of impressing the students' friends, and of generating a sense of achievement within the students themselves. This feeling, allied with the others aforementioned, gives economics a powerful attractiveness. Further, students who were on joint degrees often complained that they were not proper economists because they had not had sufficient mathematical (and/or statistical) training.

Contrary to those findings, though, students often offered strong objections to mathematics, in line with other research conducted into students' satisfaction with economics (see Economics Network 2010). In particular, participants objected to what they considered excessive mathematics. It becomes excessive when it is divorced from reality and is extremely abstract. Such a complaint lies behind successive calls by students for better use of examples in teaching, and behind advocacy to teach mathematics and statistics for economists via examples:

> Now, to make it a mathematical problem and make it elegant, neo-classical is just… is lovely, but the reality is it's not how the real world works. (Male, age not provided, British).

Realisticness and relevance

The above findings highlight the perceived strengths and weaknesses of economics that may shape the desire to study more economics; they relate to the importance of economics study, as perceived improvements in both understanding and future career prospects are associated with the desire to study more economics. Of much less significance is the ease of passing or gaining the certificate, as the easy perception appears to be much less important.

Further, they underscore the relevance of economics (had work experience, aiming for a private job or self-employment, already had a part-time job) to the real world. As discussed in section 2, one of the main drivers of this study was to investigate the role of relevance and realisticness in rendering economics attractive to students.

The above discussion also suggests that if students regard the subject matter as excessively mathematical, or too theoretical or abstract in other ways, it becomes unattractive. It has also been argued that (non)usefulness is a key element in economics being (un)attractive. These two findings suggest the importance of grounding economics teaching in real world situations. 'Real-world' can mean at least two things: realisticness, and relevance. This question is evident in the survey questions on 'theoretical' and 'realworld', as well as in the single question set for the focus groups.

In discussing realisticness, we are veering into well-trodden methodological territory. Realisticness would imply that assumptions, models, theories, etc. should be anchored in reality and endeavour to reflect features of reality, as they are understood. However, a reading of Friedman's (1953) highly influential essay is that realisticness does not matter. Critics of his position suggest that realistic theories are more likely to be true (Lawson 1997) and, therefore, more illuminating. What are the implications of these arguments for teaching economics?

For advocates of greater realisticness, it would have several benefits for teaching economics. First, if realisticness increases the truth content of theories, teaching realistic economics will furnish students with extra economic knowledge. Second, if these theories are more illuminating, they will be more attractive to students. Third, realistic theories are also more accessible to students because they appear grounded in a plausible reality. An interpretation of Sutton (2000) is that a central problem for economics is that inquisitive students have their curiosity quashed by increasing levels of abstraction and the repeated engagement with models of increasing technicality, but decreasing realisticness or relevance to them. It is clear from Bloom (1956) that engagement (and application) is necessary for learning. Thus, more realistic economics will lead to improved learning.

Other literature focuses on the related claim that relevance is related to learning; the Problem-Based Learning (PBL) literature is based on this premise. In PBL, students begin with a specific problem to solve, and their learning of theoretical and other material follows organically from this problem (see Forsyth 2010). Results of other student surveys (see Economics Network student surveys) report consistently that students emphasise that the relevance of the subject is important. One interpretation of this is that the subject is too distant from reality to be of interest. Indeed, our questionnaire survey results support this finding: when economics is perceived as too theoretical then it makes it less attractive. Further, our focus groups support this finding and our participants report that extreme abstraction can be a real problem:

> I think it's [perfect competition]... it's not too important but there is, obviously there's parts of it that are, you know, are still relevant to today, but it's not, well just the ideas behind it are not that, you know, not that important I don't think, very much, very realistic. (Female, 21, British)

Generally, microeconomics tends to be less popular than macroeconomics (as the questionnaire survey data found — results not reported for brevity) because it is regarded as less realistic, less applicable and therefore less useful (and hence does not have the power to illuminate specialist areas of interest) than macroeconomics:

> It's probably because you can apply macro to the problems you see' (Female, 20, British).

Perhaps students have not been doing as much microeconomic policy; perhaps microeconomics is taught differently from macroeconomics with less emphasis on policy. Crucially, microeconomics is also less popular because the abstraction is regarded as making it *overly-simplified*, i.e. making things too simple, whereas complexity is regarded as being difficult and therefore having kudos. Participants also suggested that in this context, mathematics may be regarded as a problem. If mathematics gets in the way of realisticness or application, it is regarded as unhelpful and this is something which turns people off economics. Important elements from other disciplines ought to be included, perhaps at the expense of mathematics. There is a tension between wanting something which is realistic, applicable and relevant, and the desire to achieve kudos of the subject.

5. On reflection, let's return to the quantitative data

The focus group data generated a number of significant findings. Economics is held in a more positive light than in the survey. Regard for economics seems to come from students' beliefs that studying it offers them an education which is valuable in terms of financial benefits, but perhaps more significantly in terms of the insights it can provide, the critical faculties it cultivates, and a general kudos of the subject, some of which is attached to its scientificity, and its difficulty. However, one of the principal sources of difficulty, mathematics, plays an ambiguous role: it can also turn students against economics if it removes them too far from realisticness, and thereby relevance. Significantly, some of the findings were suggested in the questionnaire survey data, but the focus groups uncovered new findings, and deepened our understanding much more.

However, the focus group findings are also subject to a number of caveats. As noted earlier they may have suffered from self-selection and social desirability biases. Further, the heterogeneity of the sample which (despite its strengths, also) complicated the analysis of the survey data, is also present in the focus groups. As Table 1 shows, the composition of the focus groups

makes it unlikely that we have a representative sample. Finally, on a more positive note, we can say that the focus group data point to further opportunities to analyse the survey data.

Accordingly, the perception variables (*easy, theoretical, future-career, better-decisions, frustrating, understanding-behaviour* and *confusing*) were analysed to generate a dimensions reduction and produce corresponding factors. The output generated a Kaiser-Meyer-Olkin (KMO) value of 0.788, which is an acceptable value to continue the analysis, and a Bartlett's test of sphericity value with p=0.000. According to these results, the sample size of the survey is sufficient for analysis and there are 2 factors that can be extracted from the data, suggesting that these perceptions can be summarised as being two dimensional. The values of the component after an Oblimin with Kaiser Normalization rotation are presented in Table 6 and the accompanying rotated component plot is presented in Figure 4. Factor 1 can be seen as representing a *useful* or *valuable* continuum, with *better-decision*, *understanding-behaviour* and *future-career* having a diametrically opposite effect from *theoretical*. Note that easy, confusing and frustrating play little part in influencing this continuum. Factor 2 can be seen as representing a *challenge* continuum, with it being dominated by perceptions of confusion, frustration and easiness.

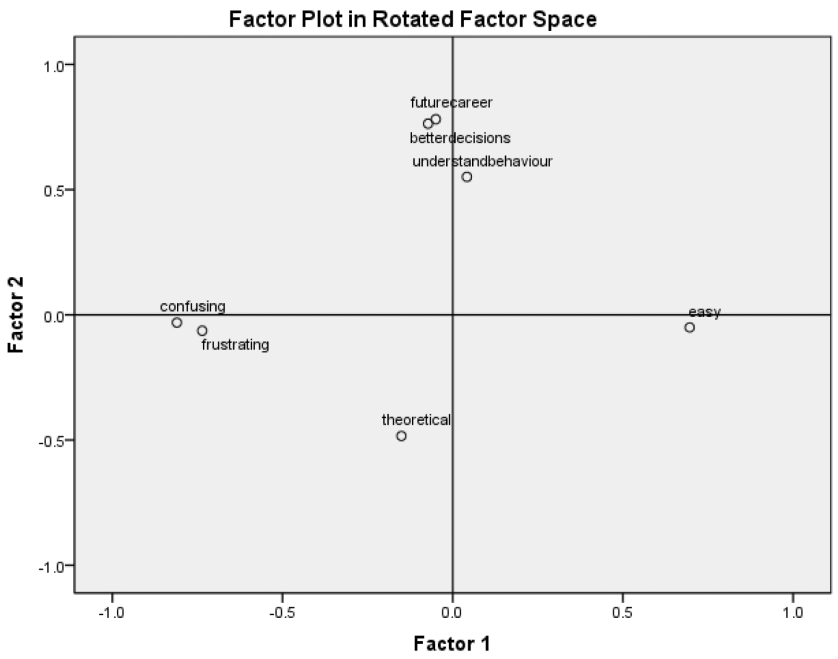
Table 6: Rotated pattern matrix

	1	*2*
Confusing	-0.810	
Frustrating	-0.736	
Easy	0.696	
Future career		0.781
Better decisions		0.763
Understanding behaviour		0.551
Theoretical	0.151	-0.484

Notes: Extraction method: maximum likelihood. Rotation method: Oblimin with Kaiser Normalisation. Rotation converged in 6 iterations.

The identification of these two factor continua corroborate the correlations above and point us towards revisiting the regression presented in Table 5 in two ways. Our first option is to use these perception continua to replace the individual perception variables. These results are presented in column 1 of Table 7 and suggest that the more useful and valuable economics is perceived to be by the student, then the greater the likelihood that the student will want to study more economics. Similarly, the more challenging economics is perceived to be by the student, the lower the likelihood that the student will want to study more economics. Qualitatively similar results are maintained for the other variables in the model.

Figure 4: Rotated component matrix



Second, because of the reported importance of the kudos of economics in the focus groups, we wished to explore this element in the questionnaire survey data. Therefore, we constructed two new variables, called *kudos* and *simple*. The easy variable, which originally was coded 1 (strongly disagree) to 5 (strongly agree) according to the extent that the student agrees with the statement 'I find economics easy', was recoded to generate *kudos* (which takes a value of zero if *easy* originally had values of 3, 4 or 5, and has a value of 4 and 1 if *easy* was originally coded 1 and 2, respectively) and *simple* (which takes a value of zero if easy originally had values of 3, 2 or 1, and now has a value of 1 and 4 if *easy* was originally 4 and 5, respectively). Table 5 suggested that the perception that economics is easy has no effect on the desire for more economics study. This may be surprising, because of the expectation that students who like the subject may also think that they are good at it. Separating the easy variable into three may be opportune if the variable is actually capturing three distinct dimensions: i) a reflection that if it is, in fact, *easy*, ii) a reflection that the perception of difficulty is associated with *kudos*, and iii) a reflection that it has no real value because it trivialises the real world down to inappropriately *simple* models. A re-estimation of the regression presented in Table 5, but now including *simple* and *kudos*, is presented in column 2 of Table 7. It can be seen that all variables (excluding *easy*) that were in the original regression in Table 5 are stable to the inclusion of these extra

Table 7: Regression re-estimation with Kudos and Simple

	1			*2*		
	Coeff-icient	*Std. error*	*Odds ratio*	*Coeff-icient*	*Std. error*	*Odds ratio*
Work experience	0.701	(0.246)***	2.016	0.803	(0.252)***	2.231
Part time job	0.108	(0.275)	1.114	0.136	(0.280)	1.146
Economics background	-0.152	(0.250)	0.859	-0.180	(0.254)	0.835
Private job	0.904	(0.289)***	2.470	0.867	(0.294)***	2.379
Self-employment	0.156	(0.422)	1.169	0.074	(0.428)	1.077
Easy				0.776	(0.346)**	2.173
Theoretical				-0.182	(0.116)	0.834
Future career				0.758	(0.177)***	2.134
Better decisions				-0.004	(0.172)	0.996
Frustrating				-0.281	(0.146)*	0.755
Understanding				0.443	(0.125)***	1.558
Confusing				-0.508	(0.153)***	0.602
Factor 1 (useful / valuable)	1.156	(0.135)***	3.178			
Factor 2 (challenge)	-0.792	(0.123)***	0.453			
Kudos				0.594	(0.279)**	1.811
Simple				-0.649	(0.245)***	0.522
Cut1		-0.706			0.877	
Cut2		1.142			2.814	
Cut3		2.735			4.500	
Cut4		4.863			6.681	
Log likelihood		-370.112			-361.189	
Pseudo R^2		0.159			0.179	
LR chi^2		139.62***			151.46***	
N		291			291	

Notes: These results take into account age, gender, and year of study (none of which are statistically significant).

two variables. The main differences are the following: first, the easy variable is now suggesting that if economics is indeed perceived to be easy, then students will be 2.173 times more likely to want to study more of it; second, if economics is perceived to bring *kudos*, then students will be 1.811 times more likely to want to study more of it; third, if economics is perceived to be *simple*, then students will be 1.916 times less likely to want to study more of it. These findings are in line with the results of the focus groups.

The final stage of the quantitative analysis is to investigate any patterns in the questionnaire survey data that were suggested either in its qualitative open questions or by the findings of the focus groups. Several areas were mentioned comparatively frequently as useful traits of economics: policy, macro, monetary, real, history and development. We applied ordinary logistic regression with the dichotomous dependent variable being whether the student cited a specific term — for example, 'policy' — in each of the two open questions

relating to what students found useful (Q14) and what they would have liked more of (Q15). These results revealed the following.[11] First, students who had work experience were less likely to discuss 'monetary' issues. Second, students who found economics to be theoretical were less likely to discuss 'real' issues, thereby suggesting these students could not see the relevance of the theory. Third, students who found economics to help their understanding of behaviour were more likely to discuss 'real'. Fourth, interestingly, students who found economics to be confusing were more likely to discuss 'real' issues; this may be because they recognise that the real world can be complex and confusing.

Perceptions of how easy or theoretical economics should be are of immense interest to economics departments. Our results presented in Table 7 suggest that those students who find economics to be easy were 2.173 times[12] more likely to want to study more economics while those students who report that they perceive economics to be theoretical were 1.199 times[13] less likely to want to study more economics, all relative to students who do not report these traits.

6. Conclusions

This paper has presented findings from a research project into UK economics students' perceptions of the subject using a combination of data collected via an online questionnaire and focus groups, and involving a range of statistical and qualitative analyses. The data collection in the focus groups was somewhat informed by the analysis of the questionnaire data. Throughout the research process, there has been unambiguous interaction between the different data collection and analysis processes. Thus the research can be said to be located in the tradition of mixed-methods research, and to some extent in case-based research. However, as our chronological, reflective paper demonstrates, the research design was adaptive and emergent: whilst the original intention was to collect data from a survey, and then from focus groups, the exact mixing was not pre-determined. Moreover, while the purpose of the research was to develop a picture of students' perceptions of economics, and in particular to explore the role of relevance and realisticness in that, the final set of research questions and findings were not determined *a priori.*

The paper has identified several interesting findings. Overall we find that students rationalise their choice of economics by emphasising that they want their education to be valuable, where value has many dimensions. Students appear to value economics for several reasons, namely its ability to confer superior understanding of world issues, rigour, improved decision making, enhance career prospects and, crucially, difficulty. Difficulty confers kudos on economics which emphasises difficulty somewhat for its own sake. However, where difficulty involves *excessive* theorisation and abstraction which conflicts too strongly with the usefulness of the subject, students regard economics more negatively. Significantly, because our data were collected in 2007-8, before the economic crisis, we can claim that it does not

merely reflect that crisis. We would surmise that data collected more recently than ours would stress even more strongly the importance of the perceived (by students) power of economics to be relevant, illuminating and prestigious.

These findings, though tentative, suggest several implications for economics curricula and teaching. As students value difficulty, there is no immediate need to strip out such material from curricula (even if this were possible given the nature of economics). However, students appear to demand difficulty *plus application*. This finding supports recent moves towards greater use of examples and, say, the embedding of mathematics into economics modules (see Economics Network 2012); however, it suggests that these moves should be accelerated. Our findings support those of Colander and Klamer (1987) who suggest that economics can be perceived as being too technical and divorced from reality. Our findings support greater use of policy analysis, as students see this as offering important insight and even access to power, even if that power is limited to students impressing their immediate social spheres.

The implications for teaching and curriculum design are that relevance, usefulness and realisticness but also perceived difficulty, are sine qua non for attracting students to economics. That suggests that economics curricula should be reformed to stress useful, relevant and realistic material; and, as a corollary, material which is excessively abstract, or which stresses technical excellence for its own sake would be de-emphasised. That is not to say that theory ought to be ditched. Rather, the question would be: which theories? If a premium is placed on realisticness and relevance, then there may be greater room in the curriculum for non-standard theories such as Post Keynesianism, Institutionalism and Marxism. All three of these have recently been prominent in providing diagnoses of the economic crisis. Thus, the implication is that reform of the curriculum may need to be broader than that proposed by (Coyle, 2012).

Accepted for publication: 25 January 2014

APPENDIX

Survey Questions and Codes

Q1	Please state whether you are
1	Male
2	Female

Q2	What was your age on your last birthday?
1	17 - 21
2	22 - 26
3	27 - 31
4	32 - 36
5	37 - 41
6	42 +

Q3 What is your nationality?
1 UK
2 USA
3 Australia
4 Republic of Ireland
5 New Zealand
6 Other

Q4 What level of degree are you currently studying?
1 Bachelors
2 Postgraudate diploma
3 Masters (non-MBA)
4 MBA
5 PhD
6 Other

Q5 Name of your degree [include any major and minor] (e.g. Business Administration; economics; Engineering; Tourism & Leisure etc.):

Q6 What year of study are you currently in?
1 1st
2 2nd
3 3rd
4 4th
5 Other

Q7 Which country are you currently studying in?
1 UK
2 USA
3 Australia
4 New Zealand
5 Republic of Ireland
6 Other

Q8 Have you had any full-time work experience (i.e. paid or voluntary work which has taken up your entire working week of 35 hours?)
1 No
2 Yes

Q9 Have you ever had a part-time or casual job?
1 No
2 Yes

Q10 Have you ever studied economics before?
1 No
2 Yes

Q10(a) If yes, state what is the highest level at which you have studied economics before
1 high school/A level/international baccalaureate etc.
2 degree (either undergraduate or post-graduate)
3 professional exams (e.g. accounting, banking, etc.)
4 Other

Q11 In your 'ideal' future career, how do you see yourself making a living?
1 private sector salaried manager
2 public sector salaried manager
3 self-employed (includes commission-only sales work)
4 Academic
5 Other

Q12 Please list the economics unit(s) you have studied most recently (a unit may also be called a module, or in the USA, a course).

Q13(a) I find studying economics to be relatively easy

The following scale was relevant to all statements under Q.13.

0 Not applicable
1 Disagree strongly
2 Disagree
3 Neither agree nor disagree
4 Agree
5 Agree strongly

Q13(b) I think economics is too abstract/theoretical to be of much practical use

Q13(c) I think my knowledge of economics may help me in my future career

Q13(d) I think my knowledge of economics may help me make better decisions

Q13(e) I find studying economics to be frustrating

Q13(f) I would like to study more economics if possible

Q13(g) economics has helped me to understand other people's behaviour better

Q13(h) I think my knowledge of economics could help me write a business plan

Q13(i) Knowledge of economics may help me make lots of money

Q13(j) economics is not about what I expected it to be about

Q13 (k) I find economics confusing

Q13(l) My recent economics unit(s) has (have) helped me understand the world better than did other economics units I have previously studied

Q14 Please list three concepts from your current economics unit(s) which you felt added the most to your understanding of the world

Q15 Are there any topics you would liked to have seen covered in your economics unit(s) (but which were not)? (Please list up to 5 topics)

ENDNOTES

1. University of the West of England. (Contact email: andrew.mearman@uwe.ac.uk)

2. This, perhaps awkward, term is used instead of realism. Realism is the simple philosophical tenet that there exists a reality (somehow) independent of our conception of it. Most economists subscribe to this belief. Realisticness is the demand that theory be realistic, i.e. grounded in the reality, rather than based on fictional or purely instrumental concepts. Friedman (1953) is the seminal modern rejection of realisticness.

3. Students were not approached directly by the authors to participate. The authors distributed an electronic call for assistance via existing networks (for example, the Royal Economic Society) of economists teaching in universities; those contacts then distributed the call for participation to their students. The survey was conducted in 2007-8.

4. Although it could be argued that the University ranking or the context of the curriculum might have an impact on students perceptions, the convenience nature of the sample would not allow for a comprehensive investigation of those parameters and, as such, these two parameters fall out of scope for the purposes of this paper.

5. Although it would have been interesting to investigate differences between 'old' and 'new' universities in the survey, this was not possible: students' universities were not identified.

6. The Economics Network (2013) cites UK Labour Force survey data, and also cites its own Alumni Survey as evidence for a clear premium to Economics graduates. The LFS data show a particularly strong positive salary effect for women.

7. There is debate as to whether economics students do make better decisions (cf. Carter and Irons, 1991). Cadsby and Maynes (1998) argue that economics students are more rational; Miller (1999) said students learned what was supposed to be appropriate behaviour. Frank et al (1993) showed that students who do institutional economics were less selfish than standard economics students. This finding may be a result of self-selection.

8. BBC, 'Why does PPE rule Britain?', 1 September 2010. Available at http://www.bbco.co.uk/news/magazine-11136511. Accessed at 14:05 GMT on 9 September 2010.

9. An issue which was not discussed in the focus groups was whether the students' training had reinforced this desire for scientificity: that is a question for further research.

10. This finding may reflect that the students recognise the moderator was an economist; however, the accompanying comments were consistent with a genuine belief that economics is perceived as superior.

11. Table not provided for brevity.

12. Corresponding figure in Webber and Mearman (2012) was 1.21. Their low figure may reflect the whole sample being comprised of students from across the world.

13.Corresponding figure in Webber and Mearman (2012) was 1.15, thereby emphasising the external validity of our UK results.

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