

## **Economics and the real world: students' perceptions of economics and the role of heterodoxy in changing them.**

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### **Abstract**

This paper presents preliminary results of research based on multiple data sources including an international survey of students using an international online questionnaire and focus groups conducted in the UK. The results show that in general, students appear generally satisfied with economics; however, students are often frustrated by the lack of relevance perceived in economics and they often fail to connect theoretical stories to the reality they see around them. The study examines factors which affect such perceptions, including work experience, age and career aspirations. The paper presents concepts which students perceive to be useful, including supply and demand, game theory and development, concepts which are less useful, such as rationality, and areas of economics perceived to be lacking, such as its ethical dimensions, its usefulness in explaining climate change and its treatment of human beings as simple agents. The results are preliminary but nonetheless interesting. They indicate a need for economics to broaden its scope and present a case for combining theoretical approaches. The study also provides some insight into the mixing of methods and the use of focus groups in economics.

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## **Economics and the real world: students' perceptions of economics and the role of heterodoxy in changing them<sup>1</sup>.**

### **Introduction**

This paper is inspired by several recent trends in Economics. In many ways, Economics and economists have been more confident in the recent past than ever before. They have engaged in so-called 'economic imperialism' (Lazear, 2000), which has seen them march into other disciplines in order to discipline them into using more rigorous methods: including statistical methods and rational choice theories. This influence can be seen in the practice of various other disciplines, such as political science and sociology, particularly in the USA. In other ways too, economists and their subject seem omnipotent: in the UK the Treasury dominates government; the Bank of England grabs news headlines at least once per month; every government department swarms with economists and the Government Economic Service grows rapidly (Ross, 2007).

At the same time, though, economics looks rather less confident. Student recruitment to Economics degree courses (and pre-degree courses) globally has been far from impressive for at least ten years (see, for example, Alauddin & Valadkhani, 2003; Knoedler & Underwood, 2003; Becker, 2004). Where economics was once the queen of the social sciences it is now seen as somewhat arrogant and aloof by competing disciplines (McCloskey, 1994) and more students seem to invest their education dollars in alternatives such as business studies, accounting and finance. This trend has led to a collective effort to improve economics teaching. It was hoped that improved pedagogy would, amongst other things, enhance recruitment. In addition, organisations such as the Economics Network try to persuade students why they should study Economics. In so doing, they appeal to students' pecuniary interests (Economics graduates' relatively high salaries) and to other ideals, such as analytical depth, rigour, the ability to explain, to think, and to influence. The developments in pedagogy have tended to focus on teaching process and innovation: examples include the use of classroom experiments (Holt, 1999), ICT (Reimann, 2004), evidence-based (rather than merely abstract theoretical) exercises and the greater use of illustrative examples. However, there have been those who have argued that from the perspective of educational philosophy (Clarke and Mearman, 2003), cognitive development (Earl, 2000) and engagement (ref), the content of Economics programmes should change. In some cases, these calls have included a more focused treatment of so-called 'threshold concepts', which are in some way analytically transformative: an example being opportunity cost. In other cases, the claim is made that a major problem facing economics (and its desire to recruit) is Economics itself: i.e. content must change. Some authors have even argued that the content should become more pluralistic, or even heterodox. That such calls have been made through established fora, such as the Economics Network (Mearman, 2007; this project) may be significant.

Such calls for curricular reform have a basis in another contemporary trend. Several historians of economic thought have spoken of the changing mainstream economics, of a battle for the future of economics, or of a new turn in economics (Colander, 2000; Colander, Holt & Rosser, 2004; Davis, 2006). Such a turn involves a contest and implies uncertainty and indeed opportunity. For

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a discipline which has regarded itself as progressing gradually, such uncertainty is legitimately regarded as surprising; and indeed may be seen as a countertendency to the confidence with which Economics operates in many of its spheres of influence.

If we view economics as a product in a competitive market place<sup>2</sup> it is useful, if not essential, to have some idea of students' perceptions of it. Further, heterodox economists (including the authors) often claim that if Economics embraced heterodoxy more fully then students would probably adopt a more favourable attitude towards economics. But this claim presumes, rather than demonstrates, that students don't have a very high opinion of economics and it also assumes that potential reasons for this are curriculum content (i.e. topics addressed) and curriculum approach (i.e. the way topics are addressed – the theoretical lens through which they are viewed).

To summarise, then, this paper (and its home research project) is rooted in several recent trends in Economics: alongside a great confidence about the scope and application of economics outside the discipline, there is a concern about its current applicability and relevance, future direction, its attractiveness to students and its pedagogical approach in terms of process, content and aims. This research project aims to assess: 1) what students' perceptions of Economics are; 2) which economic concepts are found particularly useful and which are less useful; 3) what Economics may be lacking as a discipline, at least in terms of appealing to students; 4) which teaching methods work; 5) how does Economics assist students in thinking about real world issues; and 6) what is the potential role for heterodox and/or pluralist economics in addressing some of these findings and their attendant problems.

The research reported here is a first step towards providing empirical evidence of students' perceptions of economics<sup>3</sup>. This paper reports initial findings from a worldwide student online questionnaire and a series of focus groups in the UK. The paper is organised as follows: in the next section, the project's research design is explored; then, selected findings from the quantitative element of the project are discussed; finally, findings from the qualitative element of the project are considered. All of these findings are tentative at this stage.

## **Methodology**

All research projects have research design, albeit much of the time it is implicit. Research design includes the methods of data collection and analysis to be used; but it is much wider, encompassing methodological considerations of what the research objectives are; what the standards for enquiry are; what the appropriate mode of data collection is; etc. in short, research design involves the consideration of philosophical issues of research and how they are to be operationalised. For example, rather than assuming that data collection and analysis are separate stages, it might be held that they are simultaneous.

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<sup>2</sup> Some readers may object to this commodification of economics, but we would argue that the perspective is valid since the harsh economic reality of university finances places every discipline at the mercy of market forces (and recently several disciplines have been culled from various universities around the globe).

<sup>3</sup> While the authors cannot claim to be disinterested parties in the mainstream versus heterodoxy debate we can, at least, let the evidence speak for itself in so far as this is possible. Of course, we are open to the accusation that our interpretations of the evidence may be biased.

At this stage, three different topics are covered: 1) the overall design of the project; 2) the design of the questionnaire and selection of respondents; and 3) the organisation of focus groups.

Typically, research design debates have involved long discussions about the relative merits of quantitative and qualitative data and analysis. Quantitative data and its analysis is held to be more reliable, have greater internal validity (we are capturing what we intend to capture) and usually (dependent on its method of collection) greater external validity (we can extrapolate from findings in one study). Qualitative data and its analysis are held by its proponents to offer much richer in-depth data which captures the context-specific and unique nature of human experience and interaction and human societies, in a way in which quantitative data cannot. Qualitative research also tends to deny that the strict objectivity claimed by quantitative analysts is possible. This debate between quantitative and qualitative approaches is itself rooted in philosophical debates, usually between positivist researchers and their opponents (of various types). Objections to the positivist approach focus on its claims to objectivity and truth, its excessive faith in the so-called scientific method, which it is argued fails to operate in science, its implicit ontology and to the (it is commonly claimed) inability of quantitative analysis to capture real relationships in society.

The quantitative/qualitative debate can perhaps best described as ‘interminable’. For that and other reasons researchers have increasingly embraced research designs which mix quantitative and qualitative techniques. This approach has several names, including ‘triangulation’, but here we shall refer to it as ‘mixed-methods research’ (MMR). There are several arguments for engaging in MMR, as laid out in, for example Creswell and Plano Clark (2006). Perhaps the main reason for mixing methods is to transcend the quantitative/qualitative distinction, which is, in many ways false: for example, all quantitative analysis involves qualitative assumptions; qualitative analysis is in many cases amenable to quantification. Other justifications for mixing methods often involve a recognition of the fallibility of all methods, the inadequacy of data (perhaps because of measurement error), the recognition of investigator bias (leading to teams being used), and other pragmatic concerns, such as poor past performance in prediction. Downward and Mearman (2008) show that all of these concerns inform MMR at the Bank of England. Downward and Mearman (2007) show that there might be ontological reasons for engaging in MMR: for example, that objects of study have complex objects which require both quantitative and qualitative information for a proper analysis of them.

As Creswell and Plano Clark (2006) note, there are several ways of combining methods once that decision has been made. Often priority is given to one method. For example, many quantitative questionnaires are preceded by qualitative interviews in order to arrive at the appropriate questions, categories and response sets. In that case, the quantitative element drives the analysis. Conversely, quantitative analysis can be used simply to identify patterns in data which are then to be investigated using qualitative techniques. Sometimes the distinction is made between pattern recognition with quantitative data and causal analysis done by qualitative research: the quantitative identifies the ‘what?’ and the qualitative identifies the ‘why?’

This project involves many of the elements above. Our research design involves two principal components: an online questionnaire; and focus groups. Each will be discussed in turn below. The purpose of the online questionnaire is to gather data globally on perceptions of economics

and to establish patterns, which may be found to indicate causes, between those perceptions and a set of other factors, biographical information and cognitive abilities. The focus groups aim to ask similar questions in a different way; but also to ask different questions. The questionnaire was standardised, making data analysis easier; but it is less likely to generate novel findings than the focus groups. Having said that, the questionnaire did contain open questions for qualitative analysis, which did generate surprises, and patterns not apparent in the strictly quantitative data.

In this project it is not the case that one type of analysis drives the other. The survey and focus groups overlapped. The later focus groups were conducted after the survey had closed, and thus were informed by the survey. But one feature of the findings is that remarkably similar themes emerged from both, independently. Specifically, many of the themes we expected to emerge from the questionnaires also emerged from the early focus groups. Similarly, findings which came out of the questionnaire were reinforced by the outcomes of later focus groups. Thus, it can be claimed that this research project is a thoroughly mixed-methods approach, because it used the different techniques simultaneously, in order to find out different things and to investigate different aspects of the same thing (i.e. perceptions of economics, their causes, and recommendations for pedagogy).

### *The questionnaire*

One of the original research questions intended to be asked by the research was whether or not students' performance in demonstrating understanding of real world issues improved by being exposed to heterodox material. The classic way to assess this would be to randomly assign students from a population into two groups, one which exposed to heterodox material and one, the control, which was not. The performance of the population would then be tested and the effect (or not) of the heterodox material on performance could be assessed. The use of random assignment and control groups are essential to experimental design and is used extensively in medical research, for example to test the effectiveness of a medication versus a placebo. Such processes have several advantages, principally the avoidance of sample selection bias. Indeed, such methods have been used in educational research (see, for example, Fraenkel and Wallen, 1990). However, such methods do have drawbacks. An ethical objection to such studies would be that if indeed one method is beneficial, then one group is advantaged. Further, it could be argued that factors external to the experiment cannot confidently be removed and that therefore any evaluation of the heterodox material would be flawed. An alternative strategy is to simply ask students a series of indicative questions at the beginning and end of a course of study and see how their responses change. In this case, up to this point, these approaches have not been possible. In the current climate of economics, it is often difficult for heterodox economists to teach a course which is meaningfully heterodox.

For these reasons, a questionnaire was chosen. Questionnaires have several advantages as data collection tools, although the advantages vary with the type of questionnaire used and the questions asked. In a standard quantitative questionnaire approach questions are typically closed (have pre-defined answers) which make the data entry and analysis process much easier. It is claimed by some that closed questions also mean that all responses are easily compared and further are comparable; however, this may not be the case, particularly in self-completion questionnaires, it is difficult to be confident how respondents answered the questions. Closed

question formats may have other advantages, such as that they may allow more questions to be asked, they may make the questionnaire easier to complete, which may improve response rates. Response rates are important because non-responses can significantly bias results from samples even if the sampling units have been selected randomly. However, closed questions have disadvantages too. They mean that novel responses cannot be made, making the questionnaire purely a method for testing prior hypotheses and unable to generate other types of new knowledge or indeed new hypotheses. Closed questions can even lower response rates if respondents continually feel frustration at being forced into answering questions in set ways. For these reasons, the questionnaire used here has mainly closed questions. However, at points during the questionnaire, open responses were appropriate. This is chiefly because it would have been impossible to identify *a priori* the full range of responses. *Ex post*, though, coding the responses is relatively easy, if labour-intensive. However, the questionnaire also asked questions explicitly informed by qualitative research principles.

The purpose of the survey instrument was to gather as much detail as possible about student attitudes towards economics in as succinct a format as possible. The survey questions are displayed in Appendix A. We expected students' perceptions of economics to be related to a number of factors, including the level of degree being studied, their academic experience (current year of degree), workplace experience (full time and part time), whether they have studied economics prior to their current studies and at what level. We also believed that career aspirations would have an impact on their perceptions in the sense that they had certain expectations of what they would learn from their economics course and its utility in this regard. Once a respondent had answered these questions we attempted to elicit their perceptions by asking them the extent to which they agreed or disagreed with a series of statements about economics with answers lying on a 5-point Likert scale ('Disagree Strongly' through to 'Agree Strongly' plus an extra category if they felt the question was 'Not Applicable'). These questions focused on the cognitive/intellectual approach and development of the student. It draws upon Earl's (2000) work on indeterminacy in the economics classroom and the claim (often made) that if we teach students heterodox material they just get confused. Thus, students were asked if they find economics frustrating; and/or confusing. For 'dualistic' thinkers, confusion and frustration ought to be correlated. We could hypothesise that students who are looking for correct answers will find economics confusing *per se* (because of opportunity cost) and parallel perspectives in particular. The survey finished with two open ended questions in which students were asked first (Q14) to name three concepts from their current economics units which added most to their understanding of the real world and (Q15), to list topics which they would have liked to see covered but which were not, respectively. The purpose of these questions was to generate novel answers; it also could be used as a guide to what the students have been exposed to and also to how useful heterodox concepts might be: if heterodox concepts appear consistently in the responses to Q14, this indicates a benefit from teaching heterodox material; and if heterodox concepts or concerns appear in Q15, this also supports the teaching of heterodox material. The answers here formed the basis of further qualitative research via focus groups and interviews. Students were offered an incentive to participate in the survey by being entered into a draw for an Apple iPod Nano if they returned a usable survey.

Before discussing the design of the questionnaire in detail, it is necessary to discuss the way in which respondents were selected. In order for sample selection to be undertaken according to

probabilistic principles it is necessary to have a sampling frame. The sampling frame in this case would be all students of Economics in the entire world. Given constraints of time and money, it was impractical to even attempt to draw up some a sampling frame, or even to contact them all. Instead, a sample selection method based on convenience and snowball principals was chosen<sup>4</sup>. Given that a random sample was impossible to gather, via some appeal to the law of large numbers, the objective became to gather as large and varied a sample as possible. Such a sample could be *ex post* representative, but more likely would simply contain adequate variation to be interesting.

The survey was piloted on a small number of students and no significant problems were identified so the survey was launched in April 2007. A second appeal was made in October 2007 in an attempt to widen participation. The survey closed in November 2007. The final result was a dataset made up of 1,158 usable responses. The method for gathering responses was as follows: an e-mail was written and sent via several known networks. These networks were a network of heterodox economists (Heterodox Economics newsletter)<sup>5</sup>, the Economics Network list of departmental contacts<sup>6</sup>, the Royal Economic Society newsletter<sup>7</sup> and the (Australian) Society for

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<sup>4</sup> It might be claimed that our sample selection method also involved theoretical sampling, because given the way our survey was disseminated, it was more likely that our respondents in fact were taught by economists sympathetic to heterodox economics. Thus, the sample could have captured the effects of heterodox concepts on understanding directly. In turn, the sample would have been justified theoretically in that it was targeted directly at answering our question. However, for reasons stated below, we cannot make this claim.

<sup>5</sup> The exact text in this case was the same as that shown below (footnote 5), except that an additional paragraph was tagged on: We should also like to make a special request to UK heterodox economists who have recently/are currently running modules which have a significant heterodox content, where 'heterodox' might include a pluralist approach and/or specific heterodox approaches. We should like to conduct small focus groups on the effectiveness of heterodox economic concepts in understanding real world issues. Each focus group would comprise around 5 students, all of whom would be paid. The focus groups would take place in the period April-June. If you are interested in recruiting focus groups from your student groups, please contact Andrew Mearman (Andrew.Mearman@uwe.ac.uk).

<sup>6</sup> The exact text read: Dear colleagues, An international survey is being undertaken into students' perceptions of economics. It is being conducted by Andrew Mearman (UWE, Bristol) and Tim Wakeley (Griffith University, Australia) as part of the mini-project funded by Economics Network. The major goal of the survey is to ascertain students' perception of the economics discipline and to identify factors which influence those perceptions. We believe the results may be highly useful in informing strategies in curriculum design aimed at improving recruitment, retention and overall satisfaction with economics. We seek the co-operation of economists in alerting students to this survey and encouraging students to take part. The survey will cover mainly UK, US and Australian students, however it is open to students in other countries. We are interested in the views of any students about to complete or who have recently completed any economics or economics-based (including business and finance) modules. Please encourage any eligible students to complete the survey. All students taking part will have the option to enter a prize draw to win an iPod. The survey can be completed online until 30.08.07. Students wishing to complete the survey should go to <http://www.survey.bris.ac.uk/ltsn/perceptions>.

<sup>7</sup> The exact text read: A survey is being undertaken into students' perceptions of economics. It is being conducted by Andrew Mearman (UWE, Bristol) and Tim Wakeley (Griffith University, Australia). The major goal of the survey is to ascertain students' perception of the economics discipline and to identify factors which influence those perceptions. We believe the results may be highly useful in informing strategies in curriculum design aimed at improving recruitment, retention and overall satisfaction with economics. We seek the co-operation of economists in alerting students to this survey and encouraging students to take part. The survey will cover mainly UK, US and Australian students, however it is open to students in other countries. We are interested in the views of any students about to complete or who have recently completed any economics or economics-based (including business and finance) modules. Please encourage any eligible students to complete the survey. All students taking part will have the option to enter a prize draw to win an iPod. The survey is completed online. Students wishing to complete the

Heterodox Economics. A few points should be made about this method of appealing for respondents. It clearly relies on convenience and known contacts. No equivalent message was sent out to American economists because no simple mechanism for doing so could be identified. That significantly may bias the results. However, the Heterodox Economics Newsletter is global and has a significant number of US-based economists on it. The spread of the call for participants depends on unknowable snowball mechanisms. We do not have data on what percentage of people who received the e-mail actually acted upon it or indeed passed it on, for example to their departments.

Because we have relied upon convenience sampling and existing professional networks there are obviously doubts about the extent to which the sample represents the population of students studying economics around the world (more on which, below). Whether our conclusions can extend beyond this particular sample discussed here is debatable, but analysis of the data generated by the survey has some use as an exploratory tool for later in-depth qualitative analysis. Even though we make no claims for generality from our sample we are confident that it is interesting in its own right and at the very least its findings are indicative of a range of student perceptions of economics because the absolute sample size is quite large and therefore should capture an interesting variety of opinions.<sup>8</sup>

The survey was not targeted solely at economics undergraduates; it was intended to elicit responses from any student who has to study economics as a part of their degree programme. This means the sample contains responses from students who are studying on a variety of degrees and who may therefore face a choice at some point about whether they wish to pursue economics further.<sup>9</sup>

In terms of representativeness, there are several dimensions. Age, gender balance, location, programme of study, experience in economics, work experience and nationality are all relevant. In this project, an additional variable is whether or not the student has been taught heterodox economics. If it could be ascertained, for example, that every respondent was currently studying a module with heterodox content, our inferences about heterodox economics could be more confident. If, on the other hand, we were trying to make general claims about Economics then our sample would be biased. Further, if our sample is mixed, but has an over-representation of heterodox respondents, it is biased. However, even if we knew the profile of economists who had encouraged their students to participate, this may not tell us much. Many heterodox economists have limited opportunity to teach heterodox economics. The most they can do in many cases is to teach mainstream material in a critical way. Indeed, it seems reasonable to assume that a significant proportion of the respondents were studying the standard curriculum. This is particularly likely to be true of the first year undergraduate respondents. As such, the students under them cannot be said to be being taught heterodox economics. Thus, we cannot claim a

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survey should go to <http://www.survey.bris.ac.uk/ltsn/perceptions>.

<sup>8</sup> A view supported by Bryman & Bell (2003: 101) who point out that ‘...it is the absolute size of a sample that is important not its relative size.’ But, of course, ‘...a large sample cannot guarantee precision.’

<sup>9</sup> For example, Griffith University has a Bachelor in Business Degree which has a compulsory first year economics unit. Subsequently all economics courses are optional units and compete for student numbers with rival disciplines such as accounting, finance, marketing, etc.

*priori* that we have a ‘heterodox’ sample. On the other hand, we cannot rule that out. We can only judge our sample *ex post*.

Analysis of the location of respondents (Table 1) reveals that the majority of responses were obtained from students studying in the UK, USA, Australia and New Zealand. Consequently our conclusions cannot extend beyond these countries.

**Table 1: Geographical locations of respondents**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UK	476	41.1	41.1	41.1
	USA	214	18.5	18.5	59.6
	Australia	207	17.9	17.9	77.5
	New Zealand	218	18.8	18.8	96.3
	Republic of Ireland	1	.1	.1	96.4
	Other	42	3.6	3.6	100.0
	Total	1158	100.0	100.0	

The split between male and female and their respective age groupings is shown in table 2 cross-tabulated with age. The majority of respondents are less than 27 years old and the overall split of responses (final column) is 55.1% male versus 44.9% female. This split closely mirrors HESA data for economics and business studies students for 2006/7 (Table 3) where the respective figures are 57.1% and 42.9%. These comparative data suggest that our sample is at least representative on this dimension.

**Table 2: Sex and age distribution of respondents**

		Age						Total	
		17-21	22-26	27-31	32-36	37-41	42+		
Q1	Male	Count	377	171	31	27	17	15	638
		% within Q2	52.2%	57.4%	54.4%	81.8%	65.4%	68.2%	55.1%
	Female	Count	345	127	26	6	9	7	520
		% within Q2	47.8%	42.6%	45.6%	18.2%	34.6%	31.8%	44.9%
	Total	Count	722	298	57	33	26	22	1158
		% within Q2	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Table 3: HESA (UK) data for number and sex of economics and business studies students 2006/7**

	%male	%female	%FT	%PT	%UK	%other EU	%nonEU
Econ	65.1	34.9	88.6	11.4	61.6	9.9	28.5
Bus St	55.1	44.9	62.1	37.9	71.3	8.2	20.5
Total	57.1	42.9	67.3	32.7	69.4	8.5	22.1

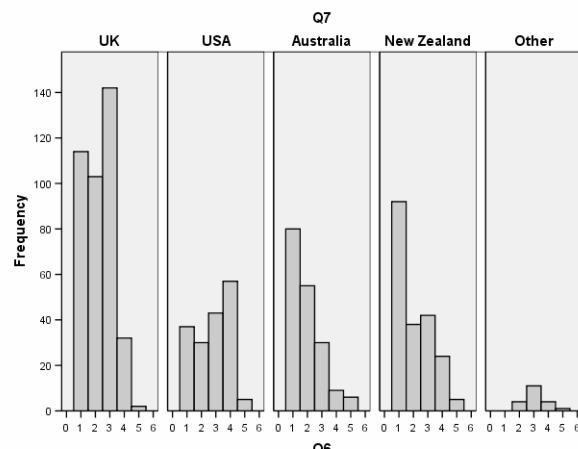
The level of degree being studied is reported in Table 4 along with current year of study. This reveals that the vast majority of respondents, 84.2%, are undergraduate students and the largest single cohort within this group are first years, although there is good representation across the other years too. We should also note that some diploma and Masters students have claimed to be in their fourth year of study, but this probably reflects ambiguity in the way we phrased the question rather than exceptionally long postgraduate courses. Which is to say that students may have added prior study on other degrees to their time studying their present degree.

**Table 4: Level of degree and current year of study**

		Count	Year of Study					Total
			1st	2nd	3rd	4th	Other	
Q4	Bachelors	Count	323	230	268	126	19	966
		% within Q6	79.4%	88.5%	91.8%	86.9%	44.2%	84.2%
	Postgraduate Diploma	Count	14	5	4	6	6	35
		% within Q6	3.4%	1.9%	1.4%	4.1%	14.0%	3.1%
	Masters (Non-MBA)	Count	48	16	6	9	11	90
		% within Q6	11.8%	6.2%	2.1%	6.2%	25.6%	7.8%
	MBA	Count	16	4	6	1	3	30
		% within Q6	3.9%	1.5%	2.1%	.7%	7.0%	2.6%
	PhD	Count	5	4	8	3	4	24
		% within Q6	1.2%	1.5%	2.7%	2.1%	9.3%	2.1%
	Other	Count	1	1	0	0	0	2
		% within Q6	.2%	.4%	.0%	.0%	.0%	.2%
	Total	Count	407	260	292	145	43	1147
		% within Q6	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Within the dominant undergraduate group the spread of students across each year in each of the main countries surveyed (Figure 1) reveals some inconsistencies in the frequencies of year against location of study. Notable here is the proportionately greater representation of 4th year students in the USA and 3rd year students in the UK. The main undergraduate respondents in Australia and New Zealand were first years followed by second years.

**Figure 1. Undergraduate (Bachelors) students only - year of study (Q6) and country of study (Q7)**



### *Focus groups*

We have opted for focus groups because they afford the ability to gather deep data from a number of subjects simultaneously, and exploit group dynamics. A focus group is a situation in which a moderator gathers a group of individuals to facilitate discussion on an issue of concern to the researcher. Focus groups are a type of qualitative data analysis technique but have their own distinct methodological issues (see, for example, Morgan, 1997). As with all qualitative techniques, there is a calculation and trade off to be made between various factors, such as cost, control over the proceedings, artificiality and involvement of the moderator. Focus groups lie between two extremes of structured interviews and participant observation in that they are quite costly and are somewhat artificial and involve moderator to a modest degree. Having said that, there are different types of focus group which afford different degrees of control and involvement; thus the researcher must make several decisions about the process of the focus group.

It is useful for the moderator to intervene if: the conversation breaks down (i.e. stops or gets rowdy), goes off track, a point needs clarifying, or a specific goal of the focus group needs to be achieved. However, the principal advantage of focus groups is the ability to observe group dynamics and considerable moderator intervention may prevent that, instead introducing unintended psycho-dynamic effects (Morgan, 1997: 48). Morgan argues that in research which is more explanatory than exploratory, greater moderator involvement is warranted. Our research lies in the middle. On consideration of these factors, moderator involvement is limited to asking key questions, clarifying points made and guiding the discussion towards the pre-set goals. In that case, it is useful to have a list of key questions and concepts available a) to establish some consistency across groups b) to create structure and c) to give the moderator a fallback position. However, it is important not to get trapped into the list, because that may stifle spontaneous exploration of emergent themes. Also, any list should not be visible to participants: visible lists often cause participants to wait for prompts from the moderator. Finally, it should be noted that the list of key factors changes. Initial focus groups directly targeted consumer choice and climate change as issues to be addressed. However, as a result of a) discussions between us, b) themes which emerged from the survey and from the focus groups themselves, the questions changed, to include policy, application and the ways in which economists think.

The focus groups involved a key question, which was asked verbally by the researcher and left written on the board for the whole session<sup>10</sup>. This question did not change. Specifically we asked: How effective is economics in creating understanding of real world issues? This question is almost the one the research project was designed to assess. The question is obviously quite direct; this fits the format and time constraint of a single focus group. It should be noted that the key research question does not include the word ‘heterodox’. It was decided not to use the word heterodox at any point for three main reasons: a) it can be misleading and confusing; b) it can be used as a control concept by which the content of the focus group discussion can be measured; and c) it was better to allow themes, useful concepts and criticisms to emerge spontaneously, mirroring Questions 14 and 15 in the survey. On (a) there is a large literature on the problematic nature of the term: for example, Mearman (2007) notes that there are a number of ways of

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<sup>10</sup> As is routine, participants were told what a focus group is, reminded that the sessions are confidential, asked to show courtesy to other group members and were asked to take into account that they were being recorded.

understanding the term ‘heterodox’; however none which are particularly satisfactory. Further, because of the variety of definitions of heterodox, the term is likely to be extremely misleading or confusing to students, who may have not been exposed to it, and may only have seen segments of heterodoxy, such as Marxism or Post Keynesianism. Also, it is quite possible that, in UK universities, with curricula dominated by mainstream economics, the term would have meant little to participants.

All the focus groups took place in classroom settings. As is routine, participants were told what a focus group is, reminded that the sessions are confidential, asked to show courtesy to other group members and were asked to take into account that they were being recorded. The participants were then asked to introduce themselves, offering some key biographical information, including name, age, course of study, occupation and work experience. This can be illuminating in the same way that the biographical questions on the questionnaire may be. The data obtained here can establish the degree of variety within the group and also be useful in explaining the responses of group members. At this point, the key question is introduced and the students’ initial thoughts are gathered. Discussion typically continued for up to 90 minutes. Ideally, participants talked freely without interruption by the moderator. The moderator intervenes where it is deemed necessary because of drift in the discussion, etc. The moderator may also intervene if the range of topics being discussed is too narrow (thus failing to meet Merton, et al’s (1956) criterion for a successful focus group) or too broad to gather deep information. The moderator may also ask follow up questions to gather data on personal context, considered explanatorily important by Merton, et al. After discussion, participants are asked for any closing statements. This may reveal key insights that the group members may have been holding back. That may or may not be a problem, depending on group dynamics.

A final point to address is focus group selection. The sampling frame problem for the survey also applies to arranging focus groups. For convenience, focus groups were held only in the UK (though more are planned in Australia). However, this does not solve the sampling frame problem. Practically there are no reliable mechanisms for setting up a focus group by approaching students nationwide directly. Rather they need to be organised locally. This could have led to the focus groups taking place in the researchers’ home institutions; however, this is problematic because of the possibility of greater social desirability bias, as home students want to mollify their tutors, or because rather the students wanted to use the focus group as a de facto staff/student committee. Thus, in addition to home university students, focus groups were sought in other UK universities. This choice may also create greater diversity in the sample in terms of various parameters. However, because of the need to organise locally, for convenience it was decided to approach known networks to find volunteers who would organise groups. In the end, six focus groups were organised at five universities (although because of technical problems, only five transcripts are available). At those universities, lecturers made appeals to their student groups, which yielded student volunteers. In some cases, the lecturers constructed groups from those who volunteered; in other cases, students arranged the selection of participants. The number of volunteers was generally low enough that issues of selecting from a large pool did not arise.

This process of selection yielded variety in group composition. Two of the universities were middle-to-low ranking, and the other three were middle-to-high ranking. The sample could thus have benefited from the inclusion of a high ranking and a low ranking institution. One of the

universities was in Scotland, the others in England. One of the universities teaches mainly by distance learning to mature students. In terms of individual group members, there is considerable variety in terms of gender mix, ethnicity<sup>11</sup>, nationality, age, main occupation, year of study and course of study. Though the sample cannot be considered representative in those dimensions, its variety is useful for inference. One clear source of possible bias regards the mainstream/heterodox distinction. Because the known contacts tended to be sympathetic to heterodox thought, this could have led to sample selection problems by them: however, in each case, the local contact approached all students in their teaching group and took all the volunteers who came. Another way in which heterodox bias could creep in is that the students could have been taught heterodox material. Indeed, in all five cases, to varying degrees, that was the case. However, in four of the cases, all students were taught predominantly mainstream material. In one of those, though, the students had been selected from a history of thought/methodology group, which might bias them towards heterodox concerns. In the fifth case, the students were taught an explicitly pluralist programme. Thus, the focus group members were almost certainly not representative in terms of their exposure to heterodox material. This is a problem if the goal of the study were representativeness and confident generalisation to the whole economics community; however, on the other hand the evident bias of the sample makes inferences about heterodoxy stronger and allows us to explore more easily issues such as debate, criticality and schools of thought.

### **Quantitative data and analysis**

The primary data we hoped to obtain from the survey related to students' perceptions of economics, which we measured on an ordinal (Likert) scale in a series of questions from Q13 (a) through to Q13 (l). The open-ended questions (Q14 and Q15) do not deal with students' perceptions of economics; instead these appear on the questionnaire in order to help us explore the issue of curriculum content. Consequently we shall reserve analysis of these findings until the later discussion.

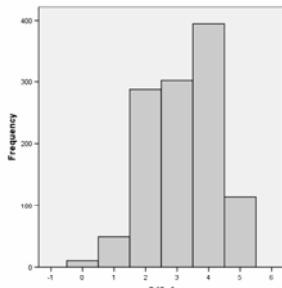
In trying to ascertain students' perceptions of economics it would have been useful to identify a single unambiguous measure but, running with our analogy of economics as a product, economics is a multi-dimensional good and consequently it has many characteristics by which it could be judged. For example, somebody may find economics frustrating yet, at the same time, believe that it will enable them to make better decisions. For a quick comparative reference, Figure 2 provides a graphical summary of responses to questions 13 (a) through 13 (l).

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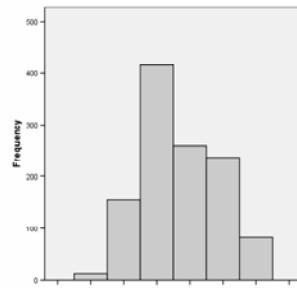
<sup>11</sup> The average age of the participants was 27 (likely higher than average); 12 out of 23 (52.2%) were male (compared to a UK average of 65.1% (source: HESA, 2006/7)); 15 of 23 (65.2%) were full time students (compared to a UK average of 88.6% (source: HESA, 2006/7)); 14 of 21 (66.6%) were UK students (compared to a UK average of 61.6% (source: HESA, 2006/7)); 7 of 23 (30.4%) were studying Economics and of the others (two unassigned), all but one was studying some combination of Economics and another subject; 17 of 21 (81.0%) (2 unassigned) were in their third year of study. Since the students were not asked about ethnicity, we cannot ascertain precisely the ethnic mix of the focus groups.

**Figure 2. Graphical summary of responses to questions 13(a) through 13(l) for all usable responses**

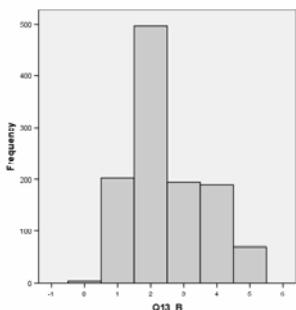
(Key: 0 = n/a; 1 = Disagree Strongly; 2 = Disagree; 3 = Neither agree nor disagree; 4 = Agree; 5 = Agree Strongly)



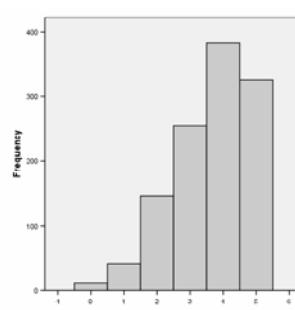
(a) I find studying economics to be relatively easy  
(0 = n/a; 1 = disagree strongly; 5 = agree strongly)



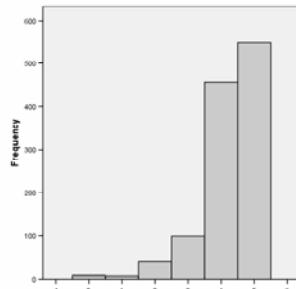
(e) I find studying economics to be frustrating



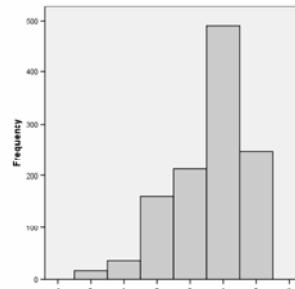
(b) I think economics is too abstract/theoretical to be of much practical use



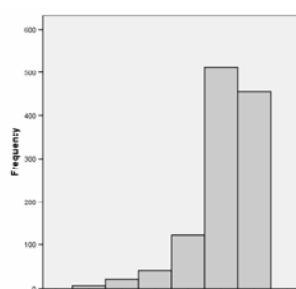
(f) I would like to study more economics if possible



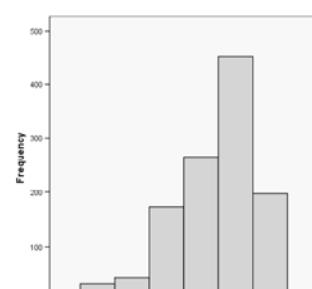
(c) I think my knowledge of economics may help me in my future career



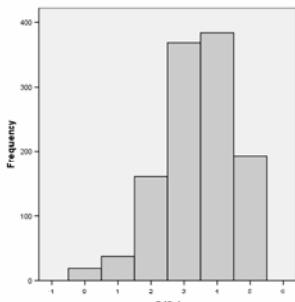
(g) Economics has helped me to understand other people's behaviour better



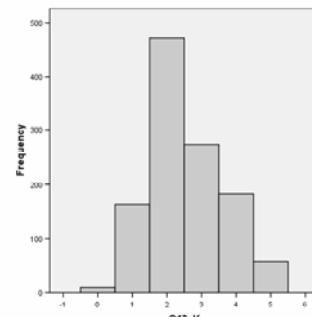
(d) I think my knowledge of economics may help me make better decisions



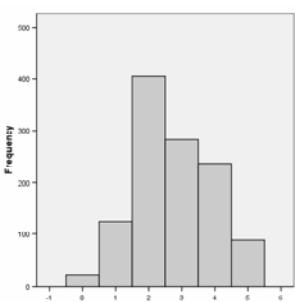
(h) I think my knowledge of economics could help me write a business plan



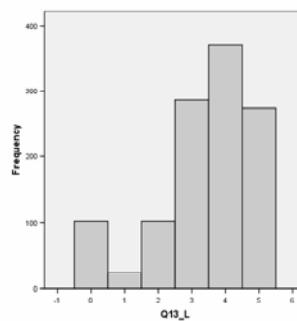
(i) Knowledge of economics may help me make lots of money



(k) I find economics confusing



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



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

The responses to each question display clear patterns, with the modal response in each and every case lying one side or the other of the indifferent response (i.e. response 3, neither agree nor disagree). Given that some questions ask students to respond to negative statements while others ask them to respond to positive statements about economics the picture that emerges here is one where many students hold positive perceptions of economics. However, this is not to claim that all is well in the economics garden; the numbers of students who have provided negative responses is not trivial for several questions. For example, 318 students agree or agree strongly with the statement '*I find economics frustrating*' representing 27.5% of respondents. These students may well be candidates who would drop economics at the first available opportunity and this would represent quite a high drop out rate on any degree programme. That said, the cross-tabulation shown in Table 5 reveals that of the 318 who responded negatively to 13(e) (i.e. 'Agree' & Agree Strongly) some 228 of them think their knowledge of economics will help them make better decisions! The chi-square statistic reveals the relationship in the table to be statistically significant and overall there is a moderate negative relationship between the two variables (as evidenced by a Kendall's  $\tau$  statistic of  $-0.206$ ,  $p<0.001$ ).

**Table 5: ‘I find studying economics to be frustrating’ versus ‘I think my knowledge of economics may help me make better decisions’**

Count		Q13_D						Total
		N/A	Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly	
Q13_E	N/A	1	0	1	0	6	3	11
	Disagree Strongly	0	3	1	7	55	88	154
	Disagree	1	3	8	37	183	184	416
	Neutral	2	3	6	25	122	101	259
	Agree	2	4	14	36	117	63	236
	Agree Strongly	1	7	10	16	30	18	82
	Total	7	20	40	121	513	457	1158

$$\chi^2_{(25)} = 127.72, p < 0.001$$

However, the cross-tabulation between 13(e) and 13(f) – ‘I would like to study more economics if possible’ shown in Table 6 supports the contention that 183 (57.5%) of the 318 respondents who find economics frustrating would not wish to pursue economics further or are indifferent. Once again the chi-square reveals the relationship to be statistically significant and both Kendall’s  $\tau$  (= -0.246,  $p < 0.001$ ) and Spearman’s rho (= -0.289,  $p < 0.001$ ) indicate the relationship between answers to the two questions is moderately negatively correlated (so some 57% of those who find economics frustrating probably would not want to pursue it further or are indifferent, even though 71.7% of them think it has the potential to help them make better decisions).

**Table 6: ‘I find studying economics to be frustrating’ versus ‘I would like to study more economics if possible’**

		Q13(f) I would like to study more economics if possible						Total
		N/A	Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly	
Q13_E	N/A	3	2	0	3	2	1	11
	Disagree Strongly	1	4	0	26	37	86	154
	Disagree	4	7	34	84	166	121	416
	Neutral	0	2	38	59	98	62	259
	Agree	2	9	58	63	64	40	236
	Agree Strongly	0	17	16	20	15	14	82
	Total	10	41	146	255	382	324	1158

$$\chi^2_{(25)} = 320.205, p < 0.001$$

So far then, of the 1158 cases in the survey 15.97% (185 students) would not wish to pursue economics further. While this is a useful insight we should recall that the survey sample consists of large numbers of non-first year cases and, as a result, the broadly positive perception of economics at the aggregate level might not reflect the perceptions held by those cases who are studying economics at degree level for the first time. In other words, we might argue that any

respondent who has made it to a higher year of studying economics (at degree level), after previous experience of economics, has already revealed a preference for economics. Consequently we should isolate first year cases in the data in order to find out the perceptions of this subset of overall respondents. Furthermore we can subdivide this group into two: the first group consisting of those who have studied economics before (at any level) and those who are genuine neophytes. The results of cross-tabulations carried out on each of these two groups for questions 13(e) and 13(d) are shown in Tables 7(a) and &(b) respectively.

For the first group, first year of study with no prior experience of economics (159 cases), 44 reported frustration with economics, but of this set some 32 (=72.7%) agree or agree strongly that economics may help them make better decisions. This figure is remarkably similar to that for the aggregate data set reported above (see Table 5) although for this sub-group the chi-square statistic suggests that we cannot reject the null hypothesis that there is no relationship between the variables analysed in the contingency table.

For the second group, first year of study but with prior experience of economics (248 cases), a total of 56 students reported frustration with economics and of this group 42 (=75%) agree or agree strongly that economics may help them make better decisions. Once again these figures closely mirror the findings above for the entire sample group and in this case the null hypothesis that there is no relation between the two variables in the table is rejected with 95% confidence.

**Table 7(a): first year, no prior experience of economics Q13(e) versus Q13(d)**

		Q13_D					Total
		Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly	
Q13_E	N/A	0	1	0	3	2	6
	Disagree Strongly	0	0	1	10	7	18
	Disagree	0	1	6	28	24	59
	Neutral	2	1	3	15	11	32
	Agree	0	3	5	16	6	30
	Agree Strongly	1	1	2	8	2	14
Total		3	7	17	80	52	159

$$\chi^2_{(20)} = 20.823, p > 0.05$$

**Table 7(b): first year, with prior experience of economics Q13(e) versus Q13(d)**

		Q13_D						Total
		N/A	Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly	
Q13_E	N/A	0	0	0	0	1	0	1
	Disagree Strongly	0	2	0	1	11	16	30
	Disagree	0	1	1	6	44	50	102
	Neutral	0	0	2	7	25	23	57
	Agree	2	1	2	5	23	13	46
	Agree Strongly	0	1	2	3	3	3	12
Total		2	5	7	22	107	105	248

$$\chi^2_{(25)} = 41.322, p < 0.05$$

The results of repeating the cross-tabulation reported in Table 6 above for the two sub-groups across 13(e) and 13(f) ‘I would like to study more economics if possible’ are shown in Tables 8(a) and 8(b). For both sub-groups of the sample the relationship between the two categorical (ordinal) variables is significant (i.e. chi-square is significant at 99.9% level of confidence meaning that the null hypothesis of no relationship can be rejected). Furthermore, Kendall’s  $\tau$  in each case (Table 8(a)  $\tau = -0.238$ ; Table 8(b)  $\tau = -0.224$ ) is similar and shows the relationship to be moderately negatively correlated which implies that higher levels of frustration will be accompanied by less willingness to pursue economics further. The sub-group results here do not reflect the overall results above. For the group with no prior experience of economics 44 report frustration and of this subset 30 (= 68.2%) would not take economics further or are indifferent. This proportion is a higher potential drop out rate than found in the aggregate data. For the group with prior experience 57 reported frustration and of this subset 30 (= 52.6%) would not pursue economics further or were indifferent. This proportion is lower than the potential drop out rate reported in the aggregate data. Consequently, we might infer that prior experience of economics in first year students who are frustrated with economics (whether they are undergraduate or postgraduate students) will lead to lower drop out rates than among first years with no prior experience. This is a hypothesis which can be tested empirically. If it is found to be significant it suggests that prior exposure to economics engenders some goodwill or a degree of ‘brand loyalty’ in students which is sufficient to help them overcome their frustration.

Now we turn attention to another possible cause of concern; namely that economics is perceived to be too abstract or theoretical to be of much practical use and therefore students might find it less attractive relative to substitutes such as business studies or marketing or politics (as suggested by Hodgson, 1999). The impetus to see the extent to which this view was held by students came from 20 years of conversations with students where this view was occasionally expressed and two thought-provoking papers; Baumol (1991) and Hansen et al. (2002). Question 13(b) explicitly asks students the extent to which they agree with the statement ‘I think economics is too abstract/theoretical to be of much practical use.’ Inspection of the histogram in Figure 2(b) above shows that the overwhelming modal response to this question was ‘Disagree’. Table 9 shows the results of cross-tabulating Q13(b) with Q13(e) ‘I find studying economics to be frustrating’.

**Table 8(a): first year, no prior experience of economics Q13(e) versus Q13(f)**

		Q13_F						Total
		N/A	Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly	
Q13_E	N/A	1	1	0	2	1	1	6
	Disagree Strongly	0	1	0	5	5	7	18
	Disagree	0	1	3	15	23	17	59
	Neutral	0	1	6	7	15	3	32
	Agree	0	1	9	9	6	5	30
	Agree Strongly	0	3	2	6	2	1	14
Total		1	8	20	44	52	34	159

$$\chi^2_{(25)} = 66.175, p < 0.001$$

**Table 8(b): first year, with prior experience of economics Q13(e) versus Q13(f)**

		Q13_F						Total
		N/A	Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly	
Q13_E	N/A	0	0	0	1	0	0	1
	Disagree Strongly	0	1	0	4	12	13	30
	Disagree	1	1	9	23	41	27	102
	Neutral	0	0	9	15	20	13	57
	Agree	1	0	7	13	19	6	46
	Agree Strongly	0	4	4	2	0	2	12
	Total	2	6	29	58	92	61	248

$$\chi^2_{(25)} = 80.99, p < 0.001$$

**Table 9: ‘I think economics is too abstract/theoretical to be of much practical use’ versus ‘I find economics to be frustrating’**

		Q13_E						Total
		N/A	Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly	
Q13_B	N/A	3	0	1	0	0	0	4
	Disagree Strongly	0	63	81	27	23	8	202
	Disagree	3	63	195	136	82	18	497
	Neutral	2	16	69	47	47	14	195
	Agree	2	8	57	42	58	23	190
	Agree Strongly	1	4	13	7	26	19	70
	Total	11	154	416	259	236	82	1158

$$\chi^2_{(25)} = 421.857, p < 0.001$$

Table 9 suggest that there is a statistically significant relationship between responses to Q13(b) and Q13(e). Kendall’s  $\tau=0.268$  pointing to a moderate positive correlation. This suggests that on the whole if students are unhappy with economics because they think it is too abstract/theoretical they also find it frustrating, although the correlation is nowhere near perfect. In fact of those respondents who either ‘agree strongly’ or ‘agree’ that economics is too abstract/theoretical (=257 students, or 22.19% of the total sample) over 50% of them (131 students, 50.97%) don’t find economics frustrating or are neutral. Of course this leaves 126 (49.03%) who agree or agree strongly that they are frustrated with economics. Overall this represents 10.9% of the sample’s respondents. Once again our analysis here suffers from the problem that when dealing with the whole sample we are capturing the responses of students at various stages in their studies and many have already revealed a positive preference for economics. The responses of first year economists may be more insightful, particularly to the extent that they have the opportunity to drop the subject in favor of alternatives. As above, the responses of first years with no experience and first years with prior experience and are reported in the cross-tabulations in Tables 10(a) and 10(b) respectively.

**Table 10(a): first year, no prior experience of economics Q13(b) versus Q13(e)**

		Q13_E						Total
		N/A	Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly	
Q13_B	N/A	2	0	0	0	0	0	2
	Disagree Strongly	0	7	12	5	3	2	29
	Disagree	2	9	30	16	12	5	74
	Neutral	2	0	9	6	5	5	27
	Agree	0	1	7	5	7	1	21
	Agree Strongly	0	1	1	0	3	1	6
Total		6	18	59	32	30	14	159

$$\chi^2_{(25)} = 76.373, p < 0.001; \tau = 0.219$$

**Table 10(b): first year, with prior experience of economics Q13(b) versus Q13(e)**

		Q13_E						Total
		N/A	Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly	
Q13_B	N/A	0	0	1	0	0	0	1
	Disagree Strongly	0	10	21	4	7	2	44
	Disagree	1	12	45	35	15	1	109
	Neutral	0	4	22	11	8	3	48
	Agree	0	2	11	7	9	6	35
	Agree Strongly	0	2	2	0	7	0	11
Total		1	30	102	57	46	12	248

$$\chi^2_{(25)} = 52.020, p < 0.01, \tau = 0.196$$

Analysis of Tables 10(a) and 10(b) reveal patterns in these subsets of the data which mirror the overall sample findings. In short between 16.98% of respondents in the first set think economics is too abstract but of this group just over half (55.55%) don't find it frustrating or are indifferent. In the second set 18.55% of respondents think economics is too abstract and once again just over half (52.17%) of this group don't find it frustrating or are indifferent. Overall we must conclude that the abstract nature of economics does not seem to relate very strongly with feelings of frustration in students, although the figures here suggest that frustration among those who do think it is too abstract/theoretical is marginally lower for first year students (whether they are experienced or not) than it is for non-first year students. This is a hypothesis which could be tested rigorously in future work. How then might responses to Q13(b) relate to Q13(f) 'I would like to study more economics if possible'?

Table 11 shows the cross-tabulation for 13(b) versus 13(f). The relationship is significant at the 99.9% level of confidence and moderately negative ( $\tau = -0.248$ ).

**Table 11: ‘I think economics is too abstract/theoretical to be of much practical use’ versus  
‘I would like to study more economics if possible’**

		Q13_F					Total	
		N/A	Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly	
Q13_B	N/A	1	0	0	0	2	1	4
	Disagree Strongly	1	0	10	24	54	113	202
	Disagree	3	16	47	121	192	118	497
	Neutral	2	5	30	46	61	51	195
	Agree	2	13	44	45	57	29	190
	Agree Strongly	1	7	15	19	16	12	70
	Total	10	41	146	255	382	324	1158

$$\chi^2_{(25)} = 183.279, p < 0.001, \tau = -0.248$$

Of the 257 (22.19% of the total sample) cases who either ‘agree strongly’ or ‘agree’ that economics is too abstract/theoretical some 178 of them (= 69.26%) are indifferent, ‘agree’ or ‘agree strongly’ that they would like to study more economics if possible. So, the abstract theoretical nature of economics is a deterrent to further study for some students, but for most who find it abstract it is perhaps just accepted that this is the nature of the subject and it is not sufficient to deter them from pursuing it further. Of course, this conclusion rests upon how we view the neutral response category, since these students have neither expressed a preference for more economics nor have they expressed a preference for no more economics. If we remove them from the story and look either side of the metaphorical fence here we find that 257 students think economics is too abstract/theoretical and of this group 79 would unequivocally not wish to pursue economics further compared to 114 who would. Seen in this light we might conclude that 30.73% of students don’t want to pursue economics further (presumably in part because of its abstract nature, although these data imply correlation not causality) while 44.36% do want to pursue it in spite of their perception that it is too abstract/theoretical, and 24.91% are sitting on the fence. Once again we arrive at an empirically testable proposition.

## Qualitative data and analysis

There were two sources of qualitative data in this project: 1) the surveys, particularly answers to questions 14 and 15; and 2) the focus groups. Qualitative analysis involves the lengthy and labour-intensive coding of responses; however other, simpler analysis can be engaged in. For example, a simple content analysis might involve a rudimentary count of words and phrases used. Some of this work can be done on the qualitative data analysis package, Nvivo 7.0; other work can be done on statistical packages such as Excel or SPSS. Nvivo runs a simple word frequency search. This generates some useful results, but they must be filtered to remove unwanted words and to collect together uses of the same words or different conjunctions of verbs, where the meaning is the same. Also, Nvivo searches for individual words such as ‘opportunity’ and ‘cost’: phrases involving economic terminology such as ‘opportunity cost’ have to be constructed manually. A selection of the initial search results is shown in table 12.

**Table 12: selected initial word frequency counts for question 14 ‘Please list three concepts from your current economics unit(s) which you felt added the most to your understanding of the world’**

Search term (* indicates variations on root term)	Frequency
Demand and supply	159
Market/s	156
Policy/ies	156
Model/s	129
Cost/s	109
Game theory	98
Trade	97
Inflation	87
Macro*	74
Growth	73
Monetary polic*	64
International	56
Price/s	56
Exchange rate	55
Interest rate	55
Opportunity cost	55
Tax*	53
Competition	52
Elastic*	52
Development/economics	50
Analysis	49
Finance/ial	49
GDP	49
Understand/ing	43
Fiscal polic*	40
Marginal	40
Equilibrium	36
IS-LM	35
Keynes*	35
Global*	34
Unemployment	32
Micro/econ*	30
Behaviour	29
Monopoly	24
Comparative advantage	22
History	22
Perfect compet*	21
Marx*	20
Apply*	16
Scarc*	14
Incentive/s	11
Heterodox	3
Happiness	1

The table shows selected initial word frequency counts for concepts which students found useful. Several interesting features emerge. Several core concepts appear to be regarded as useful: demand/supply, markets, cost/s, competition, price/s, inflation, elastic\* all appear more than 50

times. The survey results and focus groups do tentatively suggest that students find most useful what they are studying at the moment. Further analysis needs to be carried out to examine whether the preponderance of core concepts is correlated with students being in the early stages of their studies. The conclusion from this might be merely that students have short memories. However, pedagogically, it might be more interesting: students may be taking on board ‘threshold concepts’ (ref), i.e. those which transform the way they think about the world. One of the findings emergent from the focus groups is that an attraction of economics is its ability to change the worldview and other thought processes of students, which supports the transformative thrust of threshold concepts. Generally, though, threshold concepts are focused on concepts rather than thought processes; and they tend to focus on mainstream ideas such as opportunity cost. It is interesting that the number of responses for scarc\* and incentive/s are quite low; whereas opportunity cost, marginal and equilibrium are relatively higher but much lower than for supply and demand. Of course, that scarc\* and incentive/s are low might only reflect that students were asked for three concepts only and were not asked to rank given choices in order of usefulness. Further, clearly students have embraced the language of economics, in the high score for model/s and, to a lesser extent, analysis.

There seems to be a slight bias towards macroeconomics in the results. The score for macro is much higher than micro, and the references to macroeconomic concepts like growth and inflation are more frequent than to microeconomic concepts, such as those connected to market structure. The clear exception to this claim is the high score for game theory as being useful. Two other clear themes emerge: there is an interest in policy. This theme also came out strongly in the focus groups – it was often tied to a stated preference for macroeconomics – which might also be connected to the theme of relevance and realism and the students’ desire for both (see below). The second other major theme was that our respondents emphasised international themes, such as trade and exchange rates, as well as issues pertaining to development. Further analysis will be required to ascertain what is generating these responses. The results from the focus groups suggest that much of the reason relates to the perception that macroeconomic and international themes relate closely to policy, action, realism, relevance and perhaps the students’ belief that they are gaining specialist knowledge and influence by studying economics. Indeed, the focus groups suggest that these factors might be considered more important than pecuniary reward as reasons for studying economics.

In terms of heterodox economics, it is difficult to infer too much from the results of Question 14. Clearly, some of our students have been exposed to what might be called heterodox concepts and thinkers. The medium high score for Keynes\* might simply be a consequence of studying macroeconomics (as reflected in the relative popularity of IS/LM); but the lower but reasonable score for Marx\* (added to Marxist concepts such as the organic composition of capital) is less ambiguous. The low score for ‘heterodox’ is perhaps not surprising: it is not a word which is frequently used in teaching. However, arguably, the medium high score for history (allied to a score of 13 for history of economics) might suggest that students’ concerns are allied to those of heterodox economics. A similar conclusion might be (very cautiously) drawn from the popularity of macroeconomics and policy (where heterodox perspectives are seen more often and have had more influence). Arguably though, more encouragement for heterodox economists might be found in the responses to question 15, on what students would like to see more of.

**Table 13: selected initial word frequency counts for question 15 ‘Are there any topics you would liked to have seen covered in your economics unit(s) (but which were not)?’**

Search term (* indicates variations on root term)	Frequency
Market/s	64
Development/economics	61
Finance/ial	57
Real/world	46
History	44
Apply*	35
International	35
Policy/ies	30
Trade	26
Issue/s	23
stock	23
Math*	21
Macro*	20
Think	20
Environment/al	19
Keynes*	18
Stock market	18
Economic history	17
Practical/ly	17
Political economy	16
Micro/econ*	15
School/s	15
Behavioural economics	13
Game theory	13
History of economic	13
International trade	13
Relevance/t	12
A specific historical reference	10
Alternative	10
Marx*	10
Philosoph*	9

There were fewer responses to question 15, either in total or in terms of the variety. A number of students quite reasonably commented that it was impossible for them to comment on what was missing. Nonetheless, some interesting themes emerge. Indeed, the responses to question 15 are generally more useful, because they require more thought and rely less on what the students have studied most recently (not notwithstanding those students who wanted ‘more of...’ a recently studied topic). What is immediately clear is that the terms used most frequently all concern application of theory. That is either in the case of a specialist area, for instance development, finance, trade and stock markets, or in the use of the terms ‘real’ or ‘real world’, ‘apply\*’, ‘issue/s’, ‘practical/ly’ and ‘relevant/relevance’. Sometimes these concerns were raised as criticisms of current practice, at other times they focused on demand more application of useful concepts. These results are borne out very clearly in the focus group findings. Related to the question of relevance and application, it is also significant that concepts connected to history score highly, either relating to the importance of history in general, specific historical references, or to the history of economic thought. Again, these findings were supported by the focus group results.

Heterodox concepts were also prevalent in the suggestions for changing economics, as shown by the scores for Keynes, Marx, behavioural economics, school/s (of thought) and political economy. Given the nature of our sample, we must be very cautious about drawing inferences based on these findings: particularly with the focus groups, the way subjects were selected biases the results towards history of thought and also heterodox material. Another interesting feature which emerged though – which was supported by the focus groups – was that students felt that economics benefited them because of changes to their thought processes. That is clear from the references to ‘think’ (as in thinking differently, more critically or analytically) and arguably to references to ‘debate’ and to practical application. Perhaps it is in these ways, rather than through concepts, that we should judge whether students have passed through thresholds. This finding is supported by Earl (2000).

As already intimated, the focus groups revealed many similar themes as the questionnaire. The themes relate to many pedagogical issues of curriculum design and delivery. They also point to several ways in which heterodox economics might have a meaningful input. A few general points should also be made: unsurprisingly, many of the responses reflected specific elements of individual groups’ experience of learning economics in their own universities. For example, students who had been taught via debates, parallel perspectives, or problem-based learning commented on those facets. Other comments reflected material contained in economic policy, or history of thought modules. Some topics were discussed because they were raised by the researcher. These topics changed as the focus groups progressed. The topics included: climate change, consumer choice, application and economic development.

In addition to those topics, many others emerged from the focus groups. Related to consumer choice were the role of incentives and diminishing marginal utility. These were to be expected given conventional economics’ focus on them. However, additionally, students raised questions about the formation of preferences, consumer sovereignty versus dependency (see Himmelweit, et al, 2001: ch 3), the distinction between needs and wants, and the relation between wealth, welfare, utility and happiness. These points connect to another dominant theme, that of the role of psychology in economics. That might indicate some role for behavioural economics in the teaching of microeconomics. Another reason to do so would be to address the generalised concern expressed by students about the need for realism in assumptions. Such concerns were also raised in the specific case of perfect competition; and in one case about microeconomics in general. The link to psychology also hints at another theme: the links of economics to other disciplines. Several participants expressed a desire to see politics, ethics, values and other normative elements embedded in economics; that supports a call for more explicit treatment of philosophical issues in economics. Politics was considered particularly important because of the stress – shared across focus groups – on policy as an important factor in galvanising student interest.

Indeed, stimulating interest via current events, relevance of material and above all, application of theory was the most significant simple pedagogical implication of the findings of both the survey and focus groups. Participants repeatedly expressed a frustration with unrealistic assumptions and theories which appear detached from reality. This could be taken as a criticism of mainstream economics, which may be argued to place less emphasis on realism of assumptions (perhaps following Friedman, 1953); however it is a generalised criticism of economics and its teaching.

Students did not express generalised dissatisfaction with models and abstraction: rather it was the failure to apply these tools to the real world which generated frustration. Additionally, some concern and expression was noted about the emphasis in teaching on mathematics; however, often students recognised the importance and usefulness of mathematics as a part of economics. However, they also recognised the importance of evidence of other types, including data of different types. Included in that category was a recognition of the value of looking at problems from different perspectives: the vast majority of participants expressed a preference for studying a range of perspectives and understanding the debates which occur. This finding was stronger than that found in the survey: that is not surprising given that many of the students had received teaching which stressed debates.

One of the reasons why debates were seen as useful was that they encouraged several cognitive abilities to develop in students. For instance, the use of judgement was recognised as important: and this flowed from a recognition – and, crucially, acceptance – of ambiguity and uncertainty. In terms of Earl's (2000) framework, these students were no longer dualistic thinkers and were cognitively more developed. Participants expressed the belief that studying economics had made them more questioning, critical and able to argue: and that this was independent of their overall maturity and experience. That suggests that students want to be equipped to make better, more informed decisions. Such skills could be valuable *per se*, but also were considered by some participants as desirable for employability. Such concerns also relate to the ability of graduates to make decisions in a business context. Also, the desire to be able to make better decisions relates to participants' preference for and interest in policy; and in turn an expressed preference for macroeconomics over microeconomics. Both of those preferences were also found in the survey results.

## Conclusions

This paper presents preliminary results of research based on multiple data sources including an international survey of students using an international online questionnaire and focus groups conducted in the UK. The quantitative data analysis illustrated above suggests that, on the whole, students have positive perceptions of economics. What role then for heterodox economics? At this point conclusions must be tentative, but one implication we can draw from the sample data analysed here is that a more overt heterodox approach *early on* in the curriculum may have a role to play in reducing student frustration with economics (particularly early on in the curriculum) and, consequently, help ensure drop out rates are reduced (see Becker, 2004; McDonough, 2004; Earl & Wakeley, 2005; Stilwell, 2005; Pluta, 2006 for suggested approaches). Furthermore, while the abstract/theoretical nature of economics might be less of a deterrent to pursuing economics further than we might have expected the analysis above suggests that there is a role for inductive teaching strategies; the use of real world stories and data as a basis for ground-up theory building (see the discussion of ‘the “real” hook’ in Hoyt, 2003) which may help students who are sitting on the fence (those in the neutral categories) to change their perceptions of economics in a positive direction.

Of course we must recognize the limitations of our dataset here. Perhaps its biggest limitation with respect to finding out what students' perceptions of economics are, is that it does not include the views of students who may have considered studying economics prior to committing to their

university studies but who have chosen not to. By definition they do not appear in our sample and consequently they are a source of missing data which means that perhaps positive perceptions of economics are overstated here.

The qualitative data analysis show that students are often frustrated by the lack of relevance perceived in economics and they often fail to connect theoretical stories to the reality they see around them. The study examines factors which affect such perceptions, including work experience, age and career aspirations. The paper presents concepts which students perceive to be useful, including supply and demand, game theory and development, concepts which are less useful, such as rationality, and areas of economics perceived to be lacking, such as its ethical dimensions, its usefulness in explaining climate change and its treatment of human beings as simple agents. The results are preliminary but nonetheless interesting. They indicate a need for economics to broaden its scope and present a case for combining theoretical approaches. The study also provides some insight into the mixing of methods and the use of focus groups in economics.

One of the key questions raised in the research is the extent to which heterodox economics can be shown to be effective in creating understanding of real world issues. More analysis of this is required, but based on these preliminary findings, several tentative claims can be made. Both in terms of concepts cited as useful and the content of the focus groups, there is some evidence that heterodox economics may add value. For example, on consumer choice, respondents found the more complex treatment of humans offered by heterodoxy more persuasive than *homo economicus*. Many respondents seemed to appreciate the analytical rigour offered by traditional economics but also appealed for a broader treatment of economic questions, considering the political and ethical dimensions of real problems. More broadly, students, although they appreciate the usefulness of models, do not seem prepared to accept that models and theories could be divorced from reality: some realism of assumptions seems necessary to convince them of the usefulness of models and theories. Even more broadly, many respondents felt that debate was useful and important in developing understanding and cognitive capacity. On all of these points, heterodox economics can assist: directly, in terms of being broader and less scientific; and indirectly, by being used as a perspective relevant to debates.

Clearly, more analysis needs to be done. The quantitative data can be analysed further to assess relationships between biographical factors and perceptions of economics, as well as cognitive development and perceptions of economics. The qualitative element of the questionnaire, once coded, can be analysed quantitatively against biographical factors and indicators of cognitive development. Further, the focus groups need to be continued, in Australia, and the emergent themes assessed in that context.

## Appendix A

### Survey Questions and Codes

<b>Q1</b>	<b>Please state whether you are</b>	<b>Q8</b>	<b>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?)</b>
1	Male	1	No
2	Female	2	Yes
<b>Q2</b>	<b>What was your age on your last birthday?</b>	<b>Q9</b>	<b>Have you ever had a part-time or casual job?</b>
1	17 - 21	1	No
2	22 - 26	2	Yes
3	27 - 31		
4	32 - 36		
5	37 - 41		
6	42 +		
<b>Q3</b>	<b>What is your nationality?</b>	<b>Q10</b>	<b>Have you ever studied economics before?</b>
1	UK	1	No
2	USA	2	Yes
3	Australia		
4	Republic of Ireland		
5	New Zealand		
6	Other		
<b>Q4</b>	<b>What level of degree are you currently studying?</b>	<b>Q10(a) If yes, state what is the highest level at which you have studied economics before</b>	
1	Bachelors	1	high school/A level/international baccalaureate etc.
2	Postgraduate diploma	2	degree (either undergraduate or post-graduate)
3	Masters (non-MBA)	3	professional exams (e.g. accounting, banking, etc.)
4	MBA	4	Other
5	PhD		
6	Other		
<b>Q5</b>	<b>Name of your degree [include any major and minor] (e.g. Business Administration; Economics; Engineering; Tourism &amp; Leisure etc.):</b>	<b>Q11</b>	<b>In your 'ideal' future career, how do you see yourself making a living?</b>
<b>Q6</b>	<b>What year of study are you currently in?</b>	1	private sector salaried manager
1	1st	2	public sector salaried manager
2	2nd	3	self-employed (includes commission-only sales work)
3	3rd	4	Academic
4	4th	5	Other
5	Other		
<b>Q7</b>	<b>Which country are you currently studying in?</b>	<b>Q12</b>	<b>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).</b>
1	UK		
2	USA		
3	Australia		
4	New Zealand		
5	Republic of Ireland		
6	Other		

**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)**

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