

# CHAIRMAN'S REPORT

# Part I of the Economics Tripos 2013-2014

Candidates were generally very well-prepared for the Part 1 examinations with few poor performances and with candidates answering the questions across all five papers to a generally high standard.

Of the 157 candidates; overall 27.4% attained a First (43 candidates); 54.1% an Upper Second (85 candidates); 14% a Lower Second (22 candidates) and 1.3% a Third (2 candidates). Five candidates were not classified (mainly through a failure to complete all of the examinations). This distribution is broadly in line with the results of recent years.

Paper 1 mean: 64.2%, standard deviation: 7.5 and median: 65%.

Paper 2 mean: 65.8%, standard deviation: 7.2 and median: 67%.

Paper 3 maths mean: 62.4%, standard deviation: 11.6 and median: 64%.

Paper 3 stats mean: 65.2%, standard deviation: 11 and median: 67%.

Paper 3 overall mean: 63.6%, standard deviation: 10.5 and median: 64.5%.

Paper 4 mean: 65.2%, standard deviation: 7.3 and median: 66%.

Paper 5 mean: 62.9%, standard deviation: 9 and median: 64%.

All papers mean: 63.9%, standard deviation: 8.3 and median: 65.3%.

The paper setting process proceeded smoothly with all papers having been submitted on time and only minor adjustments being made in the paper setting meeting.

The guidelines for marking to rule introduced last year were applied again this year. Candidates' marks for Paper 1 were scaled down, those for Paper 2 were scaled up, scaling adjustments were needed for Paper 3 and some scaling was applied to Paper 4.

No issues of plagiarism were identified.

There were some procedural concerns. In at least one exam hall where candidates were sitting Paper 3, they appear not to have been reminded of the instructions to answer the maths and stats questions in separate answer booklets, and this caused some delay in marking. There was also some concern that a record of attendance of all candidates present in at least one examination was not accomplished. The Exam Board recommends that the examination procedures be tightened accordingly.

As Chair I must commend the internal examiners and the external examiner for their assiduous efforts and great application (many internal examiners having undertaken such duties on other parts of the Tripos and for the MPhil, thus their workload being high). They have all worked very hard and marked with great accuracy, despite the procedural problems and a protracted exam marking process. I know all of the examiners wish to thank the administrators for their very hard work and great care, particularly Silvana Dean, Cherie Lee and Craig Peacock. Our particular thanks to the

external examiner for his extremely effective work for this Exam Board over the past three years, his commitment and astute judgment being immeasurably valuable. Finally I wish to endorse the external's considered and helpful suggestions in his accompanying report.

Nigel Knight.

# External Examiner Cambridge Economics Tripos Part I



1st July 2014

# External Examiners Report - Cambridge Economics Tripos Part I

I am writing as the Moderating External Examiner for Part I of the Economics Tripos. This is my third and final year as External Examiner.

As was the case for last year, the five papers in Part I Economics teach a well-defined core set of skills necessary for any Economics degree and are eminently sensible in terms of course content and structure. The level of the material, reflected in the questions asked in the exams and in the standard of the students' answers, is very high and at the appropriate level, given the typical set of Cambridge undergraduates. The level was higher compared to the year 1 of programs with which I am familiar with at Birkbeck and on a close par (slightly more advanced) than equivalent courses in the Economics department at the University of Warwick. With fair, consistent and rigorous assessment the level of attainment of the students was high — with an average overall mark of around 63.5% and only 1 fail out of 155 students. It would appear that the high quality of students, coupled with the support they receive match the high level of the academic material they are taught and examined on.

There were no specific problems with any of the papers. Several required some re-adjustment of the marks; in particular the Math's and Statistics paper, where the average mark was considered high and hence a downward adjustment was made for all scripts. I was happy with the adjustment, and this was clearly explained to me.

All five papers had sensible averages, in the mid 60's, with the standard deviation highest for the Math's and Statistics Paper (at 10.6 percentage points) and lowest for the Macro and Micro based papers (7.5% and 7.2 %). The percentages of first class and upper seconds were high — close on 81.5% of students attained this level. I am, generally speaking, happy with the distribution of the marks from all five papers, which were consistent with the previous two to three years.

The overall classifications have large numbers of 2.1 grades and relatively few marks in the 2.2 or 3rd category. If attainment in degrees across (a subset) of Universities are required to be comparable, then it may well be the case that an institution like Cambridge are likely to have high percentages of first class and upper second degrees awarded. Last year my report expressed some skepticism (quote: "a precautionary eye is required in order to ensure that this creep does not continue") about the size of this percentage. The jump from around 75% last year to 81.5% this year is large and it begs the question of where such a trend will end up. If it were to continue at this rate then essentially the Economics degree at Cambridge will have two classifications, a first and a two one, where the main aim seems to be for a signal in the job market rather than a reflection of the student's relative academic performance. I understand this is a requirement asked by the University and in turn this reflects trends elsewhere in comparable institutions, but it does make signaling the level of attainment harder and therefore emphasizes the need to report the actual marks attained. As an external examiner, it was difficult to judge the marginal cases, as there was no indication on the script of how the marks were allocated, nor did I have the marking schemes. Mark sheets were provided, but most often it is still very hard to attribute marks to particular parts of the question. As such I was reluctant to intervene in the marking without further consultation with the examiners. There was less evidence of any second marking, where most often the box for second examiners comments was empty. The one fail was very clear, but had it not been, the comments from first and second markers, if following the standard of the average script, would have been unhelpful.

- Three suggestions:
- (i) The standard and level of second markers comments needs to be improved. Currently there is very little to go on. Given that it appears to be a Cambridge University wide policy not to write on scripts it would be helpful to external markers, for both second *and* first markers, to give a clearer indication of how the marks have been allocated/awarded.
- (ii) Widen the range of marks. The highest first was 74.2% and lowest 2.1 around 59/60% in which case 81.5% of students are within a 14% range. This seem much too narrow to me and seems to penalize high achieving students.
- (iii) More radically it might be an idea to publish alongside degree classifications the average score attained.

Finally, many thanks to the Chairman of examiners and the all people involved at Cambridge for their hospitality, efficiency and the thoroughness with which the procedures were carried out over my three years.

**Professor Anthony Garratt** 

# Paper 1 Microeconomics 156 Scripts

By and large, the paper was well done. About 27 percent achieved first-class marks and another 51 per cent 2.1 marks.

The numbers of answers for questions in Section B were as follows. Question 7 85, Q8 103, Q9 77, Q10 9, Q11 7, Q12 30.

Section A was well done by most candidates and some questions did not allow a significant differentiation across candidates as the majority answered all parts of the question correctly. In particular, most candidates found Q1 very accessible and almost two thirds got a perfect mark. Q2 was straightforward for most candidates, although a minority revealed a poor conceptual understanding of third degree price discrimination. Many candidates gave a very good answer to Q3, especially the quantitative part. Q4 was a fairly straightforward question which was generally done quite well. Many candidates distinguished between different cases for (v,c). Weaker scripts ignored mixed strategies, even though these were explicitly noted in the question. In Q5, almost all candidates were able to explain the 'median voter' outcome in (a). For (b), a significant number of candidates either ignored the (0.5, 0.5) equilibrium entirely or mistakenly claimed that it was not Nash. A pleasingly large fraction of candidates carefully described the best Nash equilibrium from 2's point of view. In Q6, too many candidates rehearsed Walras' Law without reference to the statement in the question. Answers often did not distinguish between "value" and "sum" in the wording of the statement -- though there were many very good and clear answers, too.

Section B was better than Section A at differentiating across candidates. Questions 7, 8 and 9 were by far the most popular. Q7 was the second most popular, and most candidates performed quite well with (a) being the most challenging part. Q8 was very popular and reasonably well done by most who attempted it. Most candidates understood the approach required, and were able to evaluate and discuss the first-order condition to show that a lower price than 75 is profit-maximizing. Some scripts got muddled in the details of the numerical values. Q9 was well done by most students with parts (b) and (c) being the most challenging. Very few students attempted Q10 and Q11, and it is therefore difficult to comment on the performance. Q12 was a fairly unpopular question which attracted a range of different answers. It was disappointing that quite a few candidates already slipped up on (a) and (b). Many were able to give suitable examples for (c) and (d). The standard of discussion for (f) was somewhat disappointing; almost everyone simply reasserted that the theoretical subgame-perfect equilibrium would be played, without any mention, e.g., of experimental evidence to the contrary.

Dr E Gallo Dr R Ritz

# Paper 2 Macroeconomics 155 Scripts

#### Section A

- 1. It was a simple question on calculation of the GDP deflator, and its comparison to other popular price indices such as the CPI. The majority of candidates didn't experience any problems answering the question but a few candidates were imprecise or wrong in the comparison exercise.
- 2. This was a textbook question on the effect of a reduction in government expenditures on a number of macroeconomic variables in closed and open economies. A straightforward exposition was required using IS-LM, and for the open economy part: the Mundell-Fleming model. Accordingly, the majority of candidates produced answers which were generally good.
- 3. This was a relatively straightforward question, however some candidates didn't understand the distinction between quantitative easing and the standard textbook definition of an open market operation. Some candidates also sought to answer the question in prose only. The more able candidates gave a technical exposition of the Quantity Theory and of the Fisher effect as well as prose interpolation. Virtually all candidates concluded that the long-run effect of the policy is inflation.
- 4. This was also a relatively straightforward question, the first part requiring the substitution of the given values into the equilibrium condition and then differentiating. Most candidates arrived at the correct answer. However, there was a plurality of responses amongst candidates to the last part of the question. The more able candidates gave a detailed prose exposition of the causal process, the less able gave a brief and perfunctory one.
- 5. Most candidates were able both to define the Marshal-Lerner condition and to explicate the effects upon the economy if it is satisfied (the textbook exposition); however some candidates soldiered on with a discussion of IS-LM and the exchange rate despite clearly not understanding the notion, and many candidates were either not clear about its effects if it is not satisfied, or devoted too small a proportion of their answer to discussing those effects if it is not satisfied.
- 6. The question was about the possibility of an expansionary effect of expected inflation in a small open economy with a fixed exchange rate. It required an exposition of the Fisher equation, the application of IS-LM and reference to how the Central Bank maintains a fixed exchange rate. The question is not a typical textbook question and, as a result, many candidates struggled.

### **Section B**

- 7. This question was answered by 33 candidates. The majority of those candidates did poorly in parts (b), (c), and (d). In part (d), most of the candidates mentioned human capital investment policies as the policies appropriate for raising the rate with which workers on probation become tenured, which misses the point. Many had a hard time deriving the natural unemployment rate in part (b).
- 8. This question was answered by 125 candidates. It was a relatively straightforward question, parts (a) & (b) requiring the substitution of the given values into the long-run equilibrium condition. Care needed to be taken to derive all of the answers asked for. Most candidates who attempted this question handled it well deriving the correct answers, though some missed some of the answers asked for, and a few arrived at the wrong answers because of simple arithmetical mistakes. Answers

to part (c) were more varied, in some cases because candidates did not understand the notion of an investment tax credit: wrongly assuming that this constituted an increase in tax on investment, and some candidates were not sure of the effect of the policy on the trade balance.

- 9. This question was answered by 58 candidates and the performance was generally very good. Surprisingly, many candidates despite providing the necessary derivations and correct diagrams were not able to define the convergence properly: e.g. many claimed that convergence is about the same *levels* of GDP or capital across different countries in the very long-run which is true only under very restrictive assumptions.
- 10. This question was answered by 71 candidates and the performance by the majority of candidates who attempted the question was good. Parts (a) and (b) were well addressed using IS-LM. Part (c) was the point of differentiation between the candidates as the LM curve is upward sloping and the slope of the IS curve now matters as well as the shift. This was a demanding part to the question and only the most able candidates got this right.
- 11. This question was attempted by only 3 candidates. It required an open ended essay starting with a clear and precise definition followed by an application of the IS-LM & Mundell-Fleming models with perfect capital flows. More able candidates showed that with some capital controls and a fixed exchange rate, some measure of monetary independence is possible with the use of sterilisation. Good candidates invoked examples such as those of the UK, USA, EU and China.
- 12. This question was answered by 20 candidates. Like question 10, parts (a) and (b) were generally well addressed, while part (c) was the point of differentiation between the candidates. Part (a) required the application of IS-LM and both the LAS and SAS curves as well as AD. Some candidates made the error of assuming the initial causal effect would be a shift of the AD curve, but most understood its initial effect is on AS. Part (b) required the application of the equilibrium condition in the money market. For part (c) only the more able candidates understood that there will be an increase in the demand for liquidity.

Mr Nigel Knight Dr D Hryshko

# Paper 3 Quantitative Methods in Economics - Statistics 155 Scripts

Although the instructions on the exam paper clearly specified that answers from the Mathematics and Statistics sections were to be written in separate sections, several students did not follow those instructions, which made the examiners' task significantly harder. While no penalty was imposed this year, future examiners should consider deducting marks for a failure to follow the examination instructions.

# Part I Paper 3: Statistics

The Statistics half of the Quantitative Methods paper consisted of two sections. Section C consisted of 4 short questions, each of which was compulsory. Section D offered a choice of two questions, of which students were asked to do one.

# **Section C**

Question 7

This was the easiest, and therefore the highest scoring, question in this section. Most students had no difficulty in calculating the various (marginal and conditional) probabilities asked for in the question, and in explaining why the random variables were not independent.

#### **Question 8**

This was a surprisingly low-scoring question. Somewhat unexpectedly, and disappointingly, several students struggled even to write down an expression of Bayes' rule, and many more struggled with applying it to the problem at hand. Those that did so correctly succeeded in obtaining the highest marks. Several students made simple algebraic or calculation errors – where these were easy to spot (for example, because the answer listed each step clearly), few marks were deducted. By contrast, where only an (incorrect) answer was given, with no intervening steps to show how that answer was derived, it was difficult to award many marks.

#### Question 9

Most students did well on this relatively straightforward question, which tested students' knowledge of various formulas, for sample covariance, and for the slope and intercept in the least-squares linear regression.

# Question 10

Most students correctly answered all three parts of the question, but struggled with explaining the reasoning behind their answers. It is not enough to simply restate the question. More mystifyingly, several answers seemed to reverse the if-then statement in part (a), and sought to explain why there might be no relationship between X and Y when C(X, Y) = 0.

# **Section D**

# Question 11

Not a popular question, with only 10 students attempting to answer it. Perhaps students were daunted by what might have looked like a difficult question at first glance. The better answers were those which, in addition to deriving the respective expectations and variances, were also able to offer a coherent discussion of the trade-off between unbiasedness and minimum variance.

# Question 12

This was the question that the vast majority of students chose to answer from this section. Most answers were at least satisfactory, with the majority being able to interpret the regression equations and the coefficients correctly. However, a significant number of answers to part (f) concentrated only on listing the assumptions under which the least squares estimators are unbiased. The best

answers also offered an explanation of omitted variable bias, and related it to a discussion of the short regression in part (a).

### General remarks

In conclusion, we were pleased to see that most students seemed to have an excellent grasp of the statistical concepts being examined, and could correctly calculate and interpret the various measures. However, it is worth reiterating two points. One, students should read questions carefully, to be sure that they are indeed answering (all of) the question being asked. Second, it is also in the interest of the student to provide at least some indication of the steps that were used to calculate the answer, so that the examiner can see the reasoning, and award at least some credit where it is clear that any error was caused by simple algebraic or computational mistakes. Finally, students really should read the instructions carefully, and follow those instructions by separating their answer booklets by section.

# **Quantitative Methods in Economics – Exam**

Following the same format as in recent years, Section A consisted of four short and compulsory questions, while Section B consisted of two longer questions, whereof the candidates had to answer one. The average mark for Section A was 62.8, and that for Section B was 61.6, giving an overall average mark of 62.4, that is somewhat lower than last year, but in line with previous years.

Q1

The question focused on continuity and differentiability. Overall, the candidates did well, and although some candidates struggled with differentiability the average mark was 64.7.

- a) Most candidates worked out that the function was continuous, whereas some struggled with demonstrating that it was also differentiable.
- b) Most candidates worked out that the function was continuous, whereas some struggled with demonstrating that it was not differentiable.

Q2

This question involved a constrained ecognizing. Overall, the candidates struggled somewhat, in particular with the interpretation part. The average mark on this question was 59.3.

- a) The candidates were competent in rewriting the problem as an equality constrained problem as well as at identifying the solutions to the resulting Lagrangian. However, only a small number of candidates verified that they had actually solved the ecognizing problem.
- b) Overall, the candidates struggled with interpreting the demand functions derived in a). In particular, many failed to identify that the agents required a minimum, or 'necessary', level of consumption for both goods.

03

This question consisted of two parts relating to the lectures on difference and differential equations. Overall, the candidates did well and the average mark was 66.7.

- a) Most candidates solved the difference equation, although quite a few failed to notice that the given interest rate was annual and not monthly.
- b) Most candidates did very well on this part.

Q4

This question consisted of two parts with the first focusing on the definiteness of quadratic functions and the second on convexity. The candidates struggled with part a), but did well on part b), giving an average mark of 60.6.

a) Most candidates did not notice that simply setting  $\alpha = 1$  would leave a positive semidefinite quadratic function.

b) Most candidates did very well on this part.

# Q5

This question consisted of three parts and focused on setting up and solving a system of two equations. While technically not particularly difficult, many candidates struggled with the unfamiliar set-up in part c). The average mark for the 73 candidates who answered this question was 61.7.

- a) Most candidates did very well on this part.
- b) Most candidates did well on this part, although some students did not use their result in  $\alpha$ ).
- c) Most candidates did not manage to solve this part. The easiest way of solving this problem involved rewriting the two original equations using the laws of logarithms and then imposing homogeneity of degree one. These operations in turn render enough information to calculate the determinant of the coefficient matrix.

## **Q6**

The question consisted of four parts and involved studying key properties of the CES function using techniques that were taught in the course. Compared to the other questions in the exam, this required more knowledge of economics. The average mark for the 82 candidates who answered this question was 61.6.

- a) Most candidates did very well on this part.
- b) Most candidates found the slopes of the isoquant. However, many candidates struggled with demonstrating that the isoquants were convex although this was conceptually easy, taking the second derivative was not algebraically straightforward.
- c) Most candidates did not manage to solve this part, which was admittedly a bit difficult, and required a clear grasp of the definition of the relevant elasticity.
- d) Most candidates did fairly ok on this part, ecognizing that the linear isoquants would give a straightforward answer for the substitutability of the factors of production.

### General impression

Overall, the candidates demonstrated that they are technically accomplished when faced with straightforward applications of the methods taught in the course. However, like in previous years, many candidates struggle when faced with an unfamiliar types question or if asked to explain the results. In addition, the candidates and those who are marking would benefit if the candidates wrote more careful and better structured solutions. More generally, the impression is that the candidates are pressed for time when taking the exam.

Dr B Wallace Dr S Jain

# Paper 4 Political and Sociological Aspects of Economics 157 Scripts

Candidates answered a broad spread of questions offered on this year's paper, although fewer candidates offered questions 1 and 6. All the questions were answered on the whole to a good standard, with the average score per question standing at 65.7%. Most candidates entered the exam well-prepared and there were comparatively few poor performances on this year's paper, with the exception of one very bad script. The best answers came from candidates who sought to challenge the question set and yet answer it directly with reference to a good range of detail and/or references to the literature.

- 1. This question was answered by 44 candidates. The best answers to this question addressed the three parts of this question directly, investigating the structural causes behind the rise in interest in having legally enforced labour standards and why the UK has been a late convert to having minimum wage legislation. For the first part of the question, many candidates correctly identified that the decline of trade unions, rising inequality and the impact globalisation have all be cited as causes behind the increased interest in recent years in statutory labour standards. Some candidates, however, tended to focus on more political factors, such as the rise of New Labour or the enlargement of the EU and social dumping. Candidates also tended to focus on the political reasons behind Britain's late adoption of a minimum wage rather than the structural factors. The best candidates assessed to what extent each factor was responsible for this trend and came to a convincing judgement.
- 2. This question was answered by 60 candidates and was generally well answered. Good candidates stated a wide variety of structural as well as political factors why trade unions declined. The very best assessed the case for both sides of the debate and argued which explanation they thought was the most convincing. However, many essays were deficient as to why unions in the public sector had not declined as fast as those in the private sector, and needed more detail on the structural and political reasons why this was the case.
- 3. This question was answered by 126 candidates and was the most popular in this year's exam. On the whole candidates who answered the question did well and sought to challenge the idea that Attlee was the originator of the post-war political order. Many also sought to dissect the idea of the existence of a post-war consensus. However, the best scripts heavily referenced the relevant literature and used original detail to support their arguments, especially on the record of Liberal and Conservative governments of the pre-war years and their role in developing and implementing the policies that become part of the post-war consensus.
- 4. This question was also popular among candidates, with 107 attempting answers to it. Most analysed the effects on public policy to a satisfactory degree, noting how her government moved away from policies such as full employment, Keynesian demand management and the mixed economy. Some noted how little the Thatcher government had changed some other areas, such as foreign policy and welfare. Others noted the influence of Thatcherism on subsequent governments (e.g. Major and Blair) and that Thatcherism may have contributed to a shift in the median voter to the right in the 1980s and 1990s. However, few candidates were able to distinguish convincingly between the policies the Thatcher government pursued and her ideology, which needed to be probed in more detail to achieve the highest mark range.
- 5. This question was less popular than the other two Governing Britain options on the exam paper with 61 candidates answering it; often it was candidates' fourth question, depressing the overall average mark for this question. Although candidates often produced detailed lists of the Blair

government's policy success (and its failures in Afghanistan and Iraq), most did not seek explicit comparison with the other post-war leaders. Virtually no candidates attempting this question referred to the academic literature on the subject or sought to use their own reading outside the lecture hall to inform their answers. That limited the number of high marks that could be given for this question.

- 6. This was the least popular of the Analysis of Economic Development questions with 36 candidates answering it. Candidates generally answered it well with the most able making reference to adverse selection, moral hazard, the lack of collateral, problems of monitoring and that informal lenders have access to better information. The most able candidates also pointed out that higher interest rates charged by the informal sector are due to the risk associated with voluntary and involuntary default.
- 7. This was the most popular of the Analysis of Economic Development questions with 101 candidates answering it. Generally the descriptive account was handled well by candidates, but some sought to answer the question in prose only and were awarded less marks in consequence as whenever there is a technical model directly relevant to the question, geometry and/or algebra is necessary for an adequate explication. The analytical part of the question was generally handled well with the most capable students explicating a sub-set of the research studies in great detail.
- 8. This question was answered by 89 candidates and was generally answered well. The literature on the reading list does not always adequately discriminate between Economic development and other types of development, and thus the exercise in hermeneutics which is really required to answer this well. Discretion was given to candidates by the examiners in this regard. Consideration of the HDI index was generally undertaken well by candidates.

Mr N Knight Mr C Read

# Paper 5 British Economic History 155

155 candidates took this paper and, in general, both examiners felt that the standard was high. 23.23% were awarded first class marks and 54.19% II.1s. Many of the scripts showed a detailed knowledge of the aspects asked about and could produce a wide variety of evidence in relation to these, this made the scripts interesting to read and we thank the supervisors for this paper for introducing students to material beyond that provided in the lectures.

Question	1	2	3	4	5	6	7	8	9	10
Average mark	66.4	59.8	57.8	57.3	65.1	64.7	62.6	62.3	62.0	60.7
Standard deviation	11.6	12.1	19.3	17.4	7.2	9.4	16.9	10.4	8.9	10.9
No. candidates attempting	17	32	11	7	130	89	22	104	115	93

The most popular questions were on technological choice in the late Victorian period, causes of 1920-21 depression and Britain's recovery from the Great Depression. All candidates could produce a nice account of the rationale behind the technology chosen in a variety of industries but lower marks were awarded if much of the essay was then devoted to a general discussion of entrepreneurship or the deficiencies of education in this period. The better answers showed a good knowledge of a variety of industries and the technologies used and linked these carefully to factors such as relative supplies of skilled labour and the structure of demand. In the case of the 1920-21 depression most candidates provided some discussion on Britain's return to the Gold Standard at the pre-war parity and the resulting tight monetary policy this implied. Candidates also provided a mix of supply side responses including the fall in hours worked and persistent unemployment factors. The best answers to the question were able to bring numerous channels together and provided more economic theory underlying the issue, such as the problem of labour market rigidities following WWI and the resulting fall in British competitiveness. With respect to the question on Britain's recovery from the Great Depression, candidates generally provided a competent discussion of the decision to exit the Gold Standard and the importance of free monetary policy. There was usually some discussion of trade and tariffs in the candidate's responses. The more complete responses covered fiscal policy and questioned its importance. There was a general lack of global context in most answers, given the external nature of the crisis, and few considered the stability of the banking sector of the UK.

Other popular questions also came from these later periods. Most candidates who attempted question 10 on long-term unemployment produced a good account of the mechanisms by which this type of unemployment may contribute to the high level of persistent unemployment observed during the interwar period and often incorporated detail from their economic theory lectures, most also realised that long-term unemployment wasn't a significant factor in the 1920s but was much more prevalent in the 1930s and produced some evidence to support this. The best answers made the connection between the duration of the depression and its effects on Britain's export staples in

creating long-term unemployment, weaker answers focussed too much on other explanations for unemployment and failed to distinguish between causes of the peaks and the persistently high levels throughout the interwar period. The possible failure of banks and financial institutions to finance domestic industry in the late Victorian period was comprehensively discussed by the best candidates; they covered the role of banks, the limitations of stock market financing, the putative advantages of investment banks, the availability of finance through retained profit or informal sources, and the financing needs of industry. Weaknesses were apparent in the second part of the question, how Broadberry's finding of poor productivity in the service sector reflected on the performance of the financial sector. Some failed to do more than mention the above, others showed a good knowledge of his work, demonstrated no obvious deterioration in manufacturing, and elaborated on how the failings in the transport and communication sector led to productivity decline but noting the financial sector performed well at this time. Q.7 on trade unions was attempted by only a small number of candidates. It required discussion of how unions influenced wages, conditions and technology, including Elbaum and Lazonick's argument about constraints on choice of technology in the cotton industry. Candidates typically produced good theoretical arguments about the influence of unions but produced only limited evidence on whether they had these effects in the late Victorian period. The worst arguments tended to be polemical rather than informed.

Few candidates attempted any of the questions on the Industrial Revolution and marks here tended to be quite variable. Q.2 on the impact of agriculture on the Industrial Revolution was a standard question. Most provided a brief discussion of agricultural inventions, although this could have been given a bit more emphasis. Some discussed enclosure and the onset of capitalist farming. Most also debated the idea of capital and labour release playing a role in the Industrial Revolution. The best answers also provided some discussion of demand driven industrialisation resulting from the increasing productivity in the agricultural sector and linked this to urbanisation. A number of students also attempted to evaluate the debate between Allen and Mokyr on the role of institutions and resources. Results were quite mixed, as responses were either extremely well thought out or did not address the question at all. Generally the responses did a better job of covering Mokyr on institutions than Allen on resources. The best answers were able to bring in some of the economic model presented by Allen on relative factor prices and biased technological change. However, there was a great depth of knowledge on institutions provided in some responses that made up for a limited response on Allen's model. The role of international trade in industrialisation had been covered in the lectures and answers incorporating Atlantic trade and the gains from trade were expected. Some candidates incorporated these aspects but other focussed on Berg's argument that luxury imports stimulating industrial development and Allen's argument about the role of trade in creating high wages with consequences for the technology adopted in Britain, with the conclusion that neither were unique to Britain. The essays were marked on their merit if they had taken this approach. Finally, very few people attempted to look at child labour and consider whether this could be reflected in heights data (Q.4). This was a difficult question as it required the student to make the linkages but a number who attempted this did it very well, explaining exploitation, considering whether it could be observed, discussing heights evidence and pointing out that even downward trends could be caused by factors unrelated to child labour.

Dr S Horrell Dr N Zammit

**End of Reports**