

Management Subject Board Report 2019-20

This report contains four parts:

Part I: Chair's report

Part II: Statistics

Part III: Prizes

Part IV: Reports on individual Management papers

PART I: Chair's Report

1. Background

This was the fourth year that a Management Subject Board was in operation at the behest of the Department of Economics. The Subject Board is responsible for setting papers, ensuring all scripts are marked and that all marks are resolved, analysing the marks, and passing the agreed marks to the Classification Boards (for each degree course). The Chair of the Subject Board is a member of every Classification Board.

2. Procedure and timing

An initial meeting of the examiners was held in January to establish the timetable and the responsibility for setting papers and liaising with the external examiners. There was considerable online communication in late Hilary Term/Easter vacation/early Trinity Term around the adjustment of examinations to online, open-book examinations due to student having been sent out of resident because of covid-19. The main meeting of the Subject Board was in the afternoon of Tuesday of Week 10. The exams needed to be marked and the marks reconciled by the end of Week 9. All marks were processed by [REDACTED] of the Economics Department.

3. Examiners

The Management Subject Board examiners were [REDACTED] (Chair), J [REDACTED] and [REDACTED]

The External Examiner was:

[REDACTED]

The main role of the external for the Subject Board was to comment on the draft papers.

4. Administrative resources

The Subject Board is indebted to [REDACTED] in the Examinations office of the Said Business School and also to Katherine Cumming, the Undergraduate Administrator in Economics, for their remarkable efforts to deal with this tight timetable. The timetable was further exacerbated because of remote working the switch in examination formats, and other impacts of covid-19. It is crucial that examiners understand the stress that they are under as a result of the very abbreviated schedule for processing the marks. The Chair and the Director of Undergraduate Studies have agreed a number of changes in examination processes to be implemented in 2020-21 to improve processes around paper setting and paper marking, including suggesting to paper setters that they can set papers from the beginning of Michaelmas; earlier identification of second markers;

[illegible]

Part III: Prizes

Gibbs Foundation for Management (1st & 2nd prizes).

Equal two top candidates in management who have taken at least 3 management papers:

- the two prizes to be shared equally between them i.e. $(£180 + £100)/2 = £140$ each.

Said Foundation prizes for Management

Top marks in each management paper:

	Accounting
	Entrepreneurship and Innovation
	Finance
	Marketing
	Marketing
	Organizational Behaviour and Analysis
	Strategic Management
	Technology and Operations Management

£140 to be awarded to each candidate except for Marketing where two equal candidates to be awarded £70.

Part IV: Reports on individual Management papers

Paper : Accounting (old regs) A10950X1

Marks distribution for Accounting (old regs) A10950X1

Category of Marks	Frequency
>70% (Distinction)	13
65 – 69% (Merit)	7
50 – 65% (Pass)	0
<50 (Fail)	0

Mean: 69.7

St. Dev: 6.2

Distribution of answers for Accounting (old regs) A10950X1:

Q. No	No. of answers
1	11
2	7
3	3
4	12
5	7
6	17
7	15
8	8

Comments on the examination of Accounting (old regs):

General comments: Please comment on the overall quality of the scripts, the distribution of marks and anything else worth noting and learning from (including suggested actions).

Students were expected to write two out of five given essays in Section A (25 marks each – 50% of the paper) and two out of three other questions in Section B (50% of the paper). The Section B questions consisted of a combination of short numerical questions and discussion questions. The paper is intended to cover a wide breadth of material but there is also sufficient choice to enable students to perform their best. In general students demonstrated an excellent understanding of the material and good proficiency of the key numerical and conceptual issues. Only a small cohort were taking this course and the high marks indicate a self selection of students genuinely interested in the material.

Comments on individual questions: Please comment on the overall quality of answers, notable weaknesses in the answers (and/or question) and anything else worth reporting and learning from (including suggested actions).

Section A: (Answer 2 out of 5 essays)

Essay 1: This was a popular choice with students generally demonstrating a good understanding of the issues around the convergence process. Candidate who scored less highly likely demonstrated less insight into the details of the relevant standards and issues being discussed and relied on rote knowledge.

Essay 2: Students for the most part demonstrated solid understanding of intangibles. In some cases students failed to fully develop the nuances and arguments about why accounting for intangibles is contentious. Less well developed essays veered off topic and discussed topics such as impairment at length and lost marks for not answering the question.

Essay 3: Students were expected to demonstrate a firm understanding of various frameworks and protocols that are rapidly entering this space. They could also display an understanding of the market forces on companies to provide information relating to their wider corporate and social responsibilities, and pressures in calculating and reporting this additional information.

Essay 4: A number of students attempted this essay and for the most part demonstrated a good grasp of the issues around fair value accounting. Strong essays displayed a keen insight into how a large part of the debate is centred around financial instruments whilst less well developed essays addressed the issues in more general and generic terms.

Essay 5: For the most part students demonstrated good comprehension of the value and importance of budgets whilst also understanding the concerns with the budgeting process in rapidly evolving business places. Well developed essays explored and discussed alternative forms of budgeting and their relevance in the modern workplace.

Section B: (Answer 2 out of 3 questions)

Question 6: A large number of students attempted this question and for the most part were able to perform the calculations correctly and showed all workings and formulae. The discussion questions were also well attempted and answered.

Question 7: Students displayed good command of the variance analysis calculations and strong answers showed detailed calculations and accurate reconciliation. Students for the most part displayed good knowledge in explaining the limitations of variance analysis and the relationship between cost and price.

Question 8: Fewer students attempted this question. For the financial statement analysis good answers used a choice of ratios and measures that provided different views and perspectives of the company over the relevant time frame. Similarly, strong answers were able to pinpoint the key issues around the use of non-GAAP information and the balanced score card. For part (d) good answers picked up on the specific concerns around valuing and reporting intangibles for tech companies. They indicated knowledge of implications and information content around acquisitions.

Paper: Accounting (new regs)

Marks distribution for Accounting (new regs)

Category of Marks	Frequency
>70% (Distinction)	5
65 – 69% (Merit)	4

Mean: 70.8

St. Dev: 6.4

Distribution of answers for Accounting (new regs):

Q. No	No. of answers
1	4
2	4
3	8
4	4
5	0
6	8
7	10
8	2

Comments on the examination of Accounting (new regs):

General comments: Please comment on the overall quality of the scripts, the distribution of marks and anything else worth noting and learning from (including suggested actions).

Students were expected to write two out of five given essays in Section A (25 marks each – 50% of the paper) and two out of three other questions in Section B (50% of the paper). The Section B questions consisted of a combination of short numerical questions and discussion questions. The paper is intended to cover a wide breadth of material but there is also sufficient choice to enable students to perform their best. In general students demonstrated an excellent understanding of the material and good proficiency of the key numerical and conceptual issues. Only a small cohort were taking this course and the high marks indicate a self-selection of students genuinely interested in the material.

Comments on individual questions: Please comment on the overall quality of answers, notable weaknesses in the answers (and/or question) and anything else worth reporting and learning from (including suggested actions).

Section A: (Answer 2 out of 5 essays)

Essay 1: The course started with the issues of climate change, and ended on it too. With this, I wanted to signal that accounting is not only part of the problem, but also part of the solution. This was a popular choice with students generally demonstrating a good understanding of the issues we covered (and beyond, as the best-performing students mobilized knowledge gauged

from week 8 projects on sustainability accounting too). Candidates who scored less highly likely demonstrated less insight into the details of the accounting issues at hand.

Essay 2: This question asked students to synthesize knowledge about the history of accounting ideas (and tools) that peppered the course. Students did a reasonable good job – in line with the very “Oxford” nature of this question – at looking behind the veil of taken-for-granted accounting techniques and discovering the conceptual and historical origins of accounting.

Essay 3: This was a popular question, no doubt motivated by my own keen interest in the subject of risk management, and our impassioned tutorial discussions! The questions asked students to apply examples, and this allowed them to draw on the cases we discussed. As the case study-based tutorial work went down particularly well during the semester, students found it easy to recall the empirics and mobilized it to support their arguments.

Essay 4: A number of students attempted this essay and for the most part demonstrated a good grasp of the issues around activity-based costing (ABC). Strong essays displayed a keen insight not only into the reasoning behind ABC, but also into the empirical research evidence on its use and limitations.

Essay 5: There were no takers for the budgeting question! I attribute this to the fact that budgeting was not a tutorial essay topic, but a topic covered only in a lecture (and readings). I think students felt safer on grounds that they were able to discuss in more depth in tutorials.

Section B: (Answer 2 out of 3 questions)

Question 6: A large number of students attempted this question and for the most part were able to perform the cost-volume-profit calculations correctly and showed all workings and formulae. The discussion questions were also well attempted and answered.

Question 7: Students displayed a good command of the variance analysis calculations and strong answers showed detailed calculations and accurate reconciliation. Students for the most part displayed good knowledge in explaining the limitations of variance analysis and the relationship between cost and price.

Question 8: Only two students attempted this question. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Entrepreneurship and Innovation

Assessors' Report, Trinity Term 2020

The Entrepreneurship and Innovation option was this year once again open to both E&M and Engineering students, in an evenly balanced cohort. This was the fourth year of the option, in which we implemented further changes to the syllabus in response to feedback from the previous years: most significantly, we improved support for the quantitative material adding an extra revision workshop open to students from this and all previous cohorts. We also ensured that the examination questions were very explicitly linked to material from all previous years' reading lists, classroom discussions, and tutorial exercises, so that students from this and all earlier cohorts could expect that their revision would prepare them optimally for the exam.

As in previous years, the examination posed a series of questions combining various aspects of the course: theoretical models from the lectures and readings, practical case material from the term, worked examples of financial calculations, and short essays on basic concepts of entrepreneurship and innovation. The choice of the examination questions aimed to provide students with opportunities for thinking about the challenges of conceiving, evaluating and implementing entrepreneurial ventures. Students were able to choose from a variety of questions and question types, giving each student the chance to play to his or her strengths.

- The **least successful** answers simply recounted facts from the case and/or focused more on discussion or summary of the frameworks and theoretical ideas themselves, rather than using and applying (or even criticising) these frameworks in the context of the questions posed.
- **Stronger** answers focused on a coherent selection of essential frameworks and arguments—building on class materials and discussions—and systematically applied them to the questions asked, along with carefully considering implications for the venture's performance and the entrepreneurial mind-set of the founders and other stakeholders.
- **Good** answers demonstrated solid understanding of the material through discussion and application of the relevant models and frameworks from the module, including cases, readings, exercises, and lectures.
- The **best** answers recognized the importance of analysing and figuring out how to structure business and related activities coherently, particularly in the earliest phases of ideation, opportunity assessment, financial and business modelling, and starting up.
- The financial calculations were completed without significant errors by most students.

Some more specific remarks on each of the questions:

Q1	<p>Students both agreed and disagreed with the statement posed, and some argued that the statement has mixed validity.</p> <ul style="list-style-type: none">- Achieving formal IP protection through patenting is very resource intensive,- It is often impossible for an early stage start-up to achieve, though it can be done;- so start-ups often seek to protect their competitive position through other means: building brand, or loyalty, or critical mass. <p>The best scripts cited sources appropriately, and were illustrated with material from the IP class, the supporting tutorial in Week 6, or relevant material from any other cases. SOURCES: readings for Week 5 (Bagley and Dauchy, 2012; Cohen, Nelson & Walsh, 2000)</p>
Q2	<p>PROS</p> <ul style="list-style-type: none">- Establishing feasibility early minimises costs of failure

	<ul style="list-style-type: none"> - Stress testing an idea helps to refine eventual viability of a product/service and business model - MVP mitigates risk and gather information to strengthen business model iteratively <p>CONS</p> <ul style="list-style-type: none"> - Data for making such assessments is subjectively gathered and interpreted - High risk of confirmation bias - Entrepreneurial passion does not always coexist easily with reasoned argument, but each is equally important <p>SOURCES</p> <ul style="list-style-type: none"> - Blank (2013) - Da Rin and Hellman's Matrix Canvas (2018); - the "Evaluating Opportunity" framework provided in lectures, derived from Mullins Feasibility Model (2013) <p>The best essays also cited appropriate and verifiable real-world examples</p>
Q3	<p>The best essays covered these angles in sections A and B:</p> <p>A:</p> <ul style="list-style-type: none"> - Principal/Agent conflicts can incentivise investors differently than entrepreneurs - Founders can harness these differences in incentive to further incentivise growth, but must be wary of radical misalignment - Network capital can diversify these agency risks - VCs should also bring more than just financial resources, and good ones will work to align their incentives to the founders as closely as possible. - SOURCES: readings for Week 3 & 4 <p>B:</p> <ul style="list-style-type: none"> - Returns can include non-financial elements as well as financial ones. - Over-prioritising financial incentives builds risks into ventures - Under-prioritising other forms of incentives can impoverish the venture, and disempower the founders - Power imbalances can be more destructive to ventures than slow sales, high costs, stiff competition, etc <p>SOURCES: reading for Week 1 & 2 & 3</p>
Q4	<p>The best essays made the following points in sections A, B and C:</p> <p>A & B</p> <p>Different ecosystems shape different ventures. Oxford's is characterised by different things than Zambia's, eg:</p> <ul style="list-style-type: none"> - The university: skills - both training and team members, mentors, network - Foundry: skill training, financing, workspace, expert mentors, network - Investors: angel and seed funding - Culture: peer support, success stories, societal norms - regulation: can create barriers but can also seek to establish a level playing field that supports entry and fair competition <p>C</p> <ul style="list-style-type: none"> - investment in ventures, grants, tax breaks etc. - investment in skills (education), immigration policy, e.g. startup Chile - investment in innovation (research) - investment in infrastructure - institutional stability - global interconnections and standards <p>SOURCES:</p> <ul style="list-style-type: none"> - Zoona Case Study, and readings for Week 6 - Readings for Week 8

Q5	<p>The question was purposefully structured to encourage students to use numbers in the analysis of an entrepreneurial business. Calculations were less important than commentary, but if calculations were wrong (partially or entirely) then commentary was compromised. Key topics to comment on included the financial model of the venture, cash flow, the real financing need.</p> <p>Good answers, in addition to correct calculation, included thorough discussion of what the numbers implied about the topics above and how they informed entrepreneurs' understanding of their business. Less successful answers jumped to conclusions without careful consideration of the broader context of the numbers.</p> <p>SOURCES:</p> <ul style="list-style-type: none"> - Readings for Week 3
Q6	<p>In response to results from prior years' exams, this question was restructured to include a more straightforward calculation element with a broader analysis element. This new structure ensured that this question did not outweigh the other questions in the exam. Key topics to comment on included investment and ownership, and term sheets.</p> <p>Good answers demonstrated a comprehensive understanding of the different elements of investor deals and their implications for entrepreneurs (in addition to correct calculations). Less successful answers struggled to move beyond basic definitions of the terminology.</p> <p>SOURCES:</p> <ul style="list-style-type: none"> - Readings for Week 4 and 6
Q7A	<p>Good essays explained these and similar advantages of Corporate Entrepreneurship:</p> <ul style="list-style-type: none"> - Minimise risk of reputational and financial failure - Incentivise entrepreneurial behaviours - Bring new skills, networks, other resources into corporation <p>And disadvantages:</p> <ul style="list-style-type: none"> - Internal resistance to entrepreneurial activity and culture - Low incentives to appropriately skilled talent (cannot offer equity) - Exposure to high cost of expert and super-mobile labor (contracted tech/coding specialists) <p>SOURCES:</p> <ul style="list-style-type: none"> - Wolpert and Lippitz (2007); Garvin and Levesque (2006); Shimizu (2012), etc
Q7B	<p>Good essays explained why Oxford tries to foster an environment conducive to entrepreneurship:</p> <ul style="list-style-type: none"> - Other bodies can support local start-ups through education, networks, funding, tax incentives, skills development, etc. - The rationale for doing so is to create jobs, diversify the entrepreneurial economy, harness innovation, drive productivity, discipline the behaviour of established firms, attract other economic resources, and enhance economic and social vitality. - Any conceptual frameworks from class illustrated with details from any cases from class will be acceptable if cogently presented and argued. <p>SOURCES:</p> <p>Drucker (1985), Stevenson (1985), Block et al (2016), Economist (2014) "Tech Start-ups", Wilson (2014), Litan (2008), etc.</p>
Q8	<p>Gans, Stern and Wu (2016)</p> <p>4 strategies: Intellectual Property, Architecture, Value Chain, Disruption</p> <p>The best essays used ample case details to argue concisely for <u>any</u> of these 4 strategies.</p>

Further comments and overall statistics on next page:

Further Comments, including on Open Book Format:

In general, the examiners felt positive about the quality of the students' answers and the careful thought that they had put into preparing for the exam. It was impressive to see the best answers balance insights on the application of entrepreneurial theory to entrepreneurial practice, especially those that displayed an ability to wrestle with the broader issues relating to innovation, including factors such as the social context and consequences of technical change.

As with all exams this year, the format was virtual and open book. This was certainly a boost to the quality of the student's answers. Without needing to memorise facts and figures and names and dates, students were able to fill their essays with improving details, and to spend more time organising and refining their answers. Also, their effort and attention could be deployed to application of concepts (as opposed to memorisation or calculation), the very factors that were specified at the start of term as assessment priorities. Most students performed very well overall.

It is worth noting that this assessment method (by examination) is not appropriate for this material. The teaching team is working to offer an alternative assessment, using methods derived from up-to-date entrepreneurship education that are more effective in stimulating entrepreneurial learning.

programme	E&M	Engineering	Total
# students	16	14	30
>= 70	44%	36%	40%
>= 60	50%	64%	57%
>= 50			
>= 40			
>= 30			
< 30			
upper quartile:	71.0	66.9	66.5
median:	68.0	68.0	68.0
lower quartile:	65.8	70.3	70.3
mean mark:	68.8	68.9	68.8
highest mark	78	75	78
lowest mark	55	63	55

UG Finance – Hilary Term 2020

Marks distribution

Category of Marks	Frequency
>70% (Distinction)	17%
65 – 69% (Merit)	30%
50 – 65% (Pass)	52%
<50 (Fail)	0%

Mean: 63.8

St. Dev: 5.0

Distribution of answers for [paper title]*:

Q. No	No. of answers
1	45
2	7
3	26
4	16
5	10
6	27
7	3
8	1
9	23
10	16
11	7
12	8

Comments on the examination:

General comments: Please comment on the overall quality of the scripts, the distribution of marks and anything else worth noting and learning from (including suggested actions).

The overall quality of the scripts was good (mean mark 63%). The heterogeneity in marks was moderate, with marks ranging from 51 to 76. Papers with lower marks lacked originality and the candidate's own interpretation of models. Such papers instead repeated the lecture slides (in some cases, word-for-word). Papers with high marks demonstrated a thorough understanding of the concepts, models and empirical evidence. They also showed that the candidate was able to discuss extensions to the models that were laid out in the lectures and tutorials.

Comments on individual questions: Please comment on the overall quality of answers, notable weaknesses in the answers (and/or question) and anything else worth reporting and learning from (including suggested actions).

The distribution of questions attempted was significantly skewed, with more students answering the questions on asset pricing (q1-6, 70% of answers) than on corporate finance (q7-12). In future exams it may be useful to require students to answer at least one question from each part.

Answers were compared against a template solution with typically a 3-part argument.

Specific comments on the questions with most answers:

Q1. By far the question with most attempts, it covered a core concept (market efficiency). Most students performed quite well in providing the definition of efficiency as well as examples pro and con, but only the best ones went on to draw implications for the broader working of financial markets (e.g. the role of mutual funds)

Q3. A question on the predictions of the capital asset pricing model (CAPM), again students perform well in basic definitions and examples, but most struggle with providing alternative specifications and robustness exercises that could further test the theory.

Q4. A question on the arbitrage pricing theory (APT). Here several students displayed some lack of clarity regarding the most important assumptions of APT, in particular in comparison with the CAPM.

Q5. A question on the Fama-French model (an extension of CAPM). This was the question with the highest grades. Answers were on the whole correct and wide-ranging.

Q6. A question on excess volatility of prices, most students explained the concept well, fewer students went on to consider possible solutions to this puzzle.

Q9. This question sought to assess the students' understanding of two fundamental corporate finance models, namely, the trade-off theory and the pecking order theory. Higher marks were obtained by the candidates who considered the models along with empirical evidence from the real world. The graph provided did not have convincing evidence in support of/against either theory -- stronger answers pointed out this drawback, and moved on to explain what conceptual framework may be useful to explain such trends. Parts (b) and (c) aimed to assess the students' knowledge of the existing literature, and sought a critical discussion of the standard models. Overall, the students answered this question well.

Q10. This is a question on international finance. Stronger answers provided a conceptual framework, e.g. either a simple 2-country 2-state model, or a comparison of the domestic CAPM with the world CAPM (or more than one model), followed by a comparison of this model with real world phenomena. Answers were reasonably well-structured, but in some cases, the model was not used well to convey a thorough interpretation of the material. Most students used references well to develop ideas. Lower marks were given to students who copied a lot of information from the lecture notes, without demonstrating an understanding of the fundamental issues that arose in comparisons between domestic CAPM and world CAPM, and the reasons underlying equity home bias.

Q11. This question on taxing businesses was not a very popular question, but the students who answered it got high marks, as they demonstrated a critical discussion of the pros and cons of corporate tax, as well as an understanding of issues surrounding incidence of corporation tax. Weaker answers ignored the important issue of incidence.

Q12. This corporate governance question on CEO pay was only answered by 8 students. There was a wide dispersion among the marks; some of the strong answers used a moral hazard model as a starting point to talk about why the current CEO pay levels could be justified, then discussed why some of the implications of this model did not align with real world situations. Most answers (including the stronger ones) lacked any discussion of alternative theories and further empirical evidence. Such discussions would have increased the marks.

Marketing

Marks distribution for Marketing

Category of Marks	Frequency
>70% (First)	12 (22.2%)
60 – 69% (Upper second)	39 (72.2%)
50 – 59% (Pass)	3 (5.6%)
40 – 49% (Third)	0
30 – 39% (Pass)	0
0 – 29% (Fail)	0

Mean: 65.9%

St. Dev: 3.49

Comments on the examination of Marketing:

General comments:

This was of course the first year that a take-home examination, submitted online, had been offered in Marketing, in common with other subjects. The paper had been slightly modified to reflect this additional challenge. The overall impression was that candidates benefited from this experience: essays were better organized and structured and the quality of the finished product was generally higher. What has not changed is the inability in a number of cases to answer the question being asked, rather than the ones candidates hoped might have been asked (and to which they had the answer). The lower % of distinctions compared to 2019 reflected a lower proportion of answers displaying high levels of originality and creativity, although there were one or two which were genuinely outstanding. The development of argument using literature benefited from candidates being able to reliably reproduce authors' names *and* dates of publication. Typewritten scripts were universally legible and welcomed by the assessors. Questions 1 and 3 attracted fewer than 3 responses and so no comments are provided below. Question 7 was the most popular (but not necessarily the most effectively answered) question.

Comments on individual questions:

Note: if a question is answered by 3 or fewer students, then we do **not** provide feedback relating to the specific answers by those students. However, in those cases we do provide information about what the question was seeking in general terms.

Question 1 Value-based marketing era – fewer than 3 responses – no feedback provided

A satisfactory answer would have been aware of the classification of marketing orientations from the course textbook as discussed in tutorial 1 and would have been able to have demonstrated a reasonable understanding of their origins, characteristics and apparent transitions between them. Illustrations would be relatively conventional. Such answers would treat the “era” concept somewhat uncritically. Better answers would take a more robust stance towards the concept (originally developed using the experience of Pillsbury by Keith in 1960) and the conventional wisdom it represents and would have given examples which demonstrate that a ‘production orientation’ (for example) could be entirely appropriate for some new products even today. The best answers might also have cited authors critical of the concept, including Fullerton (1988).

Question 2 Marketing ethics – 15 responses

Marketing is considered to be one of the least trustworthy professions, ranking slightly above members of Congress and used car salesmen (Grewal & Levy 2015). Therefore, firms which are able to promote themselves as sharing a customer’s value system and show that their practices are ethically grounded should be able to develop more effective relationships with their customers and achieve superior returns. However, the theoretical framing of ethical marketing is contested. The best answers not only incorporated in their answer the Laczniaik and Murphy 2019 article quoted, but were able confidently to debate the ideas within it. Good answers included critical evaluation of concepts ranging from CSR, greenwashing, authenticity & transparency. Good answers were illustrated by firms including Warby Parker, BP, Toms, M&S, Chick-fil-A, etc.

Question 3 Advertising and the Brexit campaign – fewer than 3 responses – no feedback provided

Candidates who had completed the final two tutorial essays would have been in a position to answer this question even if they were only basing their understanding of the example on what they had seen in news or social media. Satisfactory answers would have tended to set out how advertising is thought to work, drawing on examples of academic trials and articles from the reading list. They would then have likely related this to the example cited. Better answers could have started with the example itself, explored why it did not work and then have related this to both current and emerging explanations of advertising effectiveness, focusing on the emerging differences between traditional and social media. Credit would have been given to candidates drawing on specific academic contributions to our understanding of these issues identified in the reading list.

Question 4 Needs and goals – 9 responses

This should have been a fairly straightforward question to answer: the topic was covered extensively in lectures and features prominently in the recommended text. Needs are more concrete, static, and functional. Goals are more open-ended, aspirational, and emotional. Better answers suggested that needs can be functional or psychological, also referring to Christensen’s concept of “jobs to be done”. As ever, some candidates wrote little on the second part of the question. Those that did addressed ensuring goal concreteness early on – regarding this as the biggest opportunity for influence by marketers.

Question 5 Segmentation – 38 responses

Most candidates defined and critically evaluated descriptive, behavioural, and psychographic segmentation – providing good examples for each. Few explored (rather than asserting a position in relation to) the statement of segmentation becoming “meaningless”. Very few dealt adequately

with the requirement to discuss emerging as well as available methods of segmentation. Some did critically evaluate the role of big data and analytics for personalization and use for behavioural and psychographic segmentation in particular.

Question 6 Behavioural economics – 17 responses

Some candidates interpreted the question narrowly as simply requiring an extended description of behavioural economics, or its use in marketing, rather than evaluating the contribution of BE to marketing practice. All too many simply talked about ‘nudging’ (the subject of the tutorial essay) when they could have discussed system 1-2, heuristics, needs, endowment effect, loss aversion, confirmation bias, framing, availability bias, status quo bias, etc. The best answers did discuss the role of a more extensive list of contributions in improving marketing practice, and a small number did consider inter-disciplinary issues between Economics and Marketing.

Question 7 Customer centricity – 45 responses

There was a temptation by many to treat Customer Lifetime Value as the primary focus of the answer to this question. Certainly, CLV and/or CLROI are aspects of a response, but the question mainly addresses the concept of customer centricity, rather than merely the measurement of customer value. There was a good understanding by many that CC has been somewhat vaguely defined but could be best explored using the AMA’s “6 keys” to customer centricity. Few answers dealt well with the organisational implications of best practice in CC, notably the integration of practice across the firm. The best answers consider drawbacks in a customer centric approach, and cases where it might not serve the firm’s best interest.

Question 8 Role of emotion – 16 responses

The challenge here is to find an appropriate organising framework for an effective answer. Answers really needed to be based within the context of consumer decision-making. This could have included decision making theories such as the 5 stage process of consumer decision-making. Whilst there was legitimate overlap with aspects of question 6 (cognitive vs affective processing; endowment effect; loss aversion; status quo bias; scarcity bias) better answers also deployed some of the material from the reading list on happiness and decision-making. Good answers also included discussion of brand personality, including the information that might be shared online, the emotional appeal of traditional marketing communications, brand community, etc.

Question 9 (a) social listening or (b) brand communities – 15 responses

The vast majority of candidates chose to discuss ‘brand communities’. There was only a single answer on ‘social listening’. Two broad types of answer on brand communities could be discerned: those from earlier cohorts had been exposed to some of the original thinking on BCs by Muniz & O’Guinn and by Schouten & McAlexander. More recent cohorts focused on the work of Fournier & Lee and Holt. Both approaches were acceptable. Where answers disappointed was in the lack of attention given to the second part of the question: considering how risks arising from BCs might be mitigated, following a competent assessment of benefit and risk.

Question 10 Marketing, technology & fashionability – 13 responses

In evaluating the responses to this question, the assessors were looking for answers which did not simply cast digital marketing as being good or bad on the whole, but those which chose at least two specific aspects of digital marketing which could be evaluated against the concept of the

“shiny new toy syndrome”. (The idea of “shiny new toy syndrome” is that marketers are quick to jump on a trend/fad, abandoning their traditional practices for something that seems new and exciting but that they might not be familiar with using effectively or appropriately.) Examples cited by candidates included: big data analysis, microtargeting, influencer marketing and new social platforms (TikTok, Instagram, etc). Whilst many were proficient at describing these phenomena, fewer linked these descriptions to either extant literature, or to recommendations on best practice for marketers.

Question 11 Customer journeys – 28 responses

Most candidates wrote about the idea of touchpoints and journey mapping, and understood that the journey needs to be viewed as the complete end to end experience, as well as being viewed from a macro level where the journey is more than simply the accumulation of experiences from each individual touchpoint. Conventional answers relied heavily on Richardson and Edelman & Singer. Better answers gave equal weight to both parts of the question and more critically evaluated the difficulties and challenges facing firms in embedding customer journey concepts within their organisations. They also discussed the role of data and analytics being used to improve the journey.

Question 12 Data in marketing – 18 responses

There were relatively few high-quality answers to this question. Humby’s original analogy has been described as “lazy, inaccurate ... and problematic” (Forbes, 2018). The best answers included a critical analysis of how big data is being used in marketing today, as well as discussing some of the concerns of which marketers should be aware when using data including: legal and ethical issues - using data against individuals, legal issues related to GDPR (etc) - the discomfort factor of too much being known about the customer; not forgetting that the data represents real humans, and that customers should be treated as people not data; and concerns over data ownership – who owns the data and who should benefit from it? Ultimately, it is a lazy analogy: consumers can purchase oil and have use for it whereas consumers produce data only peripherally useful for marketing and for which they are not compensated.

Undergraduate Economics and Management – Organisational Behaviour

Marks distribution

Category of Marks	Frequency
>70% (Distinction)	6
65 – 69% (Merit)	19
50 – 65% (Pass)	8
<50 (Fail)	0

Distribution of answers:

Question number		Numbers Answering
1	Why does gender diversity at the top of organizations remain a challenge?	25
2	How might managers go about building effective teams, and what pitfalls must they avoid?	3
3	The art of networking is critical to enhancing a leader's social capital and success. Do you agree?	14
4	The one constant in organisational life is change, yet organisational members resist change. How can managers manage change effectively, given this observation?	14
5	Critically assess the role of organisational structure in shaping organisational culture.	12
6	Leaders need to understand how power operates to succeed. Discuss.	20
7	The psychological contract of work is changing. What are the implications for employee motivation?	5
8	What are the key factors that have shaped the definitions of work over time?	17
9	What insights do ecological theories of organisation provide? Are they still valid today?	1
10	Leaders are increasingly having to deal with complex problems such as the climate crisis. What leadership style is most suited to address such problems, and why?	4
11	Explain why organizations conform using isomorphic mechanisms. Are there any contexts where this does not apply?	8
12	Making good decisions is as much about recognizing problems as it is about identifying solutions. Discuss.	9

Comments on the scripts:

General comments: Please comment on the overall quality of the scripts, the distribution of marks and anything else worth noting and learning from (including suggested actions).

Students clearly favoured specific questions with 1,6 and 8 the most popular. Over two thirds answered question 1 and over half questions 6 and 8. Questions 3,4 and 5 were the next most popular. Questions 2, 9 and 7 were the ones with the lowest response.

Overall the quality of the scripts was good and we awarded a distinction to 6 students (18%). At the other end of the scale, 8 students (24%) were given a pass.

Comments on individual questions: Please comment on the overall quality of answers, notable weaknesses in the answers (and/or question) and anything else worth reporting and learning from (including suggested actions).

The bulk of scripts (58%) dealt with questions competently and covered the main perspectives and literature. For those scripts given a distinction, they displayed a stronger argument often bringing in real world examples and showing a more complex understanding of the phenomenon.

For example, in the gender **question (1)**, distinctions went beyond the simple lens of gender to take account of inter-sectionality and gave current examples to illustrate their arguments. Additionally, the best answers went beyond reporting trends on gender inequality, or describing the phenomena involved (e.g. 'glass cliff', 'glass ceiling') to analyzing the factors that might explain why these trends exist – e.g. feminist, biological/genetic, and rational choice arguments. Those that additionally nuanced the complexities involved also scored higher.

Distinction in **question 3** (the art of networking) was awarded when students demonstrated a breadth of knowledge in addressing the question by drawing upon the literature within, e.g., social capital theory, gender and diversity, leadership and power to engage with the question. Additionally, responses were given credit when they were able to appraise and critique the literature cited.

As another example, candidates were awarded a distinction on **question 6** (leaders needing to understand how power operates in order to succeed) when they were able to reflect on both – how leaders understand and use the power held within themselves across different contexts, but also how they must understand where and in what forms power is situated within people and the organization in general, and how this may be harnessed for 'success' (both individual and organizational). Additionally, answers also got credit for demonstrating an understanding of the complex context of power, illustrating arguments with examples, and bringing in insights from a breadth of course material beyond leadership and power, e.g. conflict and culture.

Question 8, while a popular choice, was very broad and several students struggled to present compelling essays. The most notable weakness for this question was that students discussed the definitions of work over time, without necessarily identifying or analyzing the factors shaping these definitions (as asked by the question).

Name of Paper	FHS Strategic Management 2020
No. of students taking paper	72 [REDACTED]
Date	24 June 2020

Marks distribution for Strategic Management

Category of Marks	Frequency
>70% (Distinction)	17
65 – 69% (Merit)	39
50 – 64% (Pass)	15
<50 (Fail)	0 [REDACTED]

Mean: 66.9

St. Dev: 3

Summary reflections on the paper as a whole

Please comment on the distribution of questions answered, the overall quality of the scripts, the distribution of marks and anything else worth noting and learning from (including suggested actions).

Overall:

Generally, students' answers demonstrated very good understanding of the issues in the questions. It can be seen by the list of literature they cited, empirical examples and analysis of existing theories. One concern is that most of the students choose the "safe" questions (Q1 -4) that they have written similar weekly essays on. Therefore, there are not many distinctly interesting essays. Another problem is that many essays are a "laundry list" of literature. Students need to be further encouraged to form their own original arguments.

Specifically:

The overall quality of the scripts was very good, with only a few papers being excellent or poor. More than in other years, answers to the most popular questions tended to be very standardised, with citations of the same key papers and presentations of the same arguments. This made it difficult to differentiate much between scripts or to assess how much students really understood the topics and were able to connect them to real-life scenarios. Obviously, the fact that this was an open-book exam played a role. There was a clear preference for descriptive rather than "creative" essays, i.e. most students showed very good knowledge of the key papers but did not venture, apart from some exceptions, on answers requiring to apply theory to practice or to make original arguments. Those that did, generally did it well and managed to get distinction or a high second.

Excellent scripts were those citing appropriately the key literature, answering in depth all the sub-questions of each question, presenting real-life examples and leveraging papers not traditionally related to that topic to support the arguments and/or original views and opinions.

Very good scripts cited all the key literature without mistakes or misunderstandings and used

a few real-life examples, drawn from either the papers studied for the course or other independent sources/experience (more the former than the latter).

Good papers presented the key literature but forgot to mention one or two key points or presented minor mistakes.

Poor scripts did not answer the question directly or made arguments that were not well defended/explained or supported by concrete examples.

For next year, it might be helpful to encourage students to think more creatively, to bring to the table original examples showcasing how theories apply in practice and to dare answer questions that are not simply asking to discuss a theory and its implications, because answers to those questions tend to be very standardised and therefore not easily conducive to distinction.

Brief remarks on individual questions

Please note the number of students answering the question, the range of marks, the overall quality of answers, notable weaknesses in the answers (and/or question) and anything else worth reporting and learning from (including suggested actions).

Question 1	
No. of students who answered this question	45
Range of marks	55-73
Comments This question was one of the most popular like in every other year. RBV is a topic that comes up several times both in the GM and Strategy courses and therefore many students feel confident they know how to answer well. Most answers were very good, with only few passing the excellence level. This is because most students who answered this question cited all the relevant literature and supported their points with good examples but were not very creative and did not think laterally. Probably this standardization of answers was due to the framing of the question, which did not push students to think out of the box or to connect different topics. Fair answers covered the criticisms of tautological concept and poor managerial implications. Weaker answers merely compare RBV with other theories such as Porter's five force.	

Question 2	
No. of students who answered this question	45
Range of marks	55-78
Comments This proved to be a very tricky question, with only few students answering in full the two key sub-questions. Most students did a very good job in highlighting reasons why innovations are not successful and things businesses should consider when innovating. However, few commented explicitly on the different types of innovation, generally discussing only disruptive/product innovations and similarly few students brought up data connecting innovativeness and performance limiting themselves to comment on the fact that "innovations are not always successful" in most cases. Many of the essays used very vague phrases like "uncertain environment" to describe the conditions.	

Question 3	
No. of students who answered this question	25
Range of marks	55-78
Comments This question was probably one of those producing the broadest variety of answers. Students interpreted the question in many different ways, and while some focused on the legal opportunities to cooperate, other distinguished types of cooperation based on their function (e.g. R&D vs lobbying vs growing the market). In general, students showed a good understanding of what pushes companies to cooperate while competing.	

Question 4	
No. of students who answered this question	38
Range of marks	55-78
Comments Like in Question 1, most students presented very similar answers to this question, citing economies of scale and scope, cross-financing, excess resources, RBV and biases as the key reasons to diversity. Sometimes, students mistook this question for one on M&A (which is instead only one way of diversifying). This meant they spoke too much about what drives M&As and forgot about other key considerations. Another problem was that students tended to make conclusions from one or two examples that they used, which was not convincing.	

Question 5	
No. of students who answered this question	1
Range of marks	68
Comments <div style="background-color: black; height: 80px; width: 100%;"></div>	

Question 6	
No. of students who answered this question	11
Range of marks	62-78
Comments This was one of the most interesting questions since it allowed many possible different arguments. Most students opted to say that while 5 forces are not a perfect tool and might partially explain the lack of focus on climate change, it is not only because of the use of this framework that companies are overlooking environmental sustainability. Additions to make sure companies consider climate change ranged from PESTEL to using the non-market environment as a 6 th force or including cost-benefit analysis in each force. A few students opted to abandon the 5 forces altogether and substitute it with more recent frameworks such as the Value Net.	

Question 7	
No. of students who answered this question	5

Range of marks	62-78
Comments This question was answered by very few students, generally in a similar way. Those who got a high distinction not only discussed how behavioural science is impacting strategy thinking but also went beyond that discussing extensively emergent vs planned strategies and other issues connected to strategic planning.	

Question 8	
No. of students who answered this question	18
Range of marks	58-73
Comments This question was generally answered very well although, a bit like for questions 1 and 4, most answers resembled each other. Common factors cited among those that hamper M&A were CEO and top management hubris, excessive amount of players and imperfect information involved in the negotiation stage, poor planning, clash of culture and practices and management limitations. Best answers discussed all or most of these topics and added relevant examples.	

Question 9	
No. of students who answered this question	10
Range of marks	65-73
Comments In this question students took one of two routes: either they described the two frameworks as integrating/strengthening each other or they mostly saw Peteraf's work as a development of RBV and, therefore, something detached and only complementary to Porter. Both routes were fine with the first one being more complete. The recommendations to managers were generally very similar and involving the usage of both inward- and outward-'outlook.	

Question 10	
No. of students who answered this question	15
Range of marks	58-78
Comments This question was one of the easiest to answer and the vast majority of students who chose it did very well. All answers mentioned the 3IAs framework/the importance of the non-market environment and that the company was gaining future leverage with policy makers and also protecting his brand image with customers. Excellent answers also included market-considerations connected to the fact the company operates as an online platform and has multiple products on sale.	

Name of Paper	Economics & Management; Technology & Operations Management
No. of students taking paper	20

Summary reflections on the paper as a whole

Please comment on the distribution of questions answered, the overall quality of the scripts, the distribution of marks and anything else worth noting and learning from (including suggested actions).

The paper was answered well, and I was generally impressed with the efforts that the students had made under the unfamiliar circumstances of being done online, open-book. The answers were mostly to the point, and did not stray too far from the question asked. The answers were usually two or three typed pages long, which suggests that the students were working quite hard during the time that they could prepare and submit their answers.

Brief remarks on individual questions

Please note the number of students answering the question, the range of marks, the overall quality of answers, notable weaknesses in the answers (and/or question) and anything else worth reporting and learning from (including suggested actions).

Question 1	
No. of students who answered this question	6
Range of marks	n/a
Comments This was a hybrid question, in that it allows students to address two topics from the course – supply chains and the management of an IT project. We have discussed the use of customer-facing IT projects, but this is a chance to apply those ideas to the Tier 1 supplier base. There are many aspects that the students could discuss, with part (a) covering the supplier-base, and part (b) managing the IT project. Overall, the students who tackled this were able to write imaginative answers.	

Question 2	
No. of students who answered this question	6
Range of marks	n/a
Comments Another question about suppliers and the KPIs on how to choose good supply partners. This is something that could be looked up in the students' notes, so there is the opportunity to display straightforward understanding of course content. Apart from the book-knowledge, there was the invitation to consider other non-standard KPIs, giving students the chance to think more creatively about what an entrepreneur should take into account. This is different from the usual thinking on supply chains, where we consider the customer to be a large assembly plant, typically. This question addresses the supply chain for a start-up entrepreneur, who is likely to have different considerations. Hence, the need to explain why price should not be the only characteristic of suppliers and why these are important.	

Question 3	
No. of students who answered this question	5
Range of marks	n/a
Comments A fairly standard question, asking students to review and discuss the challenges to the Hayes-Wheelwright volume-variety matrix. This has been discussed several times during the course, from its historical beginnings and more recently within the context of mass customisation and manufacturing flexibility.	

Question 4	
No. of students who answered this question	9
Range of marks	n/a
Comments This question asked students to think about risks that could affect members of a supply network, when a significant Tier-2 supplier suffered an internal fault. Part (b) of the question wanted students to consider how a stoppage in Tier-2 could cause disruptions upstream and downstream of this company, and potentially flowing to other organisations within the network as they ran of components and storage space. Part (c) asked students to consider the impact of a highly contagious illness, which would be common cause in the area, possibly causing widespread shutdown and stoppages in the whole economy. Students answered well on the simpler parts of this question, but did not give strong answers on the upstream and downstream flows as the impact of the initial disruption becomes more established and spreads throughout the network	

Question 5	
No. of students who answered this question	15
Range of marks	n/a
Comments Questions on project management are always popular, and this one topped the ratings again. It was a straightforward question, requiring students to link together the skills of a project manager, and reasons why projects fail. Popular, and answered well.	

Question 6	
No. of students who answered this question	4
Range of marks	n/a
Comments This question asked students to think about circular supply chains within three industries – clothing, electronics and automotive. Fast fashion and its impact on the environment had been discussed on the course, but extending these ideas to electronics and automotive would require students to apply the theoretical principles to these contexts.	

Question 7	
No. of students who answered this question	1
Range of marks	n/a
Comments This question was supposed to get students to think about decisions that would have to be	

made on mapping products onto cells, which would mean decisions would need to be made about which products should be retained and which should be dropped. New decisions would have to be made on lot sizes, in order to run different products on the same cells. Some products might need their own cells. Some new equipment might need to be bought, so enable cells not to compete for bottleneck resources.

Question 8	
No. of students who answered this question	8
Range of marks	n/a
Comments Questions on quality are usually popular. This question asks students to think about the practices of quality management and improvement, and what are the features of an organization that would support such practices, or inhibit them. Students considered various approaches to quality, both quality in products and in services, although more thought about product quality than service quality. Services can be more of a challenge to quality management because of the high variability of human demands and expectations.	

Question 9	
No. of students who answered this question	0
Range of marks	n/a
Comments Although no one answered this question, answers could have covered the issues that arise particularly in job shops. Different products might need different lot sizes in order to match the variability in customer demands. Cell-based layouts can be easier to schedule, than job shops. Operationally, disruptions can occur, which might need the schedules to be adjusted and revised, while minimizing the disruption to deliveries to customers. Schedules can be designed to minimize makespan, but could require very accurate production once the schedule gets underway. Highly flexible operations with products moving between machines in many sequences, with highly variable lot sizes are the most difficult to schedule. Cell-based layout with minimal cross-over between cells and stable demand for all products are the easiest to schedule.	

Question 10	
No. of students who answered this question	9
Range of marks	n/a
Comments This question was about Mass Customisation, and the technological changes that enable it, such as modularized production, technologies to help customers make their customisation decisions (configurators), good communication with customers once production has started, distribution of information within the factory, highly reliable production technologies that minimize waste and delay, and widespread access by customers to online tools. These modern features of manufacturing can be contrasted with what was available in Ford's time, and his reasons for doing things that way. Students may also mention that Ford's customers could enhance their products after purchase with specialized extras.	

Question 11	
No. of students who answered this question	9
Range of marks	n/a

Comments

This question challenges students to think about the features of the Toyota Production System or Just in Time, and which of them could be applied in a healthcare setting. Students often think of the production line model, with andon cords and elimination of waste. These are worth considering in the healthcare context, but only within the context of standardized processes, such as simple tests and procedures. Complex or multi-aspect conditions are not so amenable to this approach. The TPS also emphasizes training and up-skilling of workers, and encouraging workers to pool their skills and experience to solve problems. Processes should also be designed to reduce error and delay, e.g. poke-yoke. These aspects of the TPS and how it affects workers could work for employees in many diverse contexts.

Question 12

No. of students who answered this question	8
Range of marks	n/a

Comments

Skinner's idea of the focused factory was to ensure that the factory had a clear understanding of its competences and build on its competitive strength, rather than trying to meet the demands of many customers for a diverse range of products in various lot sizes. TPS focuses on eliminating waste, so delays caused by decisions and too many changeovers are to be avoided. The focused factory will be based on a narrow product range, and will improve its productivity through improved skills and fewer changeovers. Continual improvement of the skills of all the workers and constant experiments means that productivity is always improving. Production volume is steady and is matched by demand through the JIT pull system of manufacture. Referring back to Skinner's original paper (possible in an open-book exam) shows that many of the novel ideas of Skinner's time have their exact parallels in TPS.

**If the breakdown of marks and distribution of answers is useful to provide, but is not provided under section C 'Detailed numbers on candidates' performance in each part of the examination'.*

**FINAL HONOUR SCHOOL ECONOMICS & MANAGEMENT 2019-20
INTERNAL EXAMINERS' REPORT**

Part I**A. STATISTICS**

(1) Numbers and percentages in each class/category

(a) Classified examinations

Class	Number			Percentage (%)		
	2019/20	2018/19	2017/18	2019/20	2018/19	2017/18
I	39	29	(16)	50%	34.94%	(18.8)
II.I	36	51	(62)	46.2%	61.45%	(72.9)
II. II						
III						
Pass						
Fail						
DDH						

(b) Unclassified examinations – none.

(2) Vivas – none.

(3) Marking of scripts

All scripts were double-blind-marked in the first instance. The process by which agreed marks are reached is described in the [Examining Conventions](#) available in the Examinations section of Weblearn via:

https://weblearn.ox.ac.uk/access/content/group/a64bf967-5670-4951-acd7-c4c64e416378/2020%20Exam%20Items/5.EM%20FHS%202019-20_Conventions_COVID_PE_22_5_20_Tracks%20removed.pdf

B. EXAMINING METHODS AND PROCEDURES

The threshold for achieving a First is 68.5, in line with the thresholds for PPE and History and Economics. 59.0 for a II.1 and 49.0 for a II.2. Particular attention was paid to candidates just below the borderlines.

Both Economics and Management used step-marking for essay questions.

C. CHANGES TO BE CONSIDERED

This was an exceptional year. Overall, examiners felt that the procedures (open-book examinations and online systems) put in place in response to the pandemic worked well. Safety net policies played an important role in classification and the record percentage of First-class results; it would be appropriate to review these policies. Certain technical issues (for example, the reported lack of technical support on the first day of final exams that fell on a Bank Holiday Monday) could be avoided next year. Like last year, board members would like to request more detailed guidelines and case studies on the appropriate ways of handling MC's.

D. COMMUNICATION WITH CANDIDATES

See: [E&M Information to Candidates](#)

Part II

A. GENERAL COMMENTS ON THE EXAMINATION

Examiners were generally satisfied with the standard exhibited by candidates. In particular, one of the externals commented that they were struck by the rigour of the process and noted that marking consistency was impressive.

The Board noted the increase in the percentage of Firsts from last year (50% in contrast to almost 35% in 2018/19), which itself was somewhat higher than in prior years (about 19% in the year before, 28% in 2016/17). This increase can largely be attributed to safety net policies, in particular, that the best six marks (subject to certain restrictions) were considered for classification purposes. Classification given the candidates' marks would have been similar to that in prior years without this policy in place. Of course, it is impossible to know what the distribution of marks would have been in the absence of the pre-announced safety-net policies.

There was a record number of MC notices to examiners, specifically, 33 submitted before the board meetings. This year there were three elements to the MCs: circumstances affecting revision, specific technical issues arising during exams, and general environmental issues. Examiners spent considerable time classifying MCs and discussing the ways notices of various severity or type may be handled. All reports of technical issues were deemed credible. It would be beneficial for Examiners to have access to detailed guidelines and case studies on the appropriate ways to handle MCs in order to ensure consistency across time and subjects.

B. BREAKDOWN OF THE RESULTS BY GENDER

The proportion of females obtaining a First was marginally below that for males.

The percentage of females obtaining a First increased to

2019-20 – 78 Classified Candidates

Class	No. Males	% of males in class	No. Females	% of females in class	M+F Cands. 2019-20
I	29	52.7	10	43.48	39
2.1	24	43.6	12	52.18	36
2.2					
3rd					
Pass					
Fail					
ddh					
Totals					

Previous 3 Years' Statistics by Gender:**2018-19 – 83 Classified Candidates**

Class	No. Males	% of males in class	No. Females	% of females in class	M+F Cands. 2018-19
I	20	35.71%	9	33.33%	29
2.1	33	58.93%	18	66.67%	51
2.2	3	5.36%	0	0	3
3rd	0	0	0	0	0
Pass	0	0	0	0	0
Fail	0	0	0	0	0
Totals	<u>56</u>	100	<u>27</u>	100	83

2017-18 – 85 Candidates

Class	No.	% of males in class	No.	% of females in class	M+F Cands. 2017
I	12	19.0%	4	18.8%	16
2.1	46	73.0%			
2.2	5	7.9%			
3rd	0	0			
Pass	0	0			
Fail	0	0			
Totals		100			

2016-17 – 86 Candidates

Class	No.	% of males in class	No.	% of females in class	M+F Cands. 2017
I	18	29.51	6	24	24
2.1	35	57.38	18	72	53
2.2					
3rd					
Pass					
Fail					
Totals	61	100	25	100	86

C. DETAILED NUMBERS ON CANDIDATES' PERFORMANCE IN EACH PART OF THE EXAMINATION

This information is provided in the **Subjects Board Reports** for Economics and Management respectively.

D. COMMENTS ON PAPERS AND INDIVIDUAL QUESTIONS

These are included in the relevant **Subjects Board Reports**.

E. COMMENTS ON THE PERFORMANCE OF IDENTIFIABLE INDIVIDUALS / CANDIDATES WITH MITIGATING CIRCUMSTANCES

At the Final Exam Board meeting, 33 certificates relating to Mitigating Circumstances were considered in the 2020 cohort.

2 additional Firsts were agreed following the Final Board meeting.

The [Safety Net Policy](#) was used for the classification of all candidates.

Candidates at borderlines were closely scrutinized by the External Examiners and the Exam Board.

One MC arrived late via the Proctors' Office; *the details of this case are still being circulated among Board members at the time of writing.*

F. NAMES OF MEMBERS OF THE BOARD OF EXAMINERS

Economics Examiners

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Examinations Coordinator

[REDACTED]

[REDACTED]
Chair, 2020 FHS E&M Classification Board

Economics Subject Board for Final Honour Schools Report 2020

Part I

STATISTICS

A.

- (1) Numbers and percentages in each class/category

Such statistics are included in the reports for the PPE, E&M and H&E Classification Boards. The table below gives the numbers of candidates taking Economics for the various FHS's.

FHS	2020	2019	2018
PPE	173	145	158
Economics & Management	78	84	86
History & Economics	17	12	14
History	0	0	1

- (2) Vivas are not used.

- (3) All scripts were double blind-marked. The submissions for *Behavioural & Experimental Economics* were also double blind-marked.

NEW EXAMINING METHODS AND PROCEDURES

- B. For 2020 all exams were conducted as open-book exams.

Exam papers (which had been set as closed-book exams) were reviewed to determine whether or not they were suitable as open-book exams.

- Many were left unchanged: for some papers this seemed to make little difference to the quality of answers, but for others the quality increased significantly. For most of the latter, the assessors didn't move the bar higher, which led to higher marks in those papers than in previous years.
- In other papers, some parts of questions that required definitions or explanations that could be found in lecture handouts (or other readily available source material) were removed or down-weighted. In a few of these cases, this unsettled candidates because the paper felt too dissimilar from what they had expected.

- C. For 2021, the plan is for open-book exams to again replace 3-hr closed-book exams.

The obvious recommendation is to tell those who set papers in the future whether or not their exam will be open-book, and to set a paper accordingly. This should be accompanied by issuing broad guidelines to setters (and assessors regarding book-work), and ensuring candidates are well-informed with plenty notice.

A number of assessors observed that the option to type answers, which led to the opportunity for candidates to review and revise their work, made for more concise and better structured answers. This option should be considered for future years, whether or not the exams revert to being closed-book.

D. The Economics Subject Board Exam Conventions were updated in relation to Covid-19 and circulated to students, as well as being published on the Economics WebLearn site, together with all further information circulated from the Chair:

ESB Conventions:

https://weblearn.ox.ac.uk/access/content/group/a64bf967-5670-4951-acd7-c4c64e416378/2020%20Exam%20Items/4.Economics%20Subject%20Board%20conventions%2019-20%20-%20COVID-19_Tracks%20removed.pdf

Chair's circulations:

<https://weblearn.ox.ac.uk/portal/site/:socsci:econ:undergrad/tool/6dd6b946-97ed-44da-970b-f46ba79c03f7>

Part II

A. GENERAL COMMENTS ON THE EXAMINATION

1. Background

This is the fourth year of the Economics Subject Board, and it is now established for all three joint honour schools that include Economics, namely PPE, Economics & Management, and History & Economics. There is also a Management Subject Board, and a de facto subject board for Philosophy and seemingly for Politics; History have no interest in having a subject board, it being a single honour school in its own right. The Chair of the Subject Board is a member of each Classification Board that has Economics subjects as part of its Final Honour School.

2. Procedure and timing

Candidates sat their exams on-line and assessors were provided with web-links to the scripts. This worked as well as could be expected (in fact rather smoothly) given the short amount of time that the university had to design and implement this new procedure. As in previous years, there is almost no slack in the system to cope with either late submission of marks or marks for many options coming in just before the deadline. Fortunately, most colleagues were prompt this year.

This year, assessors were told to add reconciliation notes when their initial marks were not simply averaged. (See the Exam Conventions.) Despite these notes often being rather terse, this was very helpful in resolving queries down the line.

3. Main meeting of the Subject Board

The chair & former deputy chair (██████████) had an online meeting the day prior to the main meeting to analyse the marks and prepare for that meeting.

Summary statistics for each subject were presented, showing the percentage of marks in each class, the quartiles, the mean & standard deviation of the marks, and the mean mark of those candidates taking that subject relative to their marks in the core subjects.

There was no rescaling of marks in 2020.

The thorny issues of penalties for late submission of scripts and of Mitigating Circumstances Notices were handled by the Classification Boards, one major problem being 'mixed messages' from central admin, such as whether time-stamps were made when downloads & uploads were started or completed.

4. Summary and Recommendation

The Subject Board worked well. Responsibilities are clear, and there is consistency of treatment of Economics candidates across degree programmes. We now have marks across four years and this will enable us to perform some statistical analysis.

- We should incorporate an automatic check to flag cases where the agreed mark is out of range of the initial marks.
- We need a method of deciding whether or not 'An optional paper was more or less difficult than other optional papers taken by students in a particular year'.

- Also, we need to tackle the problem arising from having a dozen or so assessors for the large core/prerequisite papers: some candidates simply “get lucky” owing to their scripts being assessed by generous markers.

B. EQUALITY AND DIVERSITY ISSUES AND BREAKDOWN OF THE RESULTS BY GENDER

Statistics on gender etc. are included in the reports for the Classification Boards (PPE, E&M and H&E).

C. DETAILED NUMBERS ON CANDIDATES' PERFORMANCE IN EACH PART OF THE EXAMINATION

Statistics by Subject

Subject & no. of candidates		≥ 70	≥ 60 < 70	≥ 50 < 60	≥ 40 < 50	≥ 30 < 40	< 30	upper quartile	median	lower quartile	mean mark	st.dev.
QE	238	25%	51%	20%	4%	0%	0%	69.0	64.0	60.0	64.0	8.3
Macro	263	30%	58%	9%	2%	1%	0%	70.0	66.0	63.0	65.6	6.7
Micro	259	37%	48%	11%	3%	0%	0%	72.0	67.0	62.0	66.7	7.9
Behav'l & Exp't'l	17	18%	76%	6%	0%	0%	0%	68.0	65.0	62.0	65.0	4.0
Dev of World Econ	40	25%	75%	0%	0%	0%	0%	69.3	67.0	65.0	67.0	2.8
Dev Countries	29	34%	59%	7%	0%	0%	0%	70.0	67.0	64.0	67.3	5.3
E'metrics	53	34%	36%	28%	0%	2%	0%	72.0	66.0	57.0	65.2	9.8
Game Theory	32	34%	44%	22%	0%	0%	0%	71.3	66.0	61.5	66.1	7.6
Industry	31	39%	61%	0%	0%	0%	0%	70.0	68.0	66.0	67.8	3.5
Inter-national	5	40%	60%	0%	0%	0%	0%	75.0	69.0	68.0	71.0	3.7
Labour & Inequality	9	33%	44%	22%	0%	0%	0%	72.0	68.0	62.0	66.2	6.7
Micro Analysis	21	67%	14%	14%	5%	0%	0%	79.0	72.0	64.0	70.5	10.7
Money & Banking	40	20%	78%	3%	0%	0%	0%	69.0	66.0	64.0	66.2	4.0
Public	22	23%	73%	5%	0%	0%	0%	67.8	66.0	64.3	66.2	3.7
Sp.Subj.: Env.Econ &	15	40%	60%	0%	0%	0%	0%	70.0	68.0	67.0	68.0	3.2
Finance	15	40%	60%	0%	0%	0%	0%	70.5	68.0	66.5	68.5	4.2
Thesis	2											

D. COMMENTS ON PAPERS AND INDIVIDUAL QUESTIONS

Macroeconomics

The questions in section A were all compulsory. In section B candidates had to select two questions from a choice of six – all six questions attracted a reasonable number of responses and question 5 (choosing between a price path target and an inflation target) was the most popular.

The strengths and weaknesses of candidates' answers on a question by question basis are discussed in the remainder of this report.

Section A (short answer questions)

Question 1 (effects of an IS shock). The first part of this question was very close to analysis undertaken in the lecture slides. Most candidates correctly showed the adjustment of output, inflation and real interest rates following a permanent, unexpected positive shock to the IS curve. The second part asked for similar analysis but under the assumption that the policy-maker incorrectly believes the shock to be temporary. Many candidates realised that this would induce too small a rise in real interest rates, but showed the effects of this using a period $t+1$ Phillips Curve intersecting the VPC at the target inflation rate rather than the higher inflation rate that applied in period t as a result of the shock. For the third part on the inflation path, candidates correctly argued that a larger beta parameter in the loss function would lead to inflation returning to target more rapidly. The best candidates noted that for a sufficiently large beta the inflation rate could fall from t to $t+1$ despite policy-makers holding incorrect beliefs regarding the position of the IS curve. Some candidates mis-spelt 'Phillips' throughout their answers.

Question 2 (steady-state consumption in the Solow model). The first part of this question asked about the relationship between steady-state consumption and the savings rate. Most candidates could see that a rise in the savings rate would exert two competing effects on steady-state consumption, but only the best answers produced a comprehensive account of the golden rule for capital and savings and then noted that steady-state consumption rises with the savings rate up to the golden rule level but declines thereafter. Some weaker answers discussed the out of equilibrium effects of a change to the savings rate on consumption. For the second part candidates had to show the impact of improved technology on consumption. The best answers showed that consumption at each level of the savings rate would rise, due to the direct effect of improved production capabilities and the capital deepening from an increased quantity of saving. Weaker answers treated the one-off rise in the level of technology as a rise in the technology growth rate and showed the effects of a left rotation of the capital thinning line in the intensive form Solow diagram. For the final part, the best answers argued that a larger depreciation parameter would limit the size of consumption increase from a higher technology level, due to capital deepening being restricted.

Question 3 (inter-temporal consumption). For the first part of this question most candidates demonstrated impressive knowledge of how to derive the Hall random walk result for consumption from the general Euler equation for optimal consumption. The key assumptions requiring discussion in this question were equality of the discount rate and real interest rate, and quadratic utility. Candidates were aware of these requirements but very few provided an intuitive account of the roles played by each of these assumptions in delivering the random walk outcome (as opposed to just stating the assumptions and their roles in a mathematical derivation). For the second part of the question only the best candidates used the formula for the sum to infinity of a geometric series to derive an expression for permanent labour income in the budget constraint. The final part of the question asked for a first period consumption solution when the outturn for income in that period is known but all future income levels remain uncertain. Very few candidates were able to derive this result. Candidates who

provided some written account of the impact of a below/above average first period income outturn on consumption in that period were given some credit.

Section B (essay questions)

Question 4 (asymmetries in price stickiness). This question required a discussion of whether price stickiness is more plausible following positive demand shocks or negative demand shocks. A number of candidates chose to tackle this question by arguing that downward nominal wage rigidity implies that prices (set as a mark-up on costs) are more likely to be sticky in the aftermath of negative demand shocks. Some credit was given to such answers. An answer could be constructed by setting out the Ball, Mankiw and Romer explanation of sticky prices from the lectures. Whether or not there is asymmetry in price stickiness then depends on whether menu costs and real rigidities, the two key requirements for a sticky price outcome, are more relevant in one direction than the other.

Question 5 (price path targets and inflation targets). This was a popular question and candidates demonstrated good knowledge of the lecture material. Common arguments were that a price path target supported credible policy expansion at the zero lower bound, but presented problems in the face of stagflation shocks or in the event that the error with which central banks control inflation becomes quite large. On this basis, most candidates ended up agreeing with the statement in the question, namely that a price path target should be adopted at the lower bound but inflation targets pursued the rest of the time. Only the best candidates provided critical scrutiny of this suggested hybrid arrangement, for instance through asking whether the prospect of post-recovery excess inflation under a price path target is credible if there is the prospect of an automatic switch back to an inflation target. More generally, candidates assumed that the adoption of a price path target would address concerns over the credibility of optimal policy without questioning whether a proposal to adhere to a price path target was itself credible, i.e. the price path proposal may merely displace the credibility problem in the conduct of monetary policy.

Question 6 (monetary and fiscal policy in the open economy). For this question candidates explained that in the open economy monetary policy causes the economy to adjust along an RX locus that is flatter than the closed economy IS curve, meaning that monetary policy is more powerful in the open economy. Whilst this part of the analysis was well done there was relatively little critical analysis, for instance consideration of the plausibility of the assumption that net exports are sufficiently elastic with respect to the real exchange rate within one time period to generate the standard properties of the RX relation. For the fiscal policy part of the question there was good discussion of smaller open economy multipliers due to import leakages and exchange rate crowding out of fiscal policy. Very few candidates considered the possible endogeneity of aggregate supply to the real exchange rate captured in the ERU relationship, which opens up the possibility that fiscal policy may have *more* persistent effects on output in an open economy.

Question 7 (explaining the rising wage premium for skilled workers). For this question the best candidates provided a full account of the Acemoglu model of directed technical change and explained that a rising supply of skilled workers could create incentives for firms to invest in technologies suited to skilled workers, and that the demand effect on the wage premium could dominate for sufficiently high elasticity of substitution in the production function. Weaker candidates ignored the instruction to explain the wage premium in terms of the production technology and instead concentrated on the changing labour market power of trade unions as the reason for a shifting wage premium.

Question 8 (persistent technology shocks and the RBC model). Most candidates were able to give a sound account of the set-up of the RBC model, including first-order conditions for factor returns and the Euler equations for consumption and labour supply. The question

asked why it is necessary to assume a degree of persistence in the series for technology shocks in order for the RBC model to generate dynamic responses to technology shocks that match the empirical evidence on business cycle behaviour. The best answers commented on the fact that absent some technological persistence, the expansion of the capital stock when technology improves results in an adverse income effect on labour supply in subsequent periods. Without a persistent increase in labour supply the model cannot quantitatively match the output dynamics observed during a business cycle expansion. Assuming a degree of technology persistence is necessary to bridge this gap.

Question 9 (public debt determinants and public debt policy). This question was divided into three parts. For the first part most candidates correctly argued, correctly, that the government should save through running a surplus in advance of the downturn, run a deficit during the downturn and run a balanced budget thereafter. For the second part most candidates considered the common pool problem in financing public expenditure and the partisan theory of debt as explanations for debt trending away from the level predicted by tax-smoothing theories. For the final part candidates showed knowledge of a wide range of the criticisms levelled at the SGP rules, e.g. arbitrariness of the thresholds, failure to set debt in the context of state assets and so on.

Microeconomics

Two hundred and sixty candidates sat the paper: 167 PPE candidates, 76 E&M, and 17 H&E. Again, all questions in Part A were compulsory and there were four questions of equal weight. It transpired that two of the questions were on the easy side, with the other two being more challenging. Approximately 40% of the candidates were rewarded with a first-class mark on Part A (about half of them getting a 1st on this paper), although about 15% received less than half marks (and many of those candidates end up in the bottom decile with a 2.2 on this paper).

Approximate distribution of attempts at questions (Part B only):

Question	5	6	7	8	9	10
Attempts	10%	12%	62%	25%	42%	49%

Comments on Individual Questions

Part A

1] *General Equilibrium* (ave. 61%)

Most candidates found parts (a) to (c) quite manageable, but part (d) caused a few problems, quite possibly because this question was reminiscent of one from a few years ago but, unlike in that one, the utility functions of the consumers here were not identical. There was wide variation in the quality of illustrative diagrams.

2] *Game Theory* (ave. 72%)

One of the easier of the Part A questions and most candidates provided good answers, although quite a few had small gaps.

3] *Risk & Expected Utility* (ave. 59%)

Most candidates managed part (a) (bookwork) and part (c) (the calculation) fairly well. A number struggled with part (b) and came to the wrong conclusion. (And far too many candidates thought that variance and spread are synonymous – they aren't!)

4] *Principal-Agent problem* (ave. 70%)

Similar to Q2, most candidates did not find this problem very challenging. Again, this question was reminiscent of one from a few years ago – in fact some candidates discussed semi-separating equilibria *using exactly the wording and terminology from the outline answers to that problem*.

Part B

The answers tended to be concentrated on just a handful of questions, Q7 being most popular, followed by Q9 and Q10.

Note that the summary statistics for each question might exclude a small number of attempts that received very low marks because they were very short and almost verbatim from lecture notes.

5] *Inequality* (ave. 58%, low/medium st.dev.)

The least popular question. Most of the candidates answering it ended up with a low 2.1 or worse on this paper.

6] *Trade* (ave. 66%, low/medium st.dev.)

Not a very popular question, but with a mixed bag of answers. However, quite a few candidates simply relied on a basic trade model, not directly addressing the specific question about abolishing tariffs.

7] *IO (market power)* (ave. 62%, low st.dev.)

Very popular, and not especially well answered. Many essays resembled journalism, and very few included any sort of formal model.

8] *Insurance* (ave. 66%, very low st.dev.)

Not very popular, and nothing remarkable. Almost all answers were between 62% and 68%.

9] *Asymmetric Information (Principal-Agent problems)* (ave. 64%, high/medium st.dev.)

Fairly popular question which many candidates answered rather well. Having said that, a lot of answers relied rather heavily on bookwork.

10] *Duopoly, credible threat* (ave. 66%, high st.dev.)

Second most popular question, with quite a few very good answers. Maybe it was too easy – about a third of the answers were first class. A number had lapses when specifying strategies fully, and about a third of the attempts got the wrong answer to “is the announcement credible?”

Quantitative Economics

Part A

Q1 was generally done very well.

Q2 caused a surprising amount of difficulty. Many candidates failed entirely to recognise the relevance of the conditional expectation to this question, which made it difficult to award marks to their answers for either part.

Q3. Successfully answering part (a) required deriving the relationship between the three location dummy variables; relatively few candidates did this. Part (b) required the formulation of a model within interaction terms, which again only a few candidates provided.

Part B

Q4 and Q7 were the most frequently chosen questions in this part.

Q4 was generally done well, though many candidates missed subtleties in the relationships between the ATE, the TOT, and the difference in means. In particular, very few managed to answer part (e) correctly, and relatively few noted the relevance of the terms under which the programme was to be provided (whether voluntary or compulsory) for the answer in part (h).

Q5 was a technically demanding question: generally those who elected to attempt this question answered it well.

Q7. Marks on this question tended to be a little lower than for Q4. Some candidates appeared to be uncertain of the significance of the first stage regressions reported in the final three columns of the table. Some of the subtleties involved in answering part (d) were often missed.

Q6, Q7 and Q8 were answered by relatively fewer candidates: those who elected to attempt these questions generally did very well.

Behavioural and Experimental Economics

The overall quality of submitted essay was very good. The best essays combined an interesting and important research question with a well-thought out design that was able to answer the research question. The very best essays used a theoretical model to develop the experimental design and to derive testable implications. Variation of marks within group were mostly due to how well the question, design and results were explained, how well the study was linked to the existing literature and how well (if at all) a theoretical model was set up and explained.

Development of the World Economic since 1800

The paper was taken by 40 candidates. Candidates required to answer 3 questions from 8. The average mark overall was 67, reflecting the generally high standard of the answers. As the exam is essay format, the Covid-19 exam format seems to have made it easier for students to recall the relevant readings, compressing the distribution (i.e. there were fewer negative outliers).

Question 1 on the political Coase Theorem was answered by 9 candidates. Four candidates demonstrated an exceptional grasp of the issues.

Question 2 on the emergence of the state was only answered by 11 students. Three answers were outstanding.

Question 3 on culture and Europe's rise was answered by 32 students. As this was a popular question there was more variability in the quality of the answers.

Question 4 on Dell's mita paper was answered by 12 students. There were a few impressive answers which showed a deep understanding of this paper.

Question 5 on the impact of colonialism on Africa was answered by 34 candidates. Answers were roughly comparable to the average across all questions.

Question 6 on Engel's pause was answered by 4 candidates. One candidate provided a first-class answer.

Question 7 on the Gold Standard and the depression was answered by 8 students none of which provided an exceptional answer.

Question 8 on the Great Depression and protectionism was attempted by 10 candidates. Two candidates provided first-class answers.

Econometrics

A total of 53 students took the exam.

Mean 65.2, median 66, standard deviation 9.9.

Questions 2 and 4 in Part A and Questions 5 and 6 in Part B were the most popular choices.

Q1. 25 students answered this question. Answers varied in quality. Some students provided great detail in the necessary derivations, while others were less methodical. Although most students knew the concepts of unbiasedness, consistency and asymptotic distribution, some were unable to apply this knowledge to the estimator of the residual variance, required in parts (a), (b) and (d) of this question.

Q2. 36 students answered this question. Many students answered this question well. The main differences came in part (c), where some students went as far as showing the Gauss-Markov theorem, others only referred to the theorem in their answers, and a few did not see the connection.

Q3. Only 9 students answered this question. There was considerable heterogeneity in the quality of the answers. Part (d) was the most challenging part. Only a few students were able to derive the right expressions.

Q4. 36 students answered this question. This was one of the most systematic questions in Part A of the exam. Subquestion (a) was answered well by most students. In subquestion (b), some students summed over k instead of i , which lead to the wrong answer. While most students derived the right estimator for θ in subquestion (c), some did not get the right answer for θ : The quality of answers for subquestion (d) was much more heterogeneous; students who plotted the log likelihood function quickly saw the correct answer and provided the clearest explanation.

Q5. 32 students answered this question. Answers were generally good, although in part (c), most students did not take into account the presence of the absolute value in the stated condition.

Q6. 34 students answered this question. This is one of the questions with the most essay-like subquestions in the whole exam. It was chosen by many students. Most were aware of the relevant concepts, but the quality of the essay-like answers varied greatly. Some students provided an excellent balance between appropriate descriptions and technical derivations, while others offered minimal descriptions and no derivations.

Q7. 26 students answered this question. Some students provided excellent answers. Others did not approach it in a satisfactory manner. Specifically, the model in the question had a cubic trend, but some students tried to keep as close to the lecture material as possible, where just a linear trend had been considered, and others ignored the time series setting. These approaches were not successful.

Q8. Q8. Only 12 students answered this question. Parts (c) and (d) were also essay-like subquestions. The answers varied somewhat in quality, but most were well structured. Some students appeared to spend too much time on part (b) (15% of the total mark), and not enough time on parts (c) and (d) (together 80% of the total mark).

Economics of Developing Countries

29 candidates took the final exam. The majority of marks were in the 2.1 range, with the mean and median of about 67 also in line with previous years.

Due to the pandemic, the exam followed the online and open-book format that was adopted for other FHS exams. Overall, the process seems to have worked fairly smoothly, and the examiners certainly found the typed answers a lot easier to read than (some) candidates' handwriting. There were some other obvious improvements – e.g., fewer spelling mistakes. The time allowed (4 hours, instead of 3 hours) seems to have been quite adequate, judging by the fact that there were hardly any incomplete answers, where the student had obviously run out of time.

As in previous years, we are pleased to observe that all the questions on the exam were attempted by at least a few candidates – indeed, the spread was wider than usual, with no question attempted by fewer than 4 candidates. The overwhelming majority of candidates demonstrated a good knowledge of the material, as demonstrated by the quite high quality of their answers. We were also pleased to see that the distribution of marks across questions was quite similar, with no question being especially high-scoring or low-scoring. Starting from last year, the examination has asked candidates to answer three out of eight questions (rather than ten, as in previous years) and, as with last year, there does not seem to have been any apparent drop in the quality of the answers.

Brief comments on answers to specific questions.

Q1 – There were 5 responses to this relatively straightforward question, on (the limitations of) measures of inequality.

Q2 – There were 12 responses to this somewhat open-ended question. Good answers went beyond just an exposition of the Lewis model, to drawing out the implications for capital accumulation and labour employment in a dualistic economy.

Q3 – There were 14 responses to this question. Most answers were good, in contrasting the theoretical models with the empirical evidence on nutrition-based poverty traps, but there was some variance.

Q4 – There were 14 responses to this question, on public funding of education in developing countries. This was perhaps the one question where differences in open-book and (in an alternate universe) closed-book responses were most apparent. Most answers were strong on facts and arguments, but the best ones distinguished themselves in the way that they marshalled those facts and arguments to make a coherent assessment.

Q5 – This was the most popular question, perhaps because it was relatively straightforward, with 15 responses. Most answers did a good job of listing the arguments in favour of more open trade policies in developing countries, and perhaps as a consequence, the variance in marks was relatively low.

Q6 – There were 14 responses to this question. The better answers drew links between the two parts of the question, in describing how the mechanisms used by microfinance institutions (the second part of the question) helped to surmount the problems faced by lenders in poor countries (the first part of the question).

Q7 – There were 9 responses to this question. Most answers were good, in their discussion of Borjas's selection model, positive selection, and the brain drain.

Q8 – Only 4 candidates attempted this question. The answers were of high quality, with most responses recognising the problems of (reverse) causality, the distinction between short-run and long-run outcomes, and the importance (and difficulty) of distinguishing between institutions that were adopted by, versus imposed on, countries.

Economics of Industry

30 candidates sat the paper, of which 15 were EM students, 1 MHE and 14 PPE. The overall standard was good with 12 candidates awarded First Class overall marks on the paper and the remainder Upper Seconds. This year, as had been announced, the number of questions was reduced from eight to six and this does not seem to have disadvantaged candidates.

Comments on Individual Questions

Q1. (20 attempts)(Entry Deterrence) This was on the whole answered well. Better answers gave a careful treatment of the taxonomy of business strategies and discussed relevant empirical evidence.

Q2. (25 attempts) (Product Differentiation) Parts (a) to (c) asked candidates to go through the Salop model, which was straightforward as candidates had access to the lecture slides. To gain highest marks, however, candidates needed to give careful explanations and give a good answer to the more open-ended discussion in part (d). This was the most popular question and attracted the highest average mark.

Q3. (15 attempts) (Price Discrimination) Most candidates displayed a good understanding of price discrimination. Better answers gave a more careful discussion and covered a broader range of material.

Q4. (Either)(6 attempts)(R&D) This question attracted solid answers. Better answers gave a good discussion of empirical evidence in (b) as well as a clear treatment of the theory in (a).

Q4. (Or)(6 attempts)(Advertising) This question also attracted solid answers. Candidates' discussion of informative advertising tended to be stronger than that of persuasive advertising.

Q5. (17 attempts)(Mergers) This question was on the whole answered well. Better answers gave a careful treatment of all three parts.

Q6. (4 attempts)(Exclusive Contracts) This was rather unpopular with the largest variance in outcomes.

Environmental Economics and Climate Change

Question 1 attracted no answers at all. Perhaps students thought the (deliberately) provocative nature of the question might be a bit risky to address?

Question 2, by contrast, was extremely popular, selected by 12/15 students. The quality of answers was rather mixed. Though most understood the theory of either travel costs or hedonic pricing, too many did not centre their discussion on the context given in the question. It also seems reasonable to expect students to know, by the end of a degree in Oxford, whether any of the city's tourist attractions have been significantly reduced by recent flooding events. In fact, the main direct impacts of this flooding were experienced by residents whose homes were flooded; flood risk should therefore influence house prices. Some students referred to Bakkensen and Barrage (2017), who observe underestimates in the welfare cost of future flood risk due to heterogeneity in beliefs regarding future flood risk. The best reflected that that the repeated floods would lead to updates in those beliefs.

Question 3 was addressed by 5 candidates, with moderate success. Some spent too long in explaining the formula for the Ramsey discount rate, or debating the best way to address discounting, without linking sufficiently to the key problems of irreversibility and uncertainty, as posed by the question. Better answers were able to explain quasi-option value or Krutilla-Fisher discounting. But there were no first-class answers giving deeper thoughts on this question.

There were three answers to question 4, all first-class. Students had undertaken their own experiments with this computer model as part of their tutorial work, and these three candidates showed both an excellent command of the literature and considerable original thought. In one case marks had to be discounted for the chaotic presentation of the work, but the ideas were well beyond what is usually presented in an undergraduate essay, so that a first class mark was still deserved.

Question 5 also attracted 3 answers, but there were much less successful. A tutorial question had addressed a simpler version - when there is a fixed "budget" of safe greenhouse emissions. We treat "environmental space for emissions" as the stock resource in a Hotelling model. For the exam question, because marginal damages are an increasing function of cumulative emissions, we should use the Hotelling model with extraction costs. Unfortunately, instead some candidates focused on the green paradox. In the setting of the question, a weak green paradox does not lead to a strong green paradox (since damages depend only on cumulative emissions) – that is, timing of emissions does not matter in welfare terms.

Question 6 attracted four responses, all good or very good. Students had understood well the double dividend model and the marginal interaction effect and marginal revenue effect. The best answers referred also to distributive impacts of a carbon tax and the empirical literature.

Question 7, like question 2, was addressed by 12 students. Reasonable answers successfully explained the model of Barrett 1994 and understood from the explanation given in lectures how side payments could improve on its disappointing conclusions. First class answers showed extensive further reading and reflected on further problems arising – for example in strategic bargaining over the level of side-payments.

Question 8 was addressed by 6 candidates, with most answers good or very good. Candidates referred to a wide variety of models and empirical work. Less successful answers over-interpreted a strategic incentive to cut regulation under free trade as providing a case that autarky would be effective for environmental preservation. Excellent answers showed extensive further reading and assessed, for example, the potential for border carbon

adjustments to allow both trade and environmental preservation, and that linking trade to international environmental agreements can facilitate better outcomes in these agreements.

The exam paper followed the same structure and general expectations as that set in 2019 (the first year in which this paper was offered). The paper was open-book and submitted online. The candidates' submissions were generally of a high standard; there was very close agreement on marks between the two assessors.

Timetable changes due to the pandemic meant that this exam took place very much later in time than almost all other exams in economics. This additional time for further reading, revision and reflection may have been as important as the open book format in the quality of the submissions.

Naturally, however, the open book format will have influenced what candidates were able to say. For example, impressive and extensive discussions of further reading were probably facilitated by access to notes. However, the effect is then more of a high quality tutorial essay, if the discussion of that reading is sensible and relevant. Question 2 had the greatest number of weak essays: a common problem was too close an adherence to the explanations in the lecture notes, instead of addressing the context at hand. (Of course, this problem also arises in closed book exams.) On the better side, one student went online and found the environment agency flood maps mentioned in Question 2, enabling them to make more specific and relevant points. This seems a rather sensible and positive use of the setting in which they found themselves. The rather technical question 6 required explaining a model which had been discussed in detail in lectures. One might say that access to lecture notes was too much of an advantage, but that model is rather difficult to understand and so a convincing essay would only be possible for a candidate who had taken time to study it in advance.

On balance, therefore I would judge that combination of more time for revision and open book leads to a higher standard of submissions in substantive, positive ways.

Game Theory

Candidates were asked to answer four out of eight questions; at least one in each part of the exam corresponding to general solution techniques and applications, respectively. There were eleven candidates with a 1st-class mark, fourteen in the 2.i and seven in the 2.ii ranges, respectively.

The questions concerned mainly problem-solving like in previous years (explanations of concepts and interpretations of results being worth up to 10-20% of each question), therefore the open-book nature of the exam was not expected to make a great difference. The distribution of marks was similar to that in previous years.

Question 1: This was attempted only by 6 candidates, but most of those who attempted this question did well. The conceptual difficulty and novelty of the question was that there was a continuum of players in a coordination game. The calculations involving best responses in various parameter ranges was relatively straightforward. Some candidates did not address the final part of the question on the elimination of the “bad” equilibrium by altering the payoffs of only a small fraction of players.

Question 2: This question was attempted by 24 candidates; the distribution of marks was similar to that of the overall final marks (with an average nearly 67 and standard deviation around 11). This question involved a zero-sum game with payoffs given parametrically. Candidates were asked to work through various possibilities for pure and mixed equilibria. The key was to investigate cases methodically and to provide a short but precise proof for or against existence in each case. In the final two parts of the question candidates were also asked to compute mixing probabilities explicitly but parametrically, which was challenging as well.

Question 3: Only 4 candidates attempted this question. The main challenge was to set up a Bayesian coordination game by enumerating type-contingent strategies and identifying all outcomes and the players’ payoffs (in expectation conditional on each player’s type). Once the game was set up correctly (with four strategies for each player) it was not difficult to identify all pure-strategy equilibria under various parameter values.

Question 4: This question was attempted by 19 candidates and the marks produced a balanced distribution (average near 66, standard deviation around 9). This was dynamic game involving two firms contemplating to exit a declining market. Most candidates realised that when one firm exits the market the conditions facing the other change (improve). In order to find the subgame-perfect equilibrium candidates were expected to determine optimal play off the equilibrium path as well.

Question 5: This question was selected by 19 candidates; the results (with an average mark around 64 and a standard deviation of 11) were slightly worse than those on the exam overall. The initial two parts of the question were relatively easy to answer given open books, but computing the Nash bargaining solution in the specific problem (parts c-d) as well as the (unrelated) equilibrium of a particular bargaining protocol (part e) and comparing the two were more challenging.

Question 6: 25 candidates attempted this question for better-than-average results (the average mark was 71). The question tested whether candidates were familiar with evolutionary models (ESS, replicator dynamic, stochastic stability) without asking for a technically, mathematically challenging (“clever”) solution in a specific problem.

Question 7: Three candidates attempted it for less-than-stellar results (with an average in the low 2.i range). The question was to verify the equilibrium of an all-pay auction (formulated as

an R&D race) in a private-values environment, and then to derive a similar equilibrium (with less guidance) under common values. The second part of the problem was clearly more challenging than the first part.

Question 8: This was the most popular question with 28 attempts. The distribution of marks was similar to that of the overall final marks: the average was around 66 with a standard error of approximately 11 (final marks understandably have a smaller variance). This was a repeated-games question. The stage game was a Prisoner's Dilemma with the modification that one of the players could take an outside option (a third action) that is worse for both than any other outcome including mutual "defection". Such an action may be used as a credible (subgame-perfect) punishment only for finitely many periods. Candidates were asked to construct various subgame-perfect equilibria in the infinitely repeated game.

International Economics

The International Economics paper consisted of 8 questions, 4 on international trade (the first half of the course) and 4 on international finance (second half). All questions required essay style answers. Students were required to answer 3 questions in 4 hours.

The paper was generally well done, with approximately equal numbers of students obtaining 1st class and 2.1 marks, and no students below this. All students appeared to have coped well with the unusual circumstances. Most of them made advantageous use of the possibility to type their answers, inserting images of hand-drawn figures and illustrations where appropriate. It is possible that the ability to review and revise created by typing made for more concise and better structured answers than has been the case with hand-written examination scripts.

The examiners have retained no record of their marks on each question and are therefore unable to comment on performance on particular questions.

Labour Economics and Inequality

A total of 9 candidates took the exam. There were 8 questions altogether, 4 on each part of the course. The distribution of attempts at questions was:

Question	1	2	3	4	5	6	7	8
Attempts	5	3	1	6	2	3	2	5

Most students did well; there was no particular pattern discernible in terms of some questions being more difficult for them.

Nor, given the small number of students for each question, are there any patterns in terms of common omissions going beyond a single exam.

Microeconomic Analysis

Twenty-one candidates sat the paper: 12 PPE candidates, 8 E&M candidates and one H&E candidate. This paper is now well established (this was its fourth year) and generally attracts strong students. This year was no exception, and there were some really excellent candidates. Of the 14 candidates that got a first class mark on this paper, 11 of them got a 1st across their Economics papers as a whole.

Candidates had to answer any four out of six questions. The top 10 candidates (4 PPE, 6 E&M) got marks of 70+ for three or all four answers and averaged between 75 & 85, whereas the next 4 (all PPE) got marks of 70+ for two of the answers but one mark in the 50's and averaged very close to 70: all of them were rewarded with well-deserved firsts. Three candidates had marks ranging between 40 & 90 and were classed as 2.1's while three others had marks ranging between 40 & 65 and were classed as 2.2's. One candidate had an average of just under 50.

Distribution of attempts at questions:

Question	1	2	3	4	5	6
Attempts	57%	100%	62%	95%	10%	76%

Comments on Individual Questions

1] *Linear Algebra; Multivariate Calculus*

- (a) A number of candidates got into a bit of a tangle numerically (or ran out of time for the computations) but when they clearly (and correctly) described the method they would have used to complete their answer they were well rewarded.
- (b) Reasonably well answered in general. Some candidates carelessly introduced typos – flipping \pm , getting simple derivatives wrong (but the assessors were generous).

Overall, the marks were dispersed between 40% and 95%, but with a high mean (over 70%) and a large spread.

2] *Constrained Optimisation*

Everyone attempted this question and as a rule they were well prepared.

The marks ranged from 55% to 90% with a high mean (over 75%) and a modest spread.

3] *Expected Utility Theory*

Only one or two outstanding answers and a handful at the bottom end with a big bulge in the middle. It seemed hard to get almost everything right, or most things wrong.

The marks had a middling spread and a mean of about 65%.

4] *Principal-Agent problems*

This was very popular – all bar one candidate attempted it – and very similar to a question from a few years back which might explain the swathe of high marks.

If we ignore the two lowest marks (40% & 35% for disorganised answers with very little, if anything, correct), the mean would be high (about 75%) and the spread modest.

5] *General Equilibrium (with certainty)*

[REDACTED]

6] *General Equilibrium (with uncertainty)*

Rather popular and a fairly standard question on this topic. Many excellent answers but also a handful of third class marks with answers that were going nowhere &/or petering out.

The few low marks dragged the mean down (but only to just over 70%) and contributed to the high spread.

Money and Banking

This paper was taken by 40 candidates. The standard of the scripts was good and the open book format appeared to work well. All of the eight questions on the paper attracted at least one response. Questions one, three, four, five and six were the most popular. The remainder of this report provides comments on the answers to individual questions.

Question 1 (variations in the external finance premium and responses through quantitative easing). This was generally well answered. Most candidates cited increases in risk perceptions or risk aversion, and declines in asset prices, and hence collateral values, as possible drivers of the external finance premium. The best answers set these ideas in the context of a simple mathematical framework. Discussions of the role of quantitative easing in tackling rises in the external finance premium set out possible transmission channels for QE. The best answers were more nuanced and considered how the rise in the external finance premium might be more significant for small firms that are less obviously the beneficiaries of QE. The more complete answers also considered possible risks from QE, e.g. related to future inflation, central bank losses on asset purchases and so on.

Question 2 (money supply targets in Europe and the United States). Most answers set out the quantity theory as a basis for the predictive role of money growth in respect of price inflation, then argued that the growth of Eurodollars and bank lending to other financial institutions may have distorted this relationship to a greater extent in the United States than in Europe. Candidates considered other possible benefits of monitoring the money supply such as detecting macroeconomic imbalances not visible in consumer price inflation. Some candidates set out a distinction between broad money and credit in predicting financial crises but needed to be clearer in explaining this distinction and how it may matter in practice.

Question 3 (target ranges for the federal funds rate and the role of forward guidance). This question elicited relatively few answers, probably due to the first part of the question focussing on material outside the standard tutorial topic. Those that did answer the question focussed on the target range as a compromise between the price and quantity alternatives in the classic Poole analysis of the operating target choice. There was also some discussion of the ability of the Federal Reserve to tightly control the Federal Funds rate. Discussions of forward guidance largely addressed the likely credibility of such a strategy.

Question 4 (Taylor rule coefficients and inflation stability). Most candidates clearly explained the Taylor principle and presented the Clarida, Gali and Gertler account of how stronger monetary policy reactions to inflation account for lower and more stable inflation since the 1970s. Critiques of this view ranged from the Orphanides perspective on real time information to questioning of whether the short-term interest rate was an appropriate measure of policy in the 1970s. Some candidates considered other reasons for more stable macroeconomic performance such as less volatile shocks to the economy and stronger international competition containing inflation responses to shocks.

Question 5 (Central Bank Independence and the trade-off between inflation bias reduction and output volatility). Candidates were almost always clear that the Rogoff model supported the statement in the question. Some candidates discussed Lohmann's model in which the conservative central banker delivers inflation reduction at a smaller cost in terms of output variance. Some candidates considered the Walsh model as an exception to the hypothesis in the question but there was not much consideration of how this model may break down in practice and actually deliver greater volatility. There were very few detailed discussions of the empirical evidence in this area and its limitations.

Question 6 (explaining inflation persistence). This was a straightforward application of the lecture material. Candidates showed good knowledge of a range of models, including both models with some nominal inertia and models with flexible prices and some other constraint giving rise to inflation persistence.

Question 7 (arguments relating to the optimal inflation rate). Some candidates overlooked the instruction to look beyond arguments related to credibility and the zero lower bound. Otherwise, candidates handled the question well. Perspectives covered included Friedman's argument for negative inflation equal in magnitude to the real interest, the need to counter downward nominal wage rigidity and the role of seigniorage in public finance.

Question 8 (role of the state in the evolution of money). [REDACTED]

Public Economics

The two part A questions are both compulsory. Candidates choose two questions from part B. There were 22 candidates in total. The table below reports the distribution of marks across the different questions.

	A1	A2	B3	B4	B5	B6	TOTAL
Mean	63.6	63.0	64.0	65.6	65.9	63.8	64.3
Median	65	62.5	65	65	65	65	65.0
75th	60	60	60	65	60	62.5	62.5
25th	75	75	70	70	75	70	71.7
N	22	22	20	9	11	4	22.0
Std Dev	6.4	6.5	5.3	4.6	6.6	6.3	3.6

The overall standard of answers was relatively high and a good comprehension of lecture material was demonstrated. On the other hand, few candidates ventured beyond the lecture material with the consequence that there were only a small number of outstanding answers.

The exam was prepared as a closed-book exam and then was open-book because of COVID restrictions. This perhaps made the questions more straightforward than we had anticipated.

E. COMMENTS ON THE PERFORMANCE OF IDENTIFIABLE INDIVIDUALS AND OTHER MATERIAL WHICH WOULD USUALLY BE TREATED AS RESERVED BUSINESS

MCs (Mitigating Circumstances Notices) are handled by the Classification Boards.

F. NAMES OF MEMBERS OF THE BOARD OF EXAMINERS

Internal Examiners

The examiners on the Subject Board were:

[REDACTED]

External Examiners

for E&M:

for PPE:

[REDACTED]

[REDACTED]
Chair, 2020 Economics Subject Board