

17 April, 2017

Introduction

Thank you for considering this submission. I am a Professor of Finance at LBS, formerly a tenured professor at Wharton, who specialises in corporate governance, executive compensation, investment/growth/innovation, shareholder structure, CSR, and behavioural economics. I have published on these topics in all the top finance journals, plus the *Harvard Business Review*, *Wall Street Journal*, *World Economic Forum*, and *CityAM*. I am Managing Editor of the *Review of Finance*, the #1 finance journal in Europe.

Unusually for an academic, I am heavily involved in policy and real-world practice. I serve on the Steering Group of The Purposeful Company, which proposes policy reforms to encourage businesses to pursue long-term purpose rather than short-term profit. I testified orally in the House of Commons Select Committee Corporate Governance Inquiry, serve on Royal London Asset Management's Responsible Investment Advisory Committee, and frequently give talks to leading companies, investors, and professional associations.

Executive Summary

I strongly endorse the vast majority of proposals in the Green Paper on Industrial Strategy. However, there are some important dimensions missing. Investing in these dimensions would further reinforce the Government's aim to build a world-leading industrial strategy.

1. Invest in Economic and Business Research and Innovation. The Green Paper rightly highlights the benefits of increasing investment in science and, more broadly, the STEM subjects. However, research and innovation opportunities are not confined to "natural" science; there are possibilities to make game-changing innovations in economic science and management science as well.
 - a. Many of the Green Paper questions (e.g. the best ways to support entrepreneurship and long-term investment) can be answered through rigorous academic research. Indeed, academic research has *already* been successful in informing economic policy, such as the current governance debate.
 - b. The UK currently lags substantially behind the US in its funding for research, as well as much smaller countries such as Norway and Sweden.
 - c. In addition to funding research in economics and business, the Government could facilitate the dissemination of its findings to the broader public. This will benefit everyone - managers of large businesses, entrepreneurs running small businesses, and households making economic decisions.

- d. Currently, the best economics and business research uses US data, in part due to the substantial funding of research in the US. These results may not apply to the UK. The UK government can also facilitate data availability, similar to Scandinavian governments. This will allow research to be conducted with potentially game-changing insights for UK business.
2. Improve Education in Financial Literacy. The Green Paper rightly highlights the need to improve both numeracy and literacy. However, there is an urgent need to improve *financial* literacy. Financial illiteracy substantially jeopardises households' long-term financial security by leading to poor decisions (e.g. using expensive sources of financing such as credit cards) or allowing unscrupulous intermediaries to exploit them (e.g. with the over-lending that contributed to the housing crisis.)
 - a. More generally, I encourage the Government to think as broadly and “out-of-the-box” as possible when deciding what skills to invest in. For example, teaching time management skills at a young age could substantially boost labour productivity. Time management may not be considered a “proper” academic subject, and some might see this proposal as wildly unorthodox. Yet, companies and individuals invest substantially in it, suggesting it has major benefits. The need for effective time management is even more pressing in the digital age, when workers are constantly bombarded by demands and distractions from many angles. We have a major productivity problem and so cannot afford to be elitist about what counts as a proper subject.
 3. Encourage Long-Term Investment. I identify three ways to encourage long-term investment:
 - a. *Executive Incentives*. Replace complex, opaque Long-Term Incentive Plans and bonuses with simple, transparent equity that must be held for the long-term.
 - b. *Blockholders*. End the ownerless corporation by encouraging blockholders (large shareholders) to form, and making it easier for them to engage with management, both individually and in collaboration with other investors. I propose a number of ways to do this.
 - c. *Prohibit Dual-Class Shares* from qualifying for a premium listing. There is rigorous evidence that dual-class shares, far from protecting entrepreneurial vision, entrench management - manifesting in excessive pay, poor investment decisions, bad acquisitions, and lower firm value.
 - d. I also highlight that we must be very careful in diagnosing the alleged underinvestment problem in the UK. We should measure investment using outputs (value created by expenditure) not inputs (expenditure), just as labour productivity depends on output created, not hours worked.
 4. Funding Small Businesses. I refer the Government to The Purposeful Company's proposals to increase the sources of funds available to small businesses.

For brevity, I will focus on only four groups of questions in the Green Paper.

1. Question 5: What should be the priority areas for science, research and innovation investment?

1.1 “Science, research and innovation” conventionally refers to “natural” science, such as biology, chemistry and physics. Pillar 1 of the Green Paper indeed takes this conventional view. The Government is absolutely right to prioritise investment in natural sciences, and this can indeed lead to patents, innovation, and commercialisation, as stated on p27.

1.2 However, research, commercialisation, and innovation are far from limited to natural science. There are substantial opportunities and payoffs to investing in economics and business. The Nobel Prize in Economics is officially named the Nobel Memorial Prize in Economic Sciences, and the study of management is known as “management science”. This is far from a semantic issue. Just like in the natural sciences, economics and management sciences involve both:

1.2.i *Empirical research* – forming hypotheses and testing them with large-scale data. A common misconception is that it is impossible to obtain causality in economics, since we cannot hold everything else constant (unlike in a lab). This is not true; indeed, p40 of the Green Paper refers to the excellent work of the Behavioural Insights Team which has used Randomised Controlled Trials (RCTs) to obtain the similar “treatment vs. placebo” testing used in natural science. Moreover, it is not even necessary to run RCTs to identify causality. “Natural experiments” are an established technique to do so in economics, similar to experiments in the natural sciences (hence the nomenclature) – but in large data.

1.2.ii *Theoretical research*. In natural sciences, computers can model the spread of a disease. Similarly, economists can create models of an economy, and study the effect of policy changes (e.g. the effect of tax changes on new business formation). Just like a flight or city simulator, this allows us to study the effect of policies without the risk from actual implementation.

1.3 There is tremendous potential for innovation in economics and business to be a cornerstone of the UK’s industrial strategy. A strategy to revitalise UK business cannot ignore research in business. Indeed, there are established fields that could address many of the questions in the Green Paper, such as:

1.3.i *Entrepreneurial finance*. This studies issues such as the best ways to encourage new business formation and why small businesses succeed and fail. Common sense would tell us (without any need for research) that the entrepreneur’s wealth, access to finance, business connections, and past education should all matter. But, *how much* does each matter? This question is of national importance, as it would guide the Government on where to focus its resources.

1.3.ii *Corporate finance*. This studies the financing decisions of established corporations, e.g. the causes of underinvestment and the best way to stimulate investment.

1.3.iii *International finance*. This studies issues such as how to improve the UK’s exports and support inward investment.

- 1.3.iv *Energy economics, environmental economics, industrial economics, and public economics* are four other established fields that have relevance for many other questions in the Green Paper. Moreover, outside of economics, many fields of management research can have substantial benefits in boosting the UK's productivity. For example, they can identify the optimal ways to organise production, change corporate culture, form and manage diverse teams, negotiate, modernising accounting systems to account for intangibles, and devise marketing strategy.
- 1.4 p27 of the Green Paper refers to patents and commercialisation in the natural sciences. Patenting is not an issue with economics and business research. Very few ideas can be patented, and so the findings would be accessible to all UK businesses and households. While commercialisation is indeed a challenge in the natural sciences, it is almost immediate in economics – a new way to organise production, negotiate, or pay executives can be implemented almost immediately.
- 1.5 Indeed, the Green Paper on Corporate Governance and the BEIS Select Committee's Corporate Governance Report cite many research papers which have informed their proposals and suggestions. For example, the proposal to replace Long-Term Incentive Plans (bonuses based on financial targets) with long-horizon equity, in 1.61-1.66 of the Green Paper and 87-95 of the Corporate Governance Report, is partly informed by extensive academic research on the effects of executive compensation.
- 1.6 It is indeed true that research is *already* being done by many organisations, such as think tanks and management consultancies. Such research has great value. However, just as in natural sciences, there is substantial additional value to peer-reviewed academic research. While academics are often accused of being detached from the real world, this detachment is valuable as it gives several years to address a problem – to absolutely nail down a result, to address alternative explanations, to distinguish causation from correlation – while in the real world, you may only get months. Peer review involves a paper being rigorously scrutinised by the world's leading scholars. The most elite journals reject 95% of papers. Thus, if we were to base policy decisions on an unvetted paper, there is around a 95% chance that this paper would be misleading. Indeed, sometimes papers end up with the diametrically opposite conclusion after going through peer review and correcting their mistakes.
- 1.6.i In natural sciences, universities undertake “basic research”, the commercial value of which is only later realised. Similarly, in economics, practitioner research often focuses on problems currently faced by clients, but academic research can address questions that may become critical in the future. For example, much of the research on executive pay was undertaken before the current debate, which is critical since it can take five years for a result to be fully nailed down. As the saying goes, “dig the well before you're thirsty.”
- 1.6.ii I re-emphasise that practitioner research has substantial value. Academic research should not be the only focus of an industrial strategy, but it should be an important part of it.

- 1.7 UK universities compare favourably to their international competitors in natural sciences although, as the Green Paper rightly points out, there is substantial room for improvement. However, UK universities lag far behind the US in economics and business. For example:
- 1.7.i The Arizona State University’s ranking of finance department by publications in top journals (a widely recognised ranking) contains only four UK institutions in the top 100.¹ The Russell Group of UK universities all have internationally renowned departments, but few have internationally renowned business schools. Oxford, Cambridge, and Imperial are frequently ranked in the world’s top 10 universities, but Oxford is #58 in the above finance ranking, and neither Cambridge nor Imperial are in the top 100.
 - 1.7.ii The American Finance Association and the American Economic Association are, respectively, the *world’s* leading professional bodies for finance and economics.
 - 1.7.iii The vast majority of the world’s best UK-born economists and business scholars are based in the US, including Oliver Hart and Angus Deaton, who won the Nobel Prize in 2016 and 2015, respectively. Indeed, the phrase “brain drain” was initially coined for academia.
- 1.8 The underperformance of UK universities is a particular problem in economics and business. With natural sciences, a discovery found by a non-UK university can be applied by UK businesses (absent patent issues). The behaviour of a given molecule is the same inside the UK as outside. However, in economics, the results depend critically on the context – such as laws, institutions, and cultural norms. Findings from US studies may not automatically apply to the UK. It is a major problem for the UK that the vast majority of top business research is conducted on US data. Karolyi (2016) finds that only 16% of all empirical studies published in the top four finance journals examine non-US markets.
- 1.9 The UK lags seriously behind its international competitors in its funding for economics and business research. This includes funding by government bodies, foundations, and the universities themselves.
- 1.9.i In the US:
 - Universities have much greater endowments than the UK, since business schools are much older and there is more of a culture of alumni donations. Harvard Business School and Wharton have endowments of \$3bn and \$1.3bn respectively, compared to £50m at London Business School. As a result, “official” faculty research budgets are much higher in top US schools than the UK. Combining official budgets with “discretionary” funds and research centres, US budgets are often effectively unlimited. Simply put, in the US, faculty have hardly any financial constraints on doing the best quality research.

¹ Source: <http://apps.wpcarey.asu.edu/fin-rankings/rankings/results.cfm>, rankings based on publications from 1990 to 2015 (the default option). Note that this ranking is focused on research output, whereas business school rankings are driven by many other factors. For example, UK universities are helped by the fact that they typically have a 1-year, rather than 2-year MBA programme.

- The National Science Foundation has a programme dedicated to Economics, i.e. recognises Economics as a science. The UK could significantly expand the funding of the Economic and Social Research Council.
- The National Bureau of Economic Research is the premier organisation in the global economics profession. It runs programmes in many areas relevant to the Green Paper (e.g. Education, Household Finance, Industrial Organization, Innovation Policy, Market Design, Productivity/Innovation/Entrepreneurship); each programme involves the highest-quality conferences and a Working Paper series, where new research is disseminated to the public. It is extremely cost-effective, spending only \$25 million per year on research activities. Rather than supporting research by funding (e.g. the purchase of data), it does so by organising conferences where academics can present early drafts of a paper and receive feedback from leading scholars, substantially helping the paper.
- The Kauffman Foundation is dedicated to research in entrepreneurship and education, two critical areas of research for the Green Paper.

1.9.ii In Norway, Norges Bank Investment Management's (the sovereign wealth fund) Norwegian Finance Initiative funds research and education in financial economics, by attracting scholars of international recognition to Norway, financing PhD students, and funding research programs (including a partnership with the NBER in long-term asset management).

1.9.iii In Sweden, the Swedish Institute for Financial Research was a government initiative established in 2001 to strengthen financial research in Sweden and support the dialogue between researchers and practitioners. (In 2016 it merged into the Swedish House of Finance).

1.10 Research requires not just funding, but also data.

1.10.i Several Scandinavian countries maintain financial information on all households. Statistics Sweden, the government's statistical agency, collects household-level wealth data, including all financial assets such as bank accounts, mutual funds, and stocks. Euroclear Finland maintains records of every Finnish stockholder, including the date, trade, volume, and price of each transaction. Note that the data given to researchers does not contain any identifying information.

1.10.ii In the US, there are numerous well-maintained commercial datasets (thus removing the need for the government to provide such datasets):

- The Center for Research in Security Prices maintains records of stock market data.
- Compustat provides accounting information on global companies.
- Execucomp provides executive compensation information for S&P 1500 firms, including the breakdown between salary, bonus, shares, and options.

- I/B/E/S contains earnings announcements and analyst earnings forecasts.
- Thomson Reuters maintains a plethora of market data, including equities, commodities and energy, fixed income, foreign exchange, and money market data.

1.10.iii The UK has far fewer commercially available datasets than the US and none of the public datasets available in Scandinavia. The London Share Price Database contains UK stock returns. FAME provides far less accounting information than Compustat. I am not aware of a reliable UK database for executive compensation or earnings forecasts.

1.10.iv The Bank of England's One Bank Research Agenda is a useful step in this direction, giving researchers access to datasets. These are predominantly macroeconomic datasets; something similar for corporate finance or microeconomics would be valuable.

1.11 The Government should encourage the dissemination of economics and business research in a non-technical manner, to ensure that the fruits of such studies benefit everyone. For example, there are many informative television programmes on the natural sciences, with the likes of Brian Cox and Sir David Attenborough having made tremendous contributions in educating the public. There are far fewer programmes on economics and business *research* (as opposed to current events) – even though books like Freakonomics (Steven Levitt and Stephen Dubner) and Predictably Irrational (Dan Ariely) – both by US-based writers – show that the potential for popular appeal is very high. NHS Choices make the findings of medical research clearly available to the public. The Government could similarly make available the findings of the highest quality research on management techniques and economics, particularly helping small businesses.

1.12 One misperception is that “social” sciences do not include the rigorous hypothesis testing in the natural sciences. The “social” sciences contain a range of disciplines, from archaeology and history to economics and business, and so we cannot consider them all in the same bucket. Economics and business has much more developed methods of hypothesis testing, statistical robustness, and causal identification, plus the availability of large scale data. The requirement to prove views with data ensures genuine scientific investigation (at least in the very top journals) rather than ideological position-taking.

1.12.i Note that this is not to argue that other subjects are not worth studying. Many subjects (e.g. English, music, archaeology, history) are very valuable, even if they do not involve large-scale testing. This point is only to clarify that, if “science” is a particular priority for the Government, economics and management science should be treated equally with natural sciences.

1.13 The above arguments are absolutely not to reduce the importance of investment in natural science. Instead, they are to highlight that investment in economics and business research should be just as much a cornerstone of the UK's industrial strategy as natural science.

2. Question 10: What more can we do to improve basic skills?

- 2.1 Pillar 2 of the Green Paper rightly prioritises investing in basic skills. p38 principally thinks of basic skills as being numeracy and literacy, with a reference also made to digital skills. However, financial literacy is a crucial basic skill which has substantial implications for people's financial wellbeing and employability, as well as wealth inequality and trust in business.
- 2.2 Financial literacy helps people preserve their long-term financial future. This is important not only for their own wellbeing, but also inequality and social cohesion. Disparities in wealth stem from not only disparities in income, but how people spend, borrow, and save. Examples are as follows:
- 2.2.i *Budgeting.* Two-thirds of Americans do not budget² (I was unable to find a similar figure in the UK but financial literacy is unlikely to be wildly different.) This leads to households running out of money before the next pay cheque, and having to borrow on credit cards or from payday lenders. This may contribute why one in four UK families have less than £95 in savings.³
- 2.2.ii *Basic financial mistakes.* Personal conversations with many people reveal to me basic financial mistakes. These mistakes will seem obvious to many, but are still being made:
- Some people keep their money at home to avoid paying tax on interest income. They do not realise that their after-tax interest rate is still positive.
 - Some people believe that, if you have several loans (e.g. a payday loan, a credit card, and a personal loan from a bank), you should pay off the smallest loan balance first, to reduce the number of individual loans outstanding, rather than the highest interest rate loan first.
 - Many people do not understand the difference between simple and compound interest.
 - Many people are unaware of alternative sources of finance (e.g. to payday loans).
- 2.2.iii *Ignorance of tax-efficient savings.* Many households are unaware of tax-efficient ways to save, e.g. ISAs and the personal pension allowance.
- 2.2.iv *The stock market.* A large proportion of households do not participate in the stock market, far more than can be explained by market volatility or risk aversion. This is very costly since, over the long-term, equities typically substantially outperform cash. Out of those who do participate, many do not understand basic concepts such as the benefits of diversification.
- 2.3 Financial institutions can exploit households' financial illiteracy by charging high fees or rates, or selling unnecessary products. This harms customers and leads to a general mistrust of business.

² Gallups 2013 Economy and Personal Finance survey.

³ <https://www.theguardian.com/society/2017/feb/20/one-in-four-uk-families-have-less-than-95-in-savings-report-finds>, quoting a report by Aviva.

- 2.3.i Payday lenders often exploit households' ignorance of the effect of interest compounding, leading to them vastly underestimating the cost of borrowing. Bertrand and Morse (2011) show that more transparent information significantly reduces the uptake of payday loans.
- 2.3.ii Credit card companies offer low "teaser" rates which significantly jump afterwards. Financially illiterate consumers do not know to look beyond the teaser rate. Ru and Schoar (2016) find that US credit card issuers target less-educated customers with lower introductory APRs, but higher default APRs, late fees, and over-limit fees.
- This exploitation can be undertaken by companies other than financial institutions. Consumers buy printers without anticipating the cost of future cartridges, or razors without anticipating the cost of future blades (Gabaix and Laibson (2006)).
- 2.3.iii Banks mis-sold Payment Protection Insurance, in part due to households' ignorance of what the product entailed. 1.3 million mistakenly believed they would be approved for credit if they took PPI, and up to 2 million were sold a policy that they would never be able to claim on.⁴
- 2.3.iv During the housing crisis of 2008, many households took out mortgages that they could not afford, perhaps due to lack of knowledge of budgeting or not looking beyond the teaser rate, combined with financial illiteracy allowing unscrupulous lenders to push unaffordable loans.
- 2.3.v Lusardi and Mitchell (2007) find that consumers around the world are poorly informed about basic financial practices. In particular, consumers know very little of saving and investing for retirement. This financial illiteracy is detrimental to both personal and aggregate welfare.
- 2.3.vi Carlin and Robinson (2012) study Los Angeles students aged 13-19 who participated at the Junior Achievement Finance Park of Southern California. One group of students received a 19-hour financial literacy course prior to the park experience and the other group did not. In the subsequent simulation, the group that received training relied less on credit financing, paid off debt faster, and were more frugal in their financial decisions.
- 2.3.vii Odean (1999), Barber and Odean (2000) find that investors trade too much, and that the average trade loses money. Odean (1998) finds that investors exhibit the disposition effect, i.e. sell winners more readily than losers, even though the winners they sell *subsequently* outperform the losers they hold onto. Educating households on cognitive biases such as the disposition effect, confirmation bias, and recency bias, may substantially reduce such losses.
- 2.4 Financial literacy is important not only for households' financial decisions, but also for their employability – particularly in the digital age. For example, MIT Professor David Autor's TED talk

⁴ <http://www.telegraph.co.uk/finance/personalfinance/money-saving-tips/8431821/Timeline-the-perils-of-payment-protection-insurance.html>. Note that lenders were also culpable for the uptake of PPI, by adding it to loan agreements without customers' consent, or lying that it was an obligatory component of a loan.

points out that there were 250k bank tellers in the US in 1970, yet 500k today (with 100k added since 2000) – despite the launch of the ATM. This is because bank tellers’ role changed from principally handling deposits and withdrawals to advising customers on financial products. A baseline level of financial literacy is important for such reorientation. In particular, while many tasks can be automated, financial advice may be more difficult to do so, given the importance of trust and personal contact.

2.5 The Money Advice Service, set up by the Government, is a positive step in encouraging financial literacy but is to be abolished and replaced by a smaller advice body. A March 2015 government review found that few members of the public had even heard of it. It is necessary to teach financial literacy skills to everyone (not just those who hear about the Money Advice Service) and from a young age. Financial literacy is so crucial to people’s well-being that it should be part of our education.

2.6 More generally, I encourage the Government to think broadly and “out-of-the-box” when deciding what skills to invest in. For example, superior time management could help address the problem that UK workers take five days to produce what a US, French, or German worker produces in four days.

2.6.i Time management may not be considered a “proper” academic subject, and I am sure some might see this proposal as wildly unorthodox. Yet, there is no reason why the Government’s investment in education should be confined to “academic” subjects. Indeed, IT was historically not considered an academic subject, yet is now seen as crucial. We have a major productivity problem and so cannot afford to be elitist about what counts as a proper subject.

2.6.ii Companies and individuals invest substantially in time management, investing thousands of pounds in seminars (the cost is \$2,500 for an executive education short course in the US⁵), suggesting it has major benefits. Time management skills should be accessible to all, not just the privileged few. Moreover, these are skills that can be understood by the young, not just executives. Through London Business School’s partnership with local secondary schools, I frequently teach time management to schoolkids.

2.6.iii The need for effective time management is even more pressing in the digital age, when workers are constantly bombarded by demands and distractions from many angles.

2.6.iv Note that the benefits of effective time management may extend well beyond workplace productivity. For example, a major reason why people do not exercise is lack of time, which subsequently has major implications for national health. Lack of time is likely a major reason for not engaging in community activities such as volunteering.

⁵ Source: <http://www8.gsb.columbia.edu/execed/program-pages/details/1485/MYSO>.

3. **Question 18: What are the most important causes of lower rates of fixed capital investment in the UK compared to other countries, and how can they be addressed?**

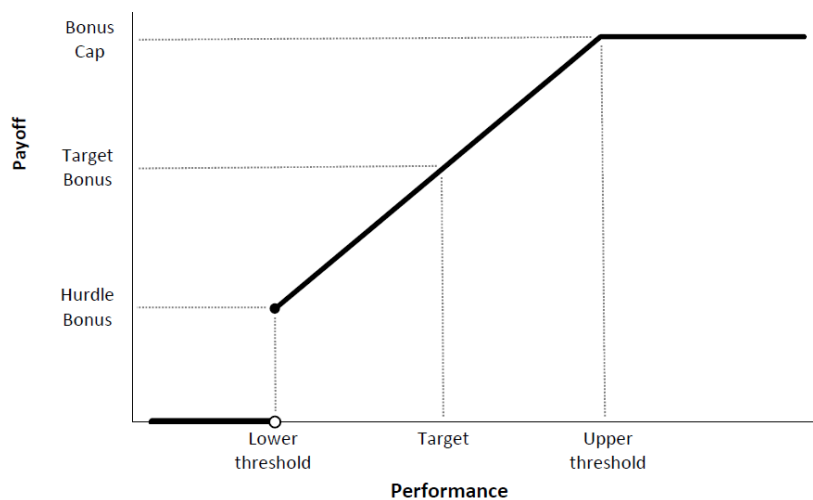
Question 19: What are the most important factors which constrain quoted companies and fund managers from making longer term investment decisions?

3.1 Before my specific suggestions, I start with an overview of the grounding that underpins them. Given the substantial risk of unintended consequences, it is essential to base any reform on rigorous evidence that uses large-scale datasets and, in many cases, demonstrates causation rather than correlation. Often views on governance and investment are shaped by a couple of high-profile examples, but they may not be representative, since only the most egregious cases tend to be reported.

3.2 Certainly, evidence should not be used dogmatically – we should be guided by evidence, not blindly follow it. Moreover, it is important to be critical of the evidence. There is a huge range in quality of academic evidence, and most papers are wrong, or at best misleading. At the *Review of Finance*, I reject 97% of papers; lower-ranked journals have substantially laxer standards. It is almost always possible to find “evidence” that supports what one would like to show, ignoring the quality of the journal in which it was published, or whether it has even been published. The peer review process at the very top academic journals helps ensure the integrity of evidence. Almost all papers I cite here are either published in the very top journals, or “revise-and-resubmits”⁶ in them.

Executive Incentives

3.3 One main driver of underinvestment is executive incentives. Currently executives are commonly paid with long-term incentive plans (“LTIPs”). However, despite the name, LTIPs encourage short-termism. The following is the payoff schedule of a typical LTIP (Edmans, Gabaix, and Jenter (2017)):



⁶ In top academic journals, 90-95% of papers are rejected. Only 5-10% get a “revise-and-resubmit”, which gives authors a chance to address the reviewers’ concerns. The probability of acceptance then rises to 65-70%.

No bonus is paid until performance reaches a lower threshold, then it jumps to the “hurdle bonus”. The bonus is capped at an upper threshold. In the middle there is a “target” performance level at which a “target” bonus is awarded.

3.4 The key drawback of LTIPs is that they are non-linear. Shareholders and society benefit continuously from better performance. A disastrous firm is worse than a bad firm, and a great firm is better than a good firm. However, the bonus is zero below the threshold, regardless of whether the firm is bad or disastrous. This in turn leads to undesirable actions:

3.4.i If the firm is just below the lower threshold, the executive has incentives to cut investment (e.g. R&D, employee training) to beat the threshold.

3.4.ii If the firm is above the upper threshold, then the executive will become excessively risk-averse and “coast” rather than being innovative and trying to move performance from good to great.

3.5 Bennett et al. (2016) find that performance-contingent bonuses lead to CEOs taking short-term actions to meet the goals (cutting R&D and increasing accruals), as well as performing just well enough to meet the goal but going no further to avoid ratcheting up future goals.

3.6 LTIPs should be scrapped and replaced by stock with long-holding periods. Indeed, the BEIS Corporate Governance Report has recommended this change, and the Green Paper on Corporate Governance proposed this change in paragraphs 1.61-1.66. This change was also proposed in my own written submissions to the BEIS Select Committee Corporate Governance Inquiry⁷ and the Green Paper on Corporate Governance⁸, and the Executive Remuneration Report by The Purposeful Company⁹, a leading consortium of executives, investors, consultants, policymakers, and academics.

3.7 In contrast to LTIPs, the value of stock rises continuously with performance. Thus, the executive is punished from disastrous rather than bad performance, and benefits from great rather than good performance. For example, Google was already a good firm. Yet, potentially due to its stock compensation, executives restructured it into Alphabet, invested in self-driving cars, and launched Pixel to take on the world’s largest company (Apple) on its most popular product (the iPhone). These innovations are risky, but exactly what we want to encourage.

3.8 Causal evidence suggests that longer pay horizons improve investment.

3.8.i Edmans, Fang, and Lewellen (2017) show that, when equity vests, the CEO typically sells it (to diversify). To ensure that she can sell at a high price, the CEO cuts R&D and capex, and just meets analysts’ earnings targets - i.e. cuts investment to focus on earnings.

⁷ <http://alexedmans.com/wp-content/uploads/2015/02/Corporate-Governance-Inquiry-Short.pdf>

⁸ <http://alexedmans.com/wp-content/uploads/2015/02/Green-Paper-Response-201701216.pdf>

⁹ http://biginnovationcentre.com/media/uploads/pdf/TPC_ExecutiveRemunerationReport_26Feb.pdf

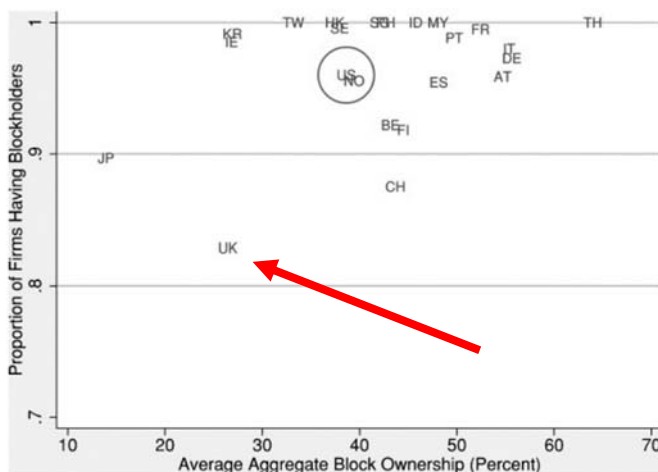
3.8.ii Flammer and Bansal (2017) show that long-term incentives improve profitability, innovation, and the stewardship of environment, customers, society and, in particular, employees.

3.8.iii Edmans (2011, 2012) finds that employee well-being improves long-run firm value by 2.3-3.8%/year (89% to 184% cumulative). However, the effects take 4-5 years to fully manifest in the stock price. Thus, a five-year horizon is important to induce executives to invest in workers.

3.9 The vesting horizon should extend beyond the executive’s departure, or equivalently, shareholding requirements should be imposed post-departure (as in Unilever and Kingfisher). This encourages CEOs to make investments whose payoffs extend beyond their tenure.

The Ownerless Corporation

3.10 A second driver is the UK’s fragmented shareholder structure. Blockholders (large shareholders) are critical to supporting long-run investment. However, the following chart from Holderness (2009) shows that the UK is a global outlier in having few blockholders (defined here as a 5% shareholder):



3.11 Moreover, blockholders can improve corporate governance generally, over and above “say-on-pay” voting. Blockholders can promote long-term value creation in two ways:

3.11.i Engagement / Voice. A blockholder’s large stakes give him both the *incentives* to engage with a firm (since he has skin-in-the-game) and the *power* to do so (due to voting rights). Engagement can involve not only disciplining management (e.g. curbing short-termism), but also advising management (e.g. on long-term investment strategies). There is significant evidence on the benefits of engagement for shareholder and stakeholder value.¹⁰

3.11.ii Monitoring / Exit. A fragmented shareholder has too little “skin-in-the game” to analyse a company’s intangible assets (such as culture). He will thus focus on freely-available short-term

¹⁰ Becht, Franks, Mayer, and Rossi (2009), Carleton, Nelson, and Weisbach (1998), Dimson, Karakas, and Li (2015), Brav, Jiang, Partnoy, and Thomas (2008), Brav, Jiang, and Kim (2015), Brav, Jiang, Ma, and Tian (2016).

earnings – “the market sells first and asks questions later.” In contrast, blockholders’ large stakes give them the incentives to ask questions first and analyse long-term value (Edmans (2009)). If a firm has delivered low earnings due to investment, blockholders will not sell (and may buy more). Informed blockholders insulate managers from the need to cater to short-term pressures, and free them to focus on long-term purpose. Warren Buffett is an example.

Blockholders also discipline managers against pursuing the short-term. With fragmented shareholders, a manager may inflate the short-term stock price by cutting investment. An informed blockholder will notice such myopic behaviour and sell her stake. The threat of such disciplinary “exit” deters a firm from acting myopically to begin with.

Key to exit is that the blockholder displays *conditional*, not unconditional loyalty. A blockholder who remains with the firm, even if it acts myopically (such as VW’s shareholders), will not exert governance. Indeed, Buffett sells if the firm has not built its brand after several years. Causal evidence shows that stock liquidity improves firm value since it enhances blockholder discipline.¹¹ Contrary to misperception, selling in the short-term does not mean taking a short-term perspective. What matters is not whether an investor *trades* in the short- or long-term, but whether she trades on short-term or long-term *information*. Blockholders, due to their large stakes, have incentives to gather long-term information. Uber’s customers recently deleted their accounts to discipline management¹²; similarly, shareholders who sell their shares in a non-purposeful company are exerting discipline rather than being short-termist. We should promote *large* shareholders with long-term perspectives, not *long-term* shareholders who entrench management by remaining with the firm regardless of performance.

3.12 Potential ways to encourage blockholding are as follows, which are taken from The Purposeful Company’s Policy Report (Chapter 4: Blockholding)¹³. Note that, before considering any such policies, it is critical to ensure that their adoption does not disadvantage minority shareholders (in particular retail shareholders). The discussion of the merits of blockholders does not all imply that retail shareholders have no value, merely that skin-in-the-game gives more incentives and clout:

3.12.i Disclosure Relaxation. At present, investors have to disclose when they have acquired a 3% stake. This makes it costly for an investor to build (say) a 5% stake. After he has acquired 3%, he must disclose her stake. This pushes up the stock price and makes it more expensive for him to buy the remaining 2%. As a result, shareholdings typically cluster at 2.9%. 46% of FTSE 100 companies have at least one investor with a 2.9% stake.

¹¹ Fang, Noe, and Tice (2009), Bharath, Jayaraman, and Nagar (2013), Edmans, Fang, and Zur (2013).

¹² I am not taking a stand as to whether Uber’s actions merited such discipline; merely emphasising that customers had the disciplinary device of “exit” available to them and that customer discipline is typically seen as desirable.

¹³ http://biginnovationcentre.com/media/uploads/pdf/TPC_Policy%20Report.pdf

- The UK's disclosure requirements are abnormally stringent compared to the US and EU, where the lowest disclosure threshold is 5%.
- In the UK, directors are required to call a general meeting only if requested by the holders of 5% of shares. This engagement threshold is inconsistent with the 3% disclosure threshold and means that, 3%, in some firms, no single shareholder has the power to call for meetings.
- The US introduced a more relaxed disclosure requirement (Schedule 13G) for investors that do not seek to take control, and so there is less concern with minority shareholder expropriation. Yet, such blockholders can still monitor, and so should be encouraged. The UK should consider a relaxed disclosure requirement for such blockholders. Edmans, Fang, and Zur (2013) show that 13G blockholders significantly improve operating performance.

3.12.ii Structured Access. Investors have substantial concerns about receiving intangible information in company meetings, even though such information may aid engagement and monitoring. Clarifying what information they can and cannot receive without violating insider trading laws would improve engagement and monitoring for the benefit of minority shareholders (and society) also. This must be done in a way that does not disadvantage minority shareholders.

3.12.iii Collective Engagement. Active engagement often involves collaboration between shareholders. Many institutional investors are wary about collaborating as it may (unintentionally) lead to information sharing and thus being classified as an insider. The Investor Forum has significantly facilitated collaboration for intensive and wide-ranging engagements, but there is no similar framework for routine or specific engagements. It would be useful to both clarify and, if necessary, weaken any restriction on collaboration.

- An example of a weakening of restrictions is the SEC's relaxation of proxy rules in 1992¹⁴, allowing shareholders to communicate freely. This led to institutional ownership improving innovation (Aghion, Van Reenen, and Zingales (2013)).

3.12.iv Voting With Borrowed Stock. Some commentators have expressed concerns that the stock lending market allows arbitrageurs to borrow votes and sway decisions (e.g. M&A outcomes), even if they have a small actual stake in the firm. However, Christoffersen et al. (2007) show that stock lending can lead to votes going to informed investors, and may potentially address the "low turnout" issue. One potential way to prohibit "bad" stock lending but not "good" stock lending is to allow borrowed stock to be voted only if it is borrowed by blockholders, who have skin-in-the-game and are likely to be informed.

¹⁴ This relaxation exempted shareholder communications such as public statements of their voting intentions and/or voting rationale (including public speeches, press releases, newspaper advertisements, and internet communications) from the definition of a proxy solicitation

Dual-Class Shares

3.13 p67 of the Green Paper asks whether companies with dual-class shares should qualify for a Premium Listing. I strongly advise against allowing such companies to qualify for a premium listing.

3.14 The evidence is that dual-class shares are associated with significantly lower firm valuations.

3.14.i Gompers, Ishii, and Metrick's (2010) find that "firm value is increasing in insiders' cash-flow rights and decreasing in insider voting rights". The statistical significance becomes smaller, but the economic significance remains as strong, when using instrumental variables to address the endogeneity of the decision to have a dual-class structure.

3.14.ii These results are consistent with cross-country evidence that, when voting rights exceed cash flow rights, firm value is significantly lower. Lins (2003) studies 1,000 firms in 18 emerging markets and finds that firm value is lower when voting rights exceed cash-flow rights. Claessens et al. (2002) study 1,300 firms in eight East Asian countries and find that firm value decreases when the voting rights exceed the cash-flow rights.

3.14.iii These academic findings are backed up by practitioner studies. A 2012 study by the Investor Responsibility Research Centre ("IRRC") showed that controlled companies with multiple share classes exhibited lower long-run stock returns, higher stock price volatility, and a higher likelihood of accounting-related material weaknesses and related-party transactions than non-controlled companies. A 2016 study by the IRRC found that, in controlled companies, there is less gender and ethnic diversity in the boardroom, directors have longer average tenures with less board refreshment, and there are more and larger related-party transactions. CEO pay at controlled companies with multiple share classes is \$7.2 million higher than at single-class controlled companies, and \$3.3 million higher than in non-controlled firms.

3.15 These results suggest that, far from protecting a firm's entrepreneurial vision and allowing it to invest for the long-term, dual-class shares entrench management and allow it to pursue its own interests.

Indeed, Masulis, Wang, and Xie (2009) find that dual-class shares are associated with:

3.15.i A lower valuation of corporate cash holdings. Cash held on the balance sheet is valued less by the market, consistent with entrenched management using free cash to pay themselves excessively or consume perks. It is inconsistent with dual-class shares allowing managers to undertake valuable long-term investments.

3.15.ii Higher CEO pay. This is consistent with evidence that institutional investor monitoring reduces CEO pay, and ties it more to performance (Hartzell and Starks (2003)).

3.15.iii Worse acquisitions, consistent with dual-class shares allowing managers to build empires. Specifically, acquisitions are associated with lower returns and more likely to exhibit *negative*

returns. Moreover, firms are less likely to withdraw from acquisitions that the market perceives as value-destroying, again a sign of insulation from external discipline.

3.15.iv A lower valuation of capital expenditure – i.e. capital expenditures contribute less to firm value.

This is consistent with entrenchment leading to empire-building or indisciplined investment rather than valuable long-term investment.

3.16 Moreover, the principle behind dual-class shares sits uneasily with the Government’s mission to give voice to the voiceless and make Britain a “country that works for everyone”. Dual-class shares entrench the elite by making management *less* accountable, which is why management pays themselves excessively and makes bad acquisitions. Retail shareholders who put their hard-earned money into companies are denied votes. Pension funds who invest for the long-term interest of their beneficiaries are denied votes. Dual-class shares send the message that corporations want the public’s money, just not their opinions – similar to the famous quote “taxation without representation is tyranny”. For some shareholders to have a voice and others – who are also risking their money in the firm – not to goes against the principle of fairness that the Government is trying to promote. Many commentators rightly highlight the problems of the ownerless corporation and shareholder disengagement; dual-class shares will severely hinder shareholders from engaging, worsening the problem of disengagement and the ownerless corporation. Indeed, engaged shareholders with a long track record of stewardship, such as Hermes, have been lobbying against dual-class shares for decades. A February 2017 report by the International Corporate Governance Network contains the findings of a recent survey “which shows that a strong majority of our Members disapprove of differential ownership structures.”

3.17 Proponents argue that dual-class shares protect entrepreneurial vision, and that successful companies such as Google, Facebook, and LinkedIn have them. However, it is a huge unsupported leap to claim that dual-class shares caused their success. Very many other factors were behind their success – non-governance-related (the companies’ first-mover advantage) and governance-related (the executives having substantial shares in their firm). If anything, causality is likely to be the other way – given investors’ scepticism on dual-class shares, it is only the companies with very strong prospects that will be able to get away with dual-class shares upon IPO. In other words, expected good future performance allows dual-class shares to be adopted, rather than dual-class shares leading to good future performance.

3.17.i Moreover, the above cases are anecdotal examples. It is almost always possible to find anecdotes to support a particular viewpoint. The large-scale evidence presented above demonstrates the negative effects of dual-class shares in general. There are many high-profile anecdotes of substantial failures associated with dual-class shares. For example, dual-class shares allowed Hollinger CEO Conrad Black to run the company like a dictator, exacting huge management fees, consulting payments, and personal dividends, and filling the board with his friends – all leading to underperformance. Vic De Zen of Royal Group Technologies diverted

large sums of money for personal benefit, and Frank Stronach of Magna and Jim Shaw of Shaw Communications substantially overpaid themselves despite huge losses. Such cases substantially destroy the public's trust in business.

3.17.ii More generally, the idea that entrepreneurial vision should be left unchecked is also not clear. As a high-profile example of unchecked "vision" (although not dual-class shares), Jerry Yang of Yahoo rejected a takeover bid from Microsoft in February 2008 at a 62% premium, because he stubbornly refused to cede control, and has since substantially underperformed. Even the best entrepreneurs benefit from external opinions; indeed, this is why we promote board diversity, rather than allowing CEOs to fill the board with their friends if they were the founders.

3.18 The evidence against dual-class shares is also consistent with the broader evidence on other devices – such as golden parachutes, poison pills, and staggered boards – claimed to protect a firm's entrepreneurial vision, but actually ending up entrenching management. The most-cited governance paper of the millennium, Gompers, Ishii, and Metrick (2003) finds that companies with the most entrenchment devices underperformed those with the least by 8.5%/year in the 1990s. Giroud and Mueller (2011) find that this continues to hold with more recent data in non-competitive industries, where management has more latitude to destroy value. Masulis, Wang, and Xie (2007), echoing their paper on dual-class shares, find that companies with more entrenchment devices engage in worse M&A.

3.19 The above large-scale evidence suggests that dual-class structures are undesirable for most firms. However, it may be the case that they are beneficial in certain firms. The current regulations still allow such firms to adopt dual-class structures and be listed. The standard listing simply highlights that investors need to scrutinise such firms' governance particularly closely, and that investors without the resources or expertise to do so may be advised not to invest in such firms.

Critically Assessing the Evidence

3.20 Before we even start to design policies to improve investment, we must *critically* diagnose the extent of the underinvestment problem to begin with – just as medical diagnosis precedes medical treatment. The Green Paper prevents some compelling evidence that the UK underinvests in both fixed capital investment (p63) and R&D (p26) than other countries. However, the evidence is far from one-way.

3.21 First, it is unclear why we should measure investment using *inputs* (expenditure) rather than *outputs* (value created by the expenditure). We should not measure the quality of investment by simply the amount of money spent, without taking into account what it is spent on or the results of this expenditure.

3.21.i To start with a simple analogy, Leicester City invested far less money than Manchester City in the 2015/16 football season but clearly invested far more effectively as they won the league.

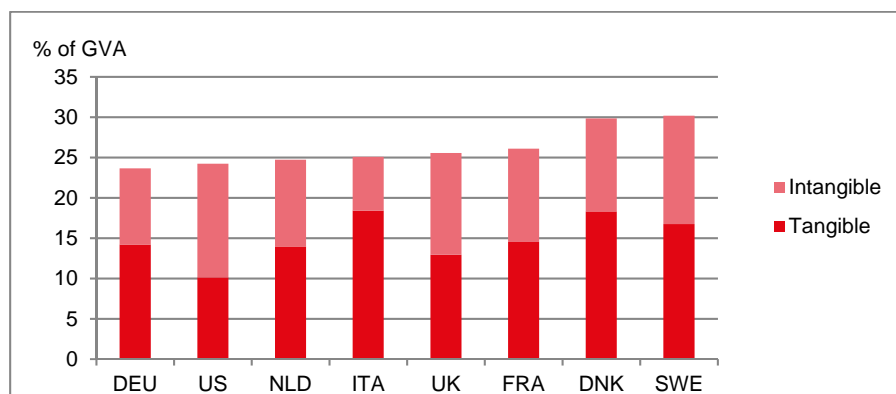
3.21.ii The Green Paper correctly recognises that it is a major problem that UK workers take five days to produce what a US, French, or German worker produces in four. UK workers “invest” more hours than foreign workers to generate the same output. Just as the output, not the input, is the correct measure for labour productivity, it is the correct measure for investment efficiency.

3.21.iii Studies claiming underinvestment in the UK quote the UK’s low level of investment as a % of GDP, or as a % of sales. But, it could be that the UK needs less fixed capital to generate the same amount of GDP or sales – perhaps because it has better machines or management practices. Using less labour to generate the same output is classified as “high productivity” but using less capital to generate the same output is classified as “underinvestment.”

3.21.iv Turning from conceptual arguments to large-scale evidence, Brav, Jiang, Ma, and Tian (2016) highlight the incorrect inferences that can arise from measuring investment with inputs, rather than outputs. Hedge fund activism leads to companies lowering R&D, the supposed “smoking gun” suggesting that hedge funds are short-termist. However, despite the fall in innovation input, innovation output actually improves, in terms of both the number and quality of future patents. Hedge funds lead to companies refocusing their R&D strategy. Responsible companies do not just invest willy-nilly; they do so judiciously.

3.22 Second, *even if* we wish to measure investment using inputs, statistics using fixed capital investment are misleading in today’s intangibles-based economy. The statistics using R&D do not address this, because R&D is only one component of intangibles. The commonly-quoted investment figures ignore investment in training employees, advertising to build a brand, implementing superior management practices, or redesigning strategy, sales techniques, or production processes. The following Figure from The Purposeful Company Interim Report shows that, if intangible capital is included, the UK is less of a conspicuous outlier. (Note that the Report presents the case for encouraging more investment in the UK, so if anything it would have an interest in presenting the opposite result):

Figure 4.2: Total (tangible and intangible) market sector GVA shares (1995-2010)



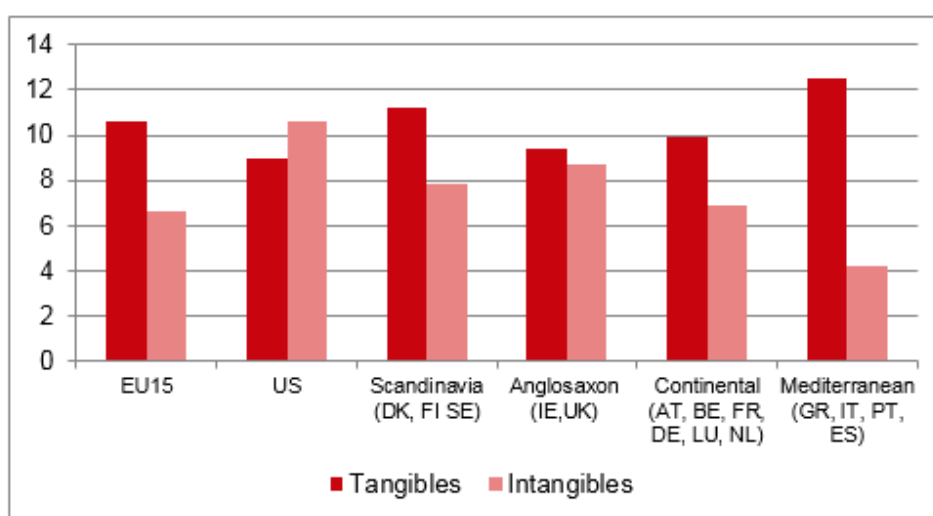
Source: INTAN and Llewellyn Consulting.

In addition, the figure and narrative below shows that intangibles are particularly important in the UK:

Intangibles in the UK

The increasing importance of intangible investment is particularly pronounced in the UK, a potential source of reassurance. Over the past two decades, UK investment in intangibles has both grown rapidly and has had the highest propensity to invest in intangible assets relative to tangibles out of its European peers (Figures 4.3). The relative importance of intangibles is highest in the US.

Figure 4.3: Tangible vs. intangible GDP shares (average between 1995–2009)



Source: Corrado, Haskel, Jona-Lasinio and Iommi (2013)

3.23 Evidence on the UK's poor labour productivity should similarly be interpreted with caution. These figures do not deal properly with the problem of measuring service sector productivity in an economy that is 79% services¹⁵, and do not make meaningful international comparisons, e.g. ignoring differential unemployment rates. On certain measures of labour productivity, France is superior to the UK but has a much higher unemployment rate, and it is not unreasonable to assume that the UK's higher employment rate includes a marginal tranche of workers with below-average productivity.

3.24 There are many academic and practitioner studies claiming that "underinvestment" and "short-termism" are problems, but they should also be interpreted with caution. I consider a 2017 study by the McKinsey Global Institute which finds "that companies we classify as "long term" outperform their shorter-term peers on a range of key economic and financial metrics". The reason for choosing this study as an example is that McKinsey is a premier organisation that I deeply respect, and produces very influential studies whose conclusions are supported by the evidence. (It would be easy to poke holes in a lower-

¹⁵ <http://visual.ons.gov.uk/five-facts-about-the-uk-service-sector/>

quality study.) However, short-termism is such a complicated topic that it is difficult for even the most elite researchers to nail down the issue conclusively.

3.24.i The study constructs an index of five measures for a company's horizon, and finds that these measures are associated with long-term performance. However, most of these measures are measures of earnings quality, not short-termism. For example, one measure is accruals, and it is well-known since Sloan (1996) that accruals are linked to low returns, since it suggests low-quality earnings. The "margin growth", "quarterly management", and "difference between EPS growth and true earnings growth" are also measures of earnings quality. Essentially, the study finds that companies with higher-quality earnings perform better (which is already well-known), rather than companies with a long-term outlook perform better.

3.24.ii The one measure that is not a measure of earnings quality is investment. However, here reverse causality is a major issue. It may not be that higher investment causes higher future performance, but when a company expects positive future prospects, it should invest more today. (Indeed, this is what management consultancies tell their clients).

3.24.iii Indeed, many other experts also argue that "short-termism" is more nuanced than studies claim, e.g. Larry Summers's *FT* article "The jury is still out on corporate short-termism" and other writings. Note that, if anything, I have an interest in accepting uncritically any evidence that short-termism is a problem, since the bulk of my own research is on the importance of addressing short-termism. Despite this, I still must be critical of the evidence. Short-termism is a problem, but how to measure it, and what causes it, is far more nuanced than commonly believed.

3.25 Note that none of the above is to argue that underinvestment is not a problem in the UK. Any attempts to improve the output of investment, and labour productivity, will be critically important to the UK's future. They are only to be critical on identifying the causes of underinvestment and low productivity, the specific areas, and the magnitude of the problem. Again, using a medical analogy, even if we accept that something is an issue, the *causes* determine the nature of the treatment (e.g. surgery or medicine), the *specific areas* determine the scope of the treatment (which area to treat), and the *magnitude* determines the severity of the treatment (e.g. amputation or a cast).

4. Question 20: Given public sector investment already accounts for a large share of equity deals in some regions, how can we best catalyse uptake of equity capital outside the South East?

Question 21. How can we drive the adoption of new funding opportunities like crowdfunding across the country?

Question 22. What are the barriers faced by those businesses that have the potential to scale-up and achieve greater growth, and how can we address these barriers? Where are the outstanding examples of business networks for fast growing firms which we could learn from or spread?

4.1 Please see the policies in Section 4.5 of The Purposeful Company's Policy Report, on p79-84 of http://biginnovationcentre.com/media/uploads/pdf/TPC_Policy%20Report.pdf. This Section is entitled "Finance for Purpose" and is about funding small companies.

4.2 I would also like to reiterate that investing in small businesses should not be limited to investing financial capital, but intellectual capital also. As per my answer to question 1, funding the highest-quality research and disseminating the findings in a non-technical manner will substantially help small businesses.

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