

Business, Energy and Industrial Strategy Committee

Oral evidence: Industrial Strategy, HC 702

Tuesday 22 November 2016

Ordered by the House of Commons to be published on 24 November 2016.

Watch the meeting

Members present: Mr Iain Wright (Chair); Richard Fuller; Amanda Milling; Albert Owen; Amanda Solloway; Michelle Thomson; Craig Tracey; Chris White.

Questions 1 - 345

Witnesses

[I](#): Alex Brummer, City Editor, *Daily Mail*; Lee Hopley, Chief Economist, EEF; Paul Kahn, President, Airbus UK; Rhian Kelly, Director for Infrastructure, CBI; Mark Littlewood, Director General, Institute of Economic Affairs; Mariana Mazzucato, RM Phillips Professorship in the Economics of Innovation, University of Sussex; Paul Nowak, Deputy General Secretary, TUC; Stephen Pattison, Vice-President Public Affairs, ARM Holdings; Ashley Shackleton, Head of Public Affairs, British Chambers of Commerce; Simon Walker, Director General, Institute of Directors

Written evidence from witnesses:

– [Add names of witnesses and hyperlink to submissions]

Examination of Witnesses

Alex Brummer, Lee Hopley, Paul Kahn, Rhian Kelly, Mark Littlewood, Mariana Mazzucato, Paul Nowak, Stephen Pattison, Ashley Shackleton and Simon Walker.

Q295 Chair: Good morning, colleagues. Welcome to the Business, Energy and Industrial Strategy Committee. We are considering industrial strategy this morning. I do not propose that our guests introduce themselves because, given how many of you there are, that might take all morning. It will emerge during the course of deliberations. We are trying something new today in respect of having an all-inclusive horseshoe debate rather than an interrogation.

May I kick things off when it comes to industrial strategy? Five months on from the new Government, the Prime Minister said yesterday at the CBI in respect of an industrial strategy, "It is not about propping up failing industries or picking winners, but creating the conditions where winners can emerge and grow. It is about backing those winners all the way to encourage them to invest in the long-term future of Britain, and about delivering jobs and economic growth to every community and corner of the country." Five months on, is that good enough? How is that in respect of what we need from an industrial strategy?

Mariana Mazzucato: I was just wondering if that was a provocative question or a real question. One of the things that has been missing, both in that speech but also in the more general discussion, is this first admission about what industrial strategy is about. It is about admitting that economic growth and innovation do not just have a rate; they have a direction. What industrial strategy can do is give a direction to economic growth. The little growth that this country experienced recently was consumption-led, so very high personal debt over disposable income.

If we want investment-led growth, we have to understand what leads business investment. Investment is led not by tax cuts or tax incentives, but by the increased expectations of businesses of where the future opportunities are. These do not come about just through patchy policies here and there, but through a more mission-orientated industrial strategy, which is based on big problems the nation might have that many different sectors can work on together. Going to the moon in the past required more than 10 sectors. It was not robotics and aerospace. Even textiles had to change.

One thing that has been missing from these announcements about industrial strategy is how it is going to be linked up with both the vision that the country has around inclusive growth, which she has been very clear about, and more particularly which big problems or challenge-led areas our sectors, especially the ones that have key competencies, can work together on in order to direct growth in particular ways.



Chair: Do people agree with that?

Simon Walker: We would broadly agree with that. We are anxious that industrial strategy should not simply be a code for pouring money into failing businesses. That is what we have always been a little nervous about, but we are convinced now that it is not that, and that it will be about finding sectors where we have real advantage and opportunity and skilling up, which we place particular emphasis on—people in those areas and around those businesses, particularly if it involves universities and more training. In all those areas, if the Government can establish linkages in high growth potential areas, we feel that that would be very welcome. We think we are heading in that direction.

Mark Littlewood: I do not disagree with what Mariana has said, but the claim made for industrial strategy is rather stronger than that. It is that the state is best placed to determine which these particular growth sectors will be, rather than the private sector; that the state has some foresight or ability for long-term planning at its disposal that the private sector does not. Clearly, there are going to be certain growth sectors, which require investment, and there are investment patterns.

If the United Kingdom Government decide in their extreme unwisdom that sending a man to the moon is the important growth sector for the UK industry, that would require quite substantial state intervention to bring it about, because there is precious little evidence that the private sector would invest in such an enterprise. The claim is not just that different sectors grow and require different investments. It is that the Government are best placed and have a comparative advantage in determining what those sectors are.

Mariana Mazzucato: That is a very old-fashioned dichotomous way to think of it: that it is either the state or the private sector. We know from looking at Silicon Valley or Denmark today, which by the way is the number one provider of high tech services to China's green economy and China is spending CNY 1.7 trillion on green, so for a small country that is not a bad feat, that they absolutely have to work together.

No private sector in any country I know of has ever invested in areas that are highly capital intensive and in the early phases where there is high technological and market risk. In those particular areas the public sector has to lead, but even when it does, if there is not a vision around what kind of economy we want to build, the risk is that it leads to very patchy policies. We have seen this with green, where GE investors stopped projects in the UK a couple of years ago and, when they were asked why, they said, "There is no green vision".

Vision matters. What vision means is much more complicated; it is not an easy answer, but you need a vision, whether of particular competencies, as Simon was talking about, although I would focus more on big challenge-led problems, on which lots of different sectors—the ones that we are currently leading in—can work together in new ways.



Paul Nowak: I would agree with Mariana. It is not a case of saying the state is better; it is about saying there is a role for the state in helping to create a better economy. It has been really useful and welcome that the Prime Minister has acknowledged the need for an industrial strategy. We know that, on a lot of economic indicators, the economy is doing well, but we also know that there are real issues about, for example, quality of employment, what has happened to wages, the productivity gap in the UK and growing inequality between nations and regions and between shop floor and boardroom. There is a set of problems that our previous approaches have not tackled.

For the TUC, at the core of any industrial strategy is an explicit commitment to think about how we create better quality employment. You do that in two ways: first, supporting those sectors that are going to generate good quality jobs and are the high-added-value sectors that we all know about. It is also about raising standards across the economy, and we know there are some sectors where we are really lagging behind, whether that is social care, retail or hospitality. The second thing I would put on the table is the need for us to do that in a way that helps us to decarbonise the economy. Again, it is inextricably linked to some of the points that have already been made.

Lee Hopley: We have talked a little about some of the problems our economy faces: reliance on consumption as a driver of growth, some of the challenges with productivity, quality of jobs and earnings. We very quickly jumped to the role of sectors and the fact that industrial strategy needs to focus there. We need to look more broadly at what the success metrics are for industrial strategy.

Chair: Can I come on to the sectoral approach in a moment, Lee? It is a good point to bring in. What does a successful industrial strategy look like?

Lee Hopley: It is not about just a small number of sectors carrying the can for future growth opportunities in the UK economy. That on its own is not going to solve some of the big problems that we have already touched on, like the dominance of household spending in growth and productivity challenges. We need to look at broader macroeconomic indicators as measures of success. It might be about our poor net trade position. This is not something that has happened recently. We are a net importer in lots of different sectors. That should not be sustainable. That is not something that we should be satisfied with. Productivity is weak. We are an innovation follower, rather than an innovation leader. A small number of sectors on their own are not going to move the needle in that necessarily, so we need to be looking at a whole-economy approach.

Q296 **Chair:** Would you agree with that, Paul?

Paul Kahn: Largely. For us, it is really about partnership and alignment, so that we have collaboration between academia, Government and the



HOUSE OF COMMONS

private sector and they are all pulling in the same direction. That drives innovation. As Mariana said, you get a direction and everyone is travelling in the same direction. I would not particularly agree that it needs to be mission-based. You want to come on to sectors later. Sector is important, as is cross-sector innovation and spill-over effect, which is where Government investment in an industrial strategy makes a real difference.

Alex Brummer: Industrial strategy has a bad reputation in the UK, and that goes right back to the Wilson era, the white heat of technology and the Industrial Reorganisation Corporation that existed. People forget that some very positive things came out of that period. Indeed, what people remember about the IRC is British Leyland, but some of our best computing companies—ICL, which is now owned by Fujitsu, and GEC—were put together by the IRC. Government can do a lot more by intervening in the economy and backing good companies.

Q297 **Chair:** Are we falling short at the moment, then? Should the Government intervene more?

Alex Brummer: We have had an enormous opportunity. We have something called a business bank, and we really need to gear it up so that that business bank can get behind some of the key technologies that we have. I have been appalled in recent weeks to read day after day in the *Financial Times* and other places that some of our companies in artificial intelligence are being bought by overseas enterprises. We have seen the Chinese, Japanese and others investing in these companies because the UK finance or venture capital is just not there.

Q298 **Chair:** I will come to foreign takeovers later in the discussion. Rhian, the Prime Minister went to your conference yesterday. Were your members happy with what she said about industrial strategy?

Rhian Kelly: It is fair to say that everybody is happy that industrial strategy is back on the radar and we have a Department with “industrial strategy” above its door. That is better than it has been for the last year or 18 months. I agree with a lot of what has been said. In the Green Paper that is coming out before Christmas from the Government, we probably need a clearer understanding of what outcomes we are trying to deliver from industrial strategy that we can all get behind, picking up some of the themes of productivity, the role of technology and globalisation. We need to understand what we are aiming for, what the economy should look like and what we would like the economy to look like in 2030.

I think of industrial strategy, in a way, as the UK’s calling card. If we are going to go externally and sell the UK, promote ourselves and explain to other countries why they would want to invest in and trade with the UK, industrial strategy is the way in which we come up with that calling card. It should be our opportunity to say, “You know what? In the UK we are really great at X, Y and Z, and that is why you ought to be thinking about



HOUSE OF COMMONS

how you do business with us. This is what we can sell to you. This is what we can do for you". We need to see something that crystallises exactly what we want as an outcome and what we are looking for.

Chair: Richard, everyone is happy with an industrial strategy.

Q299 **Richard Fuller:** Not everyone. The industrial strategy is a 1960s phrase, is it not? That was a period where we had no internet, no mobile telephony, international trade was at the margin, there was no big bank and computers were things called mainframes. There was no such thing as genomic technology. My goodness, how did we cope without an industrial strategy? I like where we are with industrial strategy. The Government talk about it, but they do not tell you what it is. The problem will come when Government tell us what it is, because what all of you want is what each of you want, and you look to the Government to give it to you. My question is: how are the Government going to achieve a consensus?

Ashley Shackleton: First, we have had some different veins of industrial strategy over a few years, but it is very good to see the Prime Minister herself is leading this. We now have a Government Department with "industrial strategy" in the name, but we still need to have it joined-up across Whitehall. When the new Department says, "This is what we want to do", there are different levers in Government, in the Treasury in particular, from which they will need support to make sure we drive industrial strategy forward.

There are clearly things that the national Government can do: fixing the fundamentals—our infrastructure, our training—and ensuring we have open markets, both to the EU and to the rest of the world. There are certain things only they can do, but it should not be too prescriptive. You should allow industry and the regions of our country to act, particularly with further devolution in England and the rest of the UK. It should not be too prescriptive. It should be a joined-up approach. The Government should set out some clear goals and missions, and then sectors and places can feed into that.

Q300 **Richard Fuller:** That is fine. Everyone puts in their bids, whether it is green this, directors on the board or whatever it is. How do the Government achieve consensus? How do we ever achieve it? Is it something that cannot be achieved?

Mariana Mazzucato: Where do you think the internet came from, and all these great things that came in the old strategy?

Richard Fuller: You mentioned that you think it was because of Government policies.

Mariana Mazzucato: They all came from guided policies. Some might be misguided, and that is why your point is very good: let us be careful and get the right mechanisms to see why it is that we are choosing one mission over another. The internet, GPS, touchscreens, Siri—all these



technologies and all our smart products—came from Government coming up with some missions, and then these were the spill-over.

- Q301 **Richard Fuller:** That is very Obama-esque in terms of the view that someone never creates a business on their own. I believe in the world of entrepreneurs. I think entrepreneurs are the ones who create wealth. They shape a lot of the advantages in the economy.

Mariana Mazzucato: What is an entrepreneur?

Richard Fuller: I read some of your work and I thought, “This is really good”. You talk about a mission. That seemed to be about how you get to a consensus. If you can get everyone to agree that, for example, the mission should be that we need to have a more inclusive economy—growth ought to be more inclusive—then you can shape strategies and policies behind that.

Mariana Mazzucato: We are confusing things. Industrial policy and innovation policy need both horizontal and vertical measures. In some ways, we are now focusing on a specific thing, which is what we mean by vertical measures. Of course we need the horizontal measures, which are about skills and different areas that will increase productivity, but vertically the question is: will it be sectoral—and you say that we will talk about this later—or will it be challenge-led, mission-orientated, with different sectors working together, and bottom-up through different private initiatives? Again, going to the moon was a big mission, with 400 homework problems that required different types of interactions between public, private, third sector and even civil society.

Paul Nowak: I think there is a consensus. This is not a case of counterpoising the role of Government and the role of employers or other stakeholders. Think about some of the big issues that we have started to talk about already. On productivity, we know we have a problem in the UK. We have some world-class companies that are extremely productive, but the average British worker takes until the end of Friday to produce what the average French or German worker produces by the end of Thursday. There is a growing consensus that one measure of success of an industrial strategy would be good quality employment.

Think about some of the other things, whether that is about decarbonising our economy or the large-scale infrastructure projects that we know are coming online. Again, there is a consensus. You do not want to spend tens of billions of pounds on Hinkley, Heathrow expansion and High Speed Two without thinking about how we use those as levers to maximise the benefit for the UK supply chain. It would be mad to do so. There is an emerging consensus about how Government can help and support that, rather than saying to the Government, “Here is our list of demands. We expect you to deliver X, Y and Z”.

- Q302 **Chair:** Mark, do you think there is a positive role for an industrial strategy where the state intervenes and collaborates with business in



HOUSE OF COMMONS

order to give a sense of direction in the economy?

Mark Littlewood: In short, no, I do not. One of the problems with this discussion about definition is that we discover how vague the terminology is. We talk about the horizontal industrial strategy. To my mind, that is just an economic policy. My horizontal industrial strategy is to slash tax and remove a lot of the burden of regulation on businesses. If you want to call that an industrial strategy, I guess you can. I would just call that an economic policy that would allow different sectors to emerge, while others may die. That is not worthy of the name industrial strategy. That is simply an economic policy around tax and regulation, which may or may not be helpful to industry. Pick whatever you think your preferred taxation and regulatory environment is.

The problem is that you quite quickly, despite everybody saying as a prefix that we are not going to pick winners, start to do exactly that. While it is the case that, if the Government decide to invest a huge amount of money in mobile phone technology, it is quite likely that at the end of that process we will stumble across some new mobile phone invention that otherwise would not have been stumbled across had we not invested in it, that does not prove that that is a good and sensible use of resources. That is resources being shifted into one particular sector or mission and, as a zero-sum game, by definition moved out of another sector that it could have been invested in for the purposes of discovering new inventions.

Stephen Pattison: I take a rather different view of industrial strategy. It is not helpful to think of it in terms of 1970s-style planning. It is not particularly helpful to think of it in terms of massive Government investment in certain sectors. An industrial strategy for our times would look much more at what the Government can do to enable certain nascent strains in the economy to move faster. I am going to shout for the digital economy strategy. If you look globally, everyone is trying to go digital. Is there something a British industrial strategy could do to make the UK move faster and adopt a leadership role in digital economy industrial strategy?

It will not be by investing in research to find the next generation of mobile phones, because with all due respect we will probably do that faster than anyone else could. It will be by looking at other areas: by trying to encourage smart cities to adopt smart technology, by trying to encourage the health service to adopt smart technology and by using levers that are not necessarily supporting the sector directly, but are creating demand awareness and the ability to explore the sector's products.

Q303 **Chair:** That brings us on to a key theme I want to discuss. What is the nature of picking winners in industrial strategy? Is it picking individual companies? Is it picking individual sectors and how are those determined? Is it picking individual technologies or is it picking individual challenges? Is it vertical? Is it horizontal? What is the right blend of the



two? What approach do you think a British industrial strategy should take? Paul, you have a vested interest in a certain approach, I would imagine.

Paul Kahn: For us, it is about alignment. It is about alignment of an entire industry and creating the right sort of environment to attract inward investment. I very much agree with Rhian's point that capital is mobile, so we have to attract that investment to the UK. The industrial strategy and growth partnership funding act as catalysts. That makes a real difference, because global companies, whether they are headquartered here or anywhere else in the world, have choices on where they make their investment. Having an industrial strategy makes a real difference to where that investment goes.

Lee Hopley: There is a balance. The dominant policy responses should be on horizontal levers. I completely take your point about having a competitive tax base and reducing regulation, but there are lots of ways in which that can be achieved. There has to be some kind of framework to dictate how you make the tax base more competitive, because we still have fiscal constraints.

In terms of sectors, technologies and capabilities, we have to look at the global context. Lots of countries are looking at how they develop capabilities in particular technologies, whether it is digital, whether it is in the aerospace sector. An individual company on its own in the UK will not be able to compete with that, so there needs to be some enabling investment, intervention, support and collaboration with Government to ensure that the UK is part of that market or supply chain.

Q304 **Chair:** Do we do that in a good enough way now?

Lee Hopley: It is hard to judge, because we have not been doing it consistently for long enough in any particular sector. We looked at this on and off over the last 10 years, but aside from some key sectors we do not have enough data to say that the collaborations have been effective, because we have not approached it in a consistent enough fashion. We have not lined up other parts of Government behind the individual interventions that we saw from the Department for Business, Innovation and Skills a few years ago.

The announcement on innovation funding yesterday is a case in point. An extra £2 billion by 2020 for science and innovation is hugely welcome, but this is more or less reversing cuts that we have seen in previous spending reviews on innovation. We have not even approached those cross-cutting investments on a consistent basis.

Rhian Kelly: There is an opportunity in this next iteration of industrial strategy to make it sector-led. We need to build on the momentum of the last couple of years. I do not agree that we have not made progress. There are good examples in automotive and aerospace where it has been a collaborative approach. It does not have to be about investment.



There are a number of levers that Government can pull in collaboration with the sector. The whole point of good industrial strategy is that the sector itself comes together and understands what it can do and where there are opportunities to work in partnership with Government. Therefore, it is about going with the grain of the market. It is not about randomly going out and saying, "We are going to do this thing in 20 years' time. We are going to invest". That is not the right approach.

To Paul's point, we hear from some of the global companies that we talk to that they are looking at the UK globally and they are asking, "Do we invest in the UK? Is it a good place to do business or should we invest somewhere else like France or Germany?" The sense of a coherent strategy for that sector and collaboration with Government is what then encourages those companies to put their money in the UK.

It is very clear, and the Government have been clear about this, that the next iteration of industrial strategy should not only be a sector-led approach; it will need to be place-based. We will need to think about how we make sure that there are benefits and how we improve productivity. It must be possible, and there are good examples of where we have done this by default, and we need to do it more by design: where we have enabled sector strategies to link in to place-based interventions that have made a difference to places. We need to do more of that matrixing across the economy, because that will then deliver benefits to those sectors and the economy as a whole, but also productivity benefits at a local level.

Q305 Chair: Who decides which sectors are important and when sectors are no longer important to the British economy?

Rhian Kelly: To some extent, it has to go with the grain of the market. It has to be the sectors themselves that come together and are able to clearly articulate what they are good at, where they need support and what the role of Government is. In the past, Government have nominated sectors, and I think that is possibly where they have not worked as well. The truth is that it needs to come from the business community as the driver.

Q306 Chair: Of the 11 sectors that were brought together by David Willetts, we only ever really hear about aerospace and automotive. Is that just a sign of good, successful alignment? Is it a sign of successful lobbying from those sectors to the exclusion of the nine others? Why have they succeeded, while the other nine sectors that David Willetts pushed forward in the coalition Government have not been quite so successful or prominent?

Paul Kahn: The reality is that aerospace is working well. I would like to pick up on Lee's point: it is about consistency. This has been going on as a growth partnership since 2010. Having confidence in long-term funding and long-term support is vital. It takes 10 years to develop an aircraft and it is in service for 20 to 30 years, so the lifetime of a Parliament is a



HOUSE OF COMMONS

blip. We need consistency across Governments over the long-term, so having a Department with the name over the door makes a difference. Having some confidence in that funding over a 12-year period is very helpful.

Q307 Richard Fuller: I hear that a lot, and there is a pesky thing called democracy in this country which means that every five years we go to the country and we present a plan and the public, the people, decide whether they want Can of Beans A or Can of Beans B, and let's hope they continue with Can of Beans A. How do you marry that? You also did not answer the question that the Chairman asked, which was: why did the other nine not make it? I understand why your sector has done very well, but why did the other nine not?

Paul Kahn: In terms of answering the question, the other sectors generally are making it. Sectors involved in space are doing very well and the Government's role is absolutely vital in that. Space exploration—landing on comets, landing on Mars—will require Government involvement, and the industry aligns behind that. The return on investment is massive. There is quite limited Government funding compared with the size of the sector; it is a £12 billion sector coming off quite a small investment.

Defence is an area where the Government, of course, has a role, but which has been less successful, if we are honest. That does not mean it will not be successful in the future, but we need better alignment and more collaboration and partnership for the longer term. Long-term investment makes a difference. We have a failing defence industrial strategy in many respects when you look at some important decisions like maritime patrol aircraft and helicopters, where decisions were taken many, many years ago that resulted in the Government not having a choice that could benefit British prosperity and British industry, so they have to buy off-the-shelf from abroad.

Q308 Albert Owen: Before I raise the issue of skills, which has been touched on very briefly, I will come back to what Richard said: that every five years we go to the country and it is called democracy. That is part of the problem with industrial strategy: it keeps changing. We need longevity and continuity, particularly in energy. Take what Mariana said about Denmark, for instance. Denmark skilled up its workforce very early. It said that that was the vision and that was what it was going to do. It became self-sufficient in green energy and now it is exporting it. That joined-up thinking has been lacking in this country over the last 15 to 20 years, to be absolutely honest with you. I agree with you when you say that tax cuts and various things are important, but the skill base is the most important thing and it is the Government that have to skill people up. We have to go into the schools across the country and say to 14-year-olds, "Where do you want to be in 10 years' time? These are the types of skills we need" and marry them up. That has not been happening.



HOUSE OF COMMONS

You mentioned the academia and Government, Paul. I have worked with your company quite a lot, but your success is on technical skills in particular: that you are able to say to people of different backgrounds that we need those technical skills.

Paul Nowak: There are merits and drawbacks to all the different approaches. If you take the sector approach, in some sectors like automotive and aerospace, it has worked well. You do not want to throw the baby out with the bathwater. You want to support those sectors where it has been a success. That also includes recognising the role of individual companies and employers. Airbus is important, not just as an organisation in and of itself, but in terms of driving improvements right throughout its supply chain, so it takes on a broader importance.

I am slightly hesitant when we talk about broader horizontal objectives. Things like skills are absolutely important. We know we have a job of work to do to improve the skills base of this country and to improve skills utilisation. There is a danger I would just flag up that we have a lack of coherence in Government approaches to skills. You have, on the one hand, very welcome developments around apprentices, for example, and on the other hand you have a 40% cut in the funding of FE colleges. There has not been enough thinking done with regard to how skills, FE and HE are supporting the large-scale infrastructure projects I talked about before.

I just have two other quick points. I quite like the mission statement approach, as long as the mission itself is ambitious enough and we can measure the outcome. Sorry to sound like a broken record, but it is important to set some bold targets around good quality employment and what we want the future of work to look like in this country.

The last point that I will throw on the table is about the place issue. I would worry that our current infrastructure at a sub-regional level, with LEPs, does not have the scale or the resources to genuinely support coherent industrial strategy. There are some things that you can only do nationally. You cannot do carbon capture and storage technology, which we think is important to support not only clean fossil fuels but the chemicals industry, the cement industry and so on, in every region or supported by a couple of LEPs. You need to have some national intervention there. It is not a case of one-size-fits-all.

Q309 **Chair:** I want to come on to the issue of place in a moment, but are you not arguing for a horizontal industrial approach? That is, the state has a responsibility—moral, social and economic—to upskill and educate the workforce in a good educational system, provide infrastructure across the country and make sure that workers are protected with good quality jobs? Other than that, let the market decide.

Paul Nowak: No, I do not think it is that. The support, for example, that the aerospace sector would need is very different from what would be needed to drive up productivity in social care. Government will need to



HOUSE OF COMMONS

intervene smartly in different sectors and in different ways depending on the circumstances.

It is crucial that this has the full engagement of employers, but that it involves other stakeholders as well. Our unions have played a very important role, for example, in aerospace and automotive, and in some of those other sector-based approaches. It is not just employers; it is HE, local authorities and trade unions.

Simon Walker: I am comfortable with the definition you just gave of those being the areas where the state has a responsibility. If I thought it was going to go to Mark's extreme that the state is better suited to make these decisions than the market, I would be totally opposed to it. I think we will end up with consensus around the horizontal measures, particularly the skills-based ones that we have talked about today, which our members certainly find a real problem with.

I cite the fact that Andy Haldane from the Bank of England talks about 15 million jobs being under threat over the next 20 years because of automation. It seems to me that the Government could sensibly be focusing the education system on what that is going to mean, both for people who are in education at the moment and for people who need to be reskilled.

I will look at some actual examples. If the Government were to focus on an area like steel, say Port Talbot, and were to say, "This needs reskilling in order to do something very different in the specialised steel area", we would feel that that was justified. Our anxiety about the language of industrial strategy is the fear that it will end up, as it did in the 1970s, with money pouring into industries that were doomed and that were going to collapse anyway, because they were not what this country has any comparative advantage in.

However, I think we will get to the consensus that Mariana talked about if we stick to those horizontal measures and recognise that there are things, like infrastructure and education, where it is conceded that the Government have the principal role.

Ashley Shackleton: Regarding sector-driven industrial strategy, a danger you have is capture by some of the bigger companies. That perhaps is why the aerospace and the automobile industrial strategies did well in the past.

There is also a danger of the sectors being siloed. You want the sectors to work together. There are many things that they can agree on, particularly in the energy sector. About four years ago, I went around the country with someone from BIS to help put together the oil and gas industrial strategy. I had a look at that recently, and there was some good stuff in it and a really good partnership between business and Government, but obviously that sector has changed dramatically since that industrial strategy was written. It could have been more



HOUSE OF COMMONS

forward-looking in terms of the supply chain, and how they diversify it away from the oil and gas industry to other energy sectors and different sectors across the board, as well as the skill force. How do we reskill these people into other sectors? We now have Hinkley going ahead and we have had a lot of investment in renewables. How do we get these people retrained into other energy sectors?

It is also about place. Obviously, the oil and gas sector is clustered around the north-east of Scotland in Aberdeen. There needs to be a lot of investment in the infrastructure of Aberdeen, for example in harbours, because of the new industry of decommissioning. Once again, we can learn from other sectors, such as the nuclear sector, about the decommissioning that they have done over the years. I am sure that the nuclear sector can learn from the oil and gas sector with regards to Hinkley, in terms of getting a good UK supply chain rather than relying on foreign companies.

Q310 Albert Owen: Ashley, do you think it is good that energy has come into BIS, now that it is BEIS? Do you think that is a good idea? Do you think that we will have a better industrial strategy because we can work with other Departments?

Ashley Shackleton: Yes, I do, because energy is extremely important to business. We want a low-cost, secure supply of energy. The supply chain is incredibly important, and that will help link up the supply chain to the energy operator.

Q311 Chair: I am interested in other people's comments, especially Lee's because Lee mentioned lining up Government with industrial strategy. The Department for Industrial Strategy cannot just own industrial strategy; it has to be across Government, and there is very little evidence that other Departments really take that strategic approach. What needs to happen to ensure that other Whitehall Departments see industrial strategy as their core business as well?

Mariana Mazzucato: Your question about picking winners has not been answered and it is such an important question. Can we just finish on that? Otherwise we will go back and forth.

The question is: what are we picking and who is picking? One of the biggest problems that we have is that losers are picking Government. By "losers", I do not mean particular losing companies, but losing stories about what drives innovation. To Mark's point, some of the most regressive and problematic tax policy in this country has been lobbied for by particular companies in the name of innovation. That is capture and it wastes a lot of public money. This is not just public money being invested in a particular project or company that can be problematic; it is when tax policy itself is driven by problematic stories. GSK basically lobbied through the patent box. Patents are already monopolies for 20 years. It makes no sense to target the profits generated from that



HOUSE OF COMMONS

monopoly; you want to be targeting the research that led to that patent in the first place. That is just as much an issue of capture.

What are we picking? Of course we are picking these problems. We would not have had ARM—Stephen's company—without the BBC's learning programme. Through the BBC's learning programme in the 1980s, we picked, through procurement, particular companies and ARM was picked, if that is what we mean by "picking". This was not through backroom deals with ARM. There was a mission and the BBC, a public entity, had its learning programme and ARM benefited from that. It was not just horizontal. I think we all agree, by the way, on the horizontal policies.

Steel is a sector but you do not just fund steel to remain inertial and not to invest; you do it in the German and the Belgian way. They have an energy-run programme that has forced steel to think in new ways. It has had to repurpose, reuse and recycle and lower its material contents. That is an innovative strategy, driven by this vision of lowering the carbon footprint of Germany. It was not just horizontal. It required the Fraunhofer institutes to create these science industry linkages and the KfW to provide patient long-term finance. Venture capital, by the way, does not do this: it is very exit-driven; it wants its IPO or buy-out in three to five years, which is useful for a particular moment in the innovation chain, but the lack of patient long-term finance in this country is huge.

Alex Brummer: There is the business investment bank.

Mariana Mazzucato: To be honest, though, it has not happened. It is still going through the private banking sector and it has not really taken off. Andy Haldane's big point, by the way, is mainly on that: the lack of long-termism. The cost of short-termism—and he wrote a chapter on this in a book that we have just published called *Rethinking Capitalism*—is huge. Instead of just thinking of the cost to the public sector when it invests in something, think of all the money wasted on bad tax policy. Due to not having a vision, these patchy policies in the end do not lead to much.

Q312 **Chair:** Do we have to pick winning companies? Nissan is a good example. It is a great company with fantastic innovation, and it is enormously productive. It is hugely important to the north-east economy in a really winning sector. The Government's deal a couple of weeks ago is exactly the sort of industrial strategic approach that we need in this country, is it not, Stephen?

Stephen Pattison: We do not have to pick winning companies, but we have to pick winning frameworks. Let me come back to what I think a modern strategy should look like and give you an example. The Government have just established something called the National Cyber Security Centre. It sounds rather geeky and it is spun out of GCHQ but, if it can make the UK a safe place, a safer place and the safest place to



HOUSE OF COMMONS

do cyber-business, that would be a huge competitive advantage for the UK. We should have a strategy built round this thing that says, "You guys have the best brains in GCHQ; try to sort out some of the online security". Out of that, we will try to encourage more and more businesses coming to the UK and based in the UK to develop secure IT or digital products.

It is not about picking particular companies. With all due respect to Mariana, ARM was not created out of those computers. Those computers were made by Acorn, which of course was a company that collapsed. It was out of the collapse of that company, which had been supported by the BBC, that ARM arose.

Mariana Mazzucato: Without the BBC procurement programme, would ARM be where it is today?

Stephen Pattison: The short answer is "yes". The BBC procurement programme was unable to keep Acorn alive, but it did one great thing, which was to make a lot of people very enthusiastic about computing.

Q313 **Chair:** Stephen, in terms of the history of ARM, is it about the involvement of the state in providing the procurement, funding and direction or is it just a case of Acorn collapsing and ARM rising from the ashes? Is that not just what the free market does? It is the reallocation of efficient capital into the most productive means.

Stephen Pattison: That is absolutely right. That is how ARM started.

Q314 **Chair:** Where is the state involved in that?

Stephen Pattison: In ARM's own history, we would not have got on as fast as we did had we not had access to some public funding; it was actually European Union public funding early on, which was quite important. It became less important to us later—of course it did—but early on it was quite important.

Rhian Kelly: I want to pick up on Ashley's point around sectors working together. You are absolutely right. One of the things that we saw in the last iteration of the industrial strategy was a series of sector strategies, and they had lots of common themes through them. There is a sense that they ought to be vertical, but how do we link them together so that it is not all done in isolation and they can learn from each other?

The second point you made, with which I also absolutely agree, is that it has to be about involving all sides of the business across the whole of the UK, so there has to be a stronger element of supply chains in there to make sure that we are able to do that.

Finally, to get to this point around the level of Government intervention, it is quite clear that this Government are prepared to intervene, and maybe more so than their predecessor. In many ways, given that they provide education infrastructure, they have a right to, but there is



HOUSE OF COMMONS

something about how we calibrate that intervention so that we also allow free and fair markets to develop, and we support entrepreneurs and private investments. What is the right calibration of policy? Too much intervention will be a problem. With too little intervention, we risk missing building competitive advantage.

Q315 Chair: We need a “Goldilocks” industrial strategy: not too much intervention and not too little, but we do need some intervention.

Mark Littlewood: Therein lies the problem. You people in this place cannot agree on what the appropriate temperature is, to take up Mr Fuller’s point. There is an assumed, rather heroic, optimism, in that everybody says we obviously need a long-term strategy. I guess that is obvious, but it seems hugely optimistic to think that you are going to get one.

To take one example, the coalition Government took a very different view of renewable energy from the Conservative majority Government. You can argue about who was right and who was wrong, and whether both were wrong, but that is a change in policy. You therefore have a lack of longevity and long-term planning in that sector, because there has been political change.

To your point, Chairman, about Nissan and whether it requires anything, I am still not entirely clear what undertakings, pledges or hopes were given by the Government to Nissan, but it seems to me that what they were striving for—and many sectors are striving for—is some degree of regulatory certainty. You can argue as to whether it is too hot, too cold or just right but, in planning a business, you want to know what the likely framework looks like going forward five months, five years and 10 years rather than it chopping and changing all the time. You would probably rather have a predictable, relatively high regulatory burden than a regulatory burden that is moving all over the place every six or eight months for political reasons. It seems to me that, in Nissan’s case, that is an industrial strategy to give certain undertakings of certainty about what the future looks like. Regulatory certainty would be most welcome.

Q316 Amanda Solloway: I want to go back to your point, Stephen. It struck me and it made sense in terms of where Government has an oversight. You were talking about places of safety for cyber and everything. I wonder if there is a case for Government providing that guidance. Is that what you are suggesting: instead of having a strategy, saying, “This is the guidance that we would give”?

Stephen Pattison: The short answer is yes. That is exactly right. It would not just be about security. It would also be about the things that I mentioned earlier. The Government will be giving guidance to cities to say, “If you want to improve productivity, use more digital technology” and incentivise both those cities and the companies that provide the cities’ services.



HOUSE OF COMMONS

Take lighting companies. Street lighting is a slightly niche subject, but you can save huge energy costs by having smarter street lights. Can the Government create a way of incentivising the development of smarter street lights? This is the role of a modern industrial strategy in some of the new sectors. I come back to Richard's point about why the new industries had not got as much out of Willetts' eight greats as aerospace and automotive, and this is partly the reason. It is not like the sector needs huge amounts of investment. It is not a hugely regulated sector. It does not need those things. What it does need is a bit of Government-led co-ordination and—to use an old-fashioned word—nudging to get the rest of the economy up with the programme.

Lee Hopley: We are thinking about industrial strategy as an event rather than a process, as if the next iteration of industrial strategy will be an all-singing, all-dancing answer to all our economic questions. We need to be a bit more realistic. Businesses are essentially looking for a lot more predictability and stability in the business environment, particularly in the light of the referendum decision. They want certainty about the returns that they will get on any investment in the UK and they want confidence that the UK business environment will be more competitive than some of the alternatives.

If we start from that perspective, we can start thinking about the sequencing of Government interventions or policy decisions. It is very much about infrastructure and the horizontal, building on the really good sector strategies that we have had. It is about taking our time and thinking about what the big sectoral technology capabilities of the future are and how we start to involve regions, rather than trying to do all this in the next six months. If we try to do that, and we rush this and we do not do it in a co-ordinated fashion, we will be back revisiting this in the next Parliament, and business does not want that.

Paul Kahn: I would like to pick up on Mark Littlewood's point about regulatory certainty. Long-term regulatory certainty is very important. For aerospace, EASA is the regulatory environment that we operate in. It is very important that we remain in it, and that becomes an important part of industrial strategy, because it would make a massive difference to our cost structure if we had anything different.

In terms of choosing the strategy—whether it is picking winners or not—I do not believe it is picking winners. Getting consensus around what the strategy should be for a particular sector has been relatively straightforward. It involves working very closely with the supply chain, and the supply chain benefits from that alignment around the strategy. It works very effectively, and it is much easier to build that consensus than you might imagine.

Q317 **Chair:** Is it not about picking winners? However you want to do it, whether it is individual companies, sectors or technologies, Government have finite resources and want to target investment. Therefore, they



have to choose where they allocate that resource.

Paul Kahn: By sector, yes. There is an element of it when you are choosing which sectors the nation chooses to invest in, but then, as to which companies benefit from that, it becomes competitive. We certainly see that in aerospace, where we have competitor companies working together and we are happy to benefit from the industrial strategy of the UK, as are competitors.

Q318 **Richard Fuller:** However, Airbus is huge. You are a big company and you dominate your sector. It is pretty easy for you to get a consensus and then to go to Government with a big stick to say, "You should support and pick us", whereas technology companies tend to be diverse and are all about entrepreneurship and innovation. They go with a small stick.

Paul Kahn: If you take the Aerospace Growth Partnership, wing technology is very important to the UK. We get massive export earnings from wings, as does Bombardier, which is a direct competitor to Airbus. The UK has chosen to invest in infrastructure that supports wing development. It benefits Bombardier and it benefits Airbus. GKN is a key supplier to both and it flows down the supply chain. Yes, we are large and, yes, we are important for the economy, but it is certainly open. If Boeing wanted to invest in a wing design and production facility in the UK, it could choose to benefit from that industrial strategy.

Q319 **Chair:** Mariana, I would like you to respond to that, but can I also ask another question? I am interested in Lee's point about a process. There is a lifecycle of companies, sectors and so on. I read a couple of years ago Joe Studwell's *How Asia Works* about South Korean industrial strategy. It really struck me, in terms of the chaebols, that it was not a question of the Government picking winners but of them dropping losers really quickly. How do we drop losers? When do we decide not to do things as opposed to intervening as well?

Mariana Mazzucato: We have been trying to debunk the term "picking winners" but we keep going back to its old meaning. What Stephen was talking about was picking. It was choosing something. It was not picking a company and then just backing that company; he was talking about choosing a strategy or what I would call a mission. It is a very concrete mission: to be the safest country in terms of cyber-security. You can have very clear targets around that mission—I am not a cyber-security expert, but it could be the number of times that big databases are hacked or whatever—which you can then measure every year to see whether you are getting closer to the mission or not.

The mission to the moon is interesting for two reasons. The first is that we knew when we got there—some people say that we never did but let's avoid that—and the second is that it required lots of different sectors. The mission was target-specific and it required lots of different sectors.



HOUSE OF COMMONS

There are lots of problems when we do not pick. For example, when we say, "Let's help our SMEs", we often think that every SME is entrepreneurial. Unfortunately, that is not true. Most SMEs are not very productive, innovative or entrepreneurial in terms of their ambitions. About 6% are. What kind of support does that 6% need? That is the big question and that requires picking because, if you do not, you end up wasting something like £8 billion, which is the number that Alan Hughes from the Centre for Business Research at Cambridge came out with. That is how much money we spend on SMEs. They are not under-financed. They are over-financed. Who is under-financed? The good ones.

How do you know which ones will be good? You need to set up an innovation ecosystem to allow the few that might grow to actually grow. That is where, for example, procurement policy is so important. The SBIR policy in the US was very important in allowing these small companies, which you do not know about, to grow. If you allow them to have a market creation process through procurement, their potential can be realised versus just spreading all that support thinly.

In terms of big companies, of course big companies need support. Airbus is competing with Boeing and Embraer which get huge amounts of state support. Even there, we should have conditions attached. One of the biggest problems of modern day capitalism is the extreme financialisation of large companies. The S&P 500 companies in the last 10 years have spent \$3 trillion worth in share buybacks: not reinvesting their profits back into human capital, R and D and all the things that we are talking about but just boosting their share prices. Perhaps the kind of support that we are giving to big companies should be conditional on agreements of where their big profits go in terms of reinvestment back into big innovation. That is, by the way, where Bell Labs came from. Bell Labs came from Government being quite confident and, instead of implementing these aggressive tax policies, like the patent box, saying, "AT&T, you are big. You are going to reinvest your profits into big innovation". Bell Labs came from that healthy deal, which that I refer to as a symbiotic deal, rather than a parasitic deal.

Stephen Pattison: I do not know if we will ever get rid of "picking winners" as terminology. Venture capitalists pick winners, or try to pick winners, and they lose much more often than they succeed. Sometimes they succeed really big but, mostly, they do not. I do not think Government want to get into that business at all. Instead of picking winners, rather along the lines of what Mariana said, this is more about Government looking at how they can build the essentials of a modern industrial economy.

Q320 **Chair:** That means horizontal rather than vertical, does it not?

Stephen Pattison: Yes, it does.

Mariana Mazzucato: Take Yozma in Israel, the public venture capital fund, and In-Q-Tel in the US.



Stephen Pattison: Okay, there are a couple who do that.

Mariana Mazzucato: You cannot ignore that history.

Alex Brummer: Mariana just raised Israel. I was in Israel quite recently, just a couple of weeks ago. I was in the Israeli Treasury, and I noticed right next door to the Secretary to the Treasury's office was the office of the chief scientist, and he is the guy who picks the sectors that Government money eventually gets into. That positioning of an industrial strategy right next door to the Treasury was quite interesting.

Ashley Shackleton: Regarding the question about the Government picking winning companies, first, you have to ask whether they have the capability to do that. In your example of Nissan, they can speak to Nissan and say, "What would you like?" but, once again, that is capture by one firm who are telling you the conditions that they want. You can ask Nissan the reason why they are in Sunderland. It is one of the most productive plants in the world. It is one of the most skilled workforces that they have in the world. That is the foundation for why they are in that part of the world. We need to create the right conditions. Obviously they have concerns about the UK's future relationship with the EU, but that is part of our industrial strategy. That is creating the conditions, including how open we are to international markets.

I would therefore say something about financial incentives. I agree that it does not always need to be about financial incentives; sometimes it is just about co-ordination, bringing the industry together and asking, "What are your common goals?" It is about not just financial incentives, but the regulatory environment, open markets and other things that the Government can do.

Stephen Pattison: Mariana's comments about IQT and Israel got lost, but they were very important. Those are examples of investments in fairly specialist areas. Israel took a strategic decision to develop cyber-security as a business. All the people came out of the Israeli armed forces; they were trained and set up a business, and it has been phenomenally successful. There is no reason why targeted investments of that sort could not also work in the UK. We have a body that tries to do that a bit: Innovate UK. We could all debate what we think about Innovate UK—most of us would say it is a bit patchy—but it is actually not too bad. It produces its own metrics to show that it is doing very well and its return is very high.

There is a role for that sort of investment, but I do not think that we should axe an industrial strategy solely on the Government's ability to invest more in particular companies.

Paul Nowak: I just have one thing to finish off with. We are looking at this, understandably, through the prism of those high-end, high-value-added sectors, and I will argue until the cows come home that we need smart Government intervention to support the aerospace,



automotive, chemical and creative industries and so on. However, we also have large and growing numbers of people employed in sectors like hospitality, retail and social care that we know are acting as a drag on UK productivity. We need to think about smart Government intervention in those sorts of sectors: an offer to employers and organisations that we want to create better quality employment and we want people to develop their skills, to either move within the sector or move out of the sector. We want to think about how you harness new technologies to drive up productivity in the sector. There are huge gains to be found in what we traditionally perceive to be low-skill, low-value-added sectors that will not go away: people will still be employed in hospitality and in supermarkets. There is a danger that you absent a big chunk of the UK economy by not looking at those areas as well.

Q321 Amanda Milling: A number of people have mentioned place or regions. It is a very broad question to start off with: where does place fit in industrial strategy?

Paul Kahn: We have been very supportive of place-based strategy for two reasons. One is that there can be real cross-sector benefits. Just yesterday, an advanced manufacturing and research institute was announced in north Wales with Welsh Government funding, where nuclear, automotive and aerospace are working together. That place-based approach is important, because that is where the skills, training and cross-sector benefits are going to take place.

The other benefit comes from creating clusters. There is a lot of clustering of the aerospace sector around the south-west and Bristol in particular. That is very helpful. It creates an efficient community.

Q322 Amanda Milling: Are there flaws or issues that arise from focusing on place?

Paul Kahn: We are in the business of making things that fly, and we are going to do that in places that are attractive for that investment. Clusters help and local co-operation helps. Would we move somewhere else? You then get into a much bigger investment decision and that is where competitive industrial strategies between nations or between regions would become an issue. That is not something that I would particularly comment on.

Lee Hopley: The devolution agenda is very much alive and well with the new Government, and we are seeing progress towards mayoral elections and increasing devolution of responsibility. That has to be about local growth and improving the local business environment. To some extent, devolution has to line up with whatever missions or outcomes we are looking for from industrial strategy. Again, I come back to this consistency idea. Some of that is happening. We are seeing investment in local transport projects and transport infrastructure, which improves the functioning of supply chains and improves mobility of people and the workforce.



HOUSE OF COMMONS

The issue is that not all parts of the country have the capacity and capability to move forward at the same pace as places like the midlands engine and the northern powerhouse. We have to make sure that, while we are devolving power and lining up those big city regions with an industrial strategy agenda, we are also lining up the incentives or whatever to scale up other parts of the country so that they are also taking part in this. Large bits of manufacturing, for example, are not going to be in those metro areas, so we need to make sure that they are also part of this process. Again, this is an agenda that will run for several years as we make sure that all parts of the country are getting to grips with the devolution process.

Simon Walker: We are also very supportive of the devolution agenda, but we have a degree of suspicion about place-based strategies and worries with respect to political decisions being made that are divorced from the economics of the issues. Linkages with universities and local government offerings, and a degree of competitiveness there, is an attractive idea and I think that that is something that could be facilitated on a cross-departmental basis. The Department for Communities and Local Government has a lot to offer in that regard as well. The need to work across Departments is very important.

I am a little worried by some of the rhetoric about downgrading London and the south-east. That was perhaps more prevalent under the last Government than this one, but this remains the engine of the economy and trying to downgrade it so that it matters less is something I am distinctly nervous about, while I greatly respect the way that the south-west, for example, has driven itself up.

Q323 **Chair:** On that point, Simon—and I have a vested interest in this in terms of the north-east—when you have finite resources and you have a pound of capital spend on transport, do you do it to alleviate congestion in the south-east or do you facilitate economic development in the north-east? Where would you put that money? If an industrial strategy is about the mission, and the Prime Minister said it is about making sure that no one is left behind, you would put that money in the north-east, would you not?

Simon Walker: There needs to be a balance, and there will be many occasions when, if it is going to produce a medium and long-term advantage economically, it would make sense to put it in the north-east. But do not underplay London and the south-east, which continue to drive this country internationally.

Mariana Mazzucato: In terms of the regional question, it is useful—and this might sound too academic—to better understand why certain regions ended up being full of these clusters, such as Silicon Valley. To give you another really boring example, something like 75% of tufted carpets are made in this random town called Dalton, Georgia. That is because, in the 19th century, there was a pool of labour. It was really random. Teenage girls had learnt how to make tufted bedspreads and they would give them



HOUSE OF COMMONS

to each other as presents at birthday parties. Slowly, that created a pool of very skilled labour around that area. When carpets started to be made with that technique, they went there because those initial conditions had been sparked. Today, after 100 years, it is still a hub of this carpet-making.

What can we learn from that? We might end up getting some results that we do not want. Do we actually want 75% of carpets to be made in one particular place? Was that done on purpose? Was it policy or was it the initial conditions and the feedback effects—what we call dynamic returns to scale? The positive part is: how can we catalyse through some initial condition events? Think of the whole graphene thing in Manchester. That was random, because these two Russian guys happened to be in Manchester, not Oxford. Manchester is now a hub of new thinking around graphene. How can we link the graphene area, which is a particular technology, with a bigger challenge or mission around that particular technology? Cornelia Parker, for example, is up there working with graphene in the cultural and creative arts areas.

To your point, Paul, in terms of care, social care and the demographic crisis that many Western economies are facing can surely be translated, in particular cities and regions, into areas that can benefit from social, organisational and technological innovations, but this then requires what Stephen has been talking about, which is city-led thinking about what kinds of cities and regions we want.

Sparking these initial conditions and catalytic events that then get this feedback process going, and understanding that process and embedding it in our economic policy, is very important. Again, we refer to it as dynamic returns to scale, not diminishing returns to scale, which drive almost all economic theory. It is a big point: most economic theories do not understand learning economies and dynamic returns to scale.

Paul Nowak: There have been some really positive examples of place-based approaches. The Welsh Government, in the aftermath of the 2008 financial crash, did some really good stuff with the ReAct and ProAct schemes, which were about helping to retain employment and helping employers to invest in skills at a time when they were under pressure. It throws up an issue around resources, because the Welsh Assembly, although they would obviously want more resources, have a lot more resources to throw at issues than, say, a LEP in an English sub-region.

One of the missed opportunities of the last coalition Government was the decision just to get rid of all RDAs. RDAs were not perfect, but I was the regional secretary of the TUC up in the north-east and I think One North East had a catalytic contribution to make in the region. Maybe you needed an RDA in the north-east in a way that you did not need an RDA in the south-east of England, because there were a different set of issues there and so on, which goes back to the point I was making about one size not fitting all.



HOUSE OF COMMONS

On the broader devolution point, I would just flag up two issues. First, it is no use devolving responsibilities without resources. At the moment, we have seen lots of talk about devolution in terms of responsibilities or enhanced responsibilities for local authority areas and much less about resources.

There is a danger that you entrench existing regional inequalities. We would support the Prime Minister's announcement yesterday for £2 billion to support R and D, but that is probably going to reinforce R and D spend in London and the south-east and will not be distributed equally across the country. You have to think about how you genuinely get at those regional inequalities. Parts of the country will need that support more than others.

My last point is that the withdrawal of European funding will be very important. I still live on Merseyside. Hundreds of millions of pounds' worth of European Union funding has been essential in terms of rebuilding the city's physical infrastructure. In the absence of that European funding, we will have to think about how the UK Government play a more active role in terms of redistribution of resources around the country.

Stephen Pattison: I think slightly different about some of this. In a sense, we should look for areas of the country where we can genuinely showcase what the UK could do really well. For example, and again it is all about technology, there are loads of countries in the world trying to build greenfield smart cities. Some of them work and some of them do not really work. One of the big challenges is: can you transform a 19th century city into a smart city? The UK has lots of 19th century cities. If we could pick one or two and try to turn them into smart cities, that would be a fantastic showcase and enable the UK's technology and expertise to be exported right across the world. India and China are facing that sort of problem.

The same is true with the National Health Service trusts. Find the trust that has a real interest in dementia and let us see if we can develop systems there to keep people in their homes for longer. It would create employment in terms of carers being better trained to go to their homes and use remote monitoring. I could go on.

Agriculture is another one. Use agriculture technology somewhere in the UK to showcase that you can do better productivity, better environmental sensitivity and so on and so forth.

It is the "picking winners" thing. I would not simply pick a part of the country, plonk down something new and hope that it succeeds. I would look at parts of the country and ask, "What do they need that we can actually develop real expertise in?"

Ashley Shackleton: I support what Mariana said earlier: that each place has its own ecosystem and there is a reason why it has a speciality,



HOUSE OF COMMONS

perhaps, in a certain area. That might be raw materials, being near a port or having a skilled workforce. There is a reason why that area is like it is. We do not want to just try to replicate those local conditions somewhere else in the country. We certainly do not want Whitehall having top-down criteria for investment, which would just lead to a race between different regions, trying to replicate things across the country that do not actually fit their local ecosystems.

On the devolution point, clearly the Scottish Government have levers that they can use regarding business rates, planning or infrastructure. This is going to be even more inevitable with devolution in England. You must allow local areas to control certain aspects of this industrial policy. You must place them at the heart of this.

Q324 **Amanda Milling:** Off the back of that, what happens in an area where an industry comes to an end? For instance, in my constituency, with mining, the last power station closes. How can an industrial strategy support something like that? That has kept us going for a very long time.

Ashley Shackleton: The history of this is that, when historical industries go, it is very difficult for an area. You see high levels of deprivation and low skills. There are different interventions a Government can make before they get to a complete intervention about public ownership or anything like that. It can be a loan bridge or trying to incentivise buyers to come in. There are different interventions that the Government can take before the industry comes to an end. Once it does, it is obviously extremely difficult but the Government need to look forward at how they can retrain that workforce to new industries. In the north-east of England, Nissan is quite a good example of where the workforce has been retrained in new advanced manufacturing.

Q325 **Chair:** Mariana, in respect of Amanda's question, which is really important, are there any good examples in your work and research whereby areas have deindustrialised and then regenerated into new innovative business sectors? What have been the catalysts or ingredients for success in doing so?

Mariana Mazzucato: There are two issues, and I will be quite brief because I could go on and on about them. In the case of mining, the first is to look at what those mining companies in the UK—because companies differ greatly even within sectors across the world—had been doing in order to invest in the skills of their workforce. Skills do not fall down from heaven and they do not just come from Government training programmes; they have historically been an endogenous function of business investment. The UK form of shareholder capitalism has been characterised by an increasing lack of investment by, for example, the big mining companies in the skills of their own workforce, so, when mining then falls, those workers are left behind. It is not inevitable. It does not have to be that way.



HOUSE OF COMMONS

Take steel, which I mentioned before. Steel in the UK has been very problematic, partly because it has not been part of an industrial strategy, or innovation policy, as I would call it, so it has remained quite static. Steel has then had to be bought up by Tata Steel. The Chinese are buying nuclear and the Indians are buying steel; it is not a coincidence. There is actually currently more patient finance in India and in China, because we have the short-termism problem. It sounds bad to talk about foreign takeovers, but sometimes these foreigners are nicer than our local shareholders.

Chair: We will talk about foreign takeovers in a minute.

Mariana Mazzucato: We need to get away from high-tech versus low-tech and these low-end industries that then close down because they are somehow not modern. We have rendered them not modern. Steel in Germany is very modern. It is part of their innovation policy.

Q326 **Chair:** Can I push you, Mariana? Are there any good examples of perhaps US states whereby industry has gone, the carnival has left town and they have brought in new, innovative, employment-rich sectors? What has helped them provide that?

Mariana Mazzucato: I just gave an example of steel in Germany and in Belgium.

Chair: Steel never really went away, though.

Mariana Mazzucato: Don't just take a snapshot of the picture. In some parts of the world, steel is going away, falling through the cracks and leading to the Detroit phenomenon, but ask yourself: what have particular countries and particular companies done to avoid that fate? That is the question. This whole issue, which I am sure that Paul can speak to more, of stakeholder governance structures has mattered there. It is about having trade union representatives at the table, whether they are on the boards of companies or not—let us just put that to the side for a minute—and it is about this stakeholder capitalism. It is about Government, business and trade unions together thinking about investments, not just sacrifices, not just wage cuts, but what kind of investment policies we need from the private and the public sector alike, in order to push steel into the modern era, as opposed to allowing it to stick to a static situation and again have to be bought up by a foreign company that actually has an idea of what it might do. That is the problem facing the UK.

In the US, large companies like GE and Cisco used to invest quite a bit of their profits back into production and skills. What then happened is this extreme form of financialisation, which the UK unfortunately seems to be copying—again, we have choices and let's not make that choice—and that lack of reinvestment of company profits back into not just the workforce but production and modernising production is what leads to workers



potentially being left behind when the particular sector that one might be looking at, due to globalisation forces, becomes less relevant.

Q327 Chris White: This is on the back of Amanda's question in terms of what you do about failing industries. We are perhaps confusing industrial strategy with responsiveness. We have talked about steel, for example, which is hugely important. It is a strategic industry, as are cement, concrete and all these other things. If we had had an industrial strategy 10 years ago, we would not now have to look at how we maintain our steel industry or our mining sector.

This conversation is so energised. You all have great ideas about the industrial strategy and I was wondering, first, whether you think we have one already. Do you think we need one? Do you think we should, as Richard suggests, not intervene? We are no longer in the 1960s: this is a far more competitive world that we are living in. Going back to Mark's point about industrial strategy underpinning economic strategy, is a successful growth economy fundamentally based on a strong industrial strategy? What do you think, Alex?

Alex Brummer: We get ourselves terribly worked up about the sale of things like Cadbury and the Wispa bar going to Poland, which is not really that bad in the great scheme of things. Another is Weetabix being bought by the Chinese. Well, they perhaps have to learn how to make Weetabix.

Chair: We will move on to foreign takeovers in a minute, if that is all right. That would be really helpful. I just want to stick to place for the time being, if I may.

Mark Littlewood: It is interesting, because several people have talked about the devolution agenda. The truth of the matter, I am pretty sure I am right in saying, is that we are still the most centralised state in the Western world with regards to where tax and spending power lies: overwhelmingly in Whitehall. Although I am a considerable sceptic about the levers of Government ever being pulled to achieve much of a benign effect, I do believe that the closer they are to the ground, the more likely they are to be deployed sensibly. You made a point at the outset, Chairman, about how a decision is made in Whitehall on whether to extend a road in London or to build a road in the north-east. Part of the problem is that that decision is being made in Whitehall. You need to devolve these powers in order to have more tailored policies.

Even on the question of skills, I would have thought—and I am making a presumption here—that an area with a rather non-diversified labour supply, e.g. everybody working in the coal mines, would be likely address itself with rather more alacrity to reskilling, retraining and the risk of that one particular industry going down than an area with a very diversified labour supply that was not quite at the mercy of one particular business or sector failing.



HOUSE OF COMMONS

I am not saying it solves it, but I think an awful lot of this would happen more efficiently if considerably more powers were devolved downwards. That has thus far been a trickle rather than a flood, and it still keeps us as an incredibly centralised economy.

Q328 **Chair:** Rhian, you have done a lot on place-based industrial strategy. What are the key lessons to learn?

Rhian Kelly: I want to build on that, because you are absolutely right. We have been focusing on devolution, and it is true that that has in some instances given and will give people more levers, but what is the outcome of this? Why do we care? One of the things we have been looking at is productivity, particularly in the regions, and the drivers of productivity in the regions.

We have done a bit of work this year with McKinsey, and it goes right down to the very, very local level. We found that there are three key drivers of productivity: education and skills, business leadership and infrastructure. In a world where you have a Government that, at the very highest levels, when they are talking about industrial strategy and an efficient economy, are talking about productivity, there has to be an opportunity and it has to be right to put place-based productivity together with industrial strategies.

It is possible to almost draw up a matrix, so that you can take the sector approach to justify, explain and indeed even look at interventions that not only boost the sector but also increase productivity in the location, such as the things you were talking about in north Wales. We have been doing it almost by default, and we need to be doing it by design and deliberately, so one of the checklists for whether you would make an intervention would be: does it help the sector? Yes. What does it do for productivity in the region? Does it help the region? Yes.

Paul Nowak: We need to have this conversation in the real world as well. It is great to think about devolution, taking decisions at the local level and so on. The reality is that, over the last 10 years, Liverpool has lost 70% of its Whitehall funding. Only 11% of the city's budget comes from local council tax. There is a real danger, unless you devolve resource as well as responsibilities, that you will just reinforce regional inequality if you say, "Liverpool, get on with sorting out your problems" at a time when the local authority is facing cut after cut after cut.

Q329 **Albert Owen:** On devolution, north-east Wales, for instance, where Airbus is now, has come out of the ashes of the coal industry and the steel industry being reduced in the 1980s.

I just wanted to pick up Mark's call and put a challenge to people around this table. Should we be devolving parts of the Treasury? Previous Chancellors have all talked about devolution and powerhouses in the north, but very few have said that they want to devolve power from Whitehall.



HOUSE OF COMMONS

Lee Hopley: They should in theory, but then you look at the fragmentation of local government across England. You need some of these regions to come together, work more effectively and scale up.

Q330 **Albert Owen:** Is that through local taxation?

Lee Hopley: We need to have a debate around this, around devolution of not just business rates but possibly other local taxes, which can start to encourage more of that collaboration as well as perhaps mergers of local authorities. If you were doing this from scratch, you would not draw up the economic geography of local government the way it is today. We need to think about how we move that forward if we are going to achieve good devolution that covers all parts of the country.

Q331 **Chair:** Does the fragmentation that arises from devolution not act as a drag on effectiveness and efficiency? If I am running Marks & Spencer and I have to deal with local taxation across the country in different ways, I might think, "This is ridiculous. I just want a single flat rate that gives me certainty, stability and a regulatory framework that is very clear to understand."

Lee Hopley: Predictability of the local tax and regulatory regime is as important as national certainty, but there are also potential benefits for local government and local areas in creating economies of scale when it comes to service provision.

Q332 **Chair:** I am conscious of the time. Can I move on to foreign takeovers? I am looking to you, Alex, because you started talking about this. Are we too keen to sell off our prized assets or is the fact that we are quite open just a sign of a dynamic and innovative economy?

Alex Brummer: Both are true. It is brilliant that we have a very open and free economy, and that capitalism has been allowed to operate in a very free way, but it has had very a detrimental impact on our economic security in many ways. I started before by saying that the great argument has been about Cadbury, because that is a name everybody recognises, and there were promises that were forgotten and all the rest of it. However, we should push that aside and think about the really big decisions that have been taken which have affected us.

I was just thinking on the way in here this morning about the number of companies with "British" in the name that have been sold: everything from British Plasterboard to Associated British Ports, British Oxygen, British Steel and British Energy. Many of those are involved in our economic security and infrastructure. This means that we have moved overseas the decision-making about some of the most important things to the British people.

We referred to Tata being a patient owner, but they are not a patient owner because they decided in Delhi that they were going to close down Port Talbot and some of our steel plants in the United Kingdom. We had very little advance knowledge of that decision, yet it happened and that



affected us. In the energy area, four of the big six energy companies are foreign-owned and foreign-controlled. When the German Government took the decision that they no longer wanted to be involved in nuclear, and we had commitments from RWE and Eon to invest in the Horizon nuclear plants in the UK, they dropped them like a lead balloon. We just lost it, and we had to go right back to square one and eventually come up with some other nuclear investors. We had no control over that process at all because we had allowed ownership to go overseas.

I really worry—and I raised this earlier—about the technology area. We have ARM sitting in the room with us here, and that is one of the gems of what we have been able to create in Britain in terms of technology. Every day, I see small technology companies absorbed, taken over and going overseas. The impact of that on our ability to build some high-tech leaders in this country is enormous. We saw the way the Autonomy takeover went horribly wrong, for all sorts of reasons, but the fact is that the patents that they had bought with that takeover remain in the United States; they are not here in the United Kingdom any longer. The expertise that was bought with that takeover remains in the United States.

ARM have a really nice owner, SoftBank, which is interested in technology and so on, and they have made all sorts of guarantees about staying in the United Kingdom and doing stuff in the United Kingdom—doubling the workforce and so on—but I really worry that the future development of those technologies will be applied to some of their other subsidiaries way beyond the UK and we will lose control of those technologies.

Q333 Chair: What is the answer, Alex? When the Prime Minister first came to office, she said that the Government could intervene in respect of foreign takeovers. What are the criteria?

Alex Brummer: We need to put some sand in the wheels of these takeovers. We need to look at them much more closely. The House of Commons and this Committee played a role in preventing Pfizer from taking over AstraZeneca, and I think they played a positive role in that. We put some sand in the wheels because Committees were willing to stand up, hold hearings and look into the issues.

I do not want to have a rosy, *Daily Mail* view of the past here, but if you go back to the 1970s—

Chair: The 1970s as rosy days: that is interesting from the *Daily Mail*.

Alex Brummer: I have on my desk a report from the Mergers and Monopolies Commission some time in the 1970s, where a foreign-owned company wanted to take over De La Rue, which prints the banknotes. It is a very detailed report produced by a lot of distinguished economists—the kind of people you have around this table—and it said: “We are very concerned about this takeover because, one, we are fearful of technology loss. We have a leadership in printing banknotes in the UK and we have



HOUSE OF COMMONS

the technology, the plates and the expertise of foreign markets. Secondly, it will have a detrimental effect on our balance of payments." They raised two issues: technology and economic impact. The Competition and Markets Authority or somebody else ought to be looking much more closely at these deals before they are done.

Simon Walker: I fundamentally disagree. It is a rosy *Daily Mail* view from the past. In a globalised era, we simply cannot compromise with those forces, and it has brought enormous benefits to this country over the last couple of decades to be seen to be as open to foreign investment as successive Governments have been. The sheer volume of foreign direct investment into this country has been crucial in softening the effects of the widening deficit in the balance of payments.

Alex Brummer: It has done exactly the opposite. It has made the balance of payments worse.

Q334 **Chair:** Simon, is Alex's point valid, in that strategic and capital investment decisions are made in boardrooms that are not in Britain and therefore might not have the interests of the wider British economy at heart?

Simon Walker: I do not think it is, and it is fundamentally sentimental. It is likely that they will be made on rational economic criteria. We can see that the system works; and Pfizer and AstraZeneca actually shows that. It was the shareholders in the end who rejected that one.

Alex Brummer: The arguments were heard but, in most of these cases, the arguments are not publicly heard at all. They are buried in the financial pages. Our takeover timetable rushes these things through. ARM was sold in six weeks. It went from being a great British company to being a Japanese-controlled company. That was six weeks without any major public debate. You said it benefits the balance of payments, but it does not. What we lose is command and control of our tax system. The tax that these companies reap immediately goes overseas. When Boots was sold, £80 million of tax went to Geneva within 24 hours. They moved the tax domicile. Cadbury moved the tax domicile to Zurich. The foreign income from these companies, instead of accruing to our balance of payments, accrues to the balance of payments of other countries.

Paul Nowak: It will be across the front pages: "TUC agrees with *Daily Mail* shocker".

Chair: That is exactly what I was going to say. What is your view?

Alex Brummer: Headquarters, expertise and all those people are displaced.

Paul Nowak: From the TUC's perspective, this is not about preventing foreign takeovers. We are saying that the mergers and takeovers should be better regulated, whether that is a new mergers and takeovers authority or expanding the remit of the Competition and Markets



HOUSE OF COMMONS

Authority, in terms of thinking about the long-term interests of the target company; the impact on employment, on local communities and on suppliers; how debt will be loaded onto the target company, how it will be repaid, the schedules for repayment and so on.

To the point Mariana made, we would see this as part of a broader set of issues around corporate governance reform. I was really excited when the Prime Minister talked about workers on boards at the party conference and outside 10 Downing Street. I was less excited when she got up at the CBI yesterday. This has to be about having a longer-term, more patient approach to company and organisational success than we have at the moment.

Mariana Mazzucato: The *Daily Mail* often pushes this notion of Britishness and nationalism, and I have been trying to figure out how this squares, given the prejudices one might have. As problematic as that concept might be, we should be focusing on—and it would be great if we had some front cover, page one pictures of this—what kind of capitalism we want. Whether that is through foreign companies coming and pushing a particular type of agenda or through a national company is secondary to what they are actually doing.

When Siemens, for example, won the procurement contract two years ago to make fast, modern, green trains, lots of people said, “Why didn’t we pick a British company?” even though the British company was Bombardier, which is Canadian.

Alex Brummer: Siemens has actually taken over all our British rail companies.

Mariana Mazzucato: Why did Siemens win that procurement contract? What has Siemens been doing? It has been investing. It has been part of Germany’s innovation/industrial policy. It has won so many prizes as the greenest company around the world. That is, as I said before, an endogenous effect of their private investments and public investments. In the end, what we have been talking about for the last hour is how we can think about the public side of that, at least. It is obviously private and public, but the public side of it has always been guided, in countries that have been successful at smart innovation and investment-led growth, by some sort of industrial/innovation policy that went beyond these horizontal conditions. Look at Siemens.

Look at Pfizer. When Pfizer closed its plant in Sandwich, Kent there was a big brouhaha in the media. Why did they do it? Was it because they were not getting the right kind of tax cuts or tax benefits or horizontal policies? No. They moved to a particular place in Boston, where they were benefiting from \$30 billion a year of National Institutes of Health financing, which is not sector-specific but is a big life sciences strategy and innovation policy. Companies might talk about tax, but they walk to where interesting mission-oriented, cross-sectoral—I really like Rhian’s point on the cross-sectoral issue—policies are. In the end, that is what



HOUSE OF COMMONS

we have been talking about. Going back to Britishness for the sake of Britishness, that is not the point. British capital is extremely problematic.

Alex Brummer: No, it is not Britishness. It is about what Paul was talking about. It is about short-termism. It is about the unwillingness of British companies and their boards to think in a long-term fashion. You referred to Siemens. Siemens, over a period of time, has bought up almost all the fantastic expertise in railway signalling from Invensys and right across the board in Britain, and it now controls all that. We allowed it to go and we have lost that expertise, because our boards, shareholders and institutional investors think about the short-term and the extreme financialisation that you talk about, instead of thinking in the long-term about where we could be. We could be the world's signalling experts. We could have been the people who were preventing the kind of rail disaster that happened in India in the last few days, if we had kept that expertise inside the UK.

Q335 **Richard Fuller:** We live in a great country. People want to come and work here. People want to come and study here. People want to come and invest in this country. The reason that we are so great is because we are open. Is there not a risk that you are trying to put in place impediments to that openness when, if you look at the world today, you should not reduce that openness? Your argument might have more weight if you talked about the disparity and said there was perhaps something different about the UK's rules compared with the rules of other countries. In the absence of that evidence, why would you wish to put up more barriers when openness seems to have worked?

Alex Brummer: Because other countries have very sensible rules. There is a Committee on Foreign Investment in the United States, which looks at big foreign inward investments and decides whether they are in the national interest or not.

Q336 **Richard Fuller:** It would not allow Dubai to buy their ports because they were Arab. That is hardly an industrial point. That sounds to me like blatant racism.

Alex Brummer: They have stopped Chinese companies buying into their oil industry. They have stopped Chinese technology companies buying into Silicon Valley technology. They looked at a whole series of things and said: "We ain't having it. This is part of our future. This is part of our economic security."

Mariana Mazzucato: That is not true. When Fiat recently went to buy Chrysler, which was bailed out like all the banks, Obama in one moment of confidence said, "Okay, fine, Marchionne," wearing his nice sweater, "here is Chrysler. This is the price but, in this country, you invest in hybrid engines", which Fiat does not do in Italy. Has Renzi asked Fiat in Italy to invest in hybrid technology? No. Those are the conditions that we should be asking for. If you come to this country and buy whatever, we want inward investment.



HOUSE OF COMMONS

Q337 **Richard Fuller:** Who is “we”? Is it the shareholders?

Mariana Mazzucato: The country: if the country wants smart innovation-led growth.

Q338 **Richard Fuller:** This is a transaction between people who have invested in one company and people who have invested in another company. You are bringing in this amorphous “we”. Who is “we”?

Mariana Mazzucato: These boards he is talking about. I am taking your line. I am saying that it is not about prevention. We are open, or we were open before the referendum. We want to remain as open as we were before, and the way to do that is to potentially attach conditions through these boards.

Q339 **Richard Fuller:** Does “we” mean the Government?

Mariana Mazzucato: These boards exist. These boards that he is talking about exist in the US. I am saying that, instead of them fearing the foreigners, we should think about how our innovation strategy and our industrial policy line up with these takeovers. That is actually what has happened in many countries and that is much more forward-looking.

Q340 **Chair:** The Enterprise Act 2002 puts in place public interest tests for a range of different sectors: defence, media and financial institutions. Should that be extended to other sectors?

Mariana Mazzucato: Sorry, I do not understand.

Chair: If a media company wants to take over another media company—and there could be an element of monopoly or competition—a public interest test is applied. The same is true for defence and national security reasons. Should we extend that to other parts of our economy, such as technology, research, science and innovation-based companies? What is the limit of state intervention when it comes to foreign takeover?

Alex Brummer: You are right that we have the four best research universities in Europe in the United Kingdom. Out of those universities come enormously important technologies, which we—partly the UK taxpayer and maybe the European taxpayer in some cases—have paid for, in terms of the education and creation of this intellectual property. Artificial intelligence, smart-chips, the internet of things and all of those things ought to be looked at very carefully before we allow that kind of technology to flow overseas. It may be that a very good owner will invest more in these and take them to the next stage, and that is absolutely fine. However, we ought to look at them before that actually happens.

Q341 **Chair:** Stephen, you have been at the heart of this recently. What is your view?

Stephen Pattison: I was going to make a general point before I made the SoftBank point, but I will do it the other way around since you asked



HOUSE OF COMMONS

me, and Alex knows the position well. I think he was alluding to it at the end there.

Essentially, the SoftBank acquisition of ARM will enable us to do a lot more than we were doing already. They want us to go further faster. You will have seen that SoftBank set up a \$100 billion tech fund to be based in the UK since the acquisition. This will enable us to create jobs in the UK, to drive technology in the UK, and so on and so forth. It is not one of those where we have been acquired to realise synergies, otherwise known as job cuts, from merging two companies.

Secondly, you talk about sand in the wheel. There is, of course, a bit more sand in the wheel with the undertakings that can now be enforced—we do not know quite how yet—by the Takeover Panel and possibly through the courts. We see the SoftBank acquisition of ARM as a huge opportunity for us to move right to the centre of some of the new technologies that you were talking about.

The more general point that I was going to make comes back to the industrial strategy. I am not sure whether Alex would be making such a fuss about it, but I do not think we would generally be so concerned, frankly, if the UK had more companies like ARM. It took us 25 years to become what we were. If we had an industrial strategy that would nurture the growth of tech companies like ARM, one or two being bought by SoftBank would not raise Alex's hackles as much as it does.

The challenge is then—and this is an interesting policy point—around the small companies in the tech sector that Alex was talking about. Quite a lot of small companies get a niche technology and then get gobbled up. We should ask ourselves why that is the case. I do not think that happens to the same extent in either Germany or the United States. In the United States, that is partly because small companies say, "No one is going to gobble us up until you can actually pay billions for us". We need to look at this whole question of scale-up and why it is that small companies do not choose to stay independent and why they do not have the resources, whether it is financial, managerial or technical, to feel confident about growing themselves.

Is it something about our culture? In Germany, you start a company and you want to leave it to your kids. Here, you want to leave the kids and go and play golf on a golf course every day. I do not know what it is, but that is an area where we could legitimately look at what we can do to support medium-sized companies to grow into ARMs.

Q342 **Chair:** Stephen, can I ask a question about enforcement? You have alluded to it slightly. SoftBank have pledged guarantees in respect of jobs and investment that are very welcome. What happens if they do not deliver? What happens if SoftBank say, "The world has changed since we bought this. We bought in the aftermath of Brexit but Donald Trump has been elected President, the whole world is suffering some volatility and therefore we cannot provide this." What happens then?



Stephen Pattison: The short answer is that we are not expecting that to happen. I have heard Masayoshi Son, the head of SoftBank, talk about his 20-year vision. He is not in this for the short term. Trumps can come and go, and I am pretty confident he will be there trying to turn ARM and SoftBank into the next really big global thing. Some of it is about how you read the company. What do they want to do with the company they have acquired? In this case, we can be fairly confident that they want to grow the business in much the same way that we wanted to grow the business, only faster.

The specific answer to your question is that we do not know, because this is an untested area of law. If you are asking how the assurances will be enforced by the Takeover Panel or through the courts, there is no experience of this because we are the test case, so we will see. I am not expecting this to end up in the courts. I am expecting ARM to remain a UK-headquartered global company for a very long time.

Alex Brummer: ARM is the first one under the post-Cadbury takeover rules. As you said, the courts have yet to intervene in this area, so we actually have no idea.

Q343 **Chair:** Alex, would you agree with Mariana's point that that intervention should be contingent upon the employment opportunities and the research and innovation you will provide in this country as a means of allowing takeovers?

Alex Brummer: To be fair to SoftBank, I think they did try to give those assurances. They gave them both in terms of protecting the technology and in terms of the jobs, and that is very encouraging. What is very unfortunate about many of these takeovers, however—and this also feeds into another point that was made—is that they are very financially driven. SoftBank raised a huge amount of debt to do this deal. They have since managed to pay off or reorganise some of that debt, but what if interest rates suddenly start to soar and they cannot manage that debt? We have seen that in our past. Some of those commitments will fall away very quickly. There is a risk in that.

Mariana Mazzucato: There are four big lessons, both from looking at ARM and your more general question. The first is what Stephen said regarding Japanese companies. We have studied them and there are textbook cases of the Japanese long-term growth model versus a short-term profit maximisation model—Japan versus the US—and we all know about that. In this particular instance, it really was long-term finance coming in and helping a company to actually have that 20-year growth agenda, which currently, with the speculative and short-term nature of our particular form of capitalism, ARM is not benefiting from.

Secondly, where did ARM come from? We could debate the role of the BBC. I see the BBC, Acorn and ARM story as part of a story. Again, to the point I was making before, this is not just about having generic SME policies but about asking what high-growth, innovative companies



actually require. This is not about picking that company versus that company, but choosing the frameworks that are going to provide a full ecosystem which actually allows them to scale up. Procurement policy has, across the world, been fundamental when it is combined with innovation policy. The difference between SBIR and SBRI is very much in terms of that power of procurement in the US versus here.

In terms of Pfizer and AstraZeneca, the problem is not about one company taking over another. I have written a lot about Pfizer with my colleague, Bill Lazonick, who won the HBR prize last year on this whole problem of financialisation. Pfizer is one of the most financialised companies in the world in terms of the percentage of net income that it spends on share buybacks and dividends versus other companies in the same sector. Take telecoms, as opposed to pharma. You have Huawei and Ericsson reinvesting everything, whereas Cisco is extremely financialised. Cisco buys up a lot of companies and Pfizer buys up a lot of companies. When they do, they actually end up destroying the productive capacity and the amount of R and D budget falls, and they use the whole open innovation scenario almost as a scam. They benefit from public or small biotech funding of big R, and they just make money on the financialisation end of it. That is what we should worry about. It is not the buy-out or takeover in itself; it is what kind of company is buying up our small or big companies, because it is the relationship that matters. We should pay attention to the financialised relationship, which is very much a UK problem.

Our VC here is not as long-term as some of the VC in the US, and that is also partly why some of these small tech companies end up in Silicon Valley. The form of VC matters, as does the way in which it is lined up with the stock market. Our venture capital market here is not very lined up with the UK stock market.

Lastly—because we skipped over the devolution thing in terms of the Treasury before—I do not see a problem in this country in terms of having to devolve the Treasury function for the reason that someone mentioned. Our innovation policy and industrial policy is not lined up in terms of the Treasury and BEIS. In some ways, you could say that bringing back a much more systemic view and horizontal relationship between the Treasury and Business, Innovation and Industrial Strategy is key to allowing the kinds of systemic policies that I was mentioning before to work.

Q344 Chair: I will give the final point on this session to Paul, and then I will ask a general question, if I may.

Paul Kahn: I would very much agree with the comments about the long term. Patient decision-making is much more important than the location of where that decision is being made. Corporate and company cultures come into play. When we are talking about big, strategic mergers and acquisitions, we are getting into what is very much a global business. Airbus is British, Spanish, French and German. Its headquarters are in



HOUSE OF COMMONS

Toulouse, so decisions are taken in Toulouse. The chief executive happens to be German today. The chief operating officer started off as a British apprentice—he is still British—but he works in Toulouse. The ability to move people around the world, creating a corporate culture that is more international and allows efficient, global, competitive decisions to take place, is very important. I do not think the decision-making process is that different in the Rolls-Royce boardroom from the Airbus boardroom, even though the locations of the headquarters are different.

Q345 **Chair:** Thank you very much for all your input. I am going to ask one final question, which is slightly unfair, and I am very conscious that industrial strategy at the moment can be anything that anybody wants it to be and is not an event but a process. However, in terms of helping us pull together tight, value-added recommendations for the Government, what is the one thing that you would suggest? Stephen, it is really unfortunate but I am looking at you first.

Stephen Pattison: I have barely written down the question, let alone the answer.

Chair: What is the one thing that you would recommend to us, which we can then recommend to Government?

Stephen Pattison: It is a digital industrial strategy that is based not so much on investing in tech companies, but on creating demand for tech services across the wider economy.

Ashley Shackleton: You need to start with a mission or a goal of the long-term future of this country. Then we can leverage our globally competitive sectors and regions to meet those goals.

Simon Walker: You need to focus on skills and to recognise that Britain is just profoundly undereducated in almost all these key sector areas. There will be no begrudging Government spending on that, although there will be in other areas.

Paul Kahn: I would really like to see consistent, long-term co-operative policy.

Mark Littlewood: I guess I have been a bit of a nihilist so far, so I will come up with a prosaic and practical suggestion around technology and disruptive industries. This goes to the regulatory certainty point. There is a risk—I have not enumerated it or worked out the cost—that, if you are in a disruptive sector setting up a completely new concept of a business, most likely digital or technological, you are in a twilight zone of regulatory uncertainty compared with established grandfathered industries. If you are running a hotel, you know what all the hotel regulations are. If you are running Airbnb, are you regulated as a landlord, as a hotel or as a tourist agency?

These regulatory uncertainties for new businesses pose potential existential threats; quite apart from the scale of regulation, it is the total



HOUSE OF COMMONS

uncertainty of it. I would like the Government to consider a “Department of We Do Not Know What it is Yet”, to provide some degree of rational regulatory certainty to disruptive companies that are not easily pigeonholed into current regulated sectors so that they can plan and invest over a time horizon of five or 10 years, rather than suddenly receiving a letter from a regulator that they did not even know regulated them.

Chair: You want an additional Whitehall Department. I did not think I would get that from you.

Mark Littlewood: I am pretty sure you can do this within the Business Department.

Rhian Kelly: You need a sector-led approach that is matrixed against place benefits and delivers against a long-term industrial strategy.

Lee Hopley: I would want absolute clarity about the point of industrial strategy and what success looks like, so that business understands it and all parts of the Government understand it. For me, that is the basic foundation of certainty and predictability.

Mariana Mazzucato: You need to put innovation at the heart of how we think about economic growth, and to break down the barrier between the Treasury and BEIS, so that they are working together and are much more systemic in how they work together towards that objective. That can only happen, in my opinion, through a mission-oriented way of thinking about what we are going after. That requires cross-sectoral support. You are trying to achieve additionality, getting sectors to do what they would not have done anyway, and to think about animal spirits in the business sector as being endogenously created through these mission-oriented policies, which create an exciting set of challenges.

Alex Brummer: We need to get British boardrooms thinking much more about the long term, digital and the future. As part of that process for the long term, we need to take a very close look at the way we deal with foreign takeovers in the United Kingdom, to make sure that they are in the long-term interests of British companies, British people, British workers and all the stakeholders in Britain.

Paul Nowak: I have two points. First, I would echo the point about absolute clarity. What do we want the industrial strategy to achieve? I have mentioned the key points about the quality of employment, a decarbonised economy, addressing those regional inequalities and sustained economic success, to Alex’s point.

Then a key part is that, however you go about it, there needs to be a genuine national effort put behind this. This is not just about Government and not just about employers; it is about drawing on all those stakeholders, including the trade unions, to make sure that we turn industrial strategy into a successful approach.



HOUSE OF COMMONS

Chair: Thank you very much. I think I speak on behalf of all my Committee colleagues by saying that that has been really helpful and informative. We are really grateful for your time and your input. Thank you again.