Business, Innovation and Skills Committee

Oral evidence: The Digital Economy, HC 571

Tuesday 22 March 2016

Ordered by the House of Commons to be published on 22 March 2016.

Watch the meeting

Members present: Iain Wright (Chair); Paul Blomfield; Richard Fuller; Peter Kyle; Jonathan Reynolds; Amanda Solloway; Michelle Thomson; and Chris White

Questions 478- 530

Witness: **Ed Vaizey MP**, Minister of State for Culture and the Digital Economy, Department for Culture, Media and Sport and the Department for Business, Innovation and Skills, gave evidence.

Q478 Chair: Thank you for coming. Welcome to the BIS Select Committee, I think for the first time in this Parliament. I think we all know who you are but, for the purposes of the record, could you tell us who you are and what your responsibilities are?

Mr Vaizey: My name is Ed Vaizey. I am a Minister in DCMS and BIS and I am responsible for the digital economy.

Q479 Chair: How do you think the Government are doing when it comes to the digital economy? I ask because we have taken a lot of evidence; the Federation of Small Businesses says that it would give the Government five out of 10. Where would you rate yourselves—higher or lower?

Mr Vaizey: Well, it is very kind of you to offer this opportunity, Chairman. Obviously a lot of organisations won't blow my trumpet for me, so I will have to blow my own trumpet and say I think we get a seven out of 10. Would you like me to elaborate on why I think I pass the threshold?

Q480 Chair: Why aren't you getting a nine or a 10? Where are you strong and where are the gaps that you need to address?

Mr Vaizey: I think that if you had a Minister who came in and said he, or indeed the Government, were getting 10 out of 10, you would immediately accuse them, quite rightly, of complacency. I think seven out of 10 seems about the right level, because it shows that we are doing well, but we still have lots of things we could do better.

Covering the range of what we plan to talk about, the strengths are that we are building a good digital infrastructure. I know people have strong views about that, but I happen to feel that our broadband roll-out programme is very successful, certainly against the targets we set ourselves, as is the increase in mobile coverage. Obviously there are issues, and Ofcom has published a report today about business lines, for example.

On the whole tech front—if I can put it as such—in terms of encouraging tech start-up businesses, encouraging inward investment into tech and growing businesses, I think we are very successful. We started in 2010 with initiatives such as Tech City UK and we have built on those to really make the UK one of the prime destinations, if not the prime destination in Europe, to set up a tech business, and certainly to set up businesses in, as it were, the disruptive arena—whether it is FinTech, the sharing economy or other areas.

We also do well on looking to the future, in terms of investment in things like 5G and the internet of things. Finally, we do very well on Government services for digital. I think we are seen as one of the world leaders in terms of putting Government services online and encouraging interaction. A lot of the credit should go to British citizens. We are a nation of relatively tech-savvy people, so we have, on all the stats, very high levels, for example, of e-commerce and very quick adoption of smartphones, and so on and so forth. The two combine neatly to put the UK really at the forefront of digital leadership across many different metrics.

Q481 Chair: Where do you think the Government need to improve?

Mr Vaizey: I think the Government face the same challenges that a lot of developed countries face in terms of coping with the pace of change and the way the digital economy is changing how we do business and how we interact with citizens. I think we could do more on skills—we certainly need to ramp up the skills agenda. We will no doubt talk in some detail about what the Government are already doing about skills, but we need, as much as we possibly can, not only to prepare people at school, university and college for the kind of skills they need in this new economy, but to allow people who are already in the workforce to upgrade and update their skills. That is one issue.

When I say the broadband roll-out is a success, I am not complacent, and I think as we come to the end of that programme, we are moving on to, as it were, a new phase—what I have started to call a gigabit Britain—over the next 10 years to ensure that we get the highest levels of connectivity to as many people in the country as we can. Those are probably the two areas where we need to keep pushing forward.

A third area might also be engaging the small business community. I said earlier that we are a very connected nation in terms of adoption of smartphones and e-commerce, but I still think that too many small businesses are not online or are not taking full advantage of the benefits of trading online.

Q482 Chair: I am glad you mentioned that, because there have essentially been two elements of our digital economy inquiry. One is how we encourage tech start-ups to start and then scale up, but how do you ensure that traditional businesses also adopt new technology to compete in the modern world? You haven't really mentioned that. What is the role of Government in helping traditional industries move into the digital revolution? Should it be completely laissez-faire, or do you think you should intervene as a Government to help businesses to adapt?

Mr Vaizey: Government can intervene in a number of ways. For example, we had a business voucher scheme, which was pretty successful; 55,000 businesses took advantage of it. So there is the crude physical task of getting businesses connected to fast broadband—

Q483 Chair: Fifty-five thousand businesses, with a business stock of 5.4 million.

Mr Vaizey: Exactly—it's a great start. Obviously, you have seen the Ofcom statistics that show that business connections lag behind domestic connections, so getting business parts connected, and so on, is a very big issue for us. The Ofcom report today is a useful reminder of how much more companies like Openreach need to do in terms of getting businesses connected. The business voucher scheme—which I would like to see continued and we will continue to engage with the Treasury about it—is a good example of the issue, because you do pay more for a business line. You get a better level of connectivity and better service levels, but there is a hurdle, because there is often an up-front cost of £2,000 or £3,000, which can seem prohibitive to any small business. The business voucher scheme effectively allowed businesses to get over that hurdle. You are right, Chair, to point out that it was only 55,000 businesses out of 5.5 million—I would like to see the scheme extended if we could—but it is a good example of how Government can, as it were, physically intervene.

The Government has convening power to work with organisations like the Federation of Small Businesses—putting behind their criticism of me and moving forward. We need to encourage and show the benefits to businesses of being online. That can, potentially, be quite a labour-intensive exercise. In a personal anecdote, I spoke to the town manager in my constituency of Wantage, and he made a valid point about how you almost literally have to knock door to door with businesses on the high street and demonstrate to them the opportunities that exist, because for a lot of people it seems quite daunting—trading online, where to find the right platform, and so on and so forth. But I think that if we work with organisations like the FSB, we can make that difference.

We are going to establish what I call a digital engagement council, which covers all the issues to do with digital inclusion, ranging from older people to people who are socially excluded, but it will include a strong element—one of the five elements—of small businesses. So we can and should do more.

Q484 Chair: What are the terms of reference of that council, and when will it be set up?

Mr Vaizey: We are in the process of establishing it. It should meet in the next few weeks. We have not finalised the final membership—I do not want it to be 30 people sitting around a table, because you do not get a lot of business done that way, so we will try to keep the membership relatively narrow, but hopefully cascade down from it. I want to focus on key areas where we can discuss interventions that will actually make a difference.

Part of the problem with the digital inclusion debate is that you get very bald and wide statistics that do not, to be frank, ring true. People say, “Twenty per cent. of people are digitally excluded”, but I do not think that rings true—it does not capture the nuances. Frankly, some people do not want to be online and, at the end of the day, we should not forget that every small business has the right not to be online. People can carry on running their small business in the way they want to. We will make more progress if we focus on key interventions in key sectors, one of which will be small businesses.

Q485 Chair: You mentioned earlier that you are a Minister in DCMS and in BIS. How co-ordinated is Government when it comes to the digital agenda? Is there a sense that, “Oh, Ed does digital”, so around Whitehall there is no need to think anything else?

Mr Vaizey: I do not think that Government is co-ordinated enough. Again, that is something we have to look at. I have said this before, in front of another Select Committee, but I think we need to pause, perhaps over the summer, and have a good look at how we engage digitally.

None of what I am about to say, obviously, is a criticism of my colleagues in any shape or form; it is simply an acknowledgement of how wide this agenda is and how we can try to co-ordinate it. Different Departments have different digital focuses. For example, George Freeman at the Department of Health is doing an excellent job in pushing forward digital engagement in health and in trying to accelerate the adoption of digital technologies by the NHS. Perhaps we should have a discussion about how that can be co-ordinated—maybe it does not need to be co-ordinated; maybe it is a perfect silo that needs to push forward.

Personally, for example, I feel that we should have a review of the digital landscape between BIS and DCMS. There are now a legion of different organisations focused on particular digital issues, such as data. We have Innovate UK, for example, which is working on four different areas of digital innovation. We also have Tech City UK, which has a close relationship with a range of different technology companies. We have the digital catapult, the future cities catapult and the satellite applications catapult—which is in my constituency—all of which could have a digital hat on, so I would like to see some clarity in that digital landscape.

In terms of connectivity, for example, I have the broadband roll-out, but the Department for Transport has its own scheme for getting mobile coverage on trains and the Department of Energy and Climate Change has its own scheme for smart meters. Again, there may be synergies between those projects. The Home Office has its emergency services project, which has very close links with our broadband roll-out, because the roll-out of mobile masts for consumers coincides quite closely with the roll-out of mobile masts for emergency services projects. There is a good piece of work to be done on making sure that Government have a holistic view of the different digital initiatives that each Department is taking.

Q486 Chair: That would be helped by having a strategy. When will the Government's digital strategy be published?

Mr Vaizey: The digital strategy has been drafted and is ready to go. We are looking for a slot from Downing Street. Obviously, we are affected by purdah, so we are affected by issues such as local elections and, indeed, the European referendum, which people seem to be getting quite exercised about. I imagine that it will probably be published after the European referendum, when the decks have been cleared and we can move forward. It is a good and very comprehensive strategy. To a certain extent, it addresses what I have just been talking about—for example, it will have sections on what is happening in terms of health or of transport, education or other areas. It will give a good overview of what the Government are doing in terms of digital.

Richard Fuller: Minister, I am going to ask questions about regulatory aspects of the strategy.

Mr Vaizey: There is nothing I like better than talking about regulation.

Q487 Richard Fuller: I shall ask too many questions, then. I apologise that shortly after that I will have to leave the Committee.

The Government have an overall target for reducing the regulatory burden by £10 billion. Are you confident that the Government are going to achieve that target? What is your contribution towards that?

Mr Vaizey: I don't think that DCMS itself is making a huge contribution to that target, but I certainly feel that the Government have been successful in the past. I don't have the specific figures in front of me for the amount of regulation it has reduced.

Q488 Richard Fuller: It was £10 billion under the last Government and they are trying to achieve another £10 billion.

Mr Vaizey: Well, there you go: we have done it once and we can do it again.

Q489 Richard Fuller: Okay. Specifically, as part of your digital strategy, has the potential for change in the digital economy to reduce the regulatory burden been an aspect of what you have been looking at?

Mr Vaizey: I would characterise it in a different way. One thing that the Government want to do, which is a good thing in terms of the sharing economy and how it affects Government policy, is instead of saying—as, perhaps, some other countries do—"These new companies are disrupting the old companies and therefore we must keep them at bay and perhaps put up regulatory barriers to prevent them from growing", we prefer to look at how we can adapt and change regulation to encourage these businesses to succeed. There are terrible phrases that knock about government all the time, which slightly irritate me—

although one goes with the flow, because we can't think of anything better. One of the most annoying is what is called the regulatory sandbox, which has a sort of hipster feel to it. A regulatory sandbox is meant to evoke playing in the sand. It is used most often in FinTech, where you take possible new ways of doing business in financial services and see whether you can adapt the regulations to encourage those businesses to grow.

Q490 Richard Fuller: Just to be clear: is that an approach you like? You might not like the phrase, but you like the approach?

Mr Vaizey: I don't like the phrase, but I like the approach. Peer-to-peer lending is a good example: we have introduced ISAs that you can use in the peer-to-peer lending environment. The approach is to ask what kind of things—for example, analogue regulations—are preventing you from growing a business. There is a paradox in what I have just said, too, because sometimes regulation can be helpful. For example, if you regulate crowdfunding, that might appear to be counter-intuitive: why are you imposing regulation on a new business? However, if you allow crowdfunding to come within consumer financial regulation, you give confidence to the consumer and help that sector to grow.

Q491 Richard Fuller: It is encouraging to hear you say that. I am not quite sure that extending the facility on ISAs to peer-to-peer lending is the area of regulatory impact that we have been looking at. We have looked at some examples and had some witnesses in from different sectors, so maybe I could ask you about some of those. We had Uber in with the Licensed Taxi Drivers Association. Obviously at that time, the TfL regulations had not come out with the roll-back of making people wait seven minutes for a taxi and so on. In general, are you happy—are you delighted—that TfL has rolled back on that? Is there perhaps a good reason for the Department for Transport to look at the Law Commission's reviews on taxi regulations that were published in 2014 and did not really address the issue of the impact of technology?

Mr Vaizey: I would be taking a big risk if I started opining on what another Minister's focus should be in their policy area. I would say, as a matter of principle, that we should encourage disruptive technologies but that they should, to a certain extent, fit in where appropriate. For example, if you hail an Uber cab, it will still have a minicab licence, which is appropriate, and the driver will have been CRB checked, which is also appropriate. The idea that Uber operates in a free-for-all environment is wholly wrong.

At the same time, you should not then impose analogue regulations on Uber to make it a less consumer-friendly service simply to protect an existing industry. If the new technology allows you to do something differently and gives the consumer a better experience, the mindset of the Government should be, "How do we help this business to thrive and grow to the benefit of the consumer?", rather than, "How do we stop this business because it is disrupting established industries?"

Q492 Richard Fuller: My concern about what you are saying, Minister, is that those are words. To have an impact, you have to get involved in those Departments. If you are leading the digital strategy for the Government, surely you need to embrace a discussion with the Minister at the Department for Transport about what the regulations about taxis should be. You need to have a conversation with your colleagues in DCMS. We heard from the British Hospitality Association and Airbnb about the regulations on food safety and fire safety. If the UK is going to be at the front of the digital strategy and the shared economy, you are the guy that has to take the battle with these Departments on behalf of the new level of technologies and, more importantly, with the regulators to look at new ways of regulation. Do you have the capacity, support and intent to do that?

Mr Vaizey: It is a very good challenge. It would be difficult for me to say that I did have the capacity to do that. Again, as it is an evolving landscape, it is a worthwhile point to make. Speaking on a personal level as the Minister responsible for the digital economy, we have commissioned Debbie Wosskow's report on the sharing economy. I think she gave evidence to you. We have worked with other Ministers, such as Matt Hancock, to encourage regulatory change where we see an opportunity.

There will be individual examples, such as the one you brought up, where perhaps we could do more from the digital agenda to push other Departments to be more embracive but it can be quite complicated. As I said earlier, I would not want any of my remarks to be taken in any way as criticism of my colleagues. I am merely commenting on an evolving and fast-changing landscape, and how the Government grapple with that holistically. That is worth an inquiry from your Committee. If I cannot give you a comprehensive answer, that indicates that there is room for discussion and progress.

Q493 Richard Fuller: One final question: in the session that you talked about earlier, we also heard from the ONS and the RSA. They were looking at ways of self-regulation on platform systems. That could be as broad as Amazon being a platform for retail or it could be Uber and other types of platforms for particular providers. The argument was put forward that there is tremendous scope for changing maybe not the aspects of the regulatory framework but the compliance regime.

We have regulators up the wazoo in this country. The old idea of the box-ticking official coming round every six months looks a bit arcane and, to use your word, perhaps a little analogue when you have the potential for much more regular and immediate feedback from participants in certain platform economies, and also for penalties, by excluding people from platforms. That was part of the argument that the RSA was making; this is a more democratic and effective system of compliance. In your thoughts about the digital strategy and regulation, are you thinking about those sorts of ideas—perhaps not immediately, but as a direction for us to achieve the overall target of a £10 billion reduction in regulatory burdens?

Mr Vaizey: Yes we are. I cannot necessarily give you specific examples of where we have been successful, although in the past, for example, we introduced a code of conduct for net neutrality that was very successful.

I have said for many years, as a mindset and a matter of principle, that self-regulation in this area is a profitable route for two reasons, and they are linked. One is that the landscape moves so quickly that by the time you have gone through the rigmarole of formal regulation, consultation and so on, which can be very time-consuming, you could well be out of date.

Secondly, if you work with the technology providers, you set yourself the goal of the outcome you want to see and you can reach conclusions very quickly. That is a good thing.

I would certainly be willing to explore in any area of the digital economy how self-regulation can bring quick resolutions to problems and also be effective. Going back to the analogue economy analogy, it works for things like advertising. The Advertising Standards Authority is a classic example of self-regulation that is, on the whole, very effective. I don't think we should be frightened of self-regulation. We should not see it as somehow a concession to big business. It can be very effective and much more rapid than formal regulation.

Q494 Chair: In a response to Richard, Minister, you said that the Government pursue regulatory change when they see an opportunity. You also said that the landscape moves so quickly that regulation can be obsolete after consultation and what have you takes place. You are very reactive, aren't you? You are always on the back foot, and you are always fighting the last battle. Is there any work in Government that is trying to be proactive and almost future-proof? You don't know what the next disruptive model is going to be. You don't know what the next innovative company is going to be. How do you ensure that regulation is almost technology-blind, to allow everybody to thrive, for the benefit of the customer?

Mr Vaizey: It is a very difficult issue. There are two or three points I would make in response to that. To a certain extent, yes, one is reactive. If you take our response to the sharing economy, that is reactive, but I still think it is better to be reactive than to have no reaction at all. It was a positive reaction in the sense that we were saying, "What can we do to move obstacles out of the way of the sharing economy, when so many consumers clearly are benefiting from it?" When you make that reactive point, you can, to a certain extent, begin to think about future-proofing, because you're trying to set in place principles for the sharing economy when you do not necessarily know what the next sharing economy business at scale will be.

The other thing is not to rush into formal regulation when new technologies emerge. For example, we are having a discussion with Brussels at the moment about platform regulation, and I said to the Commissioners there that I am fully supportive of their looking at platforms. It would be silly not to look at platforms when they are so dominant, but we have to take a nuanced approach. We have to understand that there are different kinds of platform. We also have to take a principled approach that we will not regulate unless we need to, so we need to identify a problem to which regulation is the solution, rather than saying, "We need to regulate this. What kind of regulation should we come up with?" In that sense, not reacting can be as important as a reaction.

Q495 Paul Blomfield: Minister, you identified in your opening remarks skills as one of the areas in which we could do more. Certainly that is something we hear all the time from employers in the digital and creative sector. What more?

Mr Vaizey: I normally start talking about skills by saying that we are not the only country wrestling with this problem. That is not me trying to dodge the question, but I do think it is important that all of us understand. Sometimes when talking about the issues that

Government must address, one gets into the mindset that this is a UK problem. It is not a UK problem; it is a problem in Europe, America and, as I said earlier, in any developed nation that is looking at this area. How do we get the kind of skills we need?

We are making progress, but it is not something that you can achieve overnight. Putting coding into the curriculum is a good start, but we still face the challenge of ensuring that we have enough qualified teachers to teach coding in a meaningful way. We need change in university and further education courses: we have a couple of reviews going on at the moment to ensure that those courses are actually producing graduates with the skills that business needs.

As a principle, the digital economy is changing the way we think about education, so it has to be much more closely aligned to business. It cannot, as it were, sit apart from business in an ivory tower. For practical reasons, for example, students need to use the latest technology to be useful when they emerge.

We are looking at apprenticeships. We are developing standards for digital apprentices and we have got three ready for delivery with some more to do. We are establishing beacon colleges: the Ada National College for Digital Skills and the Institute for Coding. We are also establishing degree apprenticeships, which goes to the point I was making earlier, where 40 employers have come together with nine universities to create apprenticeships. In effect, students, while taking their degrees at university, will be attached to an employer. There is a lot that is going on.

I was talking to a senior official yesterday about this. I think Government still feel that we need to ratchet this up. We have made some good initiatives, but there is a feeling that we need a national campaign to start embedding digital skills. I also think that, while we are putting in place conversion courses, we have been very focused on further and university education. We really need to start to focus as well on people already in the workforce.

Q496 Paul Blomfield: Without letting us into the secrets of the digital strategy that we will see in due course, could you share with us your further thoughts about ratcheting it up?

Mr Vaizey: Ratcheting up the skills agenda?

Paul Blomfield: Yes. You said a moment ago that, although you could point to an impressive array of initiatives, you felt that we needed to ratchet it up further.

Mr Vaizey: It goes back to what the Chair was probing me about, which is co-ordination across Government. I think we need the digital skills agenda to be much more high profile. Again, that is no criticism of Nick Boles, who is doing an absolutely brilliant job in pushing through apprenticeships and reforming skills. This is a national issue that we need to make much more high profile.

We need to look at some measures that we are discussing at the moment about raising the profile of individuals to lead a national challenge to drive digital skills. I should also mention the issue of women in digital. For International Women's Day, I held a symposium with some high-profile leaders in the business community. We need to do a lot more. I think that has to start at school to encourage women to take the kind of courses that will lead to careers in the digital economy.

Q497 Paul Blomfield: I think we are all pleased that you have made that point, because we explored in earlier sessions how to take breakthrough initiatives in that area.

One issue is how, in such a fast-changing sector, we anticipate developing skills needs. I can remember a discussion, not as part of this inquiry, with a major retailer who was at the cutting edge of digital retail who said, "The problem is that we are working with universities and we develop a new curriculum, but by the time we have recruited and taught people and they have come out with the skills that we talked about, it is five years on and everything has changed." How do we anticipate and keep up with the change in skills needs?

Mr Vaizey: That is a very good point. As I said earlier, the porousness between the world of education and the world of business needs to become the norm. We need very close interaction between universities, colleges and employers. We are introducing an apprenticeship levy, but I think that large employers have to regard themselves as educators as the new normal. More and more employers who have a need for digital skills are setting up their own graduate courses so that when you start with them you go through an intensive programme, with three months, six months, of getting the digital skills that business will need. It is no longer merely a matter of simply training someone to do a particular job when they join your company; it is about embedding it in the core skills that they will need as your company evolves. Again, the mindset has to change in education, but also the mindset has to change in employers. I am obviously talking about large employers who will have the resources to make this change.

Paul Blomfield: I have a couple of other questions, Chair, but I know that Peter wants to come in on the apprenticeship levy.

Peter Kyle: Do you want to go back and forth?

Paul Blomfield *indicated assent.*

Q498 Peter Kyle: Thank you. Minister, it is great to have you here and great for us to go into a different area with skills, because we usually go quite broad on the agenda. You have mentioned apprenticeships a couple of times. There is unanimity from across the House and particularly across this Committee on support for the target of 3 million apprenticeships. We have been trying to tease out the quality and exactly how it will roll out and impact on different sectors. How has the apprenticeship levy and the Government's apprenticeship target played out in the digital businesses you have spoken to?

Mr Vaizey: I have had conversations with a few digital businesses and large employers. Their main concern was whether the apprenticeship levy was duplicating their efforts. It is important to stress that most large employers will get back more from the apprenticeship levy than they pay in by training the requisite number of apprentices. Those companies that are already doing the right thing should see the money come back to them in terms of support for training apprentices. Also, in the Budget last week, which has achieved so much publicity, we announced that employers are going to receive a 10% top-up for their monthly levy contributions in England, which they can spend on apprentices. I think it will be a good thing, and I think it was much needed to make sure that those employers who perhaps were not doing the right thing were making a contribution.

Q499 Peter Kyle: Your answer is strikingly similar to other Departments' comments.

Mr Vaizey: At last!

Q500 Peter Kyle: You represent a specific subsector of business, yet your answer was very similar to that from Ministers in other areas. What is specifically beneficial to the digital economy in the apprenticeships scheme? From your answer, I would interpret that there is no difference between the needs of the digital economy and the needs of industry.

Mr Vaizey: There is no difference in the sense that every business should be employing apprentices. I went to visit local businesses, as I am sure you did during apprenticeship week. I went to Oxford Instruments, which makes large magnets for imaging and scanning, and I met a fantastic group of apprentices, but Oxford Instruments has been employing apprentices for 20 years. These are engineering apprentices. What we need to see is a step change in the number of apprentices throughout business. These apprentices are employed in a very specific sector of high-end engineering, but it will mean that they are still employable across a range of businesses.

Where I think it makes a difference in digital is where we are increasing the number of digital apprentices, but it is also driving this focus on digital apprentice standards. As I said earlier, we have 17 standards that we are working on. We have delivered three—network engineer, software developer, and digital and technology solutions professional—but we are also looking at other standards. Cyber, for example, is a huge potential growth area for the UK economy. Data analysis is another huge area. Digital marketing is an important aspect of the digital economy. It is making a difference for digital businesses by allowing us to set uniform standards for particular digital roles, which businesses can then adopt.

Q501 Peter Kyle: Let me press you a bit. The hallmark of the Government's approach to apprentices is that it is a job for life. Nobody can disagree with that. In the digital sector in particular, it seems that the creativity of the industry is incredibly important, which means that people ping around from one business to another as the innovation takes it. That doesn't seem to fit with the title "job for life". Let me ask you this again. Is there anything specific about the digital economy that might mean that apprenticeship schemes need to be tailored to that particular industry in a way that they do not in other areas?

Mr Vaizey: Yes. I don't know about this "job for life" title. I would refine it to say "employed for life", so you don't have to stay with the same employer. We are not saying that if you take an apprenticeship you have to stay with the same employer, although Oxford Instruments—the company I visited on Friday—retains people for an extraordinary length of time because it is a fantastic employer. What we are saying is that if you take a digital apprenticeship that happens to focus on cyber, you can have a job for life in the cyber industry because cyber-security is not going to go away. You obviously want to upgrade your skills throughout your life. That apprenticeship should give you the core skills that allow you to work in that sector. The cyber-security sector, although it is a digital sector, is a distinct sector with distinct digital skills needed. In the absence of this focus on apprenticeships, I don't think we would be where we are in terms of developing the standards we need for cyber apprentices.

Q502 Peter Kyle: I entered into a conversation with one of the large tech companies—a global tech company. In following up the conversation, they sent me an email, which said: "An apprenticeship is too narrow a training format to build lifelong confidence with digital technologies in the workplace. This must begin earlier than 16. In order to build the digital workforce of tomorrow, many tech companies like ours invest heavily in external digital skills training programmes in primary and secondary schools and youth groups." They feel that the apprenticeship levy, as applied to a company such as theirs, will disincentivise early years intervention and intervention at primary and secondary, which is where they need to get the skills embedded into the workforce. It will incentivise them to stop doing that and to reinvest in post-16. That is the challenge that is being represented to me quite strongly from large tech companies. Is that something that resonates with you? Do you think there is a response that your Department could advocate?

Mr Vaizey: Yes, I totally see your point, which is very valid. There is always a danger with Government interventions. It is a bit like whack-a-mole. If the Government says, "This is important," everyone flocks like lemmings and says, "Right, all of our resources are going into apprentices," and you lose sight of engaging young children in digital, which is equally important. I can certainly see where that organisation is coming from.

Peter Kyle: It wasn't Oxford Instruments, by the way.

Mr Vaizey: To use a digital metaphor, I wouldn't say it is a binary problem. I don't necessarily think it should be either/or. I still think that companies could and should invest in skills at a primary and secondary level. One thing I have challenged companies on—I've challenged the umbrella organisation techUK, and I'd like to see it make some real progress on this—is that I think too many companies work in their own silos.

I am not saying this in a disparaging way, but clearly if you're going to put x hundred thousand or million pounds into primary and secondary education, you're going to want your company branding all over it. I think that companies can work much more effectively if they work together. For example, on protecting children from adult content, we persuaded the internet service providers to come together under a campaign called "Internet Matters", which they all put money into. It has a national reach and a national focus. I think the tech companies should come together for a similar campaign in primary and secondary schools. It must be intensely frustrating for teachers, who receive a lot of material and have a lot of opportunities to engage their kids in digital skills, not to know which way to turn.

Q503 Peter Kyle: But do you see the frustration—

Mr Vaizey: I do see the frustration.

Peter Kyle: This organisation that has written to me, when it hears you say that, would say, “Well, now you are incentivising us to do what we are already dong, which is getting involved in primary and secondary education and then you are going to put a levy on us which is about post-16”.

Mr Vaizey: As I say, we think apprenticeships are a new route to skills and work, and we want to make sure that all companies are engaged in that. That is what the apprenticeship levy is about. Most companies who pay the levy will effectively get back what they pay in, particularly, I suspect, companies like the one you have been talking about, which probably already has a well-defined apprenticeship programme.

I would take with a pinch of salt the argument that they are going to give up primary and secondary engagement because they are now focusing only on apprenticeships. They should be doing both. They should be doing the right thing by employing apprentices and the right thing in terms of primary and secondary. My challenge back at them is to say, “Get out of your silo, talk to your competitor companies and start a national campaign working together more effectively to engage schools in the primary and secondary sectors. I think you are probably wasting teachers’ time and wasting money by having your own marketing initiative when you engage with primary and secondary schools. You could do more, more effectively, together”.

Q504 Peter Kyle: So what you are saying, as the Minister who represents them, is that you are not going to advocate in the Government for anything to take into account the specific nature of their business and investment in our country. You want them to fit in like every other sector of the economy and be more like the rest of the economy.

Mr Vaizey: No, not at all. I think I am saying the opposite. I advocated for them in the sense that I was the person who pushed as hard as possible to get coding put into the national curriculum. I was surprised when we won that debate, because Michael Gove was the Education Secretary at the time and I didn’t think he would get it, but he did. That was a minor miracle which I was very pleased about and we got coding into the national curriculum.

What I am saying is that I am very proud and pleased that so many companies are engaging with primary and secondary schools, but I think they could do more effectively together. The big challenge I had with protecting kids online was that we went from a position where some of the ISPs saw providing filters and education for parents as a competitive advantage—it would drive more customers to them—when I wanted them to see it as a social good and necessity. I would like to move companies who are engaging with primary and secondary schools who perhaps see it as a competitive advantage and a marketing strategy to see it as a social good and working together to have one campaign and one front door through which teachers can walk to give their kids the skills they need at an early age.

Q505 Chair: Minister, Peter makes an important point about making sure that the levy is a model that suits tech companies, and he cited a large company. What about high-growth small businesses? They will be affected by the levy too. The average wage in tech is about £50,000, which means that to be liable for the levy, you need only 60 employees. Small firms would be saying, "But the apprenticeship standards are not formulated yet in my particular business, so I will have to pay the levy but I will not get anything back in tangible learning and skills outcomes". How are you helping them?

Mr Vaizey: We are working apace. A lot of the companies that I talk to—even companies such as the visual effects companies which may be employing, say, 1,500 people, so a pretty sizable company but not in the realms of Microsoft or other companies—will be paying the levy and benefiting from it by employing apprenticeships, which they already did. I think we are moving apace in terms of introducing the standards. I think it is a good thing if the levy forces some of the small and medium-sized companies—the companies with the £x billion turnover and the 50 or 60 employee—to start employing apprentices, perhaps at an earlier stage than they would have done.

Q506 Chair: Even if the Institute for Apprenticeships had not yet formulated an apprenticeship standard for their industry?

Mr Vaizey: Even if we haven't yet formulated the standard, yes.

Q507 Paul Blomfield: May I conclude on skills with one final area of questioning? Despite the impressive array of things that you are describing and which we will no doubt go through in the foreseeable future, a number of companies are saying to us, "We have skill needs now and the only way we can fulfil those needs is by recruiting overseas workers". Given your philosophy for Government in relation to regulation—to make regulation to free up businesses to grow—do you think that applies in this area as well?

Mr Vaizey: I think it is a big challenge. I went to a tech conference the other day and, I would not presume to guess my colleagues' views on the referendum, but the only spontaneous round of applause I got when I was describing why I thought the UK tech sector was particularly successful was when I said that being part of the single market and having the opportunity to employ from a labour pool of many hundreds of millions made a difference.

I think the tech community—I am trying not to stray too far from your question—is by and large pro-remain, because they understand that if you walk into any high-end company with very high-level skills, you will effectively be walking into a kind of United Nations where you will see multiple nationalities working together. I think that that is an unequivocal benefit to the tech community. Clearly we have a very tough immigration policy outside the single European market, but again we work with organisations like Tech City, which are funded by Government but have become in effect a sounding board for Government, on issues like visas—visas for exceptional talent, the entrepreneur visa and the tier 2 visa—where they have had a great deal of influence. We work with the Home Office on identifying sectors with skills shortages and trying to ensure that companies can recruit from outside the European Union to fill those shortages, but there is absolutely no doubt in my mind that recruiting talent from outside the UK is a big issue for the tech community. They need to recruit talent from outside the UK.

Q508 Paul Blomfield: I agree with you on both points. You were talking about the need for joined-up Government, but how we will get it in this area? For example, one of the things that companies point to, which was enormously helpful, was the post-study work route for the graduates we are producing from our universities. Should you look again at opening up that route?

Mr Vaizey: We maintain a dialogue with the Home Office on measures that could improve recruitment prospects for companies. Again, without wading too deeply into the immigration debate, in my view being able to recruit for those companies is unequivocally a good thing for the UK economy. I do not think they are taking British jobs; I think we are bringing in talent that normally embeds itself here, helps to grow companies and grow the UK economy and also then provide job opportunities for British graduates as they come out of university and college.

Again, as a Minister you have to understand the challenges and policy priorities of your colleagues, and it is a policy priority of this Government to ensure that we have controlled immigration. Sometimes that can cause frustration, but I would also say that if you try to immigrate into America, for example, to do some tech jobs, you will still find it can be a cumbersome and indeed expensive process, so I would not contrast what we are doing here with perhaps an imagined open labour-market system in other countries. By and large, every country has a relatively tough immigration system.

Paul Blomfield: But in key competitive areas, Australia, Canada and the States to a significant degree are more embracing markets for those who have studied in their institutions to stay on and contribute to their economies. That was a very measured response, but I will take it as a yes.

Chris White: Good afternoon—good morning, Minister.

Mr Vaizey: It feels like the afternoon. It has been an exhausting session so far.

Q509 Chris White: Jobs growth is a very important Government policy. You began your remarks by saying that skills is not just a UK issue but an international issue. Among other questions, do you think that the Government is looking at the sector with sufficient priority? Do you think it is moving as quickly as it should?

For example, you say that you have a draft digital strategy in your back pocket. We are going to wait until post-23 June for it to see the light of day, so that is another three months before we get to look at it. When you talk about those three months, in terms of planning for schools and universities about what they are going to do about admissions for the next year, do you think that we are missing a trick? Do you think it is indicative that we really want to grab this and take advantage of it? There are 45,000 jobs; it is the fastest-growing sector in the economy. Do you think we are doing enough?

Mr Vaizey: I do. You yourself, Mr White, represent a constituency that is chock-full of games companies. We have introduced tax credits for games companies and the visual effects industry in particular, to encourage and support their growth. That is partly a response to competition from markets abroad. The date of the publication of the strategy is important, but the fact that, effectively, the strategy is written means that we are ready to go on a range of initiatives. The business of government will not stop: we will continue to push forward. To a certain extent, the strategy is a review of what the Government are already doing, as well as an announcement of new initiatives. Ensuring that standards are in place for the apprenticeships, and that kind of work, will continue. The work that Matt Hancock is doing, pressing forward on digital government, will continue and the work that Tech City is doing to encourage inward investment and work with different clusters around the country—all of that will continue. The digital strategy will be an important milestone in setting out, in what I hope is a clear way, the sheer scale of work that the Government are involved in; but it is not going to stop individual initiatives if we publish it tomorrow or in three months' time.

Q510 Chris White: You have mentioned apprenticeships in a number of your responses, and that is something I very much support. However, this sector also needs graduate mathematicians, engineers and scientists. How are our universities being persuaded that this is a real growth industry? What messages are coming out from Whitehall?

Mr Vaizey: The messages are, I think, similar across the piece, whatever level of education you look at. We are encouraging support for STEM subjects and encouraging universities and colleges to invest in them. In particular, we have maintained the science budget throughout the last five years, because of the passion for science felt by the Chancellor and, indeed, the previous and current Science Ministers. In that sense there has been a good level of investment. To echo some of the answers I gave earlier, we have a number of reviews, such as the Shadbolt review, looking at how we can make courses in universities and colleges more fit for purpose, to ensure that people come out with the skills that businesses need. We have had a pretty shocking record in computer science courses, in terms of giving people the skills they need to work in a business, as opposed to the pure academic approach to computer science. All that needs to change.

There are a number of initiatives—for example, in degree apprenticeships. Although there were only 400 degree apprentices starting last September, we got that programme up and running within about six months. We got 40 employers and nine universities on board for that programme within a period of six to nine months, so that is a pretty good example of an idea emerging and being taken forward at pace.

Q511 Chair: Minister, you mentioned the strategy a number of times. Show us a bit of leg. What is in it?

Mr Vaizey: The strategy is pretty straightforward. It has four pillars. The foundation pillar is infrastructure, so it is talking about the next stage of broadband roll-out and mobile connectivity, and also looking at how we can push forward new technologies such as 5G. The three strands that sit on top of that pillar, as it were—there are very confusing architectural metaphors here—are, first, the tech economy; how do we encourage companies to start and grow in tech? That will involve looking at issues such as fiscal measures—we obviously will not announce any fiscal measures in our digital strategy; those are for the Chancellor's Budgets.

Chair: Possibly.

Mr Vaizey: Possibly—who knows when the next Budget will be. Those kinds of measures are important, but skills, which we have talked about at length, will also be in there.

The second strand, going back to your opening remarks, Chairman, is looking at what different Departments are doing—in particular Transport and Health, and a number of others, including the Home Office and Energy—what the digital initiatives are. What are they all doing and how does it all fit together? The third strand is digital government: what the next steps are for what I think has been a pretty successful programme so far in terms of encouraging digital government.

Q512 Chair: Will it need ripping up if Britain votes for Brexit on 23 June?

Mr Vaizey: I think there may be one reference in the strategy, which I may or may not have removed to make it properly neutral, to our European presidency in 2017. That is such a loaded question, I have to say, because almost any answer I give has the potential to backfire. If I say it does not need ripping up, clearly the Brexiters will say, "Well, it doesn't matter whether we are in Europe or not", and if I say it does need ripping up they will say, "Well, he's just playing Project Fear".

Peter Kyle: Go on, take a side.

Mr Vaizey: It contains, for example, stuff about the digital single market so, yes, I think it would need ripping up if we left Europe because that would severely affect skills and opportunities for inward investment. A lot of tech companies that are thinking of investing or growing in the UK, or making the UK their European hub—that is the important point—would be thinking again. That would affect the strategy, and Brexit would obviously affect some of the opportunities that exist with the digital single market.

Q513 Jonathan Reynolds: Good morning, Minister. Thank you for your evidence so far.

It is widely recognised that there are huge opportunities for this country and for other countries around the impact of disruptive technology from the digital economy. There was a great story in the FT just a few weeks ago, about the number of jobs in Paris that Uber had created compared with other initiatives to date. My concern is that there is also a sense out there, particularly in parts of this country, that the digital economy does not operate on a level playing field with some traditional industries, and that can trigger a demand for a regulatory backlash. Do you think the Government should be doing more to ensure that there is a level playing field, or do you think that they need to do more to reassure people that that already exists?

Mr Vaizey: That is the great philosophical question that I have wrestled with since taking this job five years ago: do you level up regulation or do you level it down? You have to work, to a certain extent, on a case-by-case basis. Traditional industries are perfectly entitled to say, "We have to go through x, y and z hoops. These new arrivals are not signing up to them". You hear that often, for example from the telcos, who are saying, "Why on earth aren't companies such as Google regulated in the same way as telcos?" However, when you press them on what kind of regulation they are suffering from and what kind of regulation therefore would apply to Google they are less forthcoming.

To go back to Uber, which has become the posterchild for the disruptive economy, I would not in a month of Sundays want to see a company such as Uber operate free of regulation. I would want, as I say, to see their cars properly licensed and their drivers properly checked and, indeed, trained, but at the same time I am not going to shy away from the fact that you can hail a car on your smartphone and that driver can move around using technology in a way that they couldn't 10 years ago. If you take the comparison with a black cab, arguably the black cab has an element of competitive advantage, in the sense of perhaps being a nicer vehicle but also in the sense of having the knowledge and ability to navigate a city in a way that an Uber driver using a smartphone perhaps does not. So they can still play to their strengths, but in the individual sectors, there is always a debate to be had about levelling up and levelling down, and where you perhaps need a compromise.

Q514 Jonathan Reynolds: Do you think the Government should require a company like Airbnb to provide data to it, in order to monitor whether people are essentially using it for purposes beyond its original remit—in other words, whether people are using it as a commercial letting platform when that is not really what it is intended to be?

Mr Vaizey: I will not comment on that specific point, because I am not particularly sighted on it and I do not want to set any hares running with a headline like "Government will force internet companies to give up their data", but it is a perfectly good challenge in principle. Again, as far as I am aware, companies like Airbnb comply with the regulations of their host countries. For example, where there is a levy on hotel rooms to provide for tourism resources or cultural resources, as far as I am aware, Airbnb pays them. Again, taking specific examples, that is worth thinking about.

There is a debate: if you rent out a room through Airbnb, should you comply with the same fire regulations and so on that a hotel would have to? Again, there is a line about whether you occasionally let out your room. The Government changed the tax rules 20 years ago to allow people to rent out a room to a lodger, to encourage that to happen, without saying "Oh, by the way, you need to have a fire exit," and so on and so forth. We have always recognised that there are different levels of regulation for different kinds of services.

Q515 Jonathan Reynolds: Do you think the general debate at the minute on technology companies and taxation might harm the digital economy in the UK with that level of public criticism?

Mr Vaizey: Each company has to look at the effect that these arguments have on their brand. I read the other day that Facebook is going to start paying UK tax on its turnover in the UK. That is a good thing. It may or may not be related to rising levels of corporation tax in Ireland, which is currently its base, but in any event it is to be welcomed. We think that Google has moved a long way in terms of the tax that it is now paying. Again, that is not just a UK problem. There are tax issues throughout Europe and indeed in America itself, where these companies are notionally based, and there are huge arguments about international taxation treaties and regimes. There are also analogue or physical businesses like Starbucks that have faced the same level of criticism, but I think it is a stain more on the reputation of large businesses than on the digital economy as a whole.

Q516 Jonathan Reynolds: I certainly agree that these are issues that every country is struggling to resolve. They are not just practical; in some ways, they are philosophical too. Where is the intellectual property in something like Facebook? Should that be taxed in the same way that we seek to tax our industries here?

Finally, given that this issue is only going to grow for the UK, whether in terms of particular products, services, sectors or large companies, have you got the capacity in Government to keep track of all this—the data and the impact on the economy? Do you feel you have a strong grip on all these different disruptive technologies and what they mean for the UK? That strikes me as being quite a difficult job for any Minister.

Mr Vaizey: I would not say that I do personally, but I think we have good organisations that do. I think Tech City is an outstanding organisation. I was a Tech City sceptic in 2010 when it was set up.

Q517 Chair: Why was that?

Mr Vaizey: I thought it was picking winners. “Why are we suddenly putting money into a small cluster of businesses in Shoreditch and saying this is the future? What’s it all about?” But the way it has evolved has proved me wrong. It has become, as I said earlier, a sounding board for Government and the tech community. It has become a beacon for tech investment—it says the Government are serious about tech—and it has become very engaged with tech communities throughout the UK by identifying clusters and encouraging data collection to show what is happening with the tech economy. I think we have a pretty good handle on what is happening: where the clusters are, what the specific strengths of different clusters are, what emerging companies will probably be sustainable and survive. We have got a pretty good overview, actually.

Q518 Chair: Minister, before we let you go, I have a series of quick-fire questions, if that is okay. The first is on the co-ordination of Government policy, to make sure it is consistent, particularly with regards to the Investigatory Powers Bill—I have three key points about the IP Bill. The first is about internet connection records. Significant new powers are proposed in the Bill, in terms of what communications data could be defined as, and the Government is calling them internet connection records, or ICRs. That is not a term that industry recognises. The codes of practice state that there is no single set of data that constitutes what an ICR is. That will cause uncertainties and difficulties, and it may act as a real barrier to growth for new tech companies. How do you respond to that?

Mr Vaizey: I am going to take away the important comments of the Chairman of this Committee and find out more about it.

Q519 Chair: I suspect my other two questions will get a similar response.

You have mentioned cyber-security a number of times. Encryption, particularly end-to-end encryption, is really important to ensure that the consumer feels safeguarded on personal information, online communications and all of that. The Government stated that it is not trying to weaken, or lessen, the importance of encryption, but the Home Office has not said explicitly whether it intends the IP Bill to give it the powers to demand the removal of end-to-end encryption. Can you give us that reassurance today?

Mr Vaizey: Again, I would not want to say anything that might come back and bite me. As far as I am aware, Robert Hannigan, director of GCHQ, has made it absolutely clear that this Government is in favour of encryption. We regard encryption as being an invaluable tool to help protect consumers and businesses. We have no wish to undermine encryption.

Q520 Chair: My third question is about equipment interference. Technology companies have a legal obligation to ensure the security of their networks and services, in respect of cyber-security. However, equipment interference has the potential to create new risks of vulnerabilities for companies. Nothing in the Bill or the codes of practice relates to the importance of network integrity and cyber-security; neither is there a requirement for agencies to inform companies of vulnerabilities that may be exploited by other actors. It is important that EI does not introduce new vulnerabilities into the systems underpinning the UK's digital economy. What discussions have you had on that?

Mr Vaizey: We work together with the Cabinet Office and communication providers on telecoms resilience. We have important ongoing discussions with them to ensure the integrity of our networks. It is an ongoing, constant and evolving discussion that we place an extremely high priority on.

Q521 Chair: A couple of quick questions, if I may, Minister—

Mr Vaizey: I thought it was going to be Snapchat or Tinder—that was the last question I got asked at a conference I attended. I thought the question would be one of those. Apple or Samsung, iPhone or Galaxy—

Q522 Chair: No, we are not going to talk about that, although actually there is a point about Apple—you have also mentioned Google, Facebook, Uber and Airbnb. One of the things one thinks about the digital economy is that it would make sure that consumer choice is all-encompassing and that companies do not have a monopoly, but it has not worked like that. You can see a growing consolidation of power in single entities within sectors. Is that a problem? Should we be breaking up big companies like this?

Mr Vaizey: I would not say that we should be breaking them up, but I do think that it is an issue.

Chair: But in terms of Roosevelt in the early part of the—

Mr Vaizey: Yes, I have made that analogy myself, although again I am not going to say that I want Apple or Google broken up. What I would say is that I do think—funnily enough, what I said to the commissioner—that it is perfectly valid for the Commission to be looking at platforms regulation as part of the digital single market. There is an issue, and my personal starting point is, how do we protect the consumer? How do we ensure that I as an Apple customer can move, should I decide to become a Samsung customer? I want regulation in place that makes it as easy possible for me to move my data from one of those companies to another. I want it to be as easy as possible to leave Facebook to join whatever emerging social media company may be going. If I have spent five years on Facebook accumulating photos and posts, I want to move to a system—I am not saying this will happen overnight—where you can change your social media or technology provider as easily as you might in theory change your telephone provider.

Q523 Chair: On Government as customer, how do you bring forward innovation? How do you ensure that the digital revolution is coming? Do you buy things in respect of the internet of things? When you go away on visits, do you use Airbnb? How do you put your money where your mouth is?

Mr Vaizey: It is very difficult. If Liam Maxwell, the chief technology officer, were here, he would probably give you a fuller answer, certainly on basic procurement, which I know is not your specific question. On basic procurement, we have done a lot to encourage small businesses in the digital market place by allowing Government to procure solutions from them.

I cannot give any statistics on whether officials use Airbnb or Uber, but I certainly think that we as a Government would want to make it as easy as possible. We still have a lot of analogue procurement processes in Government on those issues. We would like to see officials and Ministers take advantage of the sharing economy opportunities.

Q524 Chair: Will that be the guidance? Are you pushing Ministers and officials to use Uber and Airbnb?

Mr Vaizey: Again, I think it is more that they should not be prevented from using Airbnb and Uber, rather than they must use them. It should be a straightforward view. If, for example, a Minister is going abroad, their private office should look not just at the hotel they might book but at Airbnb. The trouble with that, of course, is that the civil service probably has some quite long-standing contracts with travel providers who book you into hotels.

Q525 Chair: I am very interested in cluster theory, and was fascinated by your comments about your scepticism regarding Tech City. You have mentioned Tech City a number of times as a good example and initiative. You have not mentioned very often other parts of England and the UK. Part of our inquiry is to look at how you can encourage a rebalance in the economy towards digital across the UK. Do you have anything to say about that?

Mr Vaizey: I think the last spending review put about £11 million into three clusters in Sheffield, Leeds and Manchester. That was £11 million for new tech businesses. Those are business incubators, rather than clusters. We have also done that in the past in other cities. There are seven northern tech clusters that include Manchester, Leeds, Sheffield, Rotherham, Hull, Liverpool, Newcastle, Durham and Sunderland.

The Tech Nation report published by Tech City identifies a number of clusters all around the UK, and importantly focuses expertise. For example, I think Leeds-Bradford has particular expertise in health tech. Even Oxford gets in there; I don't know if Hartlepool makes it.

Chair: Not yet.

Mr Vaizey: That is a good example of where we can work with local councils and regions to encourage particular sectors.

Q526 Chair: What is the job of Government in that? It is the point again about whether it is laissez faire, allowing clusters to grow organically, or trying to help pick winners, as you said.

Mr Vaizey: Digital infrastructure should be seen in the same light as any other kind of infrastructure. Government should work with local economic partnerships and councils and have a conversation with them, potentially enabled alongside national organisations such as Tech City, which have the holistic overview about what can be done. If a particular city says, "We need a particular broadband solution or incubator solution," that is where Government can physically enable in a Budget or spending review, or as part of a growth deal.

Government can also be an enabler by working on a case-by-case basis. I have had many cases where I have worked with UKTI on inward investment proposals for particular cities and worked with them to encourage companies to invest and make their base there.

Q527 Chair: My final question is about finance. Although we are very good in this country about start-ups, we are perhaps not so good in scaling up.

Do you think we need to be doing more in terms of encouraging an ecosystem that allows tech companies to be able to scale up? If you want to grow, you go to silicon valley, don't you, rather than us.

Mr Vaizey: I was about to say that I totally agree with you, apart from the last statement, but actually I semi-agree with the last statement. I am amazed that one of you has not started a question by saying, "You have said that you are worried about setting a lot of hares running a lot of times in your evidence." I do not want to say that everyone is going to go to silicon valley to grow.

What I always say about the difference between the UK and the silicon valley is that, funnily enough, I do not think it is about skills. I think we have got a good skills base here, although as we have discussed we need more. I do not think it is about ideas or creativity; it is about capital, and there is a wall of capital in silicon valley. It is a particular kind of capital; it is the capital held by billionaires who have cashed out from large tech companies. They therefore not only have the money, but the expertise to back companies.

Q528 Chair: This is an important point, because just down the road we have got the world's biggest financial services industry. We have not got the skills, appetite or ecosystem to be able to ensure that tech can thrive and grow.

Mr Vaizey: It has changed a lot over the past 10 years. We are catching up, but we are still behind. As I said, the book to be written—I always say this as my off-the-cuff remark—is about Mark Zuckerberg and the creation of Facebook.

Q529 Chair: Or the history of the steel industry.

Mr Vaizey: Indeed. My father wrote it. A more interesting book might be about the five people who were prepared to put £100 million into Facebook when it was 12 people sitting in a small house in California. That is the phenomenon that one needs to create here, but we have more billion-pound companies than we have ever had before. Someone showed me a graph of billion-pound tech companies globally, and there are 20 or 30 in the past six months, as compared with 20 or 30 in the past two years. The rate of growth is picking up, and a lot of them are in the UK. The amount of venture capital raised by tech companies in the UK is many times higher than it was even two or three years ago.

Q530 Chair: So we do not need to do any more, is that it? Work is progressing.

Mr Vaizey: I would say two things. The first is that I have always said that you cannot legislate for this wall of capital backed by particular expertise. Government cannot do that. That is not to be complacent, because things are changing. Not a week goes by without my meeting investors who say, "We have come to the UK because the UK is the next big thing and silicon valley to a certain extent is saturated." I think a lot of this will happen by evolution.

Secondly, where I would agree with you in terms of what Government can do is that we need to look harder at the sort of tax regimes that could support scale-ups. At the moment, if you want to invest in a start-up, you have lots of incentives to do so. You can put your money in with very little risk if you are a high net-worth individual. You can either pay tax or you can invest in a start-up, and if you invest in that start-up, you are not risking a great deal if you lose that money.

We do not need to shift the incentive, but we need to look at specific incentives that can help companies that might be at the 30-to-50 employees stage to scale up. Those incentives not only need to be incentives for people to invest, but to encourage people to work with them. My understanding is that at the moment someone can invest in a start-up and get quite a significant stake in that company. They can then cash out three years later with good tax incentives in a way that someone cannot if they invest in a scale-up company that has 50 or 60 employees, because they will have a smaller stake for the same money, plus the tax benefit when they cash out is not as generous.

Chair: Minister, thank you very much for your time. We are very grateful.

Mr Vaizey: God knows what I have said that is going to get me into trouble.

Chair: Well, let's hope so.