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Transcript

Risky Business: Managing Innovation for Growth

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Chair, Imperial College Healthcare NHS Trust

28 October 2013

Richard Sykes:

... and that, of course, was the stimulus for this evening's discussion and then directly on my right is Kathryn Parsons. She's co-founder of Decoded, that's a ground-breaking digital education company and Kathryn is a true entrepreneur. Will Hutton who we're waiting for, who has just arrived this second. Will is principal of Hertford College, Oxford, and chair of the Big Innovation Centre, he's an economist and a leading intellectual. So each speaker will speak for about five or six minutes then we'll obviously open the session for discussion, so Michael would you like to start?

Michael Heseltine:

Well it's quite a challenge to take the subject of growth for national economy and deal with it in five minutes, but I only say that, stating the obvious, because one is going to skate very fast over a significant territory. We in this country have some of the best universities, some of the best companies, some wonderful traditions of innovation but, of course, if you're looking at the record of a nation you're not looking at the best, you're looking at the averages, and it is when you look at the averages that you run up against a problem. First because most of the commentators and the commentariat deal with the extremes of the situation and if you take most of the sort of subjects upon which there's a discussion, whether it's the quality of education, whether it's the performance of government, the people invited to comment or the newspapers invited to comment will broadly represent the views of the people that they are appealing to. You get a pressure group, the CBI, the Institute of Directors, whatever it is, talking about industry, you get the trade unions talking about labour, and they all have big constituencies, very important.

What they find very difficult to do is to actually analyse the problems, if those problems affect their members, adversely and tell it as it is. Let me take two glaring examples. Our education system has been the subject of criticism for 100 years and it's fallen remorselessly behind the more advanced technologies of countries like Germany and America. If you have a debate about education, we have 500 schools that are failing schools in the recent publication. Now there's only one reason you have failing schools, because you've got teachers who can't teach, and so the moment you say that you point a finger directly at teachers, particularly headteachers, and people don't like that degree of focus. If you talk about productivity, we are 20 per cent behind the Germans and the Americans. Now you can't blame Europe for that and you can't red tape and the civil servant's got a relatively small role to play in it, so pointing your finger at productivity means that you and me don't work hard enough, we don't invest enough, we don't work hard enough, we don't initiate enough. We are not as entrepreneurial as people individually, us, you, me as our competitors. Very, very unattractive message for a newspaper to put to its readers.

We have 3,600 trade associations in this country. Just think of that; 3,600 pressure groups all arguing on behalf of the slowest ship in the convoy. Why? Because all their members will criticize if any of those organizations point the finger in as opposed point the fingers out. So it's all about defending standards which are not good enough. If you look at the pressure groups of the private sector, CBI, Institute of Directors, Federation of Small Businesses, Chambers of Commerce, Engineering Employers' Federation, warring tribes all trying to get their particular story over, not cooperating, no, don't cooperate, up against every other country has got a really effective small business entrepreneurial government-backed financed support system. This country we don't.

Tiny examples, but when I came to write my report the dominating thought that came through time and time again, which as a person who believes in the right of politics, and by the right I mean the right wing of politics, I actually believe in competition, choice, initiative, experimentation, a degree of challenge. But this country is run from London on a functional monopolistic basis. Initiative in very large areas is constrained by the techniques of Whitehall. You only have to think of Whitehall; housing department, transport department, education department, health department, you name it, where is Manchester's department? Well Manchester's department doesn't exist. What you've got are functional monopolies looking down a chain to the machine that reflects that monopoly. If it's transport it's the county surveyor, it's education it's the chief education officer. Where is somebody sitting talking about the problems and the challenges and a SWOT analysis for Liverpool, Leeds, Manchester, Birmingham, you name it? Because that's where Britain came from.

Of course London played a role, but in no way did London create this country, it was created by the buccaneers of the 18th to 19th century taking advantage of the first mover advantage of the industrial revolution. Not the nicest people in the world, but the entrepreneurial pacemakers of the world of that time. They have been replaced by councillors who have a perfectly legitimate social obligation and they do it often to the best of their abilities, but it's not entrepreneurial, it is about social under-provision and the equality of that provision. So the more you like the more you realize that, unlike any other country, we are amateurs in the race for economic success and my own view, quite clearly, is that we need a peasant's revolt to put it in a sentence. We need the great entrepreneurial centres of this country to stamp their feet and say we won't put up with this domination where everything is organized for us, all the money is constrained, the ring-fenced grants, the circulars from Whitehall, you name it, we want a much bigger say in the way this country is designed to reflect what we know to be the problems on the ground. Now I'm going to stop there.

Richard Sykes:

Thank you Michael. Right Will, do we need a peasant's revolt?

Will Hutton:

We need that certainly, but I was just thinking about innovation and a second or two - I know that Michael agrees with this, and I guess the whole panel does, but I mean the country's in a real corner. We don't have a captive markets empire, pure preference helped us in the 1930s. We don't have North Sea oil, it's run out or it's running out. We can't have a generation-long credit boom to kind of make sure demand runs well ahead of both productivity and nominal GDP. I think we're actually just enjoying the last property boom in zone one and zone two and some other parts of the country. There are 3,000 postal districts, only 300 of them are property prices going up by 10 per cent over year on year. In large parts of the country they're still stagnant. I think the only way out of where we are is to innovate and invest, and actually I've known Michael most of my career and there's a few honourable politicians like him who have consistently made this point that the country has a dysfunctional investment and innovation system, and we still do, and it's more acute now in many respects than it was even the 1980s when we used to talk.

I think there are two or three things I'd point to. I think that the first thing is that innovation is, of course, about any embrace of the new, it's being an insurgent, it's challenging incumbents, it's about being able to combine things that are there to make something that wasn't there before. There's a lot of serendipity and accident in it, a lot of animal spirits in it, but I think you can say two things about what are likely to be the circumstances in which you get more of this rather than less. The first is I think you have to have firms that are kind of porous to the outside, not just in the sense of knowing that they don't know all the answers themselves in a highly complicated world where making scientific technological mistakes is terribly easy. It's kind of more than that actually, they so take that to their bosom that actually they are challenging and setting challenges constantly to their collaborators and their supply chains about how they can move their business model forward.

It's a kind of frame of mind and it's a frame of mind I think that comes with a deep understanding of what your purpose is as a firm, and one of the things that I think that's happened in the last 30 years in both Britain and to a lesser extent America, where actually you think it should be the other way round but actually show their value maximization and financialization, prioritizing share buybacks and dividend distributions over that, spending that money on investment and innovation is more acute in Britain than it is in the United States. That's partly because of the way remuneration is structured, directing so many people's remuneration to the share price and all that flows from that, and I think that we need actually to think about changing company law so that actually incorporation can only take place and all the privileges of limited liability can only happen if you incorporate around a declared business purpose, and your fiduciary obligation as a director and as a shareholder in that firm is more broadly defined than actually narrowly financial, but actually the broad prosecution of that business purpose, and business purpose with which if you were to stay in business is going to require you to innovate and invest. I think it's a very simple thing to do and I think it would transform actually the dynamic of quoted companies and indeed family firms that are actually hoping to exist in the markets, and to actually put purpose would actually remoralize our capitalism and it would actually give a big, big incentive to invest and innovate rather than actually think about exit takeover, the next deal as actually the fundamental business strategy.

That takes place within an innovation ecosystem, people in a world of kind of theorizing about having been talking about ecosystems for a generation, but the kind of innovation ecosystem that was right for the 1950s, 1960s, 1970s is different again in the era of digitalization and when actually the pace of business model change and actually what's possible to do in the world of things as well as the world of services is so very different. I think we have to develop a financial system that will support, bank and invest in intangible assets. I think we have to develop an intellectual property regime where actually the incentives are to share a licence rather wholly to own. I think we have to develop a much better porosity between universities and the business community. I think these new catapults, I've just joined the board of one actually, the Satellite Applications Catapult, which are about technology transfer need to be really scaled up and be kind of open innovation catalysts in a way that the Fraunhofers are in Germany. I think we need a banking system that actually is backed too by the central bank in a way that permits it to have a much wider class of assets which it knows it can take to the central bank to be rediscounted for cash if and when the banking system gets into trouble.

Importantly, and probably the most important thing said in the last 12 months is that Mark Carney intends to do just that sort of bringing the Bank of England over 100 years into line with the US Federal Reserve, the Bank of Japan, indeed actually the European Central Bank which is just carrying forward the old habits of the Bundesbank. I think there has to be a really aggressive competition policy, we don't really get it. It's amazing in this discussion about the energy companies that nobody, as far as I know, has called for a competition inquiry, unbelievable really when it's actually obviously about incumbents and dysfunctional business models and a dysfunctional structure. To think about how to design markets, so they have a propensity to innovate and invest within them, and if you get that with the state actually catalysing - and Mariana will talk to this much better than me - catalysing, giving grants where necessary, socializing risk where necessary, you will actually have an ecosystem that will support kind of these new kind of innovative corporate structures I think we have to have.

Of course, the last thing is that innovators want to change the world. I'm always very struck actually when I spend time in either the west or east coast around Boston or around California that these people, their value system is of course they want to be part of the team that's going to be part of the team that's going to be part of the next initial public offering that's going to make them very, very rich. They always think about scale and, by the way, that's an important reason to sustain our membership of the European Union and to think harder about deepening the single market rather than withdrawing from the European Union. They think about scale but they also think about the team they're in, and they also think the degree to which they're going to make a difference. There's a whole kind of start-up kind of culture that infects everything from large companies right through to people doing their doctorate or their postdoc and it just doesn't exist to the degree it should do in Britain, and we have to recognize that and recognize that actually that's what people want to do: innovate, then they also want to make some money and actually I think that we have to differentiate – this is my very last point - between money that's made from genuine value generation and money that's made actually from distributing value.

British business is far too much accented around prioritizing distributing pre-existing kind of rents and similar profits from an incumbent licence and not actually being a challenge or doing general risk taking. Too much capital, whether it's in the Sercos, the Capitas, whether it's in the banks, whether it's the big pharma, wherever you look to find capital deployed in Britain it's actually deployed to be a rentier and not actually to take genuine risk and then the people in charge of these rentier companies pay themselves as though they were taking genuine risk, so alongside Michael's kind of peasant revolt I want a revolt of the innovators.

Richard Sykes:

Okay, thank you Will. Mariana?

Mariana Mazzucato:

Right, so I mean what I find interesting often in these discussions is that even though I agree with the individual policy, so the catapult centres, I have nothing against them obviously, the apprenticeships, very good programme, the SBRI (Small Business Research Initiative) programme which in this country has tried to imitate the US SBIR (Small Business Innovation Research) programme which is trying to provide early stage financing for companies mainly through procurement. The problem is that the framework through which these policies are being both thought about and implemented is really very narrow, and unless we have a discussion both on the framework of the policies, but also what we even mean by things like public–private partnerships in an ecosystem, what kind of ecosystem? What kind of indicators do we actually have on whether the ecosystems that we're building are really symbiotic ecosystems - if you know anything about biology this is the first thing they differentiate with ecosystems; symbiotic or pericytic, are we in that predator–prey type of ecosystem? And, without being too accusatory, the point is that only if you have a framework through which you really understand how and why an ecosystem is important, what role the public sector has not just in fixing markets but actually actively designing, as Will was saying, but shaping and creating markets then actually lots of the details of these policies including the catapult centres, including these different problems around technology transfer get it wrong.

Okay, so first though, I wanted to say that the reason I think we're here and the reason why Heseltine's report was so important and was given the attention that it rightly got was because after the financial crisis we became really aware just how problematic the situation was where financial intermediation completely outpaced the growth of sort of the productive economy, the real economy. And if you're interested in graphs that show this really well I suggest you look at Andy Howden's work, it's probably the most lucid, if you want, rendition of that problem. Now the problem though is that then this industrial policy, innovation policy, entrepreneurship policy, the way it's been positioned, sort of big bad finance, bad hedge funds, credit default swaps, derivatives versus great real economy, right.

So we have a life science of strategy, for example, that's going to try to nurture this real industry, a productive industry and innovative industry versus this terrible finance, and the problem is that the real economy, including the life sciences industry, including also what's happening in IT, is just as sick as the financial sector and until we fix that sickness we're actually setting up the next bubble. Because a healthy finance, and all this now concentration on getting finance to be healthy again while leaving the real economy as sick as it is, is the perfect recipe for the next casino. And measures of that sickness, I mean some of this Will just mentioned, just look at things like different proxies that we have for how financialized the real economy is. Companies like Amgen, I actually have data on these companies over the last 30 years, have actually spent in the last decade more on share buybacks than on our MD except in one year. This is the case of that particular company, but it's just as true for most of the big pharma companies. And Cisco basically also went down that route since the early 2000s.

So these are not companies like the equivalents of the Xerox PARCs and the Bell Labs of the 1960s that were investing a large portion of their profits back into these long run growth areas, call it human capital, R&D (research and development) or whatever. So that's a real sickness which, unfortunately, to be honest has not been at the core of rethinking innovation and industrial policy, and until it is that's basically what we're going to be doing; we're going to be throwing money at different industries that are very sick as opposed to reforming them. But first of all, I'm actually quite tired of talking about innovation because innovation to me is just one of the reasons why – well, put it this way, I'm very interested in capitalism as a dynamic system and very few people have actually written about capitalism as a dynamic system. If you read [Karl] Marx he did describe capitalism as incredibly creative and throwing down walls, but so did [Joseph] Schumpeter and what's fascinating is that neoclassical economics still today, the economics that people study and micro and macro is very static, so we still talk about representative agents, we still assume Gaussian distributions of variables and ignore these big fat tails even though the stock prices we've come to admit that.

But innovation occurs in massive clusters which actually means that it is not a random walk, it is not identically an independently distributed over time, and yet many of the assumptions we apply in both the quants and the theory in economics completely ignores that. But then the point is what is it that we actually then mean by setting up these ecosystems? What does it mean to economic theory that the theory of the firm, the theory of competition and the problem I've been sort of highlighting, and I use innovation as a route in but it's not an end in itself, right, is that what we basically had in this real economy, that I just said is sick, is the same problem we have in the banks, which is we've socialized the risks but privatized the rewards, which again people like Andy Howden have said about the financial sector. Now what I mean by socializing the risk is actually really understanding then what it is that the public sector has played.

Over the history of capitalism, it hasn't just derisked the private sector in these ecosystems, it's actually taken on risk in a really courageous way, and that's why I called the book *The Entrepreneurial State*, and you only see this really when you look at countries that actually have grown through innovation, there's very few countries. So this is not the state all over the world but if you look at places like Singapore, Korea, Finland, Denmark, Germany, China today - I definitely want to talk to Will about China, because I disagreed a bit with your article in *The Observer* and how you categorized China - these are countries where the state has actually played a leading role in terms of really welcoming and taking on the real sort of risk and uncertainty, which is in fact of the basis of capitalism. So feudalism, 500 years of inertia, capitalism based on this change which again both Marx and Schumpeter talked about often the lead agent and actually sort of catalysing that radical change – which doesn't mean just radical innovation, lots of this sort of radical stuff occurs also through incremental changes – has actually been through the state. So the examples I usually give are both the iPhone or every single technology that makes it a revolutionary in Smartphone, all the technologies behind it like the internet, GPS, touch screen display, and even this new Siri voice-activated system it's all government funded.

So then you do need someone like Steve Jobs or the venture capitalist to come in and sort of rearrange things in different ways. But what they're doing basically is surfing a massive wave of state investments which are not justified just through our usual frameworking economics, which is the state coming in and just fixing some sort of market failure. The market failure perspective would, for example, justify why you need the state to fund basic research. Basic research is a public good, it's really hard to appropriate so the state needs to do that. Almost everyone agrees with that. What they don't realize is that what the state did behind all those technologies, as well as behind most of the new molecular entities which have priority rating, right, so the really radical new drugs, is fund both the basic research, the applied research and even provide this early stage risk finance, which increasingly VC (Venture Capital) is not providing, right, they want their returns in three years, they focus on the exit, they're mainly entering after this really high risk stage.

So once you see those examples, and I focus a big part of the book on telling those examples, you start asking well hold on, I took a finance class once and there was this risk/reward relationship, that's the first thing you learn, risks and returns, where's the return? And how economists have thought about the return is basically through tax, right, so these companies which then make billions, yes fine, through these government funded technologies we'll pay back tax. Well they don't. Right? Apple, Amazon, Google, Google's algorithm was funded by the state, the National Science Foundation today is a massive crisis because of all the pressure there is on cutting these government budgets. So the companies themselves find legal ways not to pay back the tax, but also taxes have evolved over time actually through a story about innovation. So capital gains tax was actually quite high, it was about 40 per cent in the mid-1970s, after just eight years of the National Venture Capital Association lobbying government saying where are the risk takers, reduce our tax because we're the big entrepreneurs, it went down to 20 per cent, this is just in 1981, it was already 20 per cent, and since then it's been falling through a story about we are the risk takers.

So part of this rebalancing that I've been arguing for, let's rebalance the story we tell about innovation, so if we are then going to be reducing all these taxes and think about even things like R&D tax credits, and the Patent Box which the latest estimation is it's going to hurt the budget by £9 billion over the next five years, there's no evidence that any of those tax reductions actually incentivize innovation and investment, they simply basically increase inequality. And so the socialization of risk and privatization of reward in the real economy just like in a financial economy has in fact massively increased inequality. And lastly, and then I'll shut up because I'm probably over, is the other thing, so what I argue there is we need a more direct way for government to get back that reward, perhaps even retaining equity. This is something very common in places like Scandinavia. But the other thing is that these ecosystems, we need to be putting more pressure on the private sector to actually step up to the game, and so you have the American Energy Industry Council with these six CEOs, including Bill Gates, asking the government to put in money today in cleantech and where are they putting their money? Mainly in these share buybacks. So they've spent $300 billion over the last ten years on share buybacks, the key seven companies in this Energy Industrial Council and they're asking government to spend $16 billion through this new RPE (respiratory protective equipment) programme, and I find that problematic. So on the one hand, yes, the state, this entrepreneurialism, these great things we haven't had a framework to talk about because we just talk about us fixing markets, on the other hand the last thing we want to do is just ask the state to do more and more without putting pressure on these companies to increase their own commitment.

Richard Sykes:

Thank you, Kathryn.

Kathryn Parsons:

I think I'm representing the optimistic peasants revolting here. I'm an entrepreneur and a woman, and I'll get onto that topic in a minute, but definitely we are a very, very vision and values-led business. We're very optimistic, I think you need to be as an entrepreneur, and we really do believe that we're kind of changing the world and it is something that you do see a lot more of in Silicon Valley. But just a little bit about Decoded and the work that we're doing; we were nominated one of the top five most innovative businesses in the UK but we had no idea that we were being innovative while we were doing it, we just thought we had no processes. I think that might be another word for innovation. But Decoded, essentially we started with a mission actually; could you take anyone and everyone and teach them how to code in a single day. A totally kind of mad thing and we never even dreamt that we could go and ask someone for money or investment for that kind of an outlandish claim, an overstatement that we'd like to over-deliver against. I'd actually set up my first business in 2007, and this was just something that was just a kind of burning ambition, we put all our kind of time, money, energy into it to deliver against it.

To cut a long story short, I mean we really started up because my background was creative and I saw that the distance between the people who actually create and the people with the ideas was just getting bigger and bigger and bigger. There was a huge digital divide between the makers, the people who have the knowledge and the people who had the ideas, but actually we should have kind of guessed that that was a bigger issue than just the creative industry alone but, if we're totally honest, we didn't and it just kind of evolved to us over time. So it's been two and a half, three years, we've had anyone from the boards of FTSE 100 CEOs right through to start-ups, beekeepers, investors, people who've taken a few years out of work, especially women who've been told you'll never catch up, it's all changed. What we really noticed was this skills gap, this area of fear about technology and all the smoke and mirrors, there's a universal gap and that's got bigger and bigger and bigger, and in the last two and a half years we probably talk kind of 4,500 people, and I can definitely call us a global business. In two months alone we will have been teaching in Dubai, in a castle in France which I quite like, San Francisco, Atlanta, Shanghai, Singapore, there's a kind of real global need for these skills.

But there are three quite interesting things going back about how it came about. We didn't have a plan; a lot of people talk about business plans, I certainly never studied any kind of innovation academics really about it, we just had a bit of a mission, and we definitely didn't have any investment either and I think the landscape's changed quite a lot in the last two and a half years alone, we were an East London based business, see a lot of really exciting stuff coming out of there at the moment. We've had a lot of exposure since we launched. I think another surprising thing is that our marketing budget, needs must, was £27 and has been since we launched. We're an entirely word of mouth grown evangelistic kind of business, but it was because we had to be lean. We were a self-funding entity and we still are, and we never went out to set up an education business, we actually went out to set up a transformation business.

There's a lot that's bad about education, we all have some bad memories of education and what we wanted was to create something that really kind of changed people. But we've just launched CodeEd because the problem is really, really deep. Children aren't being taught these skills in school. What sits under a computing curriculum, although it has actually and it does look really good now, computers don't sit within a computing room any more, I mean that's the point that they're part of our lives. But there is no talent pipeline at the moment when it comes to digital literacy and skills in the UK, because no one is being taught these skills, which is also the reason that no one should be ashamed that they don't understand technology, but we do need to empower teachers to bring their subjects alive through technology in the classroom.

Just a few things that I've noticed about kind of innovation along the way is I actually suffer from the problem I'm trying to solve. I can't hire the skills, I find it very hard to hire the skills that I need within my business. They're really expensive. I'm looking for a hybrid between IQ, EQ (emotional quotient) and something we call TQ (time quotient), and believe you me it is a global hunt for that talent, and we're looking in universities all round the world for people who can not only teach digital skills from data cyber security but are brilliant and eloquent communicators, very very tough. And it's not just me suffering from that issue, I'll definitely tell you that.

Investment, I think the landscape's changing in terms of investment in start-up but I mean it is nothing compared to America at the moment. I know people who hop on planes after they've had a few months of just dud new things in the UK and they come back with investments. So what's going on? Where's that leap of faith? And number three, the USA versus the UK. There's a kind of saying going round East London that the UK's become a bit of an incubator, make all your mistakes here and then you go to the US. I mean is that what's happening? And number four, innovation. I used to groan actually if someone called like an innovation director would come and try and kind of engage with us because usually they were a lone agent within their company, never given any budgets, it was really kind of we'll put innovation in the corner. That has changed and I'm definitely seeing that amongst our clients, and we are teaching 450 different kinds of businesses. Innovation seems to be becoming a much more central thing I think, really it's people are wondering how can we bring this into the heart of our businesses and it's very, very exciting to see that, and they want to learn about the kind of start-up culture and how they kind of borrow little bits of that I think.

But also women. Innovation is not just – if you're going to invest in innovation invest in women, because they're using products, they're using digital products, but yet a lot of this stuff is being built and created by men. I met an investor in the last few weeks, he said he never has and never would invest in a woman except the fact that it was just kind of trendy thing at the moment to be a woman in business, and there's a start-up incubator that only four per cent of its investments last year were made in female-led businesses. So if we're going to invest in innovation we need to invest in women.