HOUSE OF COMMONS

Treasury Committee

Oral evidence: Autumn Statement 2016, HC 837

Tuesday 13 December 2016

Ordered by the House of Commons to be published on 15 December 2016.

Watch the meeting

Members present: Mr Andrew Tyrie (Chair); Helen Goodman; Stephen Hammond; George Kerevan; Kit Malthouse; Mr Jacob Rees-Mogg; Wes Streeting

Questions 404 - 479

Witnesses

I: Alexander Jan, Director, City Economics, Arup; Professor Jim Hall, Professor of Climate and Environmental Risks, and Director of the Environmental Change Institute, University of Oxford; Andrew Rose, Chief Executive, Global Infrastructure Investor Association; and Richard Threlfall, Partner and Head of Infrastructure, Building and Construction, KPMG UK.

Examination of witnesses

Alexander Jan, Professor Jim Hall, Andrew Rose and Richard Threlfall.

Q404 **Chair:** Thank you very much for coming to give evidence to us this morning. The Government have a high-profile programme of infrastructure projects under way. They have also created a National Infrastructure Commission. There is huge interest in this area. That is exacerbated by the fact that nobody can get to work these days in reasonable time and in comfort. It is hardly surprising people are upset and that this is high on the political agenda. Can I begin with a question to you, Mr Threlfall? There is a pipeline for infrastructure projects right across the UK, but no return, based on a reasonable cost-benefit analysis, is attached to it. Do you think it might be a good idea if the Government were required to publish one?

Richard Threlfall: For the benefit of other members of the Committee, I am a partner at KPMG who runs our infrastructure business and our global public transport business. I also chair an infrastructure think tank called the Infrastructure Forum.

To your question, Mr Chairman, you will recall that the last Government put out a consultation document on the remit of the National Infrastructure Commission. In responding to that consultation, the Infrastructure Forum argued that the National Infrastructure Commission should not simply bring forward a pipeline of projects, but should also be asked to set out what it believes the benefit to the country would be, in terms of impact on GDP, social cohesion and so on, from investing in that pipeline of projects.

It develops a theme that Mr Hammond and I have been debating for some years. It would be better if the country looked at its infrastructure investments a bit like a business considers its investments. In other words, we have a national balance sheet and we understand, when we invest in our infrastructure, whether we are adding to the sum value of the country's infrastructure; whether we are investing just enough to maintain a steady state; or in fact whether the deterioration of it is such that the investment is not keeping up with it. I believe it would be helpful if we had some basis, accepted by the Treasury and by Government, for establishing the value of the investments we make, in terms of the output to the country.

Q405 **Chair:** I turn to you, Mr Jan. The decisions, then, would need to be taken on the basis of the pipeline that has now been costed. Those decisions would be political, would they not? One would have an idea what the return was to the whole economy, which is ultimately measurable in GDP, but there are judgments well beyond that, which society may want to take into account. Should those decisions be devolved responsibilities to another body, such as the National Infrastructure Commission, or are they decisions that should be taken by politicians?

***Alexander Jan*:** It is arguably a statement of fact rather than opinion that all these decisions are political in their nature, particularly large scale infrastructure interventions, which have so many effects, not just in terms of their economic impact but on people's quality of life in other ways. It is absolutely right that the Government have created the NIC, for example, and other agencies to help inform from a technical and economic perspective the costs and benefits of these projects, and we should have a systematic framework for evaluation.

Because of the nature of the decisions in question, though, they should be taken by politicians. Indeed, as many of those decisions as possible should be taken locally, because local politicians are better placed to understand the different impacts that projects create. It is much harder for Whitehall to understand the granularity hundreds of miles away from where those decisions are being implemented.

Q406 **Chair:** Professor Hall, we had a very brief word before this hearing. I allowed one of my prejudices to come out: that very small scale projects, which often have higher returns, tend to get neglected or delayed for the benefit of larger projects that may have more political attractions. Do you agree with Mr Jan? Do you think that that view needs qualification in any way?

***Professor Hall*:** Might I come back on that assertion around small scale versus large scale? If we look from a benefit-cost perspective, incremental improvements—things like highway junction improvements—often have quite high benefit-cost ratios. For larger transformational projects, the benefit-cost ratios are sometimes more difficult to justify. It is not always the case that in economic appraisal terms the big beats the small. In fact, it may well be the other way round.

I go back to the point around the balance between the political nature of infrastructure decision-making, which Alex Jan clearly referred to, and the need for a more strategic approach, which is what the National Infrastructure Commission has been created to enable. The Commission clearly recognises the political nature of infrastructure, but it is there to try to address the fragmented approach to infrastructure decision making.

It has to provide the evidence about trade-offs, so about promoting competitiveness in particular regions, while recognising the importance of regional development more broadly. It has a responsibility to take a systems approach, to look at how individual projects fit together, to think more to the long-term, because there has been a weakness in long-term thinking, and to develop methodology that is applicable across infrastructure sectors, so we can begin to compare, for example, investments in transport with investments in technology. Those are all necessary things that have to be done to inform the type of political process that has just been referred to.

If I might, I will briefly go back to the first point about the need for evidence on the economic impacts of projects.

Chair: Very briefly, if you would. You will have plenty more opportunities to come back later.

***Professor Hall*:** There is a weakness in terms of post-project monitoring, in terms of both the broad economic benefits and the very simple metrics of how things that have been built are actually performing. If we look at international comparisons, most people refer back to the World Economic Forum, which is a frustrating set of indicators of infrastructure performance. The NIC is doing some work at the moment on infrastructure performance indicators, but a lot more needs to be done in that space.

Q407 **Chair:** In other words, there is a cacophony of enthusiasm for looking at projects while they are being considered, and an extraordinary silence about analysing what their effects were in retrospect?

Professor Hall: Quite.

Q408 **Chair:** That is not least because, if that were done, those who have taken these decisions might discover that the odd one or two were mistakes, and nobody wants that exposed. Concorde springs to mind. Mr Rose, we are going to come on to this in more detail, but, once we have identified what the project should be, am I right in thinking that one of the problems that has bedevilled the UK is that it seems extraordinarily difficult to get it built in a cost-efficient way and in the way that was intended by those who started the project in the beginning? Sometimes politicians may interfere with it, which does not help. We have spent a very long time in this country, many decades, trying to think through ways of, as the jargon has it, delivering projects, without yet succeeding. PFI is one of the most notable catastrophes.

***Andrew Rose*:** The answer is yes. By background, I am an investment banker, but I spent about 10 years of my life running bodies for the UK Government, including Infrastructure UK and the Homes and Communities Agency, so I have seen it from both sides. Going back to the prior question, these decisions are political by definition, but we sometimes over-politicise them. Echoing the comments that have already been made, a lot of effort goes into the announcement of the project, but then sometimes we lose the evidence trail post the announcement. The National Infrastructure Commission has an important role to play in that analysis and "you said/you did" type of review.

Q409 **Chair:** So post-project scrutiny, with pension cuts for Ministers who made mistakes? Do you think that might work?

***Andrew Rose*:** It is probably beyond my remit to go to that level. The scrutiny bit would be important. There is something about valuing skills in the public sector around procurement and delivery. In my experience, there is quite a strong emphasis on the policy skills, which are excellent, but the UK Government historically have not valued the delivery skills within the Civil Service.

Chair: We are going to come on to that in more detail right now.

Q410 **Stephen Hammond:** I will come on to it in a moment, if I may. I have a couple of other questions first about the Chancellor's announcements in the Autumn Statement. You will have seen that he said that raising productivity is a central long-term economic challenge to the UK. He thinks that part of the way to do that is additional infrastructure spending, putting in £23 billion over the next five years. Could you give your views on whether you think that is likely to be enough, what it might do, impact, scale and size?

***Alexander Jan*:** There is always a question as to the extent to which announcements will lead to material change on the ground. What is interesting on this occasion is that, according to the IFS, the Autumn Statement will take public sector net investment to around 2.3% of GDP. Paul Johnson observed that that is well above the average for the last 30 years. If anybody knows about these things, the IFS will. We can probably take it that it is a material uptick.

OECD numbers suggest that, as a sort of benchmark, economies such as that of Britain should be investing around 3.5% on a comparable basis.

If you assume there is a ratio of about 40% private sector investment to public sector investment, that would take the comparable figure to around 3.2% for the UK, versus 3.5%. In that sense, it is a meaningful increase in the number.

Having said that, we are always conscious of the need for catch-up. Public sector investment in the roads, for example, was as low as £400 million per annum in the 1990s. There have now been much bigger increases, as a result of the road investment strategy. One has to keep one eye on historical backlog, which needs to be addressed. Then it comes down to how the money is spent.

Q411 **Stephen Hammond:** I would like to come on to that in a moment, if I may. Do you all roughly agree with that?

***Richard Threlfall*:** I broadly agree with what Alex has said there. I do not think we have ever really engaged in a debate in this country as to what proportion of our tax revenues we believe should be invested for the future generations of this country, versus the proportion that we wish to spend currently.

As Alex has correctly said, the trend over the last years has been to increase the value of the investment pipeline. We released a report last week that analysed the spending in the Autumn Statement and compared it to the previous spending levels. This confirmed that there had been an increase of about £39 billion in the overall infrastructure pipeline in the country, and about an 8% uplift since the beginning of this year, almost entirely in the housing and communication sectors.

Directionally it is all good. However, if you look at international comparisons and, as Alex has said, make reference to what we need to invest in this country in order to remain a successful, competitive economy for the next 50 or 70 years, I am not sure that debate is being had.

Q412 **Stephen Hammond:** If you look at the national productivity investment fund, over the next five years it is putting in an additional £2.3 billion on top of that, on a per annum basis. At the end of it, 49% is housing, 18% transport and 28% R and D. Given the amount of money that the private sector is prepared to put into housing, is that a sensible allocation?

***Andrew Rose*:** The Chancellor showed a strong focus on measures that he thinks will improve productivity and improve it quite quickly. Directionally that was quite important. It is very hard to say whether enough is enough, but the focus on housing, and not just housing but the type of housing, was very important. There was a slight shift away from what I would call demand-led to more affordable housing. From my last three years having run the HCA, I think that was a very important statement.

Q413 **Stephen Hammond:** Did you not also think there was quite an odd mismatch between the fact that that money was front-end loaded, and yet the money to unlock sites was back-end-loaded?

***Andrew Rose*:** I would argue a lot of it was back end—30% of it is in 2021-22. I would argue a lot of it was back-end loaded.

Stephen Hammond: It is, but the chunk for affordable houses is very definitely front-end loaded.

***Andrew Rose*:** I agree, because there is a pressing need in that area. I think it is called the housing infrastructure fund; there was something called the large sites infrastructure programme before that. Often it is back-end loaded. It is important. There is a real priority for below market housing. That was very important.

On transport, the mix was interesting as well, with the focus more to the local networks. That was a very important statement. Going back 10 years to when Rod Eddington wrote a report, it is quite consistent with that methodology.

***Professor Hall*:** One needs to be very cautious about trying to switch the infrastructure component on and off. We have heard that there is an upward tick in infrastructure spend. That is as it should be, because if you start trying to spend more quickly than you would otherwise do, that has an impact on the cost and the value for money of what you are delivering. Given that upward trajectory, if there is going to be an additional injection, housing is probably not a bad place to put it.

***Richard Threlfall*:** We are also at risk of taking what was an incremental spend absent from the overall picture. In this Autumn Statement, the Government for the first time produced a combined infrastructure and construction pipeline. Both from an investor and a construction supply chain point of view, that will have been welcomed. If you take that pipeline in its totality, all £500 billion of it, 40% is going into energy, 28% is going into transport and 15% is going into utilities, mostly water. That is the big picture. That £23 billion productivity fund is in the rounding of everything else that is going on.

Q414 **Stephen Hammond:** I want to come on to the project pipeline, but I have two last theoretical questions. Professor Hall has spoken about trying to turn on and off. For the previous five years, infrastructure spending as a percentage declined, for very sensible reasons, although it kept its place within the national overall spending. Can you say how much confidence you have about the Government's ability to turn the tap on at this stage? You quite rightly mentioned a few minutes ago, Mr Jan, the 3.5% of GDP. What is the right level for the UK economy?

***Alexander Jan*:** I will try to answer the first question that you put, Mr Hammond. My analysis of the road figures suggests that the additional amount announced equals about another 15% to 16% on top of the road investment strategy numbers, so it is another 15% to 20% over a four-year period. That is not an insignificant amount. If you then add in local authority capital expenditure to the base, it falls to about 8% of the total. That is probably manageable and deliverable.

The good news about the baseline is that the road investment strategy set out a tangible investment horizon that contractors, for example, were prepared to respond to. I remember talking to the roads industry a number of years ago, and delegates were talking about whether they would be prepared to invest in high-output machinery.

Q415 **Stephen Hammond:** The four-year funding cycle the Government did in the last Parliament has given some security to the supply chain. It may have required more. Professor, what is your opinion of the OECD number?

***Professor Hall*:** Thinking of it in terms of a percentage of GDP is not the right way of answering the question. We need to start with an assessment of need and a long-term vision of what is required with respect to national infrastructure, and then, working back from that, navigate the trade-offs and recognise that we cannot afford everything. Once we have navigated those trade-offs, there will be an investment requirement associated with that. We have not answered that question yet. I am hoping that the National Infrastructure Commission will.

***Andrew Rose*:** I cannot answer, but the first point you made is whether we have the capacity to turn on and turn off. In this country, we deliver infrastructure through a very mixed economy, from direct spending, through privatised industry and PF2, to local authorities. One of the big questions is whether a supply chain is in place to deliver that infrastructure. This comes back to why it is so critical that there is a clear plan that industry can respond to, which may or may not be a pipeline of projects. That is probably for a later discussion.

Q416 **Stephen Hammond:** And there is an investment in skills to supply that?

***Andrew Rose*:** That is probably the bigger challenge: do we have the skills in the construction industry required to gear up and deliver an increase?

Q417 **Stephen Hammond:** Richard, you mentioned a moment ago the £500 billion, which is the 700 projects that are in the plan. The Government have said they intend to complete half those 700 projects in the pipeline by 2020-21. This presupposes, therefore, three questions. First, how many of those projects are now shovel-ready? Do you think the Government have been an intelligent client in the specified designing of the theory? Do we have enough skills, either in the Civil Service through the IPA or out in the private sector, to deliver these projects?

***Richard Threlfall*:** Our analysis suggested that about 60% of the total pipeline value would be delivered in the life of this Parliament. To your three questions, to start with Andy's point, clearly it is a mixed economy. A very large proportion of the value in that pipeline is being delivered as a matter of course through the privatised utilities. A smaller proportion of it needs to be geared up for delivery in the public sector, whether that is local government or national Government. Quite a lot of that is already in train.

You make a good point that there has been a long-standing concern about the skills base required to deliver projects effectively and on time, particularly within the public sector. We are seeing some concerted effort by Government—for example, by the IPA in its route map published earlier this year—to provide a framework to help public officials deliver projects more effectively. It is no doubt going to be quite a while before all those skills can be developed within the public sector.

To the last point on skills, this is absolutely a key issue. It is not just skills in isolation. It is also, as Andy said, whether there is a real partnership through the supply chain of industry. You cannot suddenly switch this thing on and then switch it off again.

On the skills specifically, it has been highlighted in a number of reports over a number of years now that there are neither sufficient skills full stop, nor the right skills in the construction industry, to be able to deliver. We were involved in a London Chamber of Commerce report a couple of years ago called "Skills to build", which estimated that the industry was investing in the skills needed to develop the pipeline of projects then required in London and the south-east at only about half the rate it should do. A very significant proportion of the construction labour market, particularly in London and the south-east, is non-UK labour. It is as high as 70%, for example, on the Battersea development.

Chair: So there is an administration constraint?

***Richard Threlfall*:** There is a significant concern in the industry today. Part of this is for the industry itself; that is about what it needs to do to get its house in order, to invest in skills and, in particular, to invest in innovation technology and the skills that would go with increased investment in that. Particularly in London and the south-east, less so outside that area, the construction industry is very heavily dependent on EU labour. There is a concern in the industry about what will happen in the event that restrictions are put on their ability to use that labour in the future.

Q418 **Stephen Hammond:** I want to bring Mr Rose in on the point about the deliverability of the project. Are the Government now an intelligent client?

***Andrew Rose*:** They are getting more intelligent. There is more of a recognition that, to bring in private sector skills, there has to be an acceptance of the remuneration that will attract private sector skills. That is changing. I would still like to see more of a career path in the Civil Service around procurement and delivery skills. Bodies like IPA help that. I do not think we are where we need to be, in order to professionalise Government's procurement and delivery skills.

Q419 **Kit Malthouse:** I should point out that Alex and I have worked together in the past. When I was a member of the West End Partnership, we worked together on a ground-breaking report trying to stop corporate Britain and the authorities from pouring municipal Dettol over the West End and sanitising it.

I wanted to probe you a little further on the housing issue. There is a big emphasis in this chunk of cash on housing. The Chancellor indicated yesterday that his idea was that the bulk of this money was an investment in productivity. Is there a significant connection between housing and productivity? We are all accepting this, but is there evidence from around the world that countries that invest a lot in housing are more productive?

***Alexander Jan*:** There is a theme here, which comes through in the work that Eddington has done and the work that the Government have commissioned from Henry Overman and Anthony Venables. The productivity question has to be looked at or tackled from about three different perspectives. The first of those perspectives is transport, because that improves the movement of labour markets; the second is skills; and the third is housing.

You have to have a combination of all three to deliver the productivity improvements that one is striving for. That has come through in the NIC's interim report on the Cambridge-Milton Keynes-Oxford corridor, where housing features very prominently. Improving affordability of housing means, in turn, boosting labour market supply and concentration through agglomeration effects, for example. It is a very important component, but it needs to go along with the other two aspects.

Q420 **Kit Malthouse:** In the time horizon that the Chancellor has set for this, over the next five years, if we spend half the money on housing, which you just replied is going to be quite slow to deliver, we are not going to see a significant impact on productivity from this couple of billion quid a year, are we?

***Richard Threlfall*:** I want to go further than that. While the money itself is welcome, given the scale of the challenge facing the country in terms of housing development, I do not think anyone expects it to make a significant dent in that gap. This is a debate that the country has been having for a number of years now: if we believe that the number of houses we should be building each year is around 300,000, we have been missing that mark by a country mile for at least 20 years. The last time that we achieved 300,000 was the time in which there was a deliberate public sector-driven housing programme.

This theme was rehearsed at great length on the floor of the National Needs Assessment, which Jim and I served on together. At the moment, we are in a world where we rely on both private sector housing provision and a largely local planning regime to deliver the housing stock of the country. Evidently, it is not working, and it is not clear that either relatively small sums injected from the centre or piecemeal interventions on either the supply or the demand side of the equation are likely to move the needle significantly, in terms of filling that gap.

Q421 **Kit Malthouse:** Would you put a finger on how much you think he might need to spend to move the needle, if half of £23 billion is not going to move the needle? I have two questions. If he had the same mix, how much would he need to spend? Could he have changed the mix? If he spent, for instance, £23 billion on superfast broadband for the entire country, would that have moved the needle on productivity further?

***Andrew Rose*:** As I think you will get from my answers, I am not an economist, and there are lots of others. Going back to housing and productivity, it is hard just to flick an infrastructure switch and drive productivity terribly quickly. Housing is one of the faster ways to respond. However, to say a pound spent on housing equals a certain outcome is very difficult to do, because there are a lot of interventions. The affordable housing is through grant funding. The large sites infrastructure is to try and lever in private sector investment.

We have struggled with this issue in this country for many years, and there are quite a lot of piecemeal interventions. I think of the housing chain as land to planning, to building, to selling houses. There is a housing White Paper coming through. I have no idea what it says, but we need a much more fundamental look at that whole lifecycle of housing than necessarily matching a pound of spend to the output it delivers. That is difficult to do, because they are very different types of interventions. Putting £35,000 into grant funding for low-cost home ownership and affordable rent is one thing. Trying to drive interventions to unblock large sites or encourage small housebuilders is completely different. It is a very difficult exercise to equate a pound of spend to an output.

Q422 **Kit Malthouse:** Back to the question about the connection between housing and productivity. Maybe I am missing something, but productivity is output divided by the workforce. I guess you are saying that more new housing increases output, effectively. I can understand the argument about the agglomeration effect in a very large country, but this is quite a small county. For instance, if you spent the £23 billion on transport so you could get to and from places, effectively making them closer and increasing that agglomeration effect, would that have a quicker impact? There are lots of social reasons why we need more housing.

***Andrew Rose*:** There is something about the social need: that people need a place to live. I will pass up on the productivity side.

***Alexander Jan*:** We know that the parts of the country with the highest levels of productivity and output per head are also the same parts of the country that have the biggest housing need. If we are to respond to the factors that are inhibiting their growth and ability to at least maintain productivity or, indeed, improve it, the housing component is elemental to addressing that question.

Q423 **Kit Malthouse:** The equation you have just given me would indicate the opposite. You said the areas with the highest housing need have the highest productivity, so you are saying increased supply, low demand for housing, equals low productivity.

Alexander Jan**:** No. If you take an area like London, which has above average output per head, and there is an opportunity to grow the economy in London that then maintains that differential in output per head, housing is one way of doing that. We are increasing the size of the cake, and attracting and retaining highly productive labour in that market. All other things being equal, in overall terms that will improve output at a national level.

Q424 **Kit Malthouse:** You would therefore recommend building housing in geographically concentrated areas?

Alexander Jan**:** The economic evidence suggests that reinforcing spatially concentrated areas of labour, such as in major cities, pays a higher economic dividend than some of the alternatives. That is subject to all the questions about acceptability of housing density and so forth. In that sense, it is something that one would support. A challenge for the Chancellor's numbers is the extent to which we can deliver the number of units in the timescale given, with the money that has been made available. There might well be a risk to delivery because of supply side constraints. For once, the funding is perhaps not going to be the constraint on the delivery.

Q425 **Kit Malthouse:** We questioned him about that yesterday. He seemed to indicate to us, as Stephen Hammond said, that he was aiming this at smaller, shovel-ready projects that could get going more quickly. We did not get much of an answer on the overhang of late projects where capital is sitting out there unspent, behind schedule.

Alexander Jan**:** In the case of London, the effect of the proposed deal between the Government and the GLA on affordable housing is an increase of between two and three times the rate of affordable housing production. My numbers may be a little off there, but it is a very material increase. That raises a question as to how deliverable that will be.

Q426 **Kit Malthouse:** My second question was, if this money on housing is not going to move the needle, as you said, what would have moved the needle?

Richard Threlfall**:** The Infrastructure Forum's submission to the Chancellor proposed the creation of a £100 billion fund for housing. If you start from the logic that you need to do something radical to deal with the housing crisis in this country, then you need to start thinking in terms of that sort of expenditure in order to do that. Alternatively, you could put power to borrow into the hands of local authorities, to enable them to build that housing. There are different ways of coming to the same answer.

Q427 **Kit Malthouse:** Was £100 billion of state-owned housing what you were recommending?

***Richard Threlfall*:** £100 billion of expenditure, however it is expended into the market, but yes. It would be effectively a public sector-driven programme to build the housing in the country.

To come back to the previous point that you were asking, at a simple economics level it is around the proximity and the accessibility of individuals to jobs. It might be quite instructive to look at the work that has been done in Manchester around this over the last more than five years. Initially, it started trying to deal with the productivity question and growing its economy largely through transport interventions, the first of your points. Then, as it became more sophisticated over time, it started layering in housing and regeneration opportunities. In the same way as you could improve the transport and move somebody from further away to a job, if you build the housing in the proximity to the job, then that has a similar economic effect.

Q428 **Kit Malthouse:** Finally, I will ask one quick question about the planning system. I do not think I heard any of you imply that the planning system is a significant constraint on getting all this stuff done. There is a lot of flak thrown in the air about the planning system and fingers pointed at local authorities and others for standing in the way. On housing in particular, planning permissions are up very significantly. Is that a big barrier or insignificant these days? Are the government reforms working?

***Alexander Jan*:** As you will know from the London government experience that we have all shared, the housing conundrum is hideously complicated. In London, there are 250,000 permissions for units, which have been granted through the planning system, that are not being built. The number we should be aiming at for London is 50,000 a year.

Q429 **Kit Malthouse:** That would indicate that the planning system is not the hold-up. It is the structure of the industry that is holding it up.

***Alexander Jan*:** It gives us evidence as to why it might not all be about the planning system. The other interesting statistic is that half of all land ready for housing in London is large scale, more than 1,500 units, and it accounts for 2% of housing output. Land, housing and options to build are tradable assets, because they are commodities to a certain extent. Often you get a certain amount of resistance to development from locals and all the rest of it. It is a complicated picture. If local authorities were given a greater financial incentive through fiscal devolution to encourage housing, then they would be more likely to encourage housing.

Q430 **Kit Malthouse:** They could perhaps even have greater control over housing. At the moment it is a game with the planning inspector. Effectively, we have created this game of poker through the planning system that means we do not have a housebuilding industry in this country. We have a land speculation industry that occasionally builds houses.

Andrew Rose: As someone with an infrastructure background who spent a few years in housing, that was the thing that struck me. If you think this is around a model of high volume and low cost of capital, that is not what we have in our housing sector. We have the opposite. We have a land-trading model with a very high cost of capital. What I experienced, as an outsider looking in, was a lot of obsessing about whether the housebuilders were land banking, whether it was the planning permission. As someone who comes from an infrastructure background where you try to de-risk the project and have a low cost of capital, that is not the model we have in our housebuilding. It is about the structure of the industry. This is just a personal view, having seen it.

We have a very different model for how we deliver core infrastructure from how we deliver housing, which is about this cycle of land, to planning, to building. If you go to a contractor, the cost of building a house is 3% to 5%. If you look at the return on capital employed in the housebuilders, it is not 3% to 5%. It is because of this chain we have created. If we believe this is about supply and high volume, then I would argue that a fundamental look at the housing model we have is required.

Q431 **Chair:** Once you have had a look, what is your answer?

Andrew Rose: My view goes back to Richard's point, and it is very controversial. You have to look at the fourth of those legs. If you go into the boardroom of a housebuilder, they will say, "We will build the houses we can sell." Frankly, that is what they should be saying, as private sector housebuilders. Why would you ever build houses you cannot sell? Therefore, there is a role for Government to look at that fourth limb. In our infrastructure business, we provide offtake agreements to the deliverers of the output. We expect our infrastructure companies to have a view of the price they are selling their asset for. There is loads of discussion about land availability, about planning, but not nearly enough about the end of the chain.

Q432 **Chair:** To be clear, you are recommending that the Government guarantee to take the houses.

Andrew Rose: "Guarantee" is a very strong word.

Chair: That is what it sounded like.

Andrew Rose: It is controversial. It is very interventionist. I have always felt there is something about looking at underpinning that price risk.

Q433 **Kit Malthouse:** I find that quite alarming. My conclusion from what you told me is that we have unwittingly created a highly regulated industry with very large barriers to entry. We now have a small number of large companies, which effectively control demand through price, do not compete properly and they tend to be regional. Not many of them concentrate in the same kind of area. Rather than adding a Government guarantee to take out that demand, surely the way forward is to deregulate. Deregulation put a smartphone in all our hands.

***Andrew Rose*:** For the avoidance of doubt, I am saying that more thought needs to be put into that element of the chain. Looking historically at where Government have delivered more houses, you see much more local authority housebuilder intervention. There are a number of ways to look at it.

Q434 **Chair:** I am going to linger on this point for a few seconds. I am going to take a quick view from at least one other panellist before I move on, but I am going to move on. Housing is part of the economic-financial cycle in this country to the nth degree, more than almost any other. Most of our crashes have been associated with boom and bust cycles in funding for housing, so it is worth us just lingering a moment. Do any of the other panellists have burning views on the solution to what appears to have been an emerging consensus about the problem? Mr Jan, you breathed deeply.

***Alexander Jan*:** Yes. This one makes transport problems look relatively straightforward to solve, dare I say it. Very briefly, there are a number of factors that create the problem. We have talked a bit about industry structure, which may be one of them. The other is buildout rates, so just how quickly property can enter the market, what people will be prepared to buy. Taxation is a hugely important issue, in terms of its distortive effects on the housing market. Having very high transaction taxes in the form of stamp duty reduces the way the market should otherwise work.

Q435 **Chair:** You are saying that the stamp is creating impediments to a free functioning housing market. To be clear for those listening, it is so high in some parts of the market that it is encouraging people to cling on to stock. You are having accrued gains locked into housing, and the housing is not being put on the market.

***Alexander Jan*:** That is right.

Q436 **Chair:** It is forcing up price, is it not?

***Alexander Jan*:** Yes. If stamp duty was lower, you would see more movement in the house market. There are big exemptions at the lower end of the market, but that is a factor. Conversely, we probably under-tax property on an annual basis. Property taxes in terms of council charge are very low by international standards. That is a problem because, if they were higher, and local authorities were able to retain the income and spend it on what they wanted to spend it on, local authorities would be more predisposed to allowing development. That is, paradoxically, part of the equation.

Chair: We must get you on an election platform, to see how you do with the proposal to double annual taxation on housing.

Q437 **Wes Streeting:** Somewhat counter-intuitively for a London MP, I want to ask about regional imbalances in infrastructure spending. IPPR did an interesting analysis of the Treasury's spring edition of the National Infrastructure Pipeline. This was published in the autumn. I am not sure why they did not use later figures, except to say that when I looked at the most recent publication, in December, the opacity of the regional analysis of the Treasury's infrastructure pipeline is to be commended. Looking at the breakdown that IPPR did of infrastructure spending on transport between 2016-17 and 2020-21, transport infrastructure spending in London would be around £1,900 per head, in the north-east of England £300 per head, in the north-west of England £290 per head and in Yorkshire and Humber £250 per head. The total spend on Crossrail alone during this period will be £4.6 billion. That benefits my constituency, which is a very good thing, but it exceeds spending on all projects in the north, which is just £4.3 billion.

Do you think there is a problem here in terms of the concentration of infrastructure spending in London? It is undoubtedly important for London and the UK economy, but surely we have something bigger to do in the rest of England.

***Richard Threlfall*:** I would first like to declare an interest as a resident of the north, and I also chair the Institution of Civil Engineers northern powerhouse steering group. We agree with the IPPR's analysis, which, as you say, dates back to March.

As part of the analysis of the combined infrastructure and construction pipeline that I referred to earlier, which we published last week, we did a regional analysis of the pipeline. The vast majority of the pipeline now is categorised as benefitting the UK as a whole. That is about 65% of it in total, £326 billion. The south then takes the next biggest chunk in total, which is £72 billion, and the north the next biggest chunk, which is about £48 billion.

If you were to adjust for spend per head, you would get a degree of equality between the north and the south on that basis. However, if you were to look into the sectoral split of the spending, the reason for that balancing is because a large proportion of the energy spend is in the north, and a very large proportion of the transport spend is in the south. That reconciles to the IPPR's long-standing analysis of the imbalance of transport spending.

Why is that relevant? It goes right back to your question about productivity, and your answer, which is that transport is one of the key legs of productivity. We know that the productivity of the north lags significantly the productivity of the rest of the country. I think we all recognise that one of the ways of driving up that productivity would be to increase both the capacity and the speed of the transport links between the major northern cities.

Professor Hall: Perhaps I might come in with the other side to the argument around productivity. As we have heard, in London and urban concentrations nearby the productivity is greatest. In that sense, investments in London and the south-east are a safer bet, in terms of their returns with respect to productivity. The need and the demonstrable returns with respect to productivity in the south-east have to be traded off against the imperative to improve productivity in the north, though it is a riskier bet.

Part of the way to safeguard that bet is recognising that it is not transport alone, as we have said in previous discussions. One needs to think about the package of interventions, including transport but also skills and housing, which will together provide more confidence that transport and other investments will enhance productivity.

Alexander Jan: Like Richard, I am from the north. I am from the north-west, from Liverpool. The IPPR figures are interesting. My one observation would be the extent to which, if indeed they do this, it is fair to compare Londoners, in this case, spending their own money on their own transport systems with other parts of the country, which are, as we know, net beneficiaries of a transfer of expenditure from London to them, and rightly so.

As the farebox and London-level borrowing are significant, and London generates more taxes than it receives—it is a net tax exporter—it is a bit unfair to suggest that, if London is spending more of its own resources on transport compared to another part of the country, there is somehow an injustice in that. That is not to say that expenditure should not be higher in those other parts of the country.

The related point does come back to this productivity question. Rightly or wrongly, London and the south-east are the areas with the highest levels of productivity and growth. That has been the position despite numerous Government policies to try to address regional inequality, which go back to Barlow in the 1930s and 1940s. That gap has been increasing, not decreasing. Bill Rodgers, who was the Regions Minister in 1964, said, "We are still coming to terms with the same problems that faced us when Barlow wrote his report 25 years ago." That was in 1964.

Simply having big transfers of investment or wealth into infrastructure on their own will not necessarily deal with either the productivity gap or regional inequality. It has to be something broader and more sophisticated than that.

Richard Threlfall: As you said before, Alex, it is a combination of investments in infrastructure, particularly transport, and investment in skills. We have to be slightly careful with the logic that says because we have the highest productivity in the south we should continue to spend the most in the south. We have a political choice as a country. Do we want to try to raise the productivity across the whole of the country, and in particular try to draw up the productivity of the places that are weaker, in order to improve the output of the country as a whole, or do we want a world in which the vast majority of the output of the country comes from one part of it and not from the rest of it?

That is the argument for prioritising particularly transport investment into the north. We should recognise that there is a strength in having a number of major economies in Leeds, Manchester, Sheffield, Newcastle and so on. They are currently operating as discrete economies, and in a globalised world are becoming increasingly too small to be competitive, but they are so close together that decent transport links would allow them to operate as almost one central business district. That is an exciting opportunity that the country should be embracing with both arms. To put a simple observation on it, were you to take a maglev or Hyperloop-type solution and connect Leeds and Manchester city centres together, they would be nine minutes apart.

Wes Streeting: I am happy for this exchange to continue, because I think it is really useful.

Alexander Jan**:** I absolutely agree with what Richard says. In purely non-political or objective terms, if a Government's objective is to close a productivity gap, they should start by investing in those areas of the country with highest productivity. I am not saying that is politically the right way to go, but that is objectively what you would do.

Having said that, Richard is absolutely right. What we saw under the previous Chancellor's regime or policy framework was an emphasis on reinforcing Manchester's role as a centre of economic activity for the north-west. It was a reflection of what individual Manchester authorities had done. They had worked together and said, "We are prepared to allow jobs growth in the centre of Manchester if we can have the transport links that then support that." They were not all, arguably, competing for employment in their own areas. They made that conscious decision.

That policy of a big focus on Manchester, and then Manchester acting as a counter-party to London, made a lot of sense in economic terms, particularly in the context of the theory of agglomeration and some of the other things we have talked about. We will have to be mindful of to what extent a policy that looks to more evenly distribute investment, and potentially spread it more thinly across a broader area, can achieve the same objectives in terms of productivity gain.

Q438 **Wes Streeting:** There is one thing I would challenge around transport infrastructure spend in London. These are figures from the spring edition of the National Infrastructure Pipeline. If you look at spend per commuter, as opposed to spend per capita, in London it is £4,271. Without Crossrail it is £3,117. That still dwarfs regional spend. If you think about the number of commuters in London compared to the number of commuters in the English regions, it suggests that we are at a point where it is very hard to deliver any major efficiencies per head in London transport infrastructure spend.

My conclusion from that, which is borne out in other things I see as a constituency MP and someone who has lived in London throughout my life, is that London as a city is struggling to cope with the number of people that live in it. There is an overconcentration of our leading industries in London, whether it is financial services or the creative industries. This is where the constituency MP's self-interest comes in for the people I represent. There is both a national interest and a London interest in reducing some of the overheating of the London economy and the excessive demand on infrastructure in London, whether that is housing or transport. There is a good London case and national case to rebalance the economy and to stimulate some of that rebalancing through infrastructure spending in other parts of England.

***Professor Hall*:** We do not need to think about this in terms of a zero-sum game with respect to the south-east and the rest. As Alex has said, London is in quite a different category because of its capacity to raise finance itself and the amount of commuter revenues that come into the system. One can let London go for it with respect to infrastructure investment, while also addressing the political and economic need to address productivity issues in the north.

***Alexander Jan*:** No one is saying this is a game between other cities and London. If you talk to the leaders of the cities outside of London, what they want is to achieve the levels of growth and activity that London has enjoyed.

I have two other quick points. First, those figures of average spend per commuter may well be right, but the average amount that commuters pay in London is orders of magnitude higher than other parts of the country, so much so that a number of the franchises in London are negative subsidy providers. They pay money back through to the Exchequer, which then, rightly, gets spent on services elsewhere. Not only are Londoners paying their fares, but they are also paying subsidies back to the centre.

My final point is this: since the war, all attempts to limit growth in London and transfer it elsewhere have had the effect, in broad terms, of damaging London's economy and not really helping other parts of the country. It is a false premise to suggest that one can limit London and benefit the rest of the country. If I may say so, it needs a different, more sophisticated, more devolved approach. We have tried everything and the inequalities have grown.

In 1989, London's GVA per head was 156.9 of the UK average. By 2009, it was 171.2. In the north-west, where I am from, in 1989, it was 91.3 compared to 100, and by 2009 it was 86.4. That is after all this investment and a lot of policy changes. Trying to restrict growth in London will harm London but not benefit the rest of the country.

Richard Threlfall: I agree completely with that. It is also the case that London's growth is already being restricted today. All our cities, and indeed the country as a whole, face the same challenge of not having enough resources to invest in the projections of population growth and need more broadly.

I remember a piece of work that I was involved in a couple of years ago with London First, which was looking at the basis for funding Crossrail 2. It looked to the resources of London to be able to fund it. I think the Chancellor had set the target of funding at least half of the cost of Crossrail 2 out of London's own resources. We came up with a basis for doing that, which was great, but only if London did not invest in anything else for the 20 years of that programme. London is also constrained, because it does not have the resources to invest in the growth and the infrastructure it needs for its economic future.

Q439 **Helen Goodman:** Mr Jan, you are very unfortunate because I am a Durham MP. You are saying that these returns to investing in London are higher than the regions. Do you not think that the conflict may be a regional conflict, but it is also a short and long-run conflict? If we carry on pouring more and more resource into London, we are increasing the congestion, making the housing problems that my colleague was talking about worse, and making the gap wider. It is not true to say that we have had some great spending spree in the north. The fact of the matter is that we do have the inequality that is pointed out by the IPPR on the transport. That in itself is far more significant than the amount of money that the RDAs had before they were abolished. Take arts. Everybody is very interested in how you can use the creative industries to rebalance and for place-making. The spend per capita in London is 14 times what it is in the entire rest of the country. Would you like to respond?

Alexander Jan: I understand absolutely what you are saying. As I say, I am from a north-west city. I came to London 25 years ago or more. The question of how the northern cities retain people and act as attractors of labour and talent, excluding myself of course, is a really important one. All I was really trying to do was to put into contrast the fact that, if objectives are around things like productivity and growth, you may get a different set of decisions and outcomes compared to broader political decisions.

Q440 **Helen Goodman:** I was suggesting to you that that was a short-term approach. That will be true if your time horizon is five years, but it probably will not be true if your time horizon is 30 years. We are talking here about infrastructure, so surely it is reasonable to have a longer time horizon in this particular area of public spending.

Alexander Jan: Yes. The Autumn Statement only goes out four or five years. I am not saying that London should get all the investment. I am not saying that.

Helen Goodman: That is something.

***Alexander Jan*:** I am glad to hear that. It is an unfair comparison to say that, if London figures are higher in some ways, London's figures should be lower in order for figures elsewhere to be higher.

Q441 **Helen Goodman:** Is it not more unfair to pretend that the only public spending we need to take into account when we are looking at the difference between spending in London and the regions is the regional money? We are then not taking account of the transport, the housing, the arts, and the fact that we have Whitehall here and not in Birmingham.

***Alexander Jan*:** We were obviously talking about the transport component. London, now, has just about reached its historical high in terms of its size of population. It is growing at the rate of about a million every 10 years. What I just do not know is the extent to which that growth is likely to continue and, if it is likely to continue, the political pressures it will create, in terms of quality of life, if we then reduce investment in London. That is an important issue.

Investment in transport and these other things should probably be higher in the country as a whole. We have been talking about 3% of GDP being spent on investment overall. That compares to 40-something per cent of Government expenditure on revenue items, so it is still a very modest proportion. We should be spending significantly more to address the sorts of concerns you have identified.

Q442 **Helen Goodman:** Mr Threlfall, before you speak I want to ask you in particular a question. You said that you had done a further analysis on the pipeline, which was extremely interesting and helpful. Do you not think that there is an issue about the sequencing? Should we not be doing the east-west links before we do the north-south links? They are all in the pipeline, but would it not be more sensible to do the east-west stuff first?

***Richard Threlfall*:** To that particular question, the last time I was before this Committee I was talking about the work that KPMG had done looking at the regional economic impact of High Speed Two. It concluded that the economic benefit in percentage terms would be greater in the north and midlands than it would be in London and the south-east. From my point of view, given the conclusion of that work, which was that HS2 was good for the north, and given the fact that it is now in the pipeline and everything we have said about not trying to stop-start our infrastructure developments but to carry on with them, I think we should just press on and get HS2 built. I completely agree with you that there is then an imperative to join up the cities and the regions east to west, across the northern powerhouse. That is why I have been looking, for example, at the potential for Hyperloop technology, to really bring those city centres together.

Q443 **Chair:** You are disagreeing with Helen Goodman? You are saying that you do not think we should do the east-west first?

Richard Threlfall: I would not stop what we are trying to do on HS2 in order to then start building HS3, for the simple fact that it will be at least 10 or 15 years before we start to get spades in the ground for HS3. Therefore, all we will do is create a gap in terms of the investment in this country's transport infrastructure.

Q444 **Chair:** Let us just translate what that is saying. If we talked about this more intelligently, we might have started with the east-west route, but it is too late now because we have the spades halfway into the ground for the other one. I do not mean to put words into your mouth, but is that what you are saying?

Richard Threlfall: One of the reasons why it would be fantastic to have the National Infrastructure Commission's national infrastructure assessment is so we could start to take a proper joined-up, long-term view about what we want to build and in what sequence we want to build it.

Q445 **Helen Goodman:** The Environmental Audit Select Committee, our sister Select Committee, has criticised the Treasury for not being very environmentally friendly and in particular for not taking account of long-term environmental interests. Professor Hall, with that in mind and taking into account the fact that the IMF believes that for every 10% increase in the number of people accessing broadband you get an increase in GDP of between 0.8% and 1.1%, would it not have been better for the Chancellor to have given a higher proportion of this fund to digital infrastructure?

Professor Hall: First, on the EAC, I am very pleased to hear that reference to the importance of the environment in relation to infrastructure planning. That is quite clearly recognised, for example, in the commitment to carbon targets. Infrastructure is very closely wrapped up with carbon emissions. As the Government have accepted the fifth carbon budget and infrastructure planning is being done in that context, we are on track in that sense. There is a whole series of much broader interactions between infrastructure and the environment. I would like to see more attention paid to those, with respect to water and flooding, for example.

In relation to your question about broadband versus transport investment, the two need to be considered in complementary terms. You are right that broadband can substitute for physical mobility, but not under all circumstances. The industries are very different, in that much of the investment in digital connectivity has come through the private sector. Government's role here is in filling some of those gaps, with respect to both geographical coverage of digital connectivity and some of the market obstacles around innovation, with companies being reluctant to invest because they do not know what is going to come next in innovation terms.

It is right that Government are stepping in, but the role of that investment alongside the much larger investments from the private sector needs to be recognised. It cannot really be seen as completely comparable with the investments in transport, where Government have a much larger role.

Q446 **Helen Goodman:** I suppose that is true. I am slightly nervous about us going down a path where we say, "Of course, we would like more of everything." Of course, we would like more of everything, but unfortunately we live in a resource-constrained world. Maybe I could ask you about the national infrastructure plan. In 2010, the coalition Government said that, in the past, Governments had not produced a coherent, long-term view. What do you think are the drivers of infrastructure demand?

***Professor Hall*:** The National Infrastructure Commission's consultation on the national infrastructure assessment covered those drivers pretty well, in the sense that they are population growth, economic growth and structural change, technological change, changes with respect to the environment and climate.

Q447 **Helen Goodman:** I have one last question before I lose the questioning. That is about the importance of the EIB. The EIB has been putting a lot of money into water authorities particularly. If, as part of leaving the European Union, we were to leave the EIB, do you think that would be a serious problem?

***Alexander Jan*:** The EIB has played a very important role over the years, in terms of helping to get UK infrastructure financed. One of the effects of its involvement has been to give other providers of finance comfort as to a product's viability because of its rigorous scrutiny progress, but it also enhances the level of comfort that other borrowers have.

Q448 **Helen Goodman:** Do you mean it levers in more private sector?

***Alexander Jan*:** Yes. Other banks, when they see the EIB is involved in helping to finance infrastructure, get more comfortable with it. I imagine that, if the EIB was to step back from its role, which is not insignificant in the UK as you say, in the case of not only water but transport and other things, that would probably lead to a greater role for the Government, perhaps in the form of Treasury guarantee-type arrangements. If it was possible to retain the EIB's involvement, that would be a highly desirable thing.

Q449 **Chair:** Have you looked at what the value of the EIB balance sheet might be and what return the UK might get, were we to get our share of it?

***Alexander Jan*:** No, I have not.

Q450 **Chair:** That is a relevant question too. Clearly we have a shareholding and that shareholding has a value. Therefore, the question that needs to be assessed is the merits of returning that against the cost of continued membership, like any other international institution.

Q451 **George Kerevan:** Good morning, gentlemen. The Autumn Statement, as well as setting up the infrastructure fund, prioritised two other ways of putting public cash into infrastructure investment. One was expanding the Private Finance 2 scheme. Is PF2 value for money?

***Andrew Rose*:** PF2 can be value for money; you have to look at it project by project. In isolation of that, it raises a number of questions. We have had a long history of PFI, PPP and now PF2. When we look back at the schemes, there is a risk premium for private capital and a risk transfer to the private sector. The critical question, in answer to your question, is this: has the risk transfer been greater or less than the risk premium paid? That drives at the heart of value for money.

In a slight relaunching of PPP, it is really important that we understand that question about the historical value for money achieved. There is nothing about PF2 that would say it is or is not value for money. You can have good PF2 projects and bad PF2 projects, but it should not be said that it is or is not value for money. It is effectively a procurement methodology, and how well you do that procurement drives whether it is value for money or not.

Q452 **George Kerevan:** Were past schemes effective value for money?

***Andrew Rose*:** This is my core point: we now have 25 years of history. I am not sure how many people could genuinely answer that question one way or another.

George Kerevan: That is worrying.

***Alexander Jan*:** PF2 was clearly designed to address some of the perceived shortcomings of PF1, such as windfall gains for equity and the inclusion of softer service provision, and to allow the Government to take an equity stake in the contract to improve transparency. It is hard to say, partly because so few projects have been procured under PF2; the numbers have been very low.

Reflecting on what Andrew Rose has said, it is remarkable how little consensus exists as to whether or not PFI and PPP have been value for money, after 25 years. On things like projects coming in on time and broadly speaking on budget, the evidence is quite positive. In terms of overall value for money, because the private sector's cost of capital is higher, it is a far more furious debate—or it is more of a debate. We then have examples such as the London Underground PPP, which failed relatively early on, for lots of reasons.

In some cases it works well; in others, less so. That is partly driven by whether or not the public sector's expectations of what it needs from the other party remain stable over the long term. For example, we are probably going to need street lighting for the next 25 years; technology is now interfering with that model. If you look at hospitals or the London underground, as medical technology evolves, the need for so many theatres to be provided might change, because there is a move to outpatient treatment and so forth. In the case of the underground, the upswing in London's population meant that the authority wanted to run lots more trains. Such changes are very difficult to achieve without significant cost if you have a contract based on providing an output over a long period of time, which, it is presumed, will not change.

***Richard Threlfall*:** Interestingly, this question goes back to exactly where the Chairman started the questioning this morning. It is not just about PF2. Generally as a country, we are focused on the cash cost of building a particular output at the beginning, and then we pay far less attention to the long-run cost and benefit of that asset over its life. This is a big challenge for the industry and, indeed, for public policy. As PF2, PPP and so on tend to collapse a lot of that cost into a visible sum, many commentators immediately conclude that they are not value for money. Then we compare them to the public sector procurement of assets where we usually ignore all the life-cycle maintenance costs and operation. We do not have a like-for-like comparison in this space.

It is one of the areas where it would be great to see some work done by the National Infrastructure Commission over the coming years, to shine a light on how we drive long-run, whole-life, best value for money in the procurement of our infrastructure, whether it is being invested in by the private sector or by the public sector.

Q453 **George Kerevan:** Would you venture a suggestion as to how we would do that?

***Richard Threlfall*:** We need to focus a lot more academic work on this question. Take a simple example around maintenance of a local authority road. There is a choice each year: do you resurface the top of it as cheaply as you can, given the cost of doing that every year for the next 30 years; or do you take off the top three or four inches, build it up properly, completely redo it and massively reduce the maintenance cost for the next 30 years? Which of those approaches drives the best value to taxpayers in this country in the long run? That is the question that we should be putting a lot more focus on to.

Chair: Did you want to say something, Mr Jan? I had a sense you were pregnant with a thought.

***Alexander Jan*:** Broadly speaking—and I qualify my view because of the flooding that has happened in London over the last week or so—the regulated utility model provides not a bad way of securing long-term investment in important public services, which provides stability and reasonably good value for money. That approach is one that appears to be successful. The other thing I would add to that comes back to what we were talking about before—local authorities entering into partnerships is probably another way of doing these things.

Finally, the simpler contracting-out model whereby, for example, TfL leases its trains and allows a private operator to provide the service, but maintains control of what the service specifications and fares should be, while it is not a very complex way of doing things, is a way of getting private sector efficiency but maintaining a public service value-for-money approach to the public. Crucially, that requires local authorities to have the ability to raise the finance, in order to make that investment, which comes back to how much the Government are prepared to allow local authorities and others to invest.

Q454 **George Kerevan:** Let me stick with PF2 for a little bit, because it is embedded in the Autumn Statement. The PF2 variant on PFI tried to introduce a number of reforms, to avoid some of the financial excesses of the previous model. One of these was to establish a control total over departmental spending on PF2. Looking at the small print of the Autumn Statement, while we have the control total, there is a significant squeeze on DEL revenue spending. If, in the forecast period, the Government are successful and key Departments use up their control total of PF2, that will expose them to quite significant DEL payments, but those DEL payments are being constrained. Are we looking at a situation in the next forecast period where in fact we will find ourselves with a revenue problem?

***Richard Threlfall*:** Your question, as I understand it, is whether, by entering into more PF2 contracts, because they are entering into contractual commitments to make payments often over a 30-year life, Departments are therefore constraining their ability to spend on other things. That is evidently the case. The challenge I would put back is that it is true of investment in infrastructure generally. If, as the public sector, we choose to invest in Crossrail, for example, we have effectively committed to maintain Crossrail for the whole of the life that we want it to run successfully.

Although it is starker where, under a PF2 or PPP scheme, you are entering into a contractual commitment with a third party to make those payments, the truth of the matter is that, if we wish to continue operating the assets that we build in an effective way over their life, we are entering into a similar commitment as the public sector at the point of investing in that asset. It comes back to my point, which is that it would be better if we went into any investment with more cognisance of the whole-life cost and benefit of that asset.

***Andrew Rose*:** One of the criticisms of PFI was its inflexibility. In some ways, at the time, that was viewed as a positive design. For example, if you look at road maintenance, the point was, having hopefully built the road to a high quality, it is for the private sector to ensure that there are not potholes. After eight years of austerity, some of those decisions look different from how they did at the time, but it was not a design flaw; it was embedded in the design. To Richard's point, you have to look at the like-for-like comparison of the cost of PFI against the whole-life cost of the alternative or choose that you prefer the flexibility of not repairing the potholes because you want the local authority to make that decision at the time.

When people designed it, they thought it was a very good thing that it forced the contractor to repair the flaw if there was one. When money is as short as it is today, that inflexibility looks quite difficult. At the time, it was seen as quite positive. I am really just repeating Richard's point about the need to compare like-for-like, not one cost up front against one flexibility over whether you repair the potholes or not.

Q455 **George Kerevan:** Let me put that a different way. Are potential investors concerned about revenue streams from PF2?

***Andrew Rose*:** My guess, from speaking to investors, is that they are concerned about how committed Parliament as a whole is to PF2. Last night, I was reading the Treasury's own document relaunching PF2, which described that PFI was "tarnished by its waste, inflexibility and lack of transparency". That was the Treasury's own document in relaunching it. Investors would look for assurance that, if there is a new programme of PF2, they are entering into something that will have quite widespread political support. I have done a few PACs myself on the subject, and there are some very strong feelings about PFI. They would hope for quite a strong statement that, if Government are relaunching PF2, there is strong support for the product.

Q456 **George Kerevan:** Do you think we have that at the moment?

***Andrew Rose*:** There are many people in Parliament who feel that PFI was a bad product.

Q457 **George Kerevan:** Given that you are looking for that kind of support, would it be helped if we made things more transparent, say, by putting PF2 on the balance sheet?

***Andrew Rose*:** The balance sheet is not a decision for me. To put it the other way round, I have never believed that you should start out major infrastructure procurement with your driver being that it must be off balance sheet. This is not a PF2 comment, but we have seen a lot of major procurement where the starting point is that it must be off balance sheet. From my experience, this has ended in us making some difficult decisions as we try to deliver.

The accountancy point of PFI or PF2 is not one for me. From my experience, though, when we have started from the premise that major infrastructure procurement must be off balance sheet, it has often ended in tears.

Q458 **George Kerevan:** That is what worries many Members of Parliament, apart from specific projects: the worry that we are going down this road simply to keep it off balance sheet, rather than as an effective way of getting value for money. Would anyone else like to comment on the off balance sheet question?

***Richard Threlfall*:** Only to concur with what Andy has said, which is that it should not be the basis for decision making. In practice, quite a number of the private finance schemes in recent years have been on balance sheet. That accounting judgment is largely separate from the procurement decision.

It would be a pity if a general view was taken that the procurement approach itself was incapable of delivering value for money, simply on the point, when in practice, as Andy has already said, it has arguably driven some very good behaviours around taking responsibility for the whole life of an asset in particular. It is notable, as I go around other countries in the world, that many are still embracing these techniques because of that benefit. Increasingly, the UK is looking out of step for having so largely abandoned it.

Q459 **Mr Rees-Mogg:** Good morning, gentlemen. Mr Threlfall, can I come back to your very important point on the judgment of long-term costs and benefits of assets and the example you gave of the road and whether you take the whole surface off? How do you make those calculations? What you are saying is very important, but how, as a Government, do you get it right, so that you know when to do just the quick repair and when it is the right time to dig it all up?

***Richard Threlfall*:** It is not easy and it requires an evidential base, which the UK does not currently have. A few years ago, we were working as the Infrastructure Forum, in partnership with University College London, to look at getting a study on this off the ground. If you look to certain other industries, for example oil and gas, you find that they have a much better handle on the historic data about where a particular decision, either to simply maintain an asset or to undertake a renewal of that asset, was translated into the subsequent cost of that intervention. We do not have that data in the UK, for the majority of our infrastructure assets.

It is a study that will take a good few years. It is perhaps a study that has become easier to do than it was a few years ago, because of the huge volume of data that is now capable of being extracted from our sector. You referred to the regulators; they have been doing good work in terms of accumulating data around asset development in their industries. Obviously we are getting into a world where big data analytic techniques would make it easier to interrogate the data and make those judgments.

Fundamentally, I believe that, through an agency such as the National Infrastructure Commission, we need to take this on as a programme of work. We can pick a couple of the easier assets to start with. When we were looking at it with University College London, we were looking at roads and schools, because there are a lot of roads, so you can do comparability between different interventions in different places, and there is obviously a schools programme with quite a lot of data about, in many cases, relatively similarly structured school buildings. You can then build up an evidential base and use that historic data to inform decisions in the future.

Q460 **Mr Rees-Mogg:** The key to it will be the discount rate that you choose to use. Is that not the difficulty? If you look at our Victorian forebears, they basically had 100 years of pretty stable interest rates. Therefore, it was quite easy for them to have a discount rate that was likely to be true and, as interest rates were low, they could make long-term decisions and do things extremely well. If you look at the Bazalgette sewer, it was done to the highest standard and enormously over-engineered, because with stable interest rates you could afford to do that. If you look at interest rates over the last 50 years, and the discount rates that would flow from them, any Government, however good the data that they were using, would be essentially guessing where interest rates would go.

***Richard Threlfall*:** To the Bazalgette example, there is a risk of mixing up two issues, one of which is precisely your point on interest rates. The other is that a political decision was taken to build for far more capacity than London needed at that time. That is a separate judgment as to what would be appropriate.

Of course you need to take a view on the discount rate. Absent any better reason, you would take use the Government discount rate for making that calculation. I do not see that as in any sense either an insurmountable issue or, indeed, a good reason not to take on the challenge. I sometimes posit the political question like this. It is a legitimate political question at a local authority level when funding is tight: "Shall we spend the money this year resurfacing this road or shall we save the local library?" That is a political decision, but it seems to me that, today, that political judgment is taken and the information to ratepayers and taxpayers at large simply evidences that we have saved the library and we are not spending the money on the road, so it is good all round.

Nobody sees what the effect will be next year. Does the tax take go up by a disproportionate amount because of the decision to defer the maintenance on the road? You may still reach the same political judgment, but better transparency about the long-term consequences of our decisions as to how and when we invest in our assets would be a public good.

Q461 **Mr Rees-Mogg:** If you get the discount rate wrong, which is going to end up being a guess, then, however good the data, the ultimate decision will not be improved if the discount rate changes. The unknowable is disproportionately important to the knowable. If you take 2007 when people broadly thought that interest rates would go up, it would have been sensible to do short-term fixes, because your cost of capital was going to be rising and the long-term costs were therefore going to be higher. If, on the other hand, you had known what was really going to happen, you would have steamed ahead and done the best long-term build that you could, because it would have suddenly become very cost-effective. It is interesting to know all the variables and to do academic work on it, but it will not help councils make decisions because of the one overwhelming and unknowable variable.

Richard Threlfall: No, I disagree with that, because the public sector discount rate is not the same as the actual borrowing cost in the market at almost any point in time.

Q462 **Mr Rees-Mogg:** But it is linked to it, and moves up and down with it.

Richard Threlfall: The public sector discount rate has been fixed, for as long as I have been in this industry, at whatever it is—6.08%—and it is used today in Treasury—

Q463 **Chair:** How long have you been in the industry?

Richard Threlfall: At least 20 years.

Q464 **Chair:** It has moved at least twice.

Richard Threlfall: When was the last time? It was at least 10 years ago that it moved.

Q465 **Chair:** It has moved three or four times in the time that I have been looking at it.

Richard Threlfall: We will debate our longevities in this industry. It is used as a fixed number, in Treasury appraisal under the Green Book today, effectively as an exogenous determined variable, separate from what has happened to the interest rate over the period.

Alexander Jan: I will just add a couple of thoughts to this. One is that, on the other side of the equation, there is some evidence to suggest that our ability to understand and quantify the benefits, particularly over the long term, should change. The Department for Transport recently did some work, which Arup helped with, looking at whether or not having a cap-out on benefits after 20 years or so, assuming no growth, was appropriate. The evidence seems to suggest that benefits continued beyond those periods.

The other point to make is that, if it is possible to fix your cost of borrowing through bond finance for projects, for example, that may be one way of helping with the problem you have identified. My brother lives in Hackney and he found a flyer for Hackney bonds from the 1970s, which had been put through people's doors, encouraging them to invest locally. One way of helping this problem would be to allow local authorities to borrow more. One of the innovations they may use is, through firms such as Richard's, to have that borrowing structured in a way that addresses the uncertainty you have identified.

Q466 **Mr Rees-Mogg:** If you did that, would you let them go bust?

Alexander Jan: I do not think any local authority has ever gone bust.

Q467 **Mr Rees-Mogg:** They do in America.

***Alexander Jan*:** They do in America. The UK can pride itself on the fact that its local authorities have prudential management of their finances. There are sufficient checks and balances and they have a remarkable track record of delivery. The question would then be the extent to which that financing was guaranteed by the local authority or, indeed, the state, or if it would stand alone. That in turn has an impact on the cost of capital and value for money.

***Professor Hall*:** To come back to the question of optimal maintenance and replacement, much of the conversation so far has been implicitly in the context of roads and local authorities. I suggest we look in particular at the regulated utilities—the water sector, electricity and gas—where we have seen big improvements in asset management practice. Companies make these types of decisions, in terms of short-term or long-term maintenance versus investment, on a regular basis to a pretty high standard. That is what the regulatory process has sought to do, so it can be done.

There are, of course, uncertainties, and you have highlighted discount rate. This brings me to my second point. If we are looking at long-term investments, there are multiple sources of uncertainty, and we touched on these just now in terms of other factors like population growth and economic growth. That points to a much more rigorous methodology around the way in which all those uncertainties are incorporated in decision-making, including sensitivity analysis to see how vulnerable those decisions are to uncertainty, and the way in which we navigate those trade-offs. Some significant methodological steps have been made there, and we need to make sure that those are taken up in the appraisal process.

Q468 **Mr Rees-Mogg:** I want to come on to one more thing, if I may. This goes back to some of Mr Malthouse's questions. It is to do with whether the Government actually get it right, in terms of where they allocate money to improve productivity. I noticed in the spending plan that there is £300 million to go on cycle lanes. It seems to me that they have done nothing but gum up the productivity of London, particularly around Parliament Square, since they have been put in. Are Governments' records on boosting productivity over many years so bad that we should view this not as being spending on productivity, but as spending on things Government want to do, with a nice bit of Christmas wrapping paper about them? Mr Rose, I have not asked you to say anything so far.

***Andrew Rose*:** I am not sure I would consider myself an expert on productivity, but in all these discussions I always go back to the same thing. One thing that I have always found challenging in my role in Government is that we often dive into solutions before we have a question. The first thing Government should always ask is, what question we are actually answering? There is no question on the discussion we had about the trade-off between the north and the south. When we had the conversation about housing and productivity, there were two very different discussions embedded in that. It is true in all these things that Government is actually about managing trade-offs. It is not obvious to me that cycle lanes have anything to do with productivity but they have other benefits.

While I am not an expert, I struggle in a lot of these discussions, in that I think there are two embedded discussions going on at the same time. That was true in our discussion about Durham versus London. That was true about housing versus productivity. It is equally true in this discussion here. My plea is for Government always to be clear on what question they think they are answering, which will help them decide whether the solution is the right one.

This national productivity investment fund is not a fund; it is a series of spending applications, in reality. It was a statement by the Chancellor: "I value productivity above a number of other things that might have been in prior Autumn Statements and Budgets." It does not go down to the level of saying that cycle lanes drive productivity. But we never have the clarity in the first place on what question we are really answering.

Q469 **Mr Rees-Mogg:** It is fundamentally different from private sector investment. A private sector investor invests expecting a specified return. The Government invest, using the same word in rather a different way, to do things that they want to do anyway.

***Alexander Jan*:** I am slightly more optimistic than Mr Rose. The Eddington work, which is substantive, did as good a job as anybody at helping Government to understand where the priorities for investment should be in the context of productivity.

Q470 **Mr Rees-Mogg:** This is so important, because I too am a great fan of the Eddington work. It came up with lots of little things that do not attract any publicity or the opportunity to put on a tabard and a hard hat. Therefore, a lot of them have not been done, and great, grand projects get done instead because they look exciting. This is one of the failures of Government against the private sector, because the private sector would have done Eddington and it would not necessarily do the exciting projects.

***Alexander Jan*:** I understand what you are saying, but it is interesting that, in the Chancellor's letter to the National Infrastructure Commission, he specifically makes reference to Eddington. For those of us who are fans not just of transformative projects, but of the incremental and the sorts of stuff that Eddington talked about, that is to be very much welcomed and supported.

Q471 **Chair:** Can I clarify the word "supported"? Are you agreeing or disagreeing with Jacob Rees-Mogg's interpretation of what should have happened as a response to Eddington?

***Alexander Jan*:** The case for allowing public investment in incremental projects, junctions and all the rest of it was well made by Eddington. We should have invested more in those things.

Q472 **Mr Rees-Mogg:** Therefore, we should have invested less in other things, because we do not have money to do everything, as taxpayers.

***Alexander Jan*:** Indeed. The balance comes back to the 90-plus per cent of Government expenditure on revenue versus the relatively modest amounts spent on investment. I realise that is a very difficult political choice, but I believe, if we are going to shift the balance anywhere, it is probably at that level.

Q473 **Chair:** Just to clarify so that there can be no misunderstanding, your response is: more of everything.

***Alexander Jan*:** Up to a point.

Chair: It is obviously up to a point, but more than the point we are at now.

***Alexander Jan*:** The evidence shows that, over time, incremental projects provide best value for money. There will always be a role for the big ticket projects, but we have probably all read *Great Planning Disasters*, among other books, on when big things go wrong. The great thing is that, if we had more incentives for growing local tax bases, we could probably pay for quite a lot of these incremental schemes through allowing retention of value gain at a local authority level.

***Richard Threlfall*:** We are at risk in this debate of falling into the trap of assuming that a certain size of scheme is better value for money, rather than where I thought your question was going originally. That was whether Government take these judgments on a proper, evidential basis, as a business would do, in deciding whether to invest in this project or that project and which will give the best return for the country. Part of the debate we had on the floor of the Committee, last time I was here, was that the general approach of central Government is still to use a set of proxy measures for establishing cost-benefit analysis, and that those approaches are different between different Government Departments. There is no consistent approach, whether it is looking at productivity or impact on economic output of the country, to evaluating the prioritisation of different schemes.

Interestingly, referring to Manchester again, it has been very innovative over the last five years in trying to determine what it should prioritise, on the basis of economic impact on the area that sits within Greater Manchester. That does not conclude that all the best schemes are small ones or all the best schemes are large and transformational, but that you will end up with a blend of both.

Q474 **Chair:** I want to end with a question I am going to ask all of you. I will permit three-word answers. Is the overall level of spending or investment, if you would prefer to call it that, in infrastructure in this country too high, too low or at the right level?

***Professor Hall*:** Too low.

***Alexander Jan*:** Too low.

***Richard Threlfall*:** Too low.

***Andrew Rose*:** Too low.

Q475 **Chair:** Has it ever been at the right level or too high—yes or no?

***Andrew Rose*:** I do not know.

***Richard Threlfall*:** I suspect so, if we had good data from the Victorian period.

Q476 **Chair:** So the answer is yes but not since the 19th century?

***Richard Threlfall*:** Not in my living memory.

***Alexander Jan*:** It was three times higher in the 1950s and 1960s.

Q477 **Chair:** Was it too high in the 1950s?

***Alexander Jan*:** It was much higher.

Q478 **Chair:** I would just like a yes or a no. We do not want to spend a lot of time on this. I want clarity on whether you think it has been too high.

***Alexander Jan*:** I doubt it very much.

Q479 **Chair**: So the answer is no?

***Professor Hall*:** I concur with Richard: not in my living memory.

Chair: Thank you all very much indeed for giving evidence. It has been extremely interesting and is part of a much wider debate that will continue. The Committee will continue to look at it. We will probably end up looking at the Green Book in some detail; that is where these discussions always end up. We have touched on it on several occasions. If you have thoughts on the Green Book, we would be particularly interested to receive those in writing.