

Debt, Equity and Banks—Will There Ever be Another Property Boom?

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Introduction and summary

Property relies on and is an investment. Developers need to plan for a return on the money that they put up or borrow, and this in turn depends on the ability of property occupiers to generate that return. The result is a capital value for any investment which provides also a store of value and the basis for trading existing investments. This paper looks at some of the elements in this process of creating capital value, and asks whether they are fit for purpose in the United Kingdom in terms of supporting future economic growth.

We have been experiencing some of the most difficult economic conditions in the post war period in recent years, especially since the crisis has hit the providers of investment finance and borrowing has become hard to achieve. This provides the backdrop and context to the structural questions.

The combination of financial crisis and world structural change creates opportunities as well as challenges. It has to be recognised that resource constraints are likely to be maintained for some time. Equity funding will be at a premium, and potential returns carefully watched. However, other sources of funding are also becoming more widely available and international investment is likely still to be attracted to the United Kingdom.

This raises the question of what kinds of investments are most likely to attract funding and where the constraints on successful investment lie.

Over previous decades, much property investment took place in a context which broadly accepted existing infrastructure as sufficient. The shift in London from manufacturing to services was made possible by Victorian transport systems having sufficient spare capacity. That potential has now gone.

We need to reinvest in large scale infrastructure from transport to power to water to make possible the residential and commercial schemes that occupiers want. This in turn means that proper evaluation of the benefits and costs of such investments and how they are to be paid for must take centre stage.

Experience with previous projects such as Crossrail suggests that our existing systems are not fit for purpose but are still supported by decision making rules based on a view that the economy is somehow independent of infrastructure.

Current significant investments such as the Northern Line Extension (“NLE”) to support Battersea, High Speed 2 (“HS2”) to support city growth, or aviation expansion to support the whole economy are being viewed in a much more restricted light. A summary of the current state of play in all of these areas shows how much more needs to be done to change the way in which decisions are made and the potential for payback on investments is analysed.

A major current risk to renewed property investment is that Government sees it as a bottomless pot of gold. Not everyone can capture value, and some projects will go wrong. Analysis of benefit currently rests only on the projects which create a return. We will need to get much better at pooling risk to begin properly to fund the infrastructure without which other forms of property will not function.

Context

The banking crisis

The banking crisis has seen a combination of increased losses and write-offs, increased capital requirements from regulators and a loss of confidence in risk management mechanisms. Many banks are holding assets on their books which they can neither afford to write off nor to refinance because either a loss would be crystallised or increased capital required.

In 2008, banks also lost confidence in one another, with the result that the normal process of cross funding for the short term closed down. Inter-bank finance is an important mechanism for providing liquidity, keeping banking lifeblood flowing. It is no surprise that in this environment, LIBOR—the London Inter Bank Offer Rate—became the focus of policy to try and keep this lifeblood flowing between banks.

Liquidity and capital are the cornerstones of finance. Capital backs risk taking, and liquidity provides payout when necessary. Neither were in sufficient supply in 2008, and regulators have since been raising the stakes on both. Liquid capital of course is ultimate security, but equally makes no or little return. Holding liquid capital to back customer deposits will not pay any wages—whether or not there are any bonuses.

Leverage is the possibility of using deposits and other assets as backing for other borrowing in order to invest in projects that offer higher paybacks. Leverage is under attack by regulators across the globe, and is unlikely to go back to the heady heights of the mid 2000s. However, it will remain, and is, the fundamental choice of risk takers.

The banking crisis and poor choices in risk taking means that banks' balance sheets are still stuffed with assets that they cannot shift and cannot make a return on. Until these are cleared out, prospects for bank funding will remain restricted. This is the new normal with less leverage, higher capital ratios, more liquidity and sclerotic balance sheets. It will take either government willingness to use taxpayer funding to write off bad debts, or inflation to reduce their scale before banks return to more normal lending behaviour. No amount of exhortation to lend will undermine these fundamentals of new finance. Chart 1 shows the extent of the build up in debt in the United Kingdom. Lending to corporate (Private Non Financial Institutions) peaked in 2008, but the household sector has only been reducing debt from 2010.

Before it is possible to take on new exposures, households will need to bring down net debt further which will limit residential investment. Corporates are in a much more stable position, and indeed many are sitting on cash balances. However, a willingness to spend will require a return of confidence which in turn reflects consumer willingness to spend.

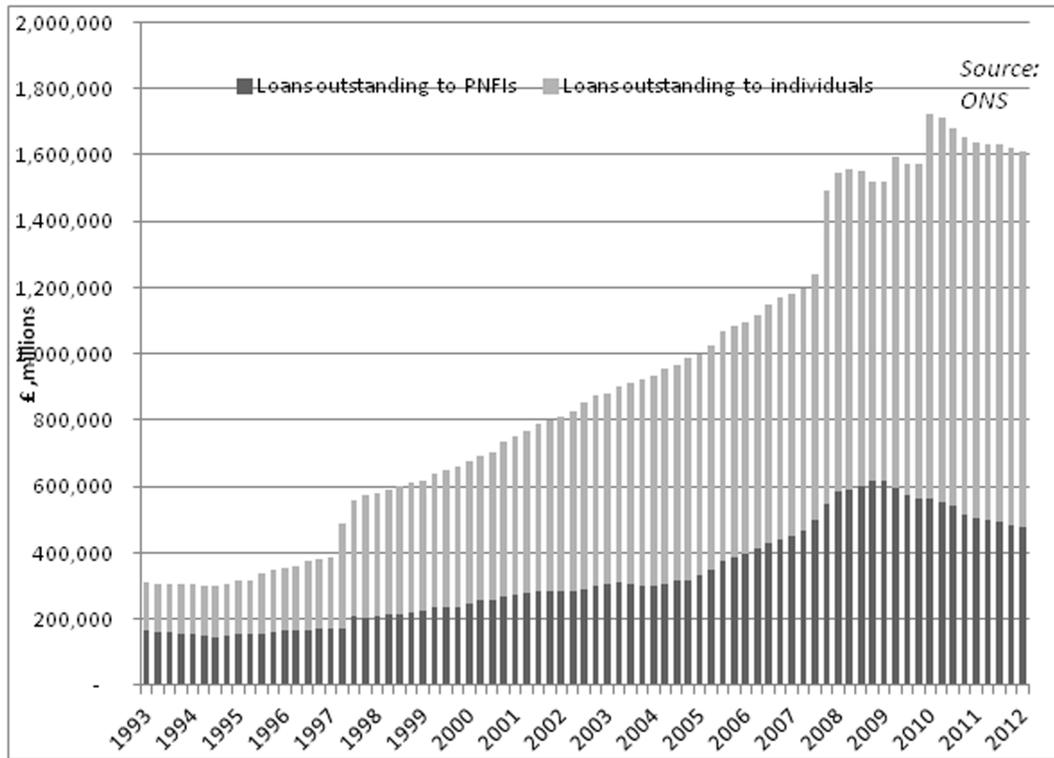


Chart 1

For many people, the last few decades have been a period in which money has appeared to grow on trees. It has appeared in their bank accounts apparently regardless of work done. And, of course, money can be created out of nothing, either via the printing press or via bank leverage. The question is what it is able to buy, and to whom it is owed. The issue of government bonds bought by one's own population creates a debt to the next generation which has no option but to take it on. If bonds are bought by non-nationals, they can just as easily be sold which is the problem faced by countries such as Greece and Spain. Italy has much less of a problem as the assets held by its own nationals are much higher. How debts can be paid back and by whom is the crucial subject.

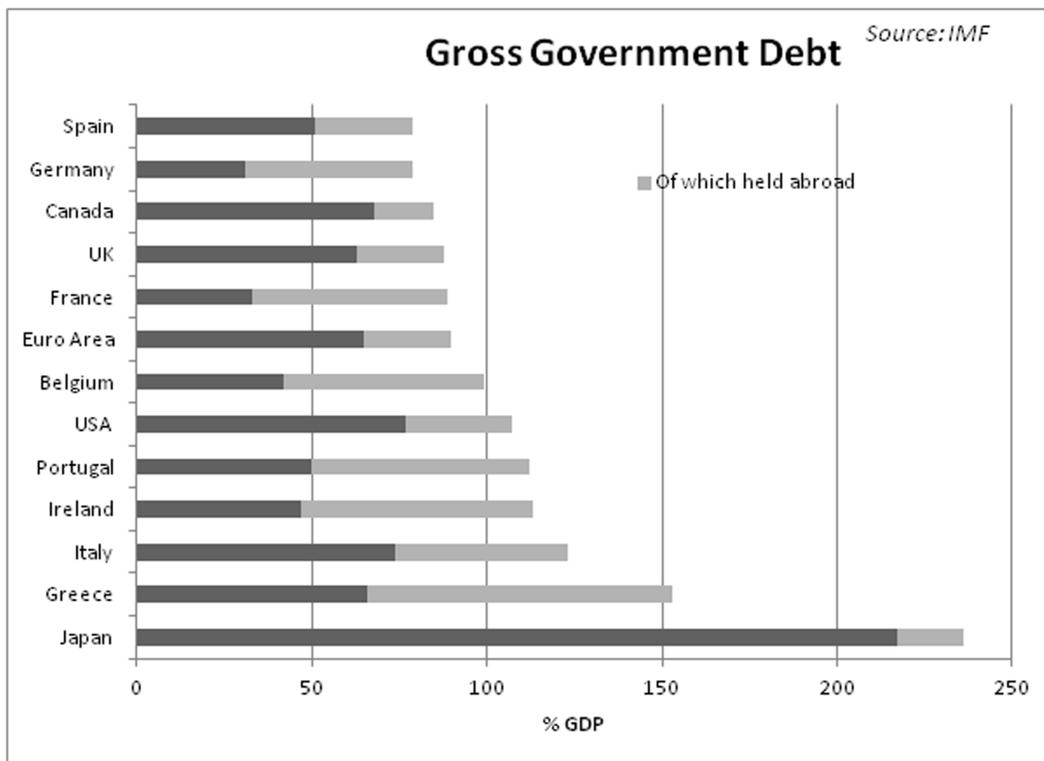


Chart 2

Chart 2 shows the extent of government debt and the exposure to foreign investors. Thus although the United States is relatively indebted, it is also largely indebted to itself. This made it much easier to write the cheques necessary to clear the bad debts in their banks. Indeed, the Troubled Asset Relief Programme (“TARP”) is on track to end in around a year. The original programme to purchase over \$450bn of assets has eventually resulted in disbursements of \$431bn, at a likely net cost of \$32bn. Most of the funds that went into banks have now been paid back, with dividends. Ireland, on the other hand has more than half its debt owned abroad, and its equivalent of TARP, the National Asset Management Agency, is finding it very hard to get assets off its books.

Japan, with huge debts, can manage this because very little is owned by foreigners, and the Japanese savings rates remain high.

The increased integration of the international economy and its finance system is now a given and it is particularly apparent in the United Kingdom, which maintains an open attitude to the movement of both money and people.

Globalisation

The tallest building in London, the Shard at London Bridge, was financed by Qataris. At the launch reception there were two bars, one serving alcohol and the other not, at opposite ends of the room. Of course London has always been a centre of global finance and has attracted international investment over a long period. The difference now is the increasing number of international players.

The UK steel industry is owned by an Indian company; Chinese investors are buying high end residential property; a Russian owns a major newspaper. And so on.

International trade has continued to expand. Britain's markets are becoming much more varied, with falling exports to Europe and growing ones to markets in Asia and the US. Even so, Europe remains very important to the base load of activity.



Chart 3

The scope for continued global pressure and the shift from West to East is likely to be maintained. How trading patterns shift alongside this and the willingness to be open to them will be crucial to the United Kingdom and especially London. Openness will further foster a leading role for global cities such as London and Hong Kong. The recent London Olympics, about which I have been quite sceptical, may have their most important role in fostering a vision of the United Kingdom as globally open, and willing to celebrate diversity. Seeing headlines celebrating a mixed race athlete (Jessica Ennis), a refugee (Mo Farah) and a redhead (Greg Rutherford) as definitive evidence of our tolerance is an interesting way of confirming this.¹

In addition, it is essential not to write off the United States. America is a traditional trading partner and still the largest economy with the highest per capita incomes. It remains innovative with huge market potential and our exports to it have been rising. The recent European Investment Monitor from Ernst and Young shows that the United States remains a major source of Foreign Direct Investment into the United Kingdom, although Germany is increasing its share from countries such as China and Russia.

¹ *Daily Telegraph*, August 6, 2012.

Destination of European FDI projects arising from the top ten countries of origin, 2011

Countries of origin	Leading recipient	Recipient's share of investor's projects	UK share of investor's projects
US	UK	27%	N?A
Germany	France	22%	15%
UK	France	19%	N/A
France	Germany	20%	15%
Switzerland	Germany	34%	9%
Japan	Germany	17%	14%
China	Germany	32%	16%
Netherlands	Germany	28%	14%
Italy	France	18%	9%
Sweden	Germany	20%	13%

Source: Ernst & Young's European Investment Monitor 2012.

More challenging is to translate our global assets into an advantage for the United Kingdom as a whole and to benefit cities outside London, where property investment has been increasingly difficult since the crash.

Conclusion

The combination of financial crisis and world structural change creates opportunities as well as challenges. It has to be recognised that resource constraints are likely to be maintained for some time. Equity funding will be at a premium, and potential returns carefully watched. However, other sources of funding are also becoming more widely available and international investment is likely still to be attracted to the United Kingdom.

This raises the question of what kinds of investments are most likely to attract funding and where the constraints on successful investment lie.

Structural change

The most obvious investments are those which relieve clearly existing constraints, and where subsequent occupier funding is most obvious. The continuing scale of investment in London illustrates this feature. As London continues to be attractive to global business, the willingness to invest remains and attracts global funding. The scale of housing shortfall is also obvious, although the process of selling on the resultant product is less easy than investment in office property. New mechanisms for housing investment and the increased willingness of institutions to begin to hold housing assets may change this in due course but there is a way to go.

However, all investments contribute to and result from structural change. In London 40 years ago, there were over a million jobs in manufacturing, largely located along the radial routes out of London and along the North and to a lesser extent the South Circular routes. Now there are only about 200,000 such jobs, but they have been more than replaced by jobs in service sector firms operating much more centrally.



Chart 4—The changing structure of London's employment

Fortunately, London had sufficient infrastructure to cope, just, with this transition. The overground and underground railways now move record numbers of people. The legacy of Victorian infrastructure has served us very well. Thus the property reconstructions and changes of use which this economic shift engendered required relatively little new infrastructure and was largely supplied directly out of tax revenues, such as the road building programme of the 1960s. Other cities were not so lucky. Lacking a commuting infrastructure, they saw city fragmentation at the hands of the motor car from which they are still trying to recover to create vibrant city centres which can attract the business services and creative activities central to modern city success.

More recently, the attitude to infrastructure provision has changed in several potentially inconsistent ways. The funding of infrastructure, identification of its need, and the ability to borrow to finance it, will dominate the future of property investment. Investments which do not require additional infrastructure will be at a premium, whether the requirement is for new roads, rail, or skills. This will also mean a reassessment of location decisions in the new global age.

Infrastructure needs are currently at the centre of many debates. The Chancellor of the Exchequer has supported this in both his Autumn Statement and the Budget. What is less clear is how such needs are to be defined and paid for.

Connectivity and power are essential elements in any economy—they are necessary, if not sufficient, to create a developed economy. As the economy has changed and global balances have changed, it is necessary also to realign the infrastructure. This is independent of issues of climate change, though these obviously play a role. Almost all our assessments of need rest on these two elements.

It is the infrastructure and energy that make possible the continued expansion of trade that are of the greatest significance, as they create the potential for added value, economies of scale and the exploitation of comparative advantage.

For example, without Crossrail, 35,000 people will be crowded out of access to central London jobs by 2035—by 2060 it is more likely to be 70,000. This represents a loss of additional output to the UK economy rising to £80bn, simply on the basis of the higher productivity which is generated across all activities in a dense location.

It is notable that this recession has not obviously reduced overcrowding on London's transport system and the resilience of access to Canary Wharf is a particular issue. Activity requires more and better access to power for computing and communications as business becomes more international. Liveability also requires improved standards of public realm and good power, water and sewage. Flood risk must be contained to ensure that residential expansion is possible.

The latest World Economic Forum rankings put the United Kingdom 34th in terms of infrastructure. This does not help when the economy itself needs to restructure in the face of changing opportunities. The United Kingdom trades around one third of its output so that the global economy is of crucial importance, as much to the suppliers to international business as to the trading businesses themselves.

Planning for infrastructure is a long term activity. It therefore requires the willingness to develop strategic vision and pursue it with flexibility. Some of the longest lived major companies in the world are the oil companies. This is what they try to do—and they consider the financial aspects of their investment decisions

as part of the plan. The United Kingdom has found it difficult to take a long term strategic approach to investment, which has meant that underinvestment in areas that require some form of government support has been relatively hard.

For example, when North Sea oil development became viable, oil companies were willing to take risky investment decisions. Government is disinclined to take risk.

An example of a strategic approach is, however, the establishment of the motorway network, which was envisaged as a whole and developed over time—with changes as attitudes and the economy changed. Chart 5 shows this original map of 1943, drawn by a civil servant and reproduced in the White Paper which proposed High Speed 2.

Chart 5—Map of proposed motorway network from 1943

Sao Paulo is currently taking a similar approach to its redevelopment—in the context of an overall vision, developing physical infrastructure and commercial and residential development quarter by quarter and over periods in which the investment programme can be self sustaining.

In France, there is a similar approach to optioneering within a vision. In all of these countries and places, there is a focus on improving financial return which is entirely lacking from the mindset of planners and regulators in the United Kingdom.

Whether evaluating transport investment with welfare based tools, or assessing an “approved” cost of capital with a regulated asset base, we have allowed economic models to get in the way of reality.

This means that costs and benefits are assessed by different standards and with insufficient attention paid to payback, as distinct from benefit-cost ratios. Private investment needs to get a payback which can cover interest and principal and over which the investor has some control. Where the returns are under the control of the public sector (fares, charges, prices) then a lender must have faith that the monies will be sufficient and robust to any regulatory framework which is in place (or might be put in place). This is a difficult judgement and made more difficult every time the rules are changed.

In the case of Tax Increment Financing (“TIFs”), there is a further judgement that tax revenues will flow through to a project to make this payback. Creating this ring fence at a sufficient scale and size to cover the costs is still untested—we are currently working this through for Nine Elms. Equally, risk management is still untested as are the propositions around “additionality”, a concept that will be explored later in this paper.

The Treasury will only be prepared to hypothecate taxes which they view as additional to those they might otherwise collect without the investment. This is quite a stringent view of how the economy works and depends on strong economic modelling assumptions of the kind that are extremely hard to test—another example of how economists have imposed a particular view of reality.

Another implication of the “modelled” approach that we take to infrastructure is that the real economic benefits are seen as the add-on and the less real are taken to be the basic benefit. In the case of a transport investment, for example, it is time savings, valued by some limited techniques, which is the core method of thinking about rail and road infrastructure.²

The weakness of this approach is self evident:

- It relies on forecasts of economic activity and population and assumes this growth will happen anyway.
- It relies on assumptions of the value of time which are in turn dependent on survey evidence.

The larger and longer term an investment the less likely it is that growth will be independent of the investment. The value of time (even if measured correctly) will only be a good measure of welfare and economic benefits if the stringent and highly unrealistic assumptions of perfect competition apply.

Nonetheless this approach is used in generating the cost benefit ratios which are a key public sector decision rule.

More recently, some variations on this theme have been permitted—a bit like the addition of further epicycles to Ptolemaic astronomy rather than accepting that the earth goes round the sun. These variations permit additions to benefits if it can be shown that:

- Investment increases activity in highly productive centres, increasing the output of the United Kingdom as a whole.
- Investment improves land use and regenerates locations which are the subject of policy.

² For a fuller discussion, see, B. Rosewell, “Planning Curses” (2010) Policy Exchange.

Both of these add further degrees of arcane analysis and are difficult, if not impossible, to prove. It is undoubtedly true that increasing activity in productive centres by relieving constraints on transport systems, such as Crossrail does, increases the output of the UK economy as a whole. Indeed it is possible to show that the taxes on such activity are sufficient to pay back the investment, while the fares are capable of covering the interest charges. In this context, it would seem that the whole paraphernalia of traditional cost benefit analysis is unnecessary—the investment will pay for itself.

In the case of the second effect, this has been defined in the guidance in such a way as to provide an almost impossible test, especially for any investment on a large scale. Requirements include the need to provide a model of how transport interacts with land use—known as LUTI³ models. Such models are even larger black boxes than the transport models, but like them the scale of investment that is made in them by both researchers and clients mean that there is a tendency for faith to replace judgement. These models are opaque and almost impossible to calibrate to real data. Relying on them for any policy decision is entirely irresponsible.

The case for the Thames Gateway Bridge had to rest on proving the potential for the bridge to create economic activity. Models in social science do not meet the standards of proof of engineering models and this proved a serious difficulty.

If we are to be able to invest in transport infrastructure, it is essential to find a better way to rank investments and especially to create a more transparent method which can both be better understood and challenged. Public sector priority setting is a key element in the investment process, whether there is public sector funding or not. Even where there is a private sector funding, planning processes will still require analysis to meet the standards set by transport policy makers.

The tests that assessments need to meet are:

- Transparent in process and assumptions;
- Clear about the split between financial and non-financial benefits;
- Clear about the purpose of investment and what form of benefits are expected;
- Clear about who controls the benefits.

One way it has been proposed to do this is to create a future asset base valuation (“RAB”)⁴ on which an agreed rate of return can be made. Unfortunately this will fail the transparency test. The way in which a future asset base is estimated has a lot of similarities with the existing process of modelling. Again it relies on forecasts and an assessment of benefits in the same framework as before.

The easiest way to create transparency is to start with an analysis as if a project is a private sector investment. Benefits would clearly be financial and it would be clear to what extent these could actually be captured by the investors. This would also create a framework for analysing the extent to which private investors would have an interest in investing—if returns can only be captured by institutions under the control of the public sector, this will clearly limit private sector funding.

Subsequent to this initial analysis, which can be provided in a form in which it will be possible for third parties to understand and challenge the analysis, it is then perfectly possible to consider external effects which might make the investment either more or less attractive, such as:

Negatives:

- It reduces the value of other activity (cannibalisation);
- There are environmental negatives;
- There are distributional negatives.

Positives:

³ LUTI stands for Land Use Transport Interaction. These models generally start with a model of the transport system and then add on an economic model based on transport costs of trade.

⁴ RAB stands for Regulatory Asset Base. It is agreed as representing an asset valuation on which an agreed capital return is guaranteed.

- There are growth impacts.
- There are environmental benefits.
- There are distributional benefits.

It would need to be obvious that these were not captured in a monetary analysis before they could be accepted—but if they were this would be a clear signal for government investment.

It must be accepted that such an approach to investment appraisal for transport would go against the development of large scale models and associated guidance which has been built up over 30 years or more. There is much vested interest associated with the current system and intellectual capital that has been built up around understanding and presenting this complex analysis.

However, it is clear that this system militates against principles of good governance, even if the analysis could be done perfectly. It lacks transparency of both process and analysis. Moreover, the embedded assumptions in the analysis are risky and lack calibration to the real world. And finally, it is absolutely obvious that there is insufficient investment in infrastructure. The current decision making process has therefore failed at a very basic level.

A simpler system must have a better chance of getting a sensible set of decisions which can generate the infrastructure we need.

There are various proposals for a multiplicity of institutions to improve infrastructure investment, including the preparation of national infrastructure plans, the establishment of an Infrastructure Bank and the Infrastructure Planning Commission (now absorbed into the Planning Inspectorate under the Localism Act amendments to the Planning Act 2008).

It is certainly the case that planning policy remains a major headache, although the National Policy Statements are still in their infancy. The development of the nuclear plant policy however shows a good direction of travel. This could mark a major step forward in the ability to take long term planning decisions.

European rail companies estimate that the costs of building rail in the United Kingdom is about three times that on the continent. In part this is due to differing safety standards, but it also results from the costs of delay on engineering and management.

A willingness to create a long term vision and act on it in a flexible way requires a willingness to create proper financial vehicles which can control costs and manage revenues, whether from charges or from taxes.

At a recent conference on High Speed 2, the speaker from France stressed finance, profitability and return on investment. The UK speakers did not mention any of these concepts. Instead they talked about systems, general economic benefits and management. This was noteworthy from a French system which is nonetheless heavily subsidised.

The stress on model based benefits and evaluation tends to lead to larger projects and a focus on cost benefit ratios, rather than a focus on deliverability and revenues. The best becomes the enemy of the good. Large projects obscure the identification of benefits and who could pay.

Current examples

Northern Line Extension

The redevelopment of the Battersea Power Station site has been in question for years. Both the costs of supporting the power station itself and access are constraints on making it possible for this site, opposite Victoria station, to become part of the productive and profitable Central Activities Zone. Successive policy plans and developer proposals have failed to materialise. The latest version includes an extension of the Northern Line to add two stations beyond Kennington.

The transport case for such a small addition is almost non-existent. There is no pre-existing demand and there could be higher congestion elsewhere in the system by adding more people onto the Northern Line. Two more stations add little new income. Thus the basis for time savings to be created in a standard transport model do not exist.

On the other hand, the investment would make possible new densities of development on the site which could create new jobs and new opportunities for local residents. The challenge is both an analytical and a financial one. If the new development could generate new passengers and itself pay for the extension, how can we show this and what is the mechanism by which the gains can be captured.

An analogy is with the extensions of the railway system in the 1930s and the creation of “Metroland” in which the profits of development were used to help fund the railways which made them possible. In that case, the railway itself owned the land which it then sold on to developers. Now the railway is owned by the public sector and the risks it is prepared to take are very different.

Considerable effort has been put into both the establishment of a mechanism which allows the railway investment to be paid back out of rates generated by the scheme, and into consideration of whether such taxes are “additional” or not.

The question of *additionality* is arcane. There are two important elements, which also reflect into other forms of taxation. One is the uses of tax revenue. In general, the Treasury dislikes hypothecation—the notion that a particular form of revenue is earmarked for a particular line of spending. It prefers all taxes to go into one pot, under their control and to be spent according to government priorities more generally. In this view taxes and spending are separate and should not be linked. The idea that a specific revenue is earmarked to repay a particular debt goes against the idea that government borrowing rests on the credit worthiness of the government as a whole.

This attitude also affects the scope for local borrowing. Central government argues that local government borrowing is essentially guaranteed by the central authorities and therefore requires central control. And indeed where local authorities have little revenue raising powers of their own, this is an inevitable consequence. The agreement to fund Crossrail included a special Business Rate Supplement (“BRS”), which required its own legislation to make possible. The BRS is indeed a hypothecated tax, against which the Greater London Authority has raised funds to pay for Crossrail. The rate of interest charged reflected lenders’ confidence that the tax base—all businesses with a rateable value of over £50,000—and the ability to collect the revenue was very secure and easy to estimate. But this remains a unique example.

The resistance to genuine localism in central government should not be underestimated. The Coalition Government took office with strong local policies and produced a White Paper with an introduction supporting the idea of more independence for local authorities, both in planning and finance. The outcome has so far not matched aspiration.

The plan for local authorities to be able to keep increases in business rates in order to encourage business support has been watered down to the extent that it is hard to see when or how money would be available. It is unlikely to be an incentive when it is hard to estimate whether a benefit would actually come through and will be subject to exactly the same criticisms as the earlier Local Authority Business Growth Incentive schemes.

This failure to embrace localism in finance returns us the other important aspect of additionality in the minds of the Treasury—how much tax they expect to collect anyway. If it can be argued that growth and investment will happen by default, without policy support or public investment, then the taxes that this growth generates will “belong” to the central government and can be spent on whatever priorities or “good causes” meet the criteria of the government of the day. The proposition that such tax revenues will simply

not exist if a particular policy, and especially a particular public investment, does not occur is therefore looked at askance.⁵

Thus in the case of the Northern Line Extension (“NLE”), it has been essential to show two things. First, for financial markets it requires estimates of potential revenue from taxation and how a contractual mechanism could be designed to ensure this was captured. Little precedent exists here except for the Crossrail borrowing. However, the BRS is a supplement for existing businesses already paying rates and already in existence. The NLE scheme needs to capture a share of rates from businesses which do not yet exist in buildings not yet built. This is a much riskier prospect and will attract higher interest charges. Such charges will of course themselves have to be covered.

In the debate on local finance, the GLA proposed that there should be a London-wide pool for such infrastructure investments, which can be financed from additional rates. Such a pool would have allowed for risk sharing across projects and created a wider pool of potential taxpayers. This proposal was not however accepted, and indeed the criteria for allowing growth in rates to be kept by an authority have been watered down by creating strict criteria for additionality.⁶

Of course this example concerns a particularly large requirement. Estimates of the costs of providing the NLE range up to £1bn. Most requirements will be much smaller than this. However, the principles involved are the same. Over recent decades, the finance has been provided through s.106 agreements and an element of such finance is proposed for the NLE. Community Infrastructure Levy (“CIL”) on the residential element is also proposed. However, this will not be enough and a finance gap remains for which Tax Increment Financing would be needed.

High Speed Rail

The preceding example has looked at the issues surrounding the funding of a (relatively) small scale investment, which come within the planning purview of one local authority. Infrastructure needs often come with much bigger tickets attached but will still be essential to the ability to drive other property investments. The funding of new rail investments comes into this category, as this is also a public sector investment since the network is owned publicly and can only be planned in the public sector. Issues of evaluation, finance and funding and additionality occur here too.

The current case for High Speed Rail (“HSR”) has been widely derided by its critics as “spending £17bn of taxpayers’ money to save 20 minutes on the trip to Birmingham”. And indeed it is hard to see how such a benefit could justify that kind of spending. Such an accusation is the direct consequence of the evaluation mechanisms used in transport planning.

When the benefits are couched in time savings alone, the economic benefit is immaterial. If economic growth will happen anyway, then who needs transport? In the case of Crossrail, we managed to show that even in terms of such restricted approaches there were benefits of agglomeration which were not captured in the standard model. Agglomeration is the process by which output is higher when people and businesses are co-located, generating more effective labour markets, better knowledge transfer and innovation. Crossrail makes possible the delivery of more people into central London which is currently capacity constrained. Increasing the size of the agglomeration adds jobs with greater value than elsewhere and enables small additions to the productivity of those already there.

It has, sometimes grudgingly, been accepted that additions to an agglomeration can add value and relieve constraints. Once again, proving additionality is a hard test to pass. Showing that transport capacity

⁵This attitude is not helped by the failure of economic analysis to come up with a good theory of growth. It tends to rest either on investment being entirely motivated outside economics, or part of a general technological progress. Either way, it does not depend on the structure of public policy, institutions, or investments. In most macroeconomic models, underlying growth “just happens”.

⁶For a summary see, Zach Wilcox, Joe Sarling and Ewan Wright, *Banking on Growth: Trends in local government funding and finance* (Centre for Cities, 2012).

is a constraint that prevents workers reaching full potential is difficult to model. The Department for Transport's favoured approach is a LUTI model—Land Use Transport Interaction. That built for London, when tested by removing the Jubilee Line Extension to Docklands failed to show any impact on employment. The model suggested that the building availability was more important. Yet without the Jubilee Line Extension the buildings would not have been built, which suggests that the model is failing to capture the true dynamics of the situation.

No accepted forms of additionality have been generated yet for intercity rail and High Speed Trains.

Successful modern city economies also require good longer-range access markets. Inter-urban links enable firms to access wider markets, and other hubs of knowledge and expertise. Fast transport links between cities help firms access these wider markets and develop economic linkages cost effectively. They also facilitate mutually beneficial economic linkages between cities. In a UK context, fast access to London and its international gateways is recognised widely as beneficial in attracting investment and developing complementary economic functions in the Core Cities.

History shows a compelling link between transport and economic prosperity. Eddington highlighted the clear link between growth in passenger traffic and GDP.⁷ An analysis by KPMG found that a location with 10 per cent higher rail connectivity tends to have an employment density that is 14 per cent higher. The simple chart below compares rail passenger growth with employment growth in four of Britain's main cities, showing a clear positive link between the two.

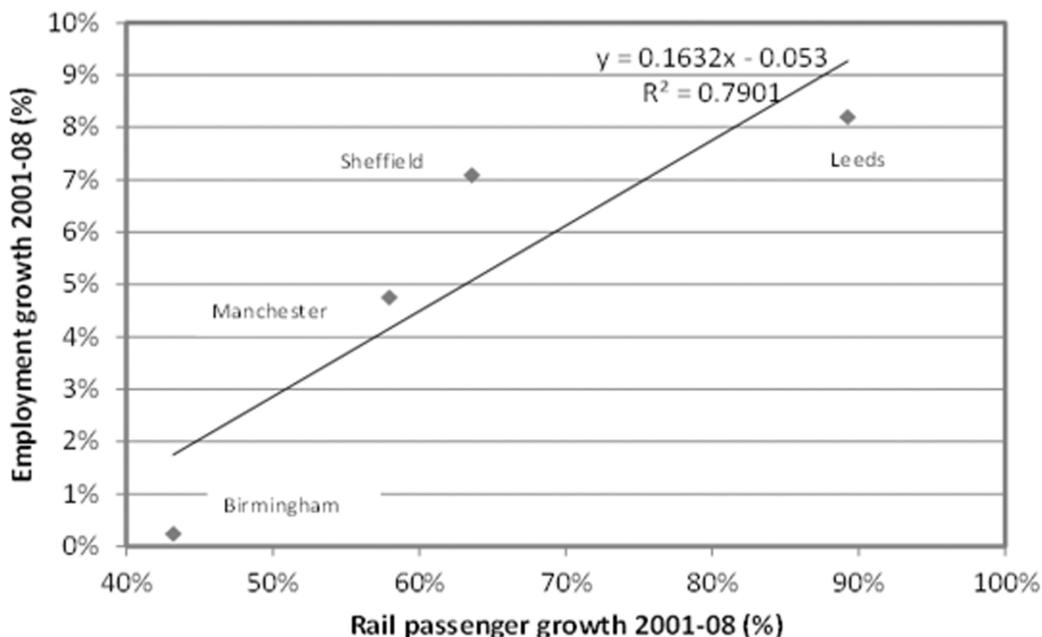


Figure 1: Growth in employment for various cities, 2001–2008

Despite acknowledging this link between transport and economic growth, the United Kingdom lags behind globally in its ability to invest in infrastructure as a means of supporting economic growth. Transport has been identified as a key objective for the United Kingdom for the last five years and the United Kingdom ranks only 34th in the world for its infrastructure, and 6thth in the G8 countries.⁸ The United

⁷ Eddington (2006) *Eddington Transport Study: The Case for Action*.

⁸ *World Economic Forum's Global Competitiveness Report*.

Kingdom only spends 1.5 per cent of GDP on infrastructure compared to 6 per cent in Japan and 3 per cent in France.⁹ Consequently, the United Kingdom has a massive infrastructure deficit, estimated at £500bn over the next decade.¹⁰

There has been unprecedented growth in rail travel over the past 15 years, and this is forecast to continue. Indeed, looking back over the past 15 years most forecasts have significantly underestimated rail passenger demand growth. In 2009 rail passenger miles were greater than at any time in the previous 60 years, on a rail network that is only 60 per cent of the size it was in 1950.¹¹ Rail demand by 2030 will be at a level far beyond that seen before, leading to severe overcrowding and higher fares in an attempt to price people off the network.

Network Rail data shows that over the last decade, passenger trips have grown by 60–90 per cent in Birmingham, Leeds, Manchester and Sheffield. To achieve 70 per cent growth will require around 80,000 more rail trips daily into these cities, something which cannot be provided by existing capacity and connectivity.

This represents around as much as one third of the projected use of the new high speed line. Even this may be an underestimate. If investment does not take place, then this growth will be jeopardised.

Capacity is already struggling to meet demand on existing long-distance rail routes—it is generally accepted that capacity constraints will bite first on the West Coast Main Line (“WCML”), followed closely by the East Coast Main Line (“ECML”). Passenger demand is forecast to increase by between 56 per cent and 61 per cent on the WCML between 2009/10 and 2024/25 between London and Manchester.¹² On the ECML passenger journeys to and from London to Leeds and Newcastle are forecast to grow by 44 per cent and 22 per cent respectively, between 2006 and 2016.¹³ Furthermore, passenger demand is set to increase by more than 30 per cent over the next ten years on the Midland Main Line from Derby, Nottingham and Leicester to London.¹⁴ Thus the case for High Speed Rail is as much about capacity as it is about speed.

High speed rail will release capacity on existing rail routes, enabling better services and benefits to the Core Cities as well as places that will not be directly on the high speed network.

Previous UK examples show that forecasts before the event tend to underestimate the demand and economic benefits of new transport investment. This can be seen with the original introduction of the Inter City 125 rail services, rail improvements to cities such as Leeds, and schemes in London such as the Jubilee Line Extension or Thameslink. In all cases the economic and regeneration benefits have been much larger than anticipated.

The proposed HS2 network is predicted to carry 240,000 passengers per day by 2043, or 85 million passengers per year, relieving capacity constraints on existing lines and transferring some six million trips from air and nine million road trips.

A key benefit of high speed rail will be the wholly new extra capacity it will deliver and the opportunity for using existing lines differently and more optimally. This will create benefits to places that do not currently have direct links to London as well as enabling intermediate places (with a service currently) to potentially have more frequent services.

When delivering high speed rail, it is crucial to make best possible use of the capacity which will be released on existing lines. Work by Greengauge 21¹⁵ shows that there would be significant benefits of the released capacity on the WCML.

⁹ Association for Consultancy and Engineering, *Avoiding the Infrastructure Crunch*.

¹⁰ Policy Exchange, *Delivering a 21st Century Infrastructure for Britain*.

¹¹ HM Treasury and Infrastructure UK (2010) *National Infrastructure Plan 2010*.

¹² Network Rail (2010) *West Coast Main Line Route Utilisation Strategy*, draft for consultation.

¹³ Network Rail (2008) *East Coast Main Line Route Utilisation Strategy*.

¹⁴ Network Rail (2010) *East Midlands Route Utilisation Strategy*.

¹⁵ Greengauge21 (2011) *Capturing the benefits of HS2 on existing lines*.

In Europe in 2008 there were 3,480 miles of high speed line in operation, 2,160 miles under construction and another 5,280 planned. In contrast, the United Kingdom has just 70 miles—High Speed One. Network Rail¹⁶ reports that by 2025 China will have 5,678 miles of HSR in place or planned, Spain 4,415, France 4,135, Japan 3,774 and Germany 2,237. With only 70 miles of high speed line, the United Kingdom would lag behind countries such as Morocco with 422 miles and Saudi Arabia with 342.

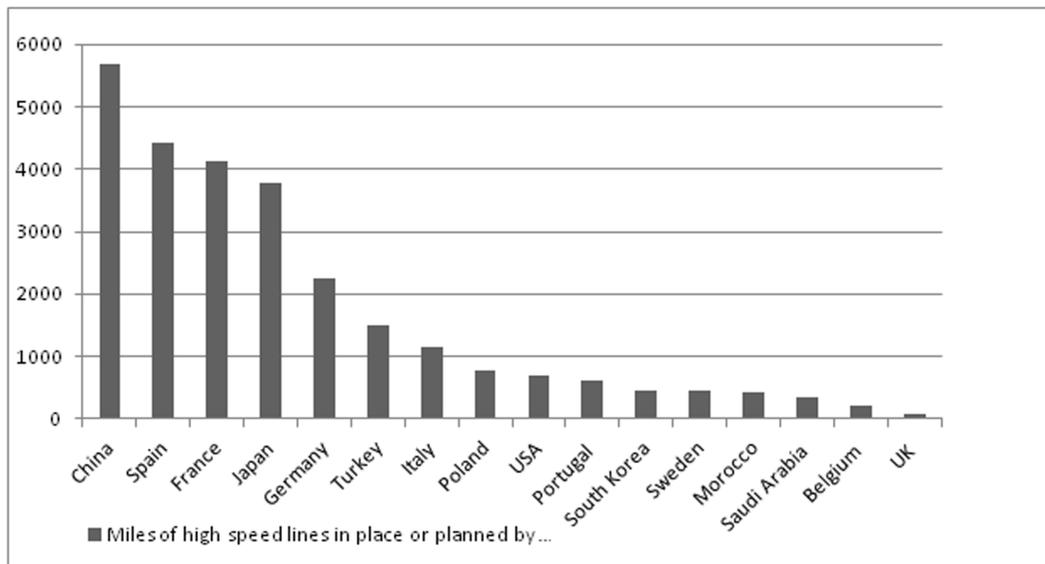


Figure 2: Miles of high speed lines in place or planned by 2025¹⁷

An ex-post evaluation of High Speed One (“HS1”) between London and the Channel Tunnel estimated that the benefits were worth £7.6bn in 2008 prices, resulting in a Benefit-Cost Ratio of 1.8, based on existing evaluation methods.¹⁸ However, the study showed that development around stations is planned to deliver 15,000 new homes and 70,000 jobs, valued at £4.4bn in GDP per annum. Even if only 5 per cent of this could be attributed to HS1, it would result in a net present value (“NPV”) over 60 years of £10bn, which would more than double the benefits calculated by the standard appraisal.

International examples also show that HSR often:

- **Pays for itself.**

The Tokyo-Osaka line opened in 1964, and the Paris-Lyon line in 1981. The Japanese line reports that it long ago covered its construction cost through fares, and the French line reports that it has also done this. The Spanish high speed network (Alta Velocidad Espanola) is the only part of the Spanish railway turning a profit.

- **Exceeds demand forecasts.**

Even though the main Japanese HSR line is only 3 per cent of the total network length, it carries 25 per cent of all traffic. In the decade to 2004, passenger traffic on HSR in France increased 62.5 per cent, and passenger traffic between Frankfurt and Cologne increased 133 per cent.

¹⁶ Network Rail (2009) Meeting the Capacity Challenge: the case for new lines.

¹⁷ Source: UIC, International Union of Railways cited in Network Rail (2009) Meeting the Capacity Challenge: the case for new lines.

¹⁸ Economic Impact of High Speed 1, Colin Buchanan and Volterra, for London & Continental Railways, January 2009.

- **Has significant economic and regeneration benefits.**

In Japan, cities like Yokohama have seen huge developments around stations. Property values around stations have been estimated to be 67 per cent higher and cities connected to the line grow their population 22 per cent faster and have 26 per cent higher growth in employment. In France, Lyon saw a 43 per cent increase in office space around the station after the HSR link to Paris opened and reports suggest land prices have risen by 35 per cent. Development at Lille's station supports 6,000 jobs. High speed rail has created new commuter cities, such as Vendome, where HSR reduced the travel time from 2hrs 20mins to 42mins. In Spain Lleida, a city between Madrid and Barcelona, has experienced a 15 per cent increase in tourism and new investment from high tech companies. Cities such as Ciudad Real have seen growth as commuter cities, with an average of 1,000 homes built per year. The stations of Montabaur and Limburg were added to the Frankfurt-Cologne line due to political pressure and studies show a 2.7 per cent increase in overall economic activity.

- **Reduces the demand for car and aviation trips.**

From Paris-Lyon the rail share of trips rose from 40 per cent to 72 per cent when HSR was introduced. HSR now accounts for 97 per cent of the air-rail market between Frankfurt and Cologne. The Madrid-Seville line cut air travel by a third and car travel fell from 60 per cent to 34 per cent. Along the Madrid-Barcelona line, once Europe's busiest air route, the number of train passengers now outnumbers air.

None of these potential benefits are included in the existing case from the Department for Transport. The case does not include any potential benefits arising from a step change in the connectivity between the Core Cities nor from development in their economic areas.

One of the difficulties in "proving" additionality is that infrastructure is an enabler of other production. Without other investments in the built environment and in skills, it is hard to take advantage of such investments. Showing how it is possible for cities such as Birmingham and Manchester to take advantage of better connectivity is also important and requires both partnerships with developers and integrated policies. Weak local government makes this harder.

In addition, as well as improvements to the strategic network there must also be improvements to local and regional transport networks.

Aviation

Finally, it is worth discussing aviation policy or rather the difficulty in creating such policy. This is now about international connectivity rather than domestic linkages.

The United Kingdom's major airport is Heathrow, which is constrained both in space and by its residential neighbours. Even a third runway will in practice do little more than relieve some of the constraints of a location which currently operates at 98 per cent capacity. Heathrow is the busiest two runway airport, and Gatwick the busiest single runway airport in the world. They are therefore both vulnerable to anything which goes wrong. A major international airport should have four full-length runways capable of independent operation, as most of our European competitors have or are working towards. This would require Heathrow to double its existing land take.

A number of reports have described the potential losses to the per cent of the failure to develop a larger international airport. Most have been commissioned by supporters of Heathrow and therefore suggest that this location can fulfil the role. Transport for London see the importance of aviation¹⁹ but are equally

¹⁹ See <http://london.gov.uk/publication/new-airport-london-part-2> [Accessed September 27, 2012] and also Pt 1.

focussed on access to the airport, which is for them a more important public investment issue. Although private funds could invest in airport expansion, they will not build a new Piccadilly line or additional rail access (high speed or otherwise). Aviation policy needs to take all of these into account.

There is a parallel here with power generation, for which a shortfall is emerging as the result of constraints on coal fired generation in the future. The challenge of creating a new generation of nuclear power plants is not yet met but the new Planning Acts have put in place a new mechanism for giving such investments a context. The nuclear National Policy Statement has created a distinct process for getting planning permission for a nuclear power station. The process is still in its infancy and the requirement for pre-application consultation can be burdensome. However, it is less burdensome than is likely to be the process of a full blown Planning Inquiry for such sensitive topics.

As experience with the new Planning Act system grows and becomes more embedded into practice, advisers will generate knowledge frameworks which will help clients streamline the process.

It is to be hoped that an aviation National Policy Statement can be developed which will address the issues in general. The proposal for an airport in the Estuary may not be the right one, but it does have some considerable benefits. It removes noise constraints from West London and helps regenerate areas such as East Kent and South Essex. It can be connected to freight terminals such as the new London Gateway port, and to a rail network connected to the continent as well as the rest of the country. It would require the closure of Heathrow, but the alternative uses of this site are considerable.

The challenge is to create a framework in which the merits of different proposals and their consequences and requirements can be rationally debated.

Finance and funding

The constraints on property investment at present in the United Kingdom are both financial and structural. In the short and indeed medium term, the traditional mechanisms of bank finance are likely to be constrained. The financial crisis, changing regulation and shifting patterns of trade will put a premium on equity and on finding sources of cash. However, interest rates remain low and countries with a good record will certainly be able to borrow for recognised purposes.

Borrowing for real investment is very different from borrowing to finance consumption—a route which has led many to bankruptcy. What is important is to ensure that there is a real payback from the investment, whether in the private or the public sector.

Here too, new constraints have however emerged. The infrastructure requirements to back up property developments have become more constraining as spare capacity has been used up in transport networks, and regulatory change has made power and water requirements change too. Electronic communication needs and data storage have also changed power needs and distribution networks. Investment in these can often be done by private sector investors, but operate within regulatory price constraints which govern the required payback. In turn this means that there need to be users willing to pay these prices to make the growth possible.

End users of any system will be people, households and businesses. People need wages, and wages require jobs and the production of value added. Taxation also rests on such value added. In turn, the right property out of which occupiers can work needs to go alongside the infrastructure that they need for markets and for their labour force.

This is not by any means to say that some central plan is required. We know that these do not work. It is to say that not all infrastructure will work, and not all developments succeed. There is always risk.

The balance of risk drives finance and funding. A current risk is that mechanisms designed to help fund infrastructure fail to grasp the nature of risk as their designers only observe successful projects.

Adding CIL to s.106 to TIF risks killing the golden goose before there are any eggs. Not all value can be captured before it actually exists. A major consideration in developing effective planning policy should

be to tax cash flow rather than cash potential. The potential may be a dream and financing a dream is charged at high interest cost.