

National Infrastructure Commission: Call for evidence

Francesca Medda
QASER Lab
University College London
[contact redacted]

London's transport infrastructure

3.1 What are the major economic and social challenges facing London and its commuter hinterland over the next two to three decades?

Different studies address the major long-term challenges which are strongly associated with steep increases in the London population, and thus the necessity to develop and adapt the transport system, particularly public transport. As a consequence, the priority will be to tackle environmental issues such as the reduction of air and noise pollution.

3.3 What opportunities are there to increase the benefits and reduce the costs of the proposed Crossrail 2 scheme?

It is possible to hone the capabilities of the Land Value Finance (LVF) tool. LVF is a financial policy tool already used in Crossrail 1 through which it is possible to finance transport infrastructure in an efficient, transparent, and equitable way. Due to the persistent effects of the 2008 economic crisis on public sector budgets, large-scale infrastructure investments such as London's Crossrail or the Northern Line Extension have typically suffered from substantial funding shortfalls; thus, there was the need to find innovative tools to finance London transport investment. Land Value Finance (Business Rate Supplements, Tax Increment Finance and Betterment Tax) was used to raise complementary financial resources to reduce this shortfall.

In the case of Crossrail 2, two specific strategies can be considered in order to improve the use of LVF, reduce costs and increase benefits. Strategy one considers a modification to the fiscal scheme of the Business Rate Supplement (BRS) by linking it more directly to the land value benefits generated by Crossrail 2. The second strategy is to use a discounted cash flow analysis to examine the gains which could be

achieved through the issue of a municipal bond backed by BRS additional revenues. We have tested the two strategies for the Crossrail 1 scheme by collecting BRS data and real estate values of London boroughs for 2009, 2010 and 2011. The results in the case of Crossrail 1, which can be extended in the case of Crossrail 2, indicate that the two strategies are indeed able to raise additional funds and reduce the costs of the transport scheme.

3.4 What are the options for the funding, financing and delivery of large-scale transport infrastructure improvements in London, including Crossrail 2?

Due to the importance of London infrastructure assets in the global context, we need to take into account the existence of heterogeneity among different infrastructure sectors and sub-sectors. As Oyedele observes, “infrastructure is an incorporation of many heterogeneous sectors including roads, bridges, ports, power generation, electricity, gas, utilities, and telecommunications with no two having identical attributes.” As verified in our analyses, UK infrastructure sectors and sub-sectors such as transport perform differently and show variations in annual returns and volatilities.

From this perspective, at present private capital exceed desired and possible investments in London. Investors are forgoing risk and seeking stable, secure options, preferably with non-zero returns, but they are seemingly sometimes happy with zero or negative returns (pension funds and other savers are essentially paying fees to park money). Despite efforts to develop innovative financial mechanisms and structures that satisfy all the needs of investors, still more can be done, particularly in the form of government initiatives to support transport infrastructure investments. When we consider private sector transport infrastructure investment, we notice how it has taken the brunt of the criticism meted out. Apart from the short duration of investment funds, another drawback is the amount of leverage of these funds and the high fees charged by fund managers, which when taken together reveal a misalignment of interests. The high fees and carried interest are beneficial for fund managers, as they lead to a buy-hold-flip structure, but they do not correspond, for example, to pension fund needs. Government restructuring of these instruments would certainly represent an important step towards encouraging pension fund investment in infrastructure such as transport.

One innovative possibility is for investors to invest directly in large physical assets such as infrastructures like Crossrail 2. However, when we consider this investment option, since a high level of capital is needed, the investor is exposed to various risks, of which policy and demand risks are among the most significant. These risks are significant since the stability of cash flows is only guaranteed if there is no change in both the transport provision of services and in the legal and regulatory conditions pertaining to a project. Within this context, three financial options: (1) London Transport Infrastructure Fund, (2) Urban Investment Portfolio, and (3) UK Sovereign

Wealth Fund, could be important as effective vehicles for transport investment in London. These three financial mechanisms allow for diverse investment across a range of sectors, and by so doing, they minimise exposure to risks that may be associated with policy making, to take one example.

Given the wide range of private and institutional investors present in the market, it is surprising that few analyses have thoroughly studied the different analytical strategies of investors. In consideration of our analyses dedicated to UK infrastructure, we can reach some interesting conclusions on the matter at hand.

The creation of a UK Sovereign Wealth Fund will aim to boost investments in large-scale infrastructure projects. The idea of creating the first UK Sovereign Wealth Fund to invest in homes, roads, and railway systems such as Crossrail 2 has recently gained a new and substantial wave of support among important figures in the UK fund management industry. This idea proposes the merging of a number of public sector pension schemes, in partnership with authorities, to create a large fund to invest in infrastructure, while simultaneously generating savings and creating attractive returns for pensioners. The potential of having a UK Sovereign Wealth Fund for infrastructure investments in London, particularly transport, is significant. This fund could not only address current infrastructure needs but also benefit future generations. Nevertheless, this idea is not without great challenges. Persuading pension funds to merge will not be easy. Some pension schemes have developed solid business models during the past 25 years, and will most likely be resistant to change. Despite the challenges, however, the idea still remains highly attractive.

In relation to the Urban Investment Portfolio, we can observe that investing in transport infrastructure within a portfolio is beneficial as long as it is part of investment in other assets, such as real estate. Our research findings have concluded that urban investments need to be treated as an integrated and interdependent entity, and that an Urban Investment Portfolio approach, by allowing for both risky and less risky urban investments, will achieve private sector high financial returns while also addressing the wider environmental/social and urban/transport needs. Private sector participation is likely to increase if the investment portfolio ranges across sectors and objectives, thereby reducing exposure to risk.

Additionally, we can confirm that the creation of a Transport Infrastructure Fund that invests in a specific infrastructure sub-sector, such as London transport, can certainly satisfy diversification benefits. In our analysis, transport shows a strong performance over the period between 2004-2014, with a return of 9.35% and volatility at 23.81%. It is the best-performing infrastructure asset, with a Sharpe Index of 0.334. This is not surprising, as transport is a very stable sector. Moreover, by focussing on transport, a fund manager can gain complete knowledge of the performance of the sector and still enjoy diversification benefits.

The introduction of these three mechanisms would allow sustainability in decisions to fit better into existing financial decision-making models and be compatible to cost-benefit approaches. The three mechanisms are also likely to foster private investor involvement because private investors help to curtail the risk of making poor investment decisions and investing too heavily, or too little, in London transport infrastructure.

3.5 How have major metropolitan areas in other countries responded to similar challenges and priorities? Are there any lessons to be learned and applied in London?

London has been and continues to be a role model of radical and innovative financial mechanisms for transport investments. For instance, the London Green Fund is an interesting structure after which the proposed London Transport Infrastructure Fund can be structured. To our knowledge, examples of Urban Investment Portfolio are not yet available, with the exception of our study for the European Investment Bank (EIB). The cities that have developed smart city strategies have made manifest the concept of integration of their urban investments; metropolitan role models include Barcelona, Freiburg, Malmö, and Chicago in the USA. All of these cases provide useful lessons but, as each city is different, the financial instruments would need to be defined and tailored for London.