



The Northern Powerhouse (NPP) is a business-led thinktank working to increase prosperity in the North of England. Its work passionately advocates for the interconnected network of thriving economic hubs in the North, to better the lives, economies and businesses not just in the North of England, but for the whole UK.

Overview of the Data Fellowship:

At NPP I produced a report that demonstrated the effects transport has on the economy; It aimed to show how government investment into transportation infrastructure, services and projects has a significantly positive correlation on productivity.

What is Productivity?

'Productivity' is how much output can be produced per unit of input. In an economic context, this refers to how many workers, hours, materials, etc are needed to produce the same amount of product. For example, building a railway line extension in an area increases the productivity of the local economy because commuters have reduced time to get to work and therefore less workers are needed to produce the same output.

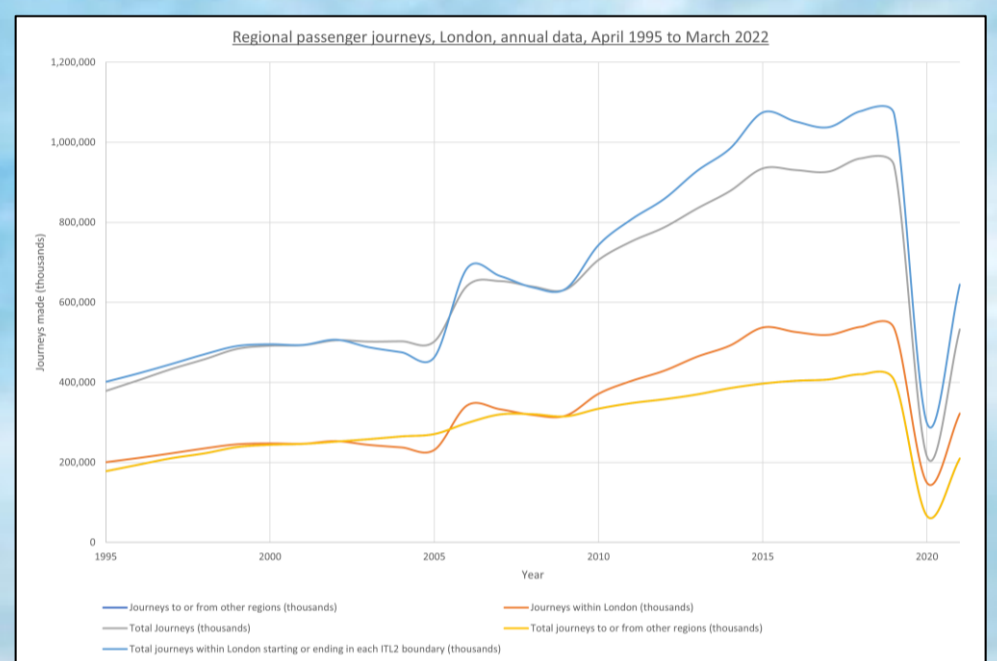
My Report

My report aimed to produce empirical evidence to support this assumption, through regression analysis. Data was collected on case studies, examples in the UK and abroad where transportation has been developed. The data from this can then be analysed to demonstrate whether the transportation investment had a quantifiable, statistically significant effect on productivity.

Key Skills learnt:

I have developed my research skills and use of public and private data stores. I feel comfortable searching for data, using databases such as ONS and BLS I now know how they're structured, how to find specific data and the best way to go about getting it. I also created datasets using lots of different sources of data in many different forms and inputting them all in spreadsheets in an easy to read and standardised way, not only for humans but for statistical programmes (Rstudio).

I also had to formulate research questions for this project. I had to draw upon my knowledge of the scientific method often to make sure I was performing research to a high quality. I developed my academic writing by producing a scientific report that summarises all the noteworthy results I had found during the fellowship.



Graph showing the growth of transportation in London

Key Findings of the Report:

Case Studies were shown for London (UK), Portland (Oregon), and national UK data

- Increasing the total journeys in London increases productivity by 0.2%
- Increasing the length of commuter rail by 1% in Oregon increases productivity by 1.5%
- Increasing the length of light rail in by 1% in Oregon increases productivity by 0.5%
- Increasing road length by 1% nationally increases productivity by 3%
- Increasing the number of undergraduates by 1% increases productivity by 0.2%

Wider Applications:

After demonstrating that in these cases investing into transport helped local economies, we apply the same principles to a UK context. The ultimate aim of the report was to show, and advocate, if the government invested into transport like these other cases did, it would have similar effects for our economy and productivity. This is even more poignant in the current context of HS2 and rail strikes.