Box B: Productivity Paradox: Challenges and Opportunities

By Adam Yousef

Back in 1987, the Nobel prize-winning economist Robert Solow observed that 'you can see the computer age everywhere but in the productivity statistics!' (quoted in Rotman, 2018). This dichotomy between limited productivity growth and rapid technological progress is now commonly described as the 'Solow or productivity paradox'.

At present, the term 'productivity paradox' increasingly refers to instances where productivity is either feeble or growing slowly. In the United Kingdom, there has been a slowdown in productivity growth since the Global Financial Crisis (GFC). The economic implications of this slowdown have been far-reaching for London and other regions (figure B1).

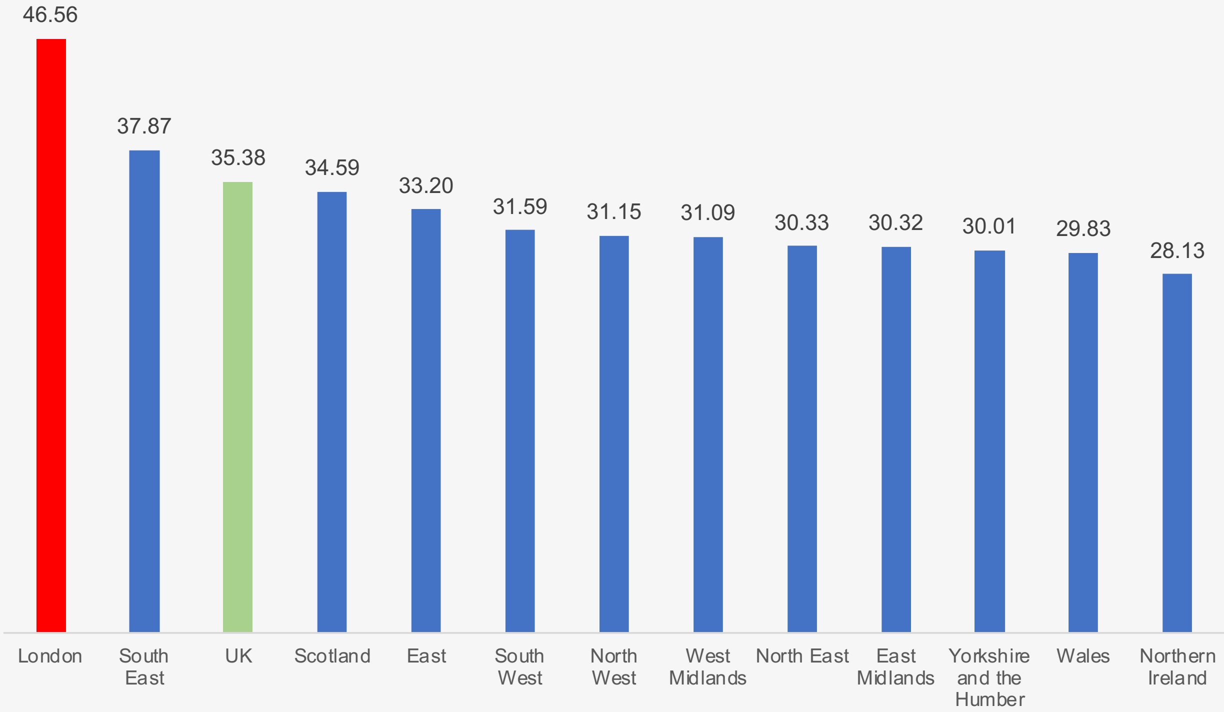
Figure B1 Year-on-year productivity growth in London and the United Kingdom

Source: Office for National Statistics.

London's productivity picture

How has London been performing? Data from the Office for National Statistics (ONS) reveals that the capital continues to outperform other UK regions: in 2019, London's output per hour across all industries was 23 per cent higher than that of the Southeast and about 32 per cent higher than the United Kingdom (figure B2).

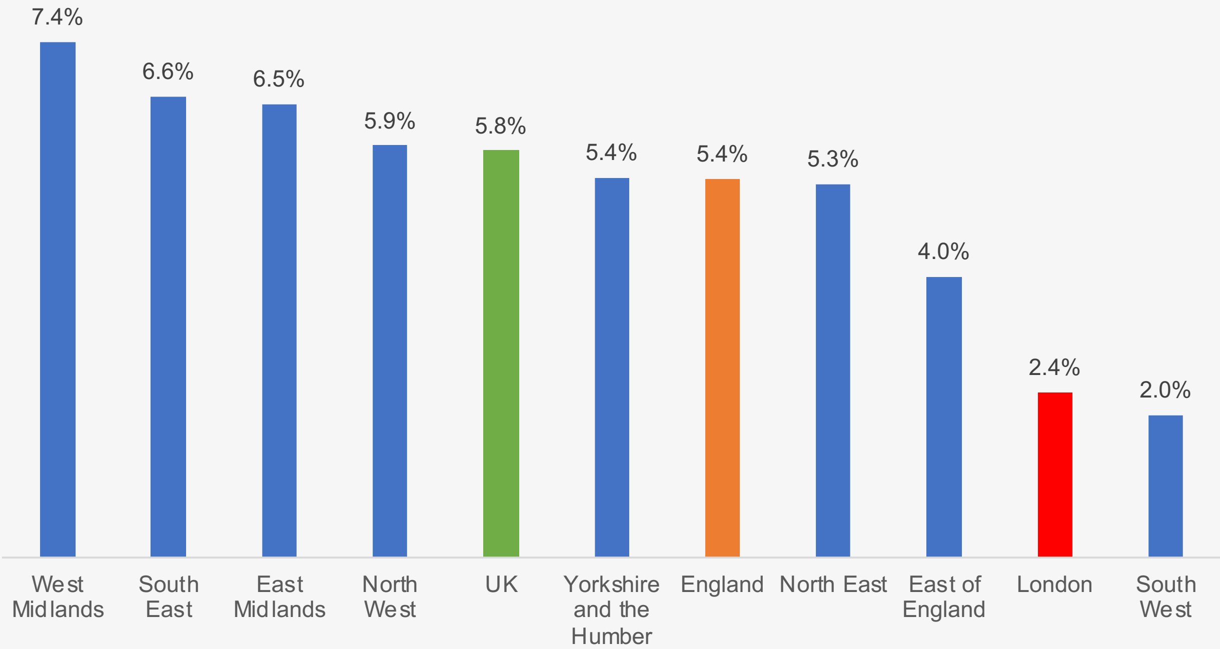
Figure B2 Output (chained volume measure) per hour by UK region (£ 2019)



Source: Office for National Statistics.

Nevertheless, the picture changes when looking at productivity growth over time. For example, between 2010 and 2021, the capital's productivity increase lagged all UK regions except the Southwest (figure B3).

Figure B3 Growth of output per hour by UK region (2010 to 2021)



Source: Office for National Statistics.

In other words, despite being higher than in other UK regions, London's productivity has been growing much more slowly. This is undermining the city's global competitiveness. A 2023 study by the Centre for Cities ranks London's productivity growth (0.2 per cent) below that of New York (1.4 per cent), Paris (0.9 per cent) and Stockholm (0.7 per cent) between 2007 and 2019 (Rodrigues and Bridgett, 2023). The report attributes this drop to a slump in the financial performance of highly-productive firms in key sectors of London's economy (for example, the financial, information, and professional services sectors), the city's unaffordable housing market, rising commercial property costs and a relatively restrictive immigration policy (which in turn undermined London's ability to attract and retain global talent).

Another consequential aspect of London's productivity paradox is the unequal performance of its boroughs. Figure B4 illustrates this point. For each of the 32 boroughs (plus the City of London), the top number is an index that compares that borough's productivity performance to the United Kingdom's in 2021 (a number bigger than 100 means that borough's productivity was higher than the United Kingdom's and vice-versa). The bottom number is the percentage change in that borough's productivity from 2004 to 2021.

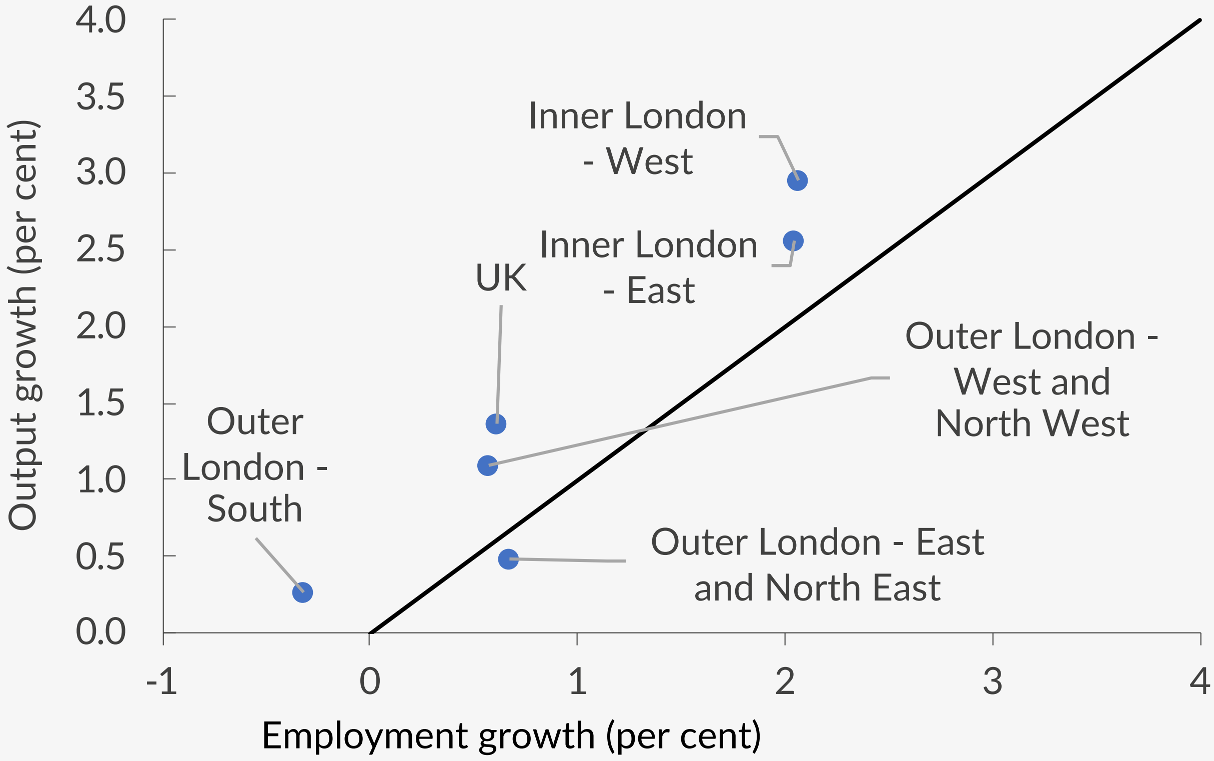
Figure B4 Productivity by London borough (2021)

Source: Office for National Statistics.

The map shows that all boroughs experienced an increase in labour productivity over the 17-year period, with central London boroughs like Hammersmith and Fulham (96 per cent) and Hackney (68 per cent) being among the best performers, and boroughs like Barking and Dagenham (7 per cent) and Sutton (11 per cent) being among the worst performers. Generally speaking, boroughs in the East and Northeast tended to have slower productivity growth since 2004 and lower productivity levels than their counterparts in the capital as well as the United Kingdom.

Finally, a look at London's labour productivity since 2004 reveals the unequal performance of Inner and Outer London. Figure B5 shows that from 2004 to 2021, Inner London boroughs outperformed both the United Kingdom and Outer London boroughs. Not only that, but Eastern and North-eastern parts of Outer London experienced a decrease in productivity over that period, while the United Kingdom and other London regions saw growth.

Figure B5 Growth in hours vs. growth in output (2004-2021)



Source: Office for National Statistics.

To borrow from the great Victorian novelist himself, the data reveals 'a tale of two Londons': one that serves as an engine for the rest of the country, and another that lags not just the first London, but also the entire country. This tale also applies to recent years: for example, while the Covid-19 pandemic unsurprisingly reduced labour productivity across the United Kingdom (including London), Inner London proved resilient as its productivity dropped by much less than Outer London. In fact, Outer London experienced a sharper decline than the United Kingdom.

Demystifying the capital's productivity paradox

With the data revealing a slowdown and acute spatial inequality in London, what are some of the challenges underlying these trends? While the productivity paradox is complex, there are several factors to highlight.

Housing affordability

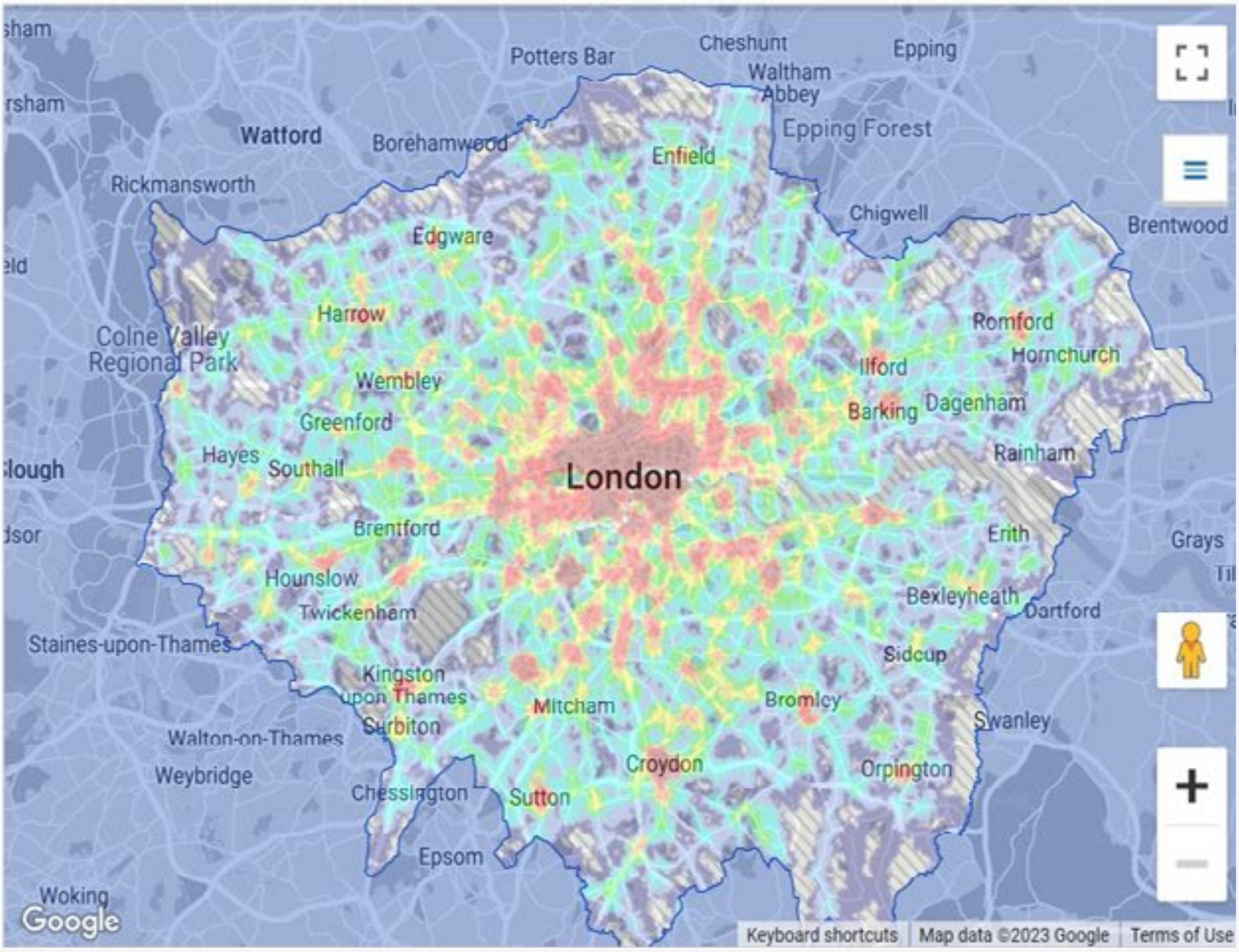
London's unaffordable housing market weighs heavily on its productivity. Unaffordable housing makes it less likely for workers to reside and work in London. Other things equal, this means a reduced quality and quantity of labour. Recent analysis by GLA Economics reveals that housing affordability has already begun to undermine public-sector recruitment and retention (Yousef, 2023).

Moreover, a shortage of affordable housing in central areas such as Inner London would limit workers' ability to move to productive places where high-wage jobs are concentrated. This erodes the benefits of efficient labour matching and agglomeration economies. It also means that people are less likely to afford and sustain housing costs: recent London Councils' research found that London has the equivalent of the population of Oxford living in temporary accommodation (Leppänen, 2023). Individuals with precarious housing are less likely to find and maintain employment (Swami, 2018), and are less likely to invest in their human capital.

Public transport accessibility

The United Kingdom under-invests in public transportation and infrastructure compared to G7 countries. For example, OECD data for 2021 shows that UK investment in infrastructure lags that of France, Germany, Japan, and the United States. Looking specifically at London, one observes inequality in public transport accessibility levels in Greater London, with Outer London having much lower accessibility than Inner London (figure 6).

Figure B6 Public Transport Accessibility Levels (PTALs) in Greater London



Source: Transport for London.
Note: PTAL rates locations by distance from frequent public transport services.

Greater transport accessibility could help people secure jobs, reduce unemployment and inactivity, facilitate access to public services, and allow economic agents to interact more efficiently.

Research and development (R&D) spending

The United Kingdom has been lagging most G7 economies in R&D spending over the past decade. According to the Institute for Public Policy Research, 'the UK share of global research and development (R&D) investment has fallen by a fifth since 2014' (Nanda et al., 2022). In addition, OECD data shows that in 2019, the United Kingdom ranked 11th out of OECD countries in terms of R&D investment as a percentage of GDP, with 2021 data showing that the United Kingdom (2.9 per cent) lagged the United States (3.5 per cent), Germany (3.1 per cent) and Japan (3.3 per cent).

As the UK Department for Business, Energy and Industrial Strategy noted, 'Higher levels of R&D investment...could lead to growth in economic productivity and prosperity through the adoption of new products and services and the creation of new high-wage jobs, tackling some of the big challenges of today and tomorrow's societies in improving health, the environment, and living standards overall' (BEIS/NIESR, 2021).

Business investment

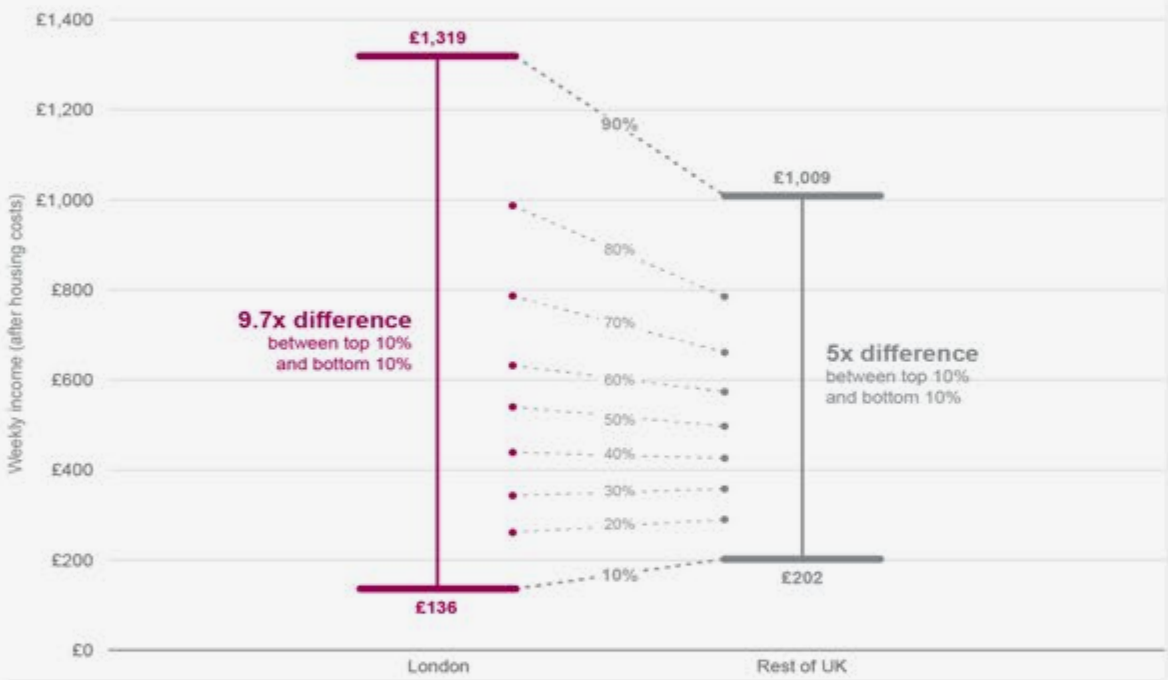
Both London and the United Kingdom have also been suffering from chronic business underinvestment. For example, OECD data reveals that the share of GDP dedicated to capital formation has been low in the United Kingdom compared to the United States, Japan, Germany and France in most years since 1980, and the gap has widened since the late 2000s.

Meanwhile, within the United Kingdom, ONS data shows that investment growth in London between 2008 and 2019 (41 per cent) was slower than all other UK regions except the Northwest (39 per cent) and Yorkshire and The Humber (27 per cent).

Income and wealth inequality

Another challenge is London's acute income inequality. Figure 7 shows that the gap between the top and bottom income deciles in London is nearly 10 times, compared to 5 times for the United Kingdom.

Figure B7 Income inequality, London and rest of the United Kingdom, 2019/20-2021/22



Source: Department for Work and Pensions and GLA.

More research is pointing out the positive role a more equal income distribution could have on economic growth. For example, the World Economic Forum's Social Mobility Report (2020) finds that increasing social mobility, a key driver of income equality, by 10 per cent would boost economic growth by nearly 5 per cent over the next decade. The same report estimated that the United Kingdom's relatively low social mobility and high inequality will cost the country nearly US$130 billion (£102 billion) in additional GDP from 2020-2030 (WEF. 2020). Moreover, IMF research also shows that excessive inequality is associated with lower economic growth (IMF, 2017).

Could we solve this paradox?

As we have already seen, capturing and measuring productivity is notoriously difficult, and this continues to limit our ability to solve the problem. Nevertheless, there are several things we could point out:

1. Any solution would require a systemic approach that goes beyond partial measures such as rebalancing housing supply and demand and R&D investment. It is interesting to note that London's low productivity spell coincided with the period immediately after the 2008 GFC – around the time the Bank of England introduced its Quantitative Easing programme. Any solution would have to consider, for example, the effect of monetary policy on productivity and growth. It would also need to include major employers, universities, start-ups, local authorities, and central government.
2. Coordination across multiple tiers of governments (central, regional/combined authorities, and boroughs) is necessary to develop a harmonious strategy that aligns national objectives with local requirements. A Productivity Commission could be established that would coordinate action across government tiers and ensure synergy across multiple fronts. The example of Australia's Productivity Commission could serve as a reference (Australian Government, 2023).
3. Any solution would also require us to address existing data constraints and outstanding questions, such as quantifying the economic contribution that affordable housing could make to productivity and developing better ways to measure total factor productivity.

All to say that solving this paradox, while arduous, is not impossible. Bill Gates once quipped that most people overestimate what they can do in one year and underestimate what they can do in ten, and this may well apply to efforts to solve London's productivity paradox.

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