

## **Understanding a pandemic: The power of administrative data**

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Public sector administrative data is a powerful tool for understanding society. And now, in a time of unforeseen global crisis and ongoing uncertainty, it is more important than ever.

Administrative data is information created when people interact with public services such as schools, hospitals, the courts or the benefits system. Records of these interactions are originally created for operational purposes: to enable public bodies to carry out their day-to-day work and provide services in an effective way. For instance, in England the Department for Education collects data on educational attainment to identify schools and subjects where improvement is needed; HM Revenue and Customs (HMRC) collects data on tax and incomes to assess compliance and inform tax policies; and the National Health Service (NHS) records details of admissions and appointments to monitor trends in hospital activity. Administrative data also includes basic information about people in the UK, such as notifications of births, deaths and marriages, the electoral register, and national censuses.

Across the UK as a whole, administrative data is currently a largely untapped but information-rich resource. This wealth of data has the potential to provide powerful insights into our society and in turn highlight areas where change in policy and service provision is needed to improve lives. The greatest benefits accrue when these data sources are linked together, illuminating the unseen connections between different aspects of our lives on which our society and economy are built. ADR UK (Administrative Data Research UK),<sup>1</sup> an Economic and Social Research Council<sup>2</sup> investment, is a UK-wide partnership working closely with the UK and devolved governments and academic institutions to facilitate greater use of linked administrative data for research in the public interest, so that policy can be based upon the best evidence possible. This is particularly relevant in the era of Covid-19, in which it has been necessary to rapidly find new ways of living and working. To restart our society and economy in a safe and effective way, and to mitigate the ongoing negative impacts of the pandemic, we need a thorough understanding of how service use has been affected by the crisis, and how different areas of life are being impacted. Administrative data can help us achieve this by paving the way towards a better understanding of what will and won't work in 'the new normal'.

As part of its 'World of Work' programme,<sup>3</sup> ADR UK is seeking access to linkable Department for Work and Pensions (DWP) and HMRC data for a range of uses. In the short-term, combining this data with indicators from the health system lets us understand how people who are 'shielding' on health grounds are distributed across working-age households, and hence the potential impacts on labour supply if household members must also limit their exposure. In the mid-term, this data will enable us to understand how the economic effects of the pandemic-induced recession are distributed and whether interventions such as the recently-announced 'Kickstart' scheme<sup>4</sup> are effective at reducing the scarring effects for young people.

To understand the impacts of Covid-19 on productivity, we want to know ‘what is happening now?’ and ‘what will happen next?’ For the first question, administrative data is essential. Whilst the Office for National Statistics (ONS) has been effective in getting new surveys developed and run – most recently the Covid-19 Infection Survey (CIS) – these always have to balance timeliness and coverage: the quicker the information is needed, the smaller the sample that can be gathered. In contrast, administrative information, such as furlough data held at HMRC or increased benefit counts held by DWP, directly reflects what is happening and is near-universal in its coverage. These administrative sources are invaluable for understanding how the economy is changing in real time.

Thanks in large part to ADR UK funding, ONS is making a range of datasets related to the impacts of Covid-19 available to accredited researchers via its Secure Research Service (SRS).<sup>5</sup> These include anonymous data on Covid-19 infection rates and social and business impacts, and are being used by ‘superusers’ such as the Institute for Fiscal Studies to identify which sectors and workers are being hit hardest, and which groups are most at risk of future unemployment. Analysis of this data by the Bank of England has supported HM Treasury in the design of business support schemes for businesses and the self-employed during the pandemic, such as so-called ‘bounce bank loans’. These insights are essential to enable the development of effective measures to mitigate the ongoing negative impacts of the pandemic on productivity.

However, trying to model the impact and outcomes is different. We need to understand what is ‘normal’ to predict how ‘not-normal’ will turn out, and here historical data resources, both survey and administrative, are vital. The Wage and Employment Dynamics project,<sup>6</sup> funded by ADR UK, is integrating data from multiple sources (employer surveys, business data, Census and education data) to follow the same de-identified individuals through their work history. This will enable a much deeper understanding of how individual workers experience the changing economic climate – for instance, the impact of joining the labour market during a recession, or in a location with few stable job opportunities. Combining this data with current administrative data, would, for example, allow researchers to analyse the incidence of furloughing across personal and business characteristics, and estimate the longer-term impact across different parts of the labour market.

In the agri-food sector, Covid-19 initially raised concerns about food security and supply chain effectiveness, though performance to date has shown the sector to be resilient in the face of numerous restrictions to normal business practice. Nevertheless, lessons will be learned, and going forward, successfully adapting and responding to Covid-19 generates an additional consideration for government when developing future agricultural policy, an area already full of complex and sometimes competing priorities. Underpinning the UK food system are tens of thousands of relatively small farm businesses, most of which are family owned and operated. Investigating resilience and productivity, as reflected in the traits of farming families, is a topic of interest for one of ADR UK’s newest projects: AD|ARC (Administrative Data | Agricultural Research Collection). To do this, the project will link government administrative data on farm businesses with de-identified information on individual farmers and their households.

Although highly resilient to shocks such as Covid-19, animal diseases, extreme weather and market volatility, it is less certain if farms can adapt and successfully respond to the opportunities created by disruption in various forms. Evidence for this can be seen in relatively modest farm business productivity growth, which generally underperforms other sectors of the economy. The AD|ARC project will investigate possible correlation between farm scale and scope, key drivers of productivity, and the socio-demographic characteristics of farmers and farm households. Trade-offs that can exist between resilience and productivity may be revealed in the characteristics of farmers and farm families operating farms of different types and sizes in different geographical locations. Initially, the impetus for the project came out of preparing for Brexit and supporting agriculture to reduce its environmental impact. However, Covid-19, as another example of disruption to business as usual, demonstrates the capacity and versatility of administrative data to inform existing and emerging policies for agriculture, the environment and rural development.

Administrative data has long been a powerful – if under-utilised – tool to help manage our society, economy and public services on the basis of lived experience. The Covid-19 pandemic only emphasises the need for timely access to the existing wealth of public sector data, to ensure the way we live and work, and our responses in times of crisis, are driven by the most comprehensive evidence available to us.

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1. ADR UK: [www.adruk.org](http://www.adruk.org)
  2. Economic and Social Research Council: [www.esrc.ukri.org](http://www.esrc.ukri.org)
  3. ‘World of Work’ programme: [www.adruk.org/our-work/world-of-work](http://www.adruk.org/our-work/world-of-work)
  4. Recently-announced ‘Kickstart’ scheme: [www.gov.uk/government/news/rishis-plan-for-jobs-will-help-britain-bounce-back](http://www.gov.uk/government/news/rishis-plan-for-jobs-will-help-britain-bounce-back)
  5. Office for National Statistics (ONS) Secure Research Service (SRS): [www.ons.gov.uk/aboutus/whatwedo/statistics/requestingstatistics/approvedresearcherscheme](http://www.ons.gov.uk/aboutus/whatwedo/statistics/requestingstatistics/approvedresearcherscheme)
  6. Wage and Employment Dynamics project: [www.adruk.org/our-work/browse-all-projects/wage-and-employment-dynamics-in-great-britain-143](http://www.adruk.org/our-work/browse-all-projects/wage-and-employment-dynamics-in-great-britain-143)