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Oñati International Institute for the Sociology of Law
Avenida Universidad, 8 – Apdo. 28
20560 Oñati – Gipuzkoa – Spain
Tel. (+34) 943 783064 / opo@iisj.net / https://opo.iisj.net

Lazy data? Using administrative records in research on judicial systems

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BRIAN OPESKIN*

Abstract

Social science research on courts and judges requires data that are typically generated through surveys, interviews, or observation for the purpose of answering specific research questions posed by the researcher. However, traditional methods of data collection are not always feasible. As an alternative, this article examines the use of administrative data, which have been collected for non-research purposes, in judicial research. Using research undertaken by the author over the past decade as case studies, the article examines potential sources of administrative data on courts and judges, how they can be acquired, and the uses to which they can be put. The article then assesses the advantages and disadvantages of using administrative data, which vary substantially according to the data source. The article concludes by agreeing with Babbie (2020) that "with so much data already collected, the lack of funds to support expensive data collection is no reason for not doing good and useful social research" on judicial systems.

Key words

Administrative records; courts; empirical research; government agencies; judges

Resumen

La investigación en ciencias sociales sobre tribunales y jueces requiere datos que suelen generarse a través de encuestas, entrevistas u observación con el fin de responder a preguntas de investigación concretas planteadas por el investigador. Sin embargo, los métodos tradicionales de recopilación de datos no siempre son factibles. Como alternativa, este artículo examina el uso de datos administrativos, que han sido recogidos con fines ajenos a la investigación, en la investigación judicial. Utilizando como estudios

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* Professor of Law, University of Technology Sydney; Distinguished Visiting Professor 2021-22, UCL Faculty of Laws, London.

de caso las investigaciones realizadas por el autor durante la última década, el artículo examina las fuentes potenciales de datos administrativos sobre tribunales y jueces, cómo pueden ser adquiridos y los usos que se les puede dar. A continuación, el artículo evalúa las ventajas e inconvenientes de la utilización de datos administrativos, que varían sustancialmente según la fuente de datos. El artículo concluye coincidiendo con Babbie (2020) en que "con tantos datos ya recopilados, la falta de fondos para apoyar la costosa recopilación de datos no es razón para no hacer una investigación social buena y útil" sobre los sistemas judiciales.

Palabras clave

Archivos administrativos; tribunales; investigación empírica; agencias gubernamentales; jueces

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1. Introduction

The use of data is critical to social science methodology because it helps to test and reformulate hypotheses about social systems. However, surveys, which are often considered the "gold standard" of data collection, have limitations inherent in their method, such as the mode of data collection, accuracy of the survey frame, and sample size limitations (Larsen *et al.* 2021). Modern life has also led to a general decline in survey response rates, which has encouraged researchers to explore alternative data sources (Anseel *et al.* 2010).

In judicial research, surveys are even more challenging because judges are "a difficult population" to reach due to their high status, professional remoteness, judicial time constraints, and assumed unwillingness to be tested (Dobbin *et al.* 2001, 287). Judges are often reluctant to share their opinions publicly, fearing claims of bias or prejudgment in later cases. While the right of judges to participate in public debate may be recognised, judges are also cautioned to assess the risk that publicly expressed views may impact later litigation (Council of Chief Justices of Australia and New Zealand 2017). For some judges, the easiest course is not to engage with researchers at all. Judicial researchers have thus had to think creatively about using data sources—such as administrative data—that lie beyond conventional recourse to surveys, interviews, or observation studies.

The term "administrative data" does not have a precise meaning but it has a number of widely accepted characteristics (Connelly *et al.* 2016). First, it is "found data" rather than "made data", meaning that the data already exist in some form before the research project is conceived. Second, the data derive from the operation of administrative systems, which are generally but not universally governmental systems. Third, as a corollary, the data have been generated for the purpose of administration rather than for the purpose of research, so that investigators generally have no input into the design, structure, and content of the data. Fourth, the datasets tend to be large and complex, and the data themselves can be messy. Many of these characteristics are common to "big data" generally and some scholars regard administrative data as a subset of big data (Connelly *et al.* 2016).

Although it is common to regard administrative data as satisfying the needs of government, there is a broader issue concerning the use of non-traditional data sources in judicial research. Valuable judicial data are also collected in the educational and commercial sectors. It is useful, therefore, to take a wider view of the subject and to consider judicial data collected in governmental, educational, or commercial contexts, at least where the data have been collected primarily for non-research purposes. These sources will hereafter be called "*administrative records*" and the data derived from them will be called "*administrative data*".

This article also takes a broad view of what constitutes data. Clearly, this term should be taken to include quantitative information created primarily for non-research purposes. But in the context of judicial research, it is also valuable to throw the net wider to include artefacts, such as legislation and judicial decisions, from which quantitative data can be generated.

I tackle the article's themes by reflecting on my own practice over the past decade in using administrative data in judicial research. In doing so, I adopt an autoethnographic methodology in which I foreground my personal experiences as a researcher, using insider knowledge to describe and critique the practices of judicial research, in the hope of seeking reciprocal responses from other researchers (Adams *et al.* 2015). Observing the "view from ground level" rather than the "view from above" (Conquergood 2002, 146) necessarily means that the analysis is coloured by my subjective experience (Ellis *et al.* 2011, Poulos 2021), but this leaves ample scope for other researchers to share their perspectives or attempt a more comprehensive examination of the use of administrative data in judicial research.

I selected ten studies published between 2011 and 2022, chosen for their capacity to highlight the use of different types of administrative data relating to courts and judges. These studies are listed chronologically in Table 1 and are referred to in the discussion by their abbreviated titles (Study 1, Study 2 etc). Some of the studies have been revised and updated in later outputs (Opeskin 2021b) but the discussion here is largely confined to the data sources used in the original publications. All the studies relate to research on the Australian judicial system, with some comparative elements, and this geographical limitation should be borne in mind when considering whether the analysis is applicable elsewhere. Although many of the administrative data sources discussed are specific to Australia, an assessment of the benefits and costs of using such data is likely to be relevant to a wide audience of researchers.

The article is organised as follows. Part 2 examines the sources of administrative data. Part 3 investigates how administrative data can be acquired. Part 4 discusses the uses to which administrative data can be put in judicial research. These are not materially different from the uses of data derived from other sources, but they serve as a reminder of the versatility of administrative data in informing our understanding of judicial systems. Part 5 analyses the advantages of administrative data compared to data from other sources. These include its uniqueness, accessibility, affordability, timeliness, and quality. However, as Part 6 explains, these benefits often come with attendant costs. These include lack of awareness that relevant data exist, distortion of research questions, barriers to access, limitations of scope and quality, the effort required to compile and analyse raw data, and restrictions on the use or re-use of the data. Part 7 presents a brief conclusion.

In certain respects, the challenges of using administrative data reflect an old problem, even if the scale of digitised administrative records provides a contemporary context. Many famous studies in social sciences, such as Durkheim's (1897/1951) famous study of suicide rates in Europe, have relied on "found data" rather than "made data". Although the title of the article provocatively asks whether the use of administrative data is a lazy option for research, the analysis suggests a different conclusion. Its relative ease of acquisition makes it possible for researchers to interrogate issues that might not otherwise see the light of day, often using data from impeccable sources. Provided researchers remain alive to its benefits and its costs, administrative data are an important adjunct to contemporary research about courts and judges.

TABLE 1

Study No.	Reference	Subject matter	Primary variables	Administrative data sources	Source type
Study 1	Opeskin (2011)	Judicial pensions	Judicial salaries	Remuneration Tribunal	Government agency
Study 2	Opeskin (2013)	Profile of the Australian judicial system	Court lodgements, number of judicial officers, number of female judicial officers	Productivity Commission, NSW Local Court annual reports, AIJA*	Government agency, courts, educational institution
Study 3	Opeskin and Parr (2014)	Geospatial projections of demand for magistrates	Number of magistrates, productivity of magistrates	NSW Department of Attorney General & Justice	Government department
Study 4	Opeskin (2015)	Models of judicial tenure	Judges' dates of birth, appointment, & termination (Australia, South Africa, USA)	Books, court websites, Epstein *et al.* (2021) *US Supreme Court Justices Database*	Commercial publishers, courts, educational institution
Study 5	Oakley and Opeskin (2016)	Judicial humour in the court room	Occurrence of humour in oral proceedings and judgments	AustLII**, HCA*** transcripts of oral argument,	Courts, educational institution
Study 6	Opeskin (2017)	Supply of judicial labour	Number of judges, acting judges and quasi-judges; number of appointments & terminations; age of judges at termination; judicial productivity	Productivity Commission, court annual reports, books, court websites	Government agency, courts, commercial publishers
Study 7	Opeskin and Appleby (2020)	Measuring performance in an intermediate court of appeal	Outcomes in criminal appeals in VCA§, special leave applications filed and granted in HCA***, number of appeals decided in HCA & VCA	Westlaw, court annual reports, HCA*** customised data, Productivity Commission	Commercial publisher, courts, government agency
Study 8	Opeskin (2021a)	Judicial diversity	Demographic attributes of judicial officers, number of female judicial officers	Australian Bureau of Statistics, AIJA*	Government agency, educational institution
Study 9	Appleby *et al.* (2022)	Judicial education	Number of judicial education programs offered (by state, court level, subject matter etc)	Court annual reports, court websites, institutional annual reports	Courts, government agency, educational institution, not-for-profit corporation
Study 10	Opeskin (2022)	Tempering the demand for courts	Court lodgements, expenditure on courts, special leave applications, monetary limits on lower courts	Productivity Commission, Australian Bureau of Statistics, court annual reports, legislation	Government agency, courts, parliament

Table 1. Selected Case Studies.

Notes: * AIJA = Australasian Institute of Judicial Administration; ** AustLII = Australasian Legal Information Institute; * HCA = High Court of Australia; § VCA = Victorian Court of Appeal.**

2. Sources of Administrative Data

Administrative data regarding the judicial system come from multiple sources, of which the executive, legislative, and judicial branches of government are the most important. Courts undertake the public function of quelling disputes according to law (McIntyre 2019).It is to be expected that the legislatures that establish the courts, the executives that fund them and appoint their officers, and the courts themselves, will collect data about their operations. In addition, administrative data can be sourced from the educational and commercial sectors. Many of the case studies discussed in this article use data from more than one of these sources.

2.1. Executive Arm

Government departments responsible for administering the courts are a key source of data about the judicial system. In Australia, this is usually the Attorney-General's Department, the Department of Justice, or both, as illustrated by **Study 3**. That study was commissioned by the state of New South Wales (NSW) for the purpose of workforce planning for the state's Local Court, region by region, over the following 25 years (2011–2036). To that end, it was necessary to calculate the attrition rates of magistrates, based on historical data on their age at appointment, age at termination, and length of service. This information was not publicly available, but the NSW Department of Attorney-General and Justice supplied the data from its internal records.

Another source of administrative data stems from *government agencies*. These are often established as statutory bodies with a degree of independence from the executive. Independence gives the agencies capacity to decide what data to collect, and to maintain long time series, free from the influence of short-term political cycles. Every government has dozens of such agencies, but only a few are important sources of data on the judicial system. In Australia, these include the Productivity Commission (which produces an annual *Report on Government Services*); the Australian Bureau of Statistics (ABS) (which is the national statistical agency); and the Remuneration Tribunal (which determines federal judicial salaries).[1] Productivity Commission data were used in **Studies 2, 6, 7 and 10**; ABS data were used in **Studies 8 and 10**; and Remuneration Tribunal data were used in **Study 1** (see Table 1).

2.2. Legislative Arm

The architecture of judicial systems is determined by legislation, which typically establishes the courts, defines their jurisdiction, and sets qualifications for appointment to judicial office. In Australia, maintenance of the "statute book" is itself now mandated by statute. The *Federal Register of Legislation* has been established as a permanent repository of federal Acts, legislative instruments, notifiable instruments, and compilations, together with associated documents and information.[2] Similar arrangements exist in the states and territories.

[1] *Productivity Commission Act 1998* (Cth) s 5; *Australian Bureau of Statistics Act 1975* (Cth) s 5; *Remuneration Tribunal Act 1973* (Cth) s 4.

[2] *Legislation Act 2003* (Cth) s 3. See http://www.legislation.gov.au/

It may be unorthodox to regard legislation as "research data", but there are circumstances in which the tens of thousands of documentary artefacts that comprise the statute book might be so regarded. For example, in **Study 10** I investigated the way dispute resolution has changed over past decades to lessen demand for adjudication in the courts. One of the processes for regulating demand occurs where the state pushes cases down the court hierarchy so they can be disposed of more cheaply and efficiently in lower courts. In civil matters, this has been achieved by increasing the monetary caps on the jurisdiction of the lowest courts in real terms. Investigating this process in the NSW Local Court, I used the official database of state legislation to examine the legislative history of the Local Court's jurisdiction over a 50-year period. Examination of legislation, as artefact, allowed me to gather numerical data on the stepwise increase in the Local Court's nominal monetary cap and then to convert those values to a time series in real dollars using ABS inflation data.

2.3. Judicial Arm

2.3.1. Courts as Data Creators

Courts provide a wealth of data on the judicial system, including published judgments, annual reports, court websites, and internal databases. These sources have been utilised in the case studies to gain insights into the operation of courts, judicial decision-making, and other aspects of the judicial system.

Judicial decisions are the courts' primary output because they are how reasoned judgment is delivered to quell disputes between litigating parties. Although judges generally have a duty to give reasons for judgment (Dillon 2008), access to the fruits of their labour was somewhat haphazard in earlier times. Today, this process has become largely automated (Magrath 2019), and most courts now maintain free online databases of their judicial decisions. The fact that nearly all written materials today exist in digital format significantly simplifies their accessibility, extraction, classification, and analysis (Feldman *et al.* 2015). For example, in **Study 5** we examined all published decisions of the High Court of Australia ("High Court") in 2002, together with transcripts of oral argument (a total of 16 million words), to make a light-hearted empirical assessment of the incidence of judicial humour in the court room.

Annual court reports are another valuable source of administrative data about the operation of courts. Since the late 1990s, annual reporting has been a legislative requirement for most Australian courts, bringing a degree of public accountability to their operations.[3] Once an annual report is prepared, the responsible minister (usually the Attorney-General) is required to table it in parliament within a specified period or as soon as practicable. Annual reports were used widely in the case studies. They formed the centrepiece of data collection in the study on judicial education (**Study 9**), where we examined the annual reports of 25 courts over a three-year period to provide information on 446 judicial education programs.

[3] For federal courts, see *High Court of Australia Act 1979* (Cth) s 47; *Federal Court of Australia Act 1976* (Cth) s 18S; *Federal Circuit and Family Court of Australia Act 2021* (Cth) s 274. See also *Public Governance, Performance and Accountability Act 2013* (Cth) s 46.

Court websites are a third source of administrative data, and they were used in four of the ten studies. **Study 4**, for instance, concerned the impact of increasing life expectancy on models of judicial tenure. For that purpose, I compared three variables (age at appointment, age at termination, and length of service) in the apex courts of three countries (Australia, South Africa, and the United States) that had different tenure practices (age limits, term limits, and life limits). For Australia and South Africa, data on most judicial appointees came from published books, but it was also necessary to have recourse to court websites because the most recent appointees were not included in the print publications.

Internal court records are a further source of administrative data. These are typically registry systems that assist courts in the day-to-day management of their workflow, but from which specific data can be extracted for research purposes. For example, in **Study 7** we evaluated the performance of the Victorian Court of Appeal in response to a claim that the Court was being overturned on appeal with increasing frequency in criminal matters (Silbert 2020). To construct a "reversal rate", we obtained time series data on the number of criminal appeals from the Victorian Court of Appeal that were reversed by the High Court. Because these data were no longer published in the High Court's annual reports, we successfully requested the High Court registry to extract the data from their internal databases.

2.3.2. Related Bodies as Data Creators

The preceding section focussed on data produced by the courts themselves. However, separate entities may also exist to service the needs of the courts; two examples being court administration bodies and judicial education bodies.

Court administration bodies are entities established by legislation for the administration of the courts, with the intention of creating a high degree of independence from the executive with respect to the courts' staffing, operations, and finances. The self-governance model was first adopted in Australia for the High Court in 1979, when responsibility for administration of the apex court was removed from the Attorney General's Department and vested collegiately in the High Court's judges.[4] Somewhat different models of self-governance have since been adopted for the courts in South Australia and Victoria (Bunjevac 2015). In these states, the Acts establishing the court administration bodies impose annual reporting requirements, and their reports are a valuable source of data about the courts.[5]

Judicial education bodies are entities established to provide judicial officers with opportunities for continuing legal education while in office. The principal bodies are the National Judicial College of Australia, the Judicial Commission of NSW, and the Judicial College of Victoria.[6] We used the annual reports of all three bodies to identify judicial education programs in **Study 9**. These bodies can fairly be placed under the rubric of the judicial arm because their governance structures are dominated by judicial officers, notwithstanding the presence of some representatives of the executive (Gleeson 2003).

[4] *High Court of Australia Act 1979* (Cth) s 17.

[5] *Courts Administration Act 1993* (SA) ss 5, 6, 13 (establishing the South Australian Courts Administration Authority); *Court Services Victoria Act 2014* (Vic) ss 5, 45 (establishing Court Services Victoria).

[6] *Judicial Officers Act 1986* (NSW) ss 5, 9; *Judicial College of Victoria Act 2001* (Vic) ss 4, 8.

2.4. Educational Sector

Moving beyond organs of government, the educational sector is another valuable source of data on the judicial system. Some of these data are produced for the purpose of academic research, and hence *do not* fall within the scope of "administrative data" as that term is used in this article (Part 1).[7] However, other data are produced within the education sector for general public information (rather than research), and can be regarded as administrative data. For example, in **Study 5** we used the public databases of the Australasian Legal Information Institute (AustLII) to furnish transcripts of oral argument and decisions of the High Court in 2002, and we mined these artefacts for quantitative information about the use of judicial humour. AustLII is operated as a joint venture between two law schools,[8] and is part of the global network of Legal Information Institutes whose mission is to provide free online access to a broad range of primary and secondary legal materials (Greenleaf *et al.* 2013).

2.5. Commercial Sector

The commercial sector is a further source of administrative data used by social science researchers. For example, demographers might use information on utility connections (electricity, gas, water) to yield small-area data about population movements (Rowland 2003). Commercial data may be less commonly used in *judicial* research because there are fewer commercial sources of data about public institutions, but they do exist. In **Study 4**, I used reference books issued by commercial publishers to source data on the birth, judicial appointment, and termination of judges of the High Court and the Constitutional Court of South Africa. In **Study 7**, we used Westlaw (a proprietary legal database owned by Thomson Reuters) to ascertain the incidence of unanimity, concurrence, and dissent in criminal decisions of two Australian courts. In that instance, public databases such as AustLII might have been used as an alternative source of judgments, but the format and navigability of the commercial database made it easier to collate data from 159 separate judicial opinions across 41 cases.

3. Acquiring Administrative Data

The previous Part examined the sources of data that can be used for judicial research, but a critical further inquiry concerns how one acquires the data from those sources. There are four common methods of data acquisition: pre-existing publication, requested customisation, contractual provision, and personal intercession.

3.1. Pre-existing Publication

The easiest mode of acquiring administrative data is to access information that has been published prior to, and independently of, the research study, whether in hardcopy or online. This accords with the understanding that administrative data is "found" and not "made" (Part 1).

[7] An example is the multi-user databases established by researchers for the purpose of future academic research, such as the US Supreme Court Justices Database (Epstein *et al.* 2021), which I used in **Study 4** to examine tenure patterns in apex courts.

[8] The joint venture is between the University of Technology Sydney and the University of New South Wales.

In earlier times, pre-existing publication referred solely to *physical* copies of documents that would generally be housed in libraries. Those libraries might be operated by the state, a university, a professional association (e.g. law society or bar association), or a law firm. Each possibility had different implications for access. A researcher might have ready access to the resources of a state-run library but not necessarily to a university library (reserved for staff and students), a professional association library (reserved for association members), or a law firm library (reserved for employees). This suggests there are barriers to accessing administrative data located in physical publications (Part 6.3).

However, the advent of the internet has spurred a revolution in accessing administrative data. So important is online access that I utilised data acquired in this way in every case study other than **Study 3**. At the present time, when the internet appears indispensable to daily life, it is easy to forget that it had a long gestation and that only since the 1990s has it emerged as the principal medium for disseminating public information (Ryan 2010). Where pre-internet data are required, recourse may still be needed to hardcopy publications. Consider a study of special leave applications decided by the High Court, such as occurred in **Study 7**. The High Court has been required to produce annual reports since it was made self-governing in 1979,[9] but its website has links to annual reports only from 1997–98 (High Court of Australia 2022). This provides access to 24 years of data, but not the full 42 years since annual reporting commenced. Statistics from earlier years still require access to physical copies of annual reports.

3.2. Requested Customisation

One of the challenges of using previously published administrative data is that the available information is limited by the mandate of the body that collects it. That does not always suit the researchers' purposes. Published data might be too highly aggregated, disaggregated, or difficult to manipulate; or the required data might not be published at all. In these circumstances, acquiring data customised to the researchers' needs is an attractive alternative.

Some larger agencies facilitate data customisation by providing a bespoke data service for specialised users on a commercial basis. The ABS, for example, runs a paid consultancy service that supplies tailored data to assist data users with more complex information needs. This formed the basis of Study 8, where I obtained customised ABS data on the demographic characteristics of Australian judicial officers, as collected in three national censuses in 1996, 2006, and 2016. The customisation was necessary because the ABS does not publish census data disaggregated by occupational classifications such as "judge" and "magistrate".

Customisation does not always imply commercialisation. Occasionally, a body will benevolently provide customised data, without charge, as occurred in Study 7. In that study, we required data on the number of applications for special leave to appeal granted or refused by the High Court, cross-tabulated by year, subject matter, and court appealed from. Since these statistics were no longer published in the High Court's annual reports, we made a direct request to the Court's registry, and the data were supplied free of charge in an agreed format.

[9] *High Court of Australia Act 1979* (Cth) s 47.

3.3. Contractual Provision

For researchers undertaking consultancy work for a government department, court, or other organisation, the contractual arrangements may specify the provision of data by the commissioning body. This is because the consultancy is intended to address questions within the remit of that body, and they often have unique access to data not in the public domain. **Study 3** is an example of this, where we were contracted by the NSW Department of Attorney-General and Justice to make projections of future demand and supply of magistrates in the NSW Local Court over a 25-year period On the demand side, the study required access to unpublished data on the state's resident population and criminal convictions for small geographic areas, and on the supply side, it required access to unpublished data on the dates of birth, appointment, and termination of every magistrate over several decades. The data were provided by different government departments, but provision was assured by the terms of the research contract.

3.4. Personal Intercession

Judicial researchers often develop professional relations with actors in the judicial system, such as judicial officers and court staff, through attendance at conferences, educational programs, and participation in prior empirical research. These connections can provide researchers with access to data that would otherwise be difficult to obtain. Judges may introduce researchers to court staff who keep the data, or they may request the data on behalf of the researcher. In this way, personal contacts can yield significant dividends in a context of mutual trust.

An example of this process can be found in **Study 1**, which examined the viability of the federal judicial pension scheme in light of increases in human longevity. One possible solution to the problem of rapidly rising judicial pension costs is to increase the mandatory retirement age, but this reform would only be effective if judges could be enticed to work longer (Opeskin 2011). The Federal Court offered a natural experiment because there was a cohort of judges who were appointed with life tenure before mandatory retirement was introduced in 1977.[10] One could therefore evaluate how judges *might* behave in the absence of an age cap. The analysis of judicial retirement patterns was made possible only because a judge of the Federal Court, known to me through professional circles, requested data on my behalf from the court registry on the dates of birth, appointment, and termination of all 121 judges who had then been appointed to the Court. Without this personal connection, data that were not in the public domain would not have been accessible, leading me to reflect on my privileged access to the information.

4. Using Administrative Data

Administrative data on courts and judges can be used in similar ways to data collected by more conventional means. This Part highlights the uses made of administrative data in the case studies to demonstrate the broad utility of administrative data in judicial research.

[10] *Constitution Alteration (Retirement of Judges) 1977* (Cth).

4.1. Singular and Comparative Analysis

Administrative data can be used to examine variables at different levels of the judicial system—from a single court, to multiple courts within a state or territory, or across an entire country. In **Study 6**, I explored these possibilities by investigating the use of quasi-judicial personnel in a single court (i.e., masters, associate judges, and judicial registrars in the Supreme Court of Victoria); the movement of judicial labour in and out of the courts of New South Wales (considered as a group); and nationwide trends in judicial productivity across Australia. The scope of each inquiry was determined by the research question and data accessibility, but ideally, more extensive coverage of courts and jurisdictions would have been desirable to confirm national trends.

Questions of the type just described stand in contrast to comparative work, where the purpose of the investigation is to contrast different courts or court systems. An example has already been given of **Study 4**, where I sought to reveal the consequences of different models of judicial tenure by comparing the apex courts of three countries (Australia, South Africa, and the United States). Similarly, in **Study 7** I compared the reversal rates of the Victorian Court of Appeal with those of other intermediate courts of appeal to investigate its performance relative to other states and territories.

4.2. Time Series and Cross-Sectional Analysis

Social science research aims to understand the factors that shape actors, institutions, and social systems, and because these factors are dynamic, the research often incorporates a temporal element. Administrative data are an excellent resource for analysing temporal trends using time-series analysis since they are frequently collected over long periods. The case studies often utilised time-series data that spanned several decades, such as judicial salaries (Study 1, 34 years), the number of acting judges (Study 6, 30 years), and case lodgements in family courts (Study 10, 26 years). One study even tracked judicial appointments and terminations over several centuries in apex courts in Australia and the United States (Study 4).

However, administrative data are not well suited to longitudinal analysis, which requires repeated measurements of the same individuals over time (Fitzmaurice *et al.* 2011). Administrative data generally track variables without regard to membership of the target group—e.g., judicial productivity measured at time t=0 and t=1 will relate to the output of different judges because there will be arrivals and departures over that interval.

Administrative data are also useful in cross-sectional analysis, which uses data from a sub-population at the one point or period. For example, Study 2 took a snapshot of features of the judiciary in the year 2012. In Study 9, we analysed judicial education offerings across Australia within a three-year window from 2015–16 to 2017–18, pooling three years of annual data to form a single "point in time", and thus increase the sample size.

Taking repeated slices of cross-sectional data can turn into time-series data if there are enough slices. In Study 8, I analysed the demographic characteristics of judges and magistrates from cross-sectional data collected in the national census in 1996, 2006, and 2016. providing insights on temporal trends over a period of 20 years.

4.3. Raw and Derived Data

Administrative data can be classified as raw or derived. Both are important for gaining insight into the judicial system and both are amenable to techniques of data visualisation (Tufte 1983). Raw data can provide information on specific characteristics, such as the *number* of applications made annually to the apex court for special leave to appeal (**Study 7**), or the *number* of judicial education programs offered by courts in a chosen period (**Study 9**). However, more often, raw data must be manipulated to create new variables that are relevant to the research questions.

Durations, indices, and rates are three examples of derived variables that can provide useful insights. In **Study 4**, I used administrative records to obtain raw data on the dates of birth, appointment, and termination of judges in three apex courts, but these variables, on their own, were of no direct relevance to the inquiry. However, by performing simple mathematical operations, I derived useful *durations* such as the age at appointment, age at termination, and the length of service. Using a rolling average to smooth out short-term fluctuations, the raw data were converted into derived data that were relevant to the research questions.

Indices are another useful tool for analysing data by showing the change in the variable over time, relative to a chosen base year (Allen 1975). The advantage of this method is that multiple variables can be presented in a single chart for easy comparison, even if they have different units of measurement and are of different orders of magnitude.[11] I used this method in **Study 1** to compare the change in salaries of Federal Court judges with changes in average weekly earnings and consumer prices.

Rates can also be derived from administrative data to reveal valuable information about judicial systems. In **Study 7** we examined the performance of the Victorian Court of Appeal by calculating the reversal rate in the High Court over time. This required computation of a rate in which the numerator was the annual number of appeals allowed by the High Court on appeal from the Victorian Court of Appeal, and the denominator was the annual number of cases decided by the Victorian Court of Appeal. Without the derived variable, it would have been impossible to draw meaning from the raw data.

4.4. Combining Datasets

Data integration is a crucial component of "big data" analytics, as it is more likely that solutions to social science questions will be discovered by combining data sources than by examining a single novel data source (Birkin 2018). While data about courts and judges may be of interest on their own account, they acquire extra value when combined with other types of data. The case studies examined judicial data in a straightforward manner alongside economic and demographic data, but data integration presents a promising opportunity for more complex analyses.

Economic data were used to convert nominal dollar values into real values (at constant prices) using the consumer price index or GDP price deflator (**Study 1, Study 10**). *Demographic* data were used to calculate demographic ratios and demographic rates using the estimated resident population as a denominator—such as the number of

[11] Different orders of magnitude can also be addressed by using logarithmic scales on the axes, but at the risk of making the graph difficult for lay readers to interpret.

judicial officers per capita (**Study 2, Study 6**), the number of court lodgements per capita (**Study 10**), and the rate of criminal convictions for the purpose of projecting the future demand for magistrates in the NSW Local Court (**Study 3**).

The illustrations just given involved the *mathematical* combination of judicial data with non-judicial data to generate derived variables of interest, but sometimes the utility of non-judicial data stems from its *narrative* value. In **Study 4**, I examined how the sustained rise in human life expectancy over the 20th century brought pressure to bear on the model of judicial tenure, shifting it from tenure for life, to tenure until a fixed retirement age. Although improvements in life expectancy were quantified, the study used the demographic data as part of a narrative argument that concluded with a proposal for refinements to the model of judicial tenure.

5. Advantages of Administrative Data

To this point, the article has investigated where administrative data on courts and judges can be sourced, how they can be acquired from those sources, and how they can be used in judicial research. This Part examines *why* judicial researchers might choose to rely on administrative data in investigating their research questions, instead of data derived from conventional sources. One part of the answer lies in the limitations of interview, observation, and survey data, which were discussed in the Introduction (Part 1). Another part lies in the positive features of administrative data, which are canvassed below.

5.1. Uniqueness

Administrative records can provide unique datasets that cannot be replicated through other methods of data collection. Take, for example, the number of cases lodged in Australian courts (**Study 2, Study 10**), which is published by the Productivity Commission in the annual *Report on Government Services*. The concepts are uniformly defined across the federal, state, and territory court systems, and the Commission performs an independent role of co-ordination and quality assurance, like the National Center for State Courts in the United States.[12] Alternative data collection methods, requiring input from more than 20 courts, could not emulate the scope or quality of the Commission's data.

The uniqueness of administrative data stems from the obligatory nature of data collection as part of program administration, meaning that individuals and entities usually cannot opt out (S. Garfinkel 2018). The *Report on Government Services*, for instance, is a co-operative venture between Australian governments, conducted under the auspices of the Steering Committee for the Review of Government Service Provision (2022). As a result, the data are comprehensive on the variables collected—there are no missing states or courts (except for the High Court, which is expressly excluded). This may be contrasted with survey data, where participation is necessarily consensual and response rates are typically imperfect.

[12] See National Center for State Courts and Conference of State Court Administrators (2020); and National Center for State Courts (2022), which are described in Hannaford-Agor (2023).

5.2. Accessibility

Accessibility is both a positive and negative attribute of administrative data. The positive aspect relates to the circumstance that a large volume of administrative data about courts and judges is published online and is available free of charge to anyone with internet access (the negative aspects are discussed in Part 6.3.). Prominent examples of online access in the case studies include the Remuneration Tribunal's determinations on judicial salaries, the Productivity Commission's *Report on Government Services*, and the various courts' annual reports.

Public dissemination of such data is often facilitated or mandated by statute. The Remuneration Tribunal's determinations of judicial salaries must be given to the responsible minister, who must then table them in parliament,[13] and in practice they are posted to the Tribunal's website as soon as the determinations are made. Courts are required to publish annual reports on their operations, as noted in Part 2.3.. Similarly, legislation must also be published online to facilitate public access, as noted in Part 2.2.

5.3. Affordability and Effort

Affordability and effort can be considered part of accessibility, but it is worth discussing them separately. Much administrative data can be obtained at *no or low cost*, as it is often pre-published on websites, provided as part of a consultancy agreement, or acquired through the intercession of a judge or member of court staff (Part 3). This is a great advantage compared to the cost of conducting surveys, which often require substantial grant funding.

Administrative data can also be acquired with *minimal effort*, which goes to the heart of the question of whether administrative data are "lazy data". Typically, access to administrative data involves the provider acting as an intermediary by extracting the required information from internal databases to which the researcher has no access. Some of the data processing is thereby outsourced to the provider. This was demonstrated in **Study 7**, where we obtained 3,000 datapoints from the High Court registry on the outcome of special leave applications, and in **Study 8**, where we acquired 1,092 datapoints from ABS census data on the demographic characteristics of judges and magistrates. In both cases, data extraction was done by people other than the researchers.

5.4. Timeliness

Collecting data through sample surveys can be glacially slow because of the need to secure funding. A typical social science research project in Australia, funded by the Australian Research Council, might have a gestation period of one to two years (for application, external review, award, and commencement), followed by a project duration of three years. Data may not emerge from such a project for up to five years from inception.

In contrast, administrative data can be acquired much faster. Where the *data are pre-existing*, mandatory reporting results in data being released with known periodicity, often annually. The steady flow of data results in long time series, which are valuable in

[13] *Remuneration Tribunal Act 1973* (Cth) ss 7(6), 7(7).

tracking secular trends. Of course, there can be occasional interruptions to the regularity of data due to institutional disruptions. Moreover, annual reporting suffers from the inherent limitation that data are not available for times that fall between the annual cut-off dates. However, neither of these limitations is likely to be a significant constraint for most judicial research.

Even where the *data are not pre-existing*, they can usually be acquired in relatively short time frames. In the case studies, our requests to the NSW Bureau of Crime Statistics and Research (**Study 3**), the High Court Registry (**Study 7**), and the ABS (**Study 8**), each took approximately two months for data delivery. Some of that time was spent clarifying what data was available and the format in which it would be delivered, and some was spent accommodating the internal work demands of the data provider. Reliance on other parties for data thus imposes some temporal constraints, but they are generally more favourable than those associated with survey data.

5.5. Quality

"Data quality" is a multi-dimensional term that encompasses several measures, such as precision, accuracy, reliability, and validity (Babbie 2020), and recent research has identified as many as twelve dimensions of data quality (Bian *et al.* 2020). The issue of data quality has positive and negative aspects for administrative data, with the positive aspects discussed here and the negative aspects in Part 6.5.

Administrative data can be of high quality when obtained from reliable sources. The continuous collection and publication of official statistics encourage the improvement of data quality over time, as those who are responsible for their production seek to reduce error in measurement (Bulmer 1980). This is the case with the ABS (**Study 8**), the NSW Bureau of Crime Statistics and Research (**Study 3**), and the Productivity Commission in relation to its work on government service provision (**Study 2, Study 6, Study 10**), as all these agencies are attentive to issues of data quality and engage in data quality assurance programs. Such agencies often enjoy high levels of trust among data users. A 2020 survey found that 99% of informed users and 85% of the general community trusted or greatly trusted ABS statistics (Australian Bureau of Statistics 2020).

There is a further issue meriting attention in the context of data quality. Administrative data are often collected from the entire population of interest, rather than from a sample of that population, making questions of statistical representativeness irrelevant. For instance, **Study 8** used data collected from the mandatory national census, which covers the entire population of judicial officers, to assess the diversity characteristics of the Bench. This approach avoided the limitations of using a sample of judicial officers, as has been the case in previous judicial research (Mack and Roach Anleu 2008).

6. Challenges of Administrative Data

Just as survey data have their limitations, so too do administrative data. This Part canvasses the principal challenges of relying on administrative data in judicial research, recognising that the significance of each issue depends on the source and nature of the data.

6.1. Lack of Awareness

Public and private organisations collect vast amounts of data during their operations. However, the challenge for researchers is to become aware of the existence of relevant administrative data. This is because organisations rarely publicise their data holdings unless the provision of information is part of their mission. A researcher's knowledge of administrative data can arise through reading the work of other scholars, conversations with stakeholders, educated guesses, and sheer luck, but the serendipity of some data discoveries is less than ideal.

For public sector data, the ease with which researchers can surmount the "awareness" problem depends on the willingness of governments to expose their data collections to researchers. In Australia, the recent passage of the *Data Availability and Transparency Act 2021* (Cth) is intended to encourage academics and the research community "to find new insights from public sector data" (Office of the National Data Commissioner 2020, 6). The Act authorises the sharing of public sector data by data custodians with accredited users, for permitted data sharing purposes, including research, if effective safeguards are in place.

Concerns about data awareness are not unique to Australia. In the United States, a report of the Commission on Evidence-Based Policymaking (2017) recommended a suite of reforms to improve the use of administrative data in developing government policy, including giving researchers better information about the government's current data inventories.

It is too early to assess whether the Australian framework will meet the statutory objective of serving "the public interest by promoting better availability of public sector data".[14] However, it has the potential to increase awareness of administrative data and to lower barriers to access.

6.2. Research Distortion

The increasing availability of administrative data presents a challenge for researchers in prioritising research questions. The risk is that data availability will prioritise certain questions over others, regardless of their inherent importance or interest (Birkin 2018). To use the well-known aphorism, "not everything that can be counted counts" (Cameron 1963, 13). This can lead to a distortion of social research towards pattern recognition rather than theory development or hypothesis-driven empirical research (Feldman *et al.* 2015). It is important to recognise the danger of prioritising research questions based solely on data availability, but the limited quantum of administrative data on courts and judges suggests that this is not a pressing concern at present.

6.3. Barriers to Access

There can be substantial barriers to accessing administrative data, especially where they are held by government organs. These barriers come in different forms, including legal, ethical, cultural, financial, geographical, and temporal.

[14] *Data Availability and Transparency Act 2021* (Cth) s 3.

Legal barriers are one of the most significant challenges when it comes to accessing administrative data. In most developed countries, the collection, use, and disclosure of personal information are regulated by law. For instance, under the *Australian Privacy Principles*, personal information collected for a primary purpose cannot be disclosed for a secondary purpose without the consent of the individual (Doyle and Bagaric 2005).[15] This can pose problems for judicial research because personal information collected for a bureaucratic purpose cannot be re-used for a research purpose. For example, in **Study 1** and **Study 4**, I was unable to obtain judges' dates of birth from the Attorney-General's Department due to legal prohibitions, and thus had to find alternative sources. Uncertainties in the application of privacy laws to specific circumstances and the multiplication of privacy regimes across a federal system of government further compound these legal barriers (Petrila 2018).

Ethical constraints also present challenges in conducting research using administrative data. In Australia, the *National Statement on Ethical Conduct in Human Research* outlines the values of respect, research merit, researcher integrity, justice, and beneficence as the foundation of all research involving humans (National Health and Medical Research Council and Australian Research Council 2018). The National Statement notes that "human research" generally includes access to people's information as part of an existing source or database, and thus covers people who may not even know they are the subjects of research. This can make it difficult to obtain consent from participants, obtain a waiver of consent from relevant ethics bodies, or de-identify personal information to remove the research from regulatory oversight (S. Garfinkel 2018). Despite these challenges, ethics should not be seen as an inconvenience, but rather as a critical component in conducting judicial research.

Cultural barriers are also prevalent when accessing administrative data. Institutions that hold administrative data often have internal policies regulating the disclosure of data to third parties. Some policies reflect legal requirements or perceptions of those requirements, while others perpetuate historical practices of non-sharing or embody cautious approaches to risk management when disclosing data that may reflect poorly on the performance of the data holder (Petrila 2018). In consultations that led to the enactment of the *Data Availability and Transparency Act 2021* (Cth), "stifling and vague bureaucratic processes" were identified as significant barriers to research (Office of the National Data Commissioner 2020, 6), and an example is the potentially restrictive role of a Chief Justice as a cultural gatekeeper to research on judges of their court (Appleby and Roberts 2023). One hopes that the legislation will limit these cultural barriers to a defined and well-justified set of circumstances in the future.

Financial barriers can also limit access to administrative data, even though much of it can be obtained at no or low cost (as noted in Part 5.3.). However, some administrative data still costs money to obtain, and this can serve as a barrier to access. For instance, in **Study 8**, customised census data on the diversity characteristics of judicial officers cost several thousand dollars (which limited the number of censuses that were included), and the same was true of customised crime conviction data used by Opeskin (2021b) as a reprise of **Study 3**. Access to commercial caselaw databases (**Study 7**) also entails financial costs,

[15] *Privacy Act 1988* (Cth) sch 1. There are cognate laws in the states and territories.

typically borne at an institutional level through library subscriptions rather than at the individual researcher level.

Geographic barriers may also exist. Most administrative data produced before the 1990s were recorded in hardcopy format, and the digitisation of such records is incomplete. To the extent that pre-digital records require physical access, there may be geographical barriers to judicial research for non-metropolitan or out-of-state researchers. Additionally, as institutions move towards online dissemination of information, the availability of *future data* in hardcopy format may be restricted as they reduce the production of printed material.

Lastly there may be *temporal barriers*. It was noted above that administrative data may have the advantage of timeliness (Part 5.4.) but this is balanced by the disadvantage of impermanence. The web is a dynamic environment in which large quantities of information are lost each day, and this has been only partly remedied by greater use of web archiving and permalinks (Costa *et al.* 2016). Thus, some Australian courts provide weblinks only to recent annual reports; likewise, until recently the AIJA's judicial gender statistics (**Study 2, Study 8**) were posted online only for the current year, notwithstanding that they have been collected for over 20 years.

6.4. Confined Scope

Administrative records may not provide the necessary data to answer research questions because the data collected for bureaucratic purposes may not align with the researchers' needs (Babbie 2020). This misalignment can occur for legitimate organisational reasons, such as time, cost, and legal considerations. As H. Garfinkel (1967, 186) noted in a medical setting, there are often "good organizational reasons for bad clinic records". Subsequently, it has been observed that the absence of researcher-input into the design, structure, and content of administrative data necessitates a careful evaluation of the data to see whether it is suitable for the intended research purpose (S. Garfinkel 2018).

Consider, for instance, the issues raised in Appleby *et al.* (2017) regarding the use of temporary judicial officers. We sought to discover how extensive this practice was, and therefore to assess the extent to which it undermined traditional notions of judicial tenure as a safeguard for judicial independence.[16] However, administrative data published by the Productivity Commission and the courts were inadequate to the task. Given these limitations of scope, the only viable solution was to undertake the research using an alternative method, namely, a national survey of judicial practice.

Another problem that arises with administrative records is the changing scope of organisational needs, which can sometimes generate more data, but sometimes less. For example, in **Study 7** we required data on the outcome of applications for special leave to appeal to assess the performance of the Victorian Court of Appeal. This information used to be published in the High Court's annual reports, but the cessation of detailed reporting in 2006 required finding alternative data sources for the research. In this instance, we were able to obtain the required data by making a direct request to the High

[16] These concerns had been raised in litigation in the High Court: *Forge v Australian Securities and Investments Commission* (2006) 228 CLR 45.

Court registry, but overcoming the changing scope of an institution's reporting practices may not always be possible.

6.5. Uncertain Data Quality

One of the challenges of administrative data is that the quality of the data is often unknown because the researcher has no oversight of the protocols for data collection. Data quality is a "black box" in which definitions, counting rules, and sources of error are largely opaque to outsiders. These problems are exacerbated in comparative judicial research, where differences among court structures, and among definitions of apparently similar variables, make it difficult to develop coherent evidence-based policy (Hannaford-Agor *et al.* 2015, Hannaford-Agor 2023). These problems are not solved by the circumstance that recorded statistics are designated as "official" because many official statistics entrench biases inherent in their definitions and modes of collection (Kitsuse and Cicourel 1963).

Study 2 and **Study 8** illustrate this. For many years, the AIJA has published annual "Judicial Gender Statistics" on its website. Yet it may be asked whether the data truly record gender or sex, and in either case what the basis for the classification is. Having compiled these statistics myself for one year (2020) on behalf of the AIJA, I can vouch that it is not an easy task. The criteria for making the gender classification are primarily *physiognomy* (using published photographs) and *onomastics* (using published first names) as indicators of gender. But, using these criteria, I quickly encountered problems of gender neutral first names (eg Justice *Kim* Smith), lack of knowledge about the gender implied by ethnically diverse first names (eg Justice *Bopha* Sok), or absence of gender signifiers in published records (eg Justice Jones).

If social scientists were compiling these statistics themselves, they could at least acknowledge the data problems and identify the number of cases in which gender was unknown or uncertain. Data quality is an inherent issue with every method of data collection; the special problem with administrative data is the lack of transparency about its flaws. Thus, it is essential for researchers to have early conversations with court staff and other expert data holders about the specificities of the data, so researchers can understand the data and use it appropriately (Roach Anleu and Mack 2023).

6.6. Effort of Compilation

Compiling administrative data may seem like an easy task since it is often outsourced to the data-provider (Part 5.3.). However, this depends on the nature of the data and its intended use, as the process can also be laborious. Some of the more demanding tasks include extracting data from annual reports to create long-term trends, converting textual narrative into quantitative data, and data coding.. For example, in **Study 5**, 16 million words were analysed to determine the use of humour in oral argument and judicial decisions. In **Study 7**, 240 judgments were examined to determine the frequency of unanimity, concurrence, and dissent. In **Study 9**, we coded 446 judicial education programs for five variables—a process that proved so labour-intensive that we decided to reduce the intended five-year study period to three. It is futile to ask whether these processes are more, or less, demanding than those required of survey data: the key point

is that administrative data also require effort to produce statistics that are useful in answering research questions.

6.7. Use and Re-use of Data

Finally, administrative data may be acquired in circumstances that limit their use or re-use, and these restrictions may compromise the production and dissemination of academic output. For example, where data are acquired in the course of a commercial consultancy, contractual terms might restrict re-use of the data for another purpose. Similarly, academic publications beyond the consultancy report might require the approval of the commissioning body (**Study 3**). Such restrictions are understandable from the perspective of the other contracting party, especially where sensitive or confidential data are involved, but researchers need to be cognisant of these issues and to negotiate terms acceptable to all parties. In particular, as Roach Anleu and Mack (2023) caution, it is important for researchers to maintain their independence from the courts, and not to allow the judiciary or the government to censor findings or publications by exerting control over the data or its analysis.

7. Conclusions

This article presents a detailed study of the use of administrative data in judicial research. Such data are "found" rather than "made", derive from the operation of administrative systems, and are usually created to meet the needs of administration not research. In origin, administrative data are thus a far cry from the data usually used for social research, where the focus is traditionally on interviews, observation, and surveys.

Some commentators may view administrative data as "lazy data", generated without the researcher's input or oversight. However, all methods of data collection have limitations and produce data whose quality varies according to the circumstances. What is needed is not *a priori* antipathy towards administrative data as a source of information about judicial systems, but a keener appreciation of the benefits and costs of using such data in conducting research. While interview, observation, or survey data may be more appropriate for some research questions, administrative records can provide unique datasets relevant to judicial research.

This article draws on case studies from my own research over the past decade to explain the sources of administrative data on courts and judges, how they can be obtained, and how they can be used. The article also examines the advantages and disadvantages of using administrative data in judicial research. The analysis shows there are many types of administrative data, making it difficult to offer simple prescriptions. Some types are no less robust than data obtained through traditional methodologies, while others may give rise to legitimate concerns.

In appropriate circumstances, administrative records can provide unique datasets relevant to judicial research, coupled with high accessibility, affordability, timeliness, and quality. Increasingly, value is being found in linking administrative data with data from other sources, in an optimistic assessment about the capacity of "big data" to make scholarly contributions to unresolved issues (Feldman *et al.* 2015). It is fitting to echo the advice of a well-respected author on social research methodology: "With so much data

already collected, the lack of funds to support expensive data collection is no reason for not doing good and useful social research" (Babbie 2020, 344).

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