JUDICIAL PRESTIGE: A CITATION ANALYSIS OF FEDERAL COURT JUDGES

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I INTRODUCTION

When judges deliver written judgments, most of the time their reasons contain citations to previous decisions.[1] Judges cite previous cases for a range of reasons. McCormick identifies five separate rationales.[2] These are (a) hierarchical citations, which are citations to decisions of courts that stand 'above' the citing court; (b) consistency citations, which are citations to previous decisions of the citing court; (c) coordinate citations, which are citations to the decisions of courts, which occupy a similar position to the citing court within a different judicial hierarchy; (d) leadership citations, which are citations to decisions of lower courts in the same hierarchy and (e) diversity citations, which are citations to decisions of lower courts in other judicial hierarchies.

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[1] For recent studies investigating the citation practice of Australian courts see Russell Smyth, 'Academic Writing and the Courts: A Quantitative Study of the Influence of Legal and Non-legal Periodicals in the High Court' (1998) 17 *University of Tasmania Law Review* 164; Russell Smyth, 'What do Judges Cite? An Empirical Study of the "Authority of Authority" in the Supreme Court of Victoria' (1999) 25 *Monash University Law Review* 29; Russell Smyth, 'Other than "Accepted Sources of Law"? A Quantitative Study of Secondary Source Citations in the High Court' (1999) 22 *University of New South Wales Law Journal* 59; Russell Smyth, 'What do Intermediate Appellate Courts Cite? A Quantitative Study of the Citation Practice of Australian State Supreme Courts' (1999) 21 *Adelaide Law Review* 51; Russell Smyth, 'Law or Economics? An Empirical Investigation of the Impact of Economics on Australian Courts' (2000) 28 *Australian Business Law Review* 5; Russell Smyth, 'The Authority of Secondary Authority: A Quantitative Study of Secondary Source Citations in the Federal Court' *Griffith Law Review* (forthcoming).

[2] Peter McCormick, 'Judicial Citation, The Supreme Court of Canada and the Lower Courts: The Case of Alberta' (1996) 34 *Alberta Law Review* 870.

When citing cases, however, in some instances judges go one step further and, as an act of discretion, refer to other judges by name. Why do judges sometimes follow this practice? As a starting point, Merryman notes: 'Presumably a citation means something to the person citing and presumably he anticipates that it will have some meaning to a reader'.[3] Klein and Morrisroe offer one plausible answer.[4] They suggest:

> A prestigious judge's name could be viewed, in the language of Landes, Lessig and Solimine, as a 'brand name' or 'trademark' that signifies quality.[5] A judge wishing to buttress his conclusions in the eyes of others (parties, attorneys, other judges) might hope that by invoking a prestigious judge's name he could impart to his position some of the credibility associated with that name'.[6]

Assuming that this is a reasonable explanation, this study attempts to measure the prestige of Federal Court judges through counting the number of times that they are referred to by name in a sample of decisions reported in 10 volumes of the Federal Court Reports decided between 1998 and 2000.

There are two reasons why a study of judicial prestige in the Federal Court is worthwhile. The first is that there are a number of studies that attempt to measure 'judicial influence' or 'judicial prestige' in North America.[7] There are, however, only two studies of this sort for Australian courts, which are both for the High Court.[8] While results for the High Court are interesting, they only tell part of the story. This is because the High Court is unusual in terms of both the visibility of its members and the increasing selectivity of the cases which it hears. For completeness, it is important to learn more about the lesser-known judges who play a large role in shaping the federal law from day to day.[9] Second, the notion of judicial prestige is a useful concept for various reasons. Klein and Morrisroe identify several socio-legal reasons why judicial prestige is a helpful concept in their study of judicial prestige on the United States Courts of Appeal:

> [A] study of prestige can teach scholars about how judges think and why they behave as they do. If we can measure prestige, then we can hope to examine

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[3] John H. Merryman, 'The Authority of Authority: What the California Supreme Court Cited in 1950' (1954) 6 *Stanford Law Review* 613, 613.

[4] David Klein and Darby Morrisroe, 'The Prestige and Influence of Individual Judges on the U.S. Courts of Appeal' (1999) 28 *Journal of Legal Studies* 371.

[5] William Landes, Lawrence Lessig and Michael Solimine, 'Judicial Influence: A Citation Analysis of Federal Courts of Appeals Judges' (1998) 27 *Journal of Legal Studies* 271, 272.

[6] Klein and Morrisroe, above n 4, 375–376.

[7] See Montgomery Kosma, 'Measuring the Influence of Supreme Court Justices' (1998) 27 *Journal of Legal Studies* 333 (United States Supreme Court); Peter McCormick, 'The Supreme Court Cites the Supreme Court: Follow-Up Citation on the Supreme Court of Canada, 1989-1993' (1996) 33 *Osgoode Hall Law Journal* 453 (Supreme Court of Canada); Klein and Morrisroe, above n 3 (United States Courts of Appeal); Landes, Lessig and Solimine, above n 5 (United States Courts of Appeal).

[8] Russell Smyth, 'Who Gets Cited? An Empirical Study of Judicial Prestige in the High Court' *University of Queensland Law Journal* (forthcoming); Mita Bhattacharya and Russell Smyth, 'The Determinants of Judicial Influence and Prestige: Some Empirical Evidence From the High Court of Australia' *Journal of Legal Studies* (forthcoming).

[9] See Klein and Morrisroe, above n 4, 374 who provide a similar justification for studying the prestige of Courts of Appeal judges, as opposed to Supreme Court Justices, in the United States.

> its origins, learn more about why judges look up to certain colleagues, and so gain a greater understanding of what impresses judges or what they value. Moreover, if one of the things they value is the respect of their colleagues and if they actively seek to earn that respect, then we could better explain and predict the ways in which judges act by identifying the kinds of behavior that seem to earn prestige.[10]

The article proceeds as follows. The next section examines the distinction between judicial influence and judicial prestige. It also considers the rationale for, and limitations on, using citation counts to measure judicial prestige. The construction of the data set and the methodology that was employed in the study are discussed in section III. Section IV presents, and discusses, the results. First, the raw citation counts are presented. The results are then subjected to a series of adjustments to take account of self-citations, the age of the citation and length of service on the Bench to get measures of judicial prestige.

II THE THEORY

A *The Distinction Between Judicial Influence and Prestige*

From the outset it is important to distinguish between judicial prestige and influence. Klein and Morrisroe define prestige as 'the amount of respect, regard or esteem one enjoys among one's fellows'. They define influence as 'the extent to which the actions of one person have an effect on the views or behavior of others'.[11] Most of the previous studies for North American courts purport to measure influence,[12] but whether in fact they are actually measuring 'influence' as distinct from 'prestige' is debatable. In the existing literature there are three types of studies in terms of the timeframe of cited and citing cases. In the first type of study Klein and Morrisroe limit both the cited and citing cases to a narrow range of years. Using this approach, citations probably measure both prestige and current influence. In the second type of study, both cited cases and citing cases are taken from the whole time span as in Kosma's study of the United States Supreme Court.[13] In this type of study those who have some influence for a time will score highly, even if, at the time of the study, they have neither influence nor prestige.

In the third type of study citing cases are restricted to recent years, but cited cases cover the court's history as in McCormick's study of the Supreme Court of Canada,[14] and the two studies for the High Court.[15] This is also the approach, which will be followed in the present study. In these studies someone who once had great influence, but whose doctrines are now not followed will still rate high if he or she is the author of landmark judgments that simply must be mentioned even if they

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[10] Klein and Morrisroe, above n 4, 372.
[11] Ibid, 371–372.
[12] For example, see Landes, Lessig and Solimine, above n 5; Kosma above n 7; McCormick, above n 7.
[13] Kosma, above n 7.
[14] McCormick, above n 7.
[15] Smyth, above n 8; Bhattacharya and Smyth above n 8.

are respectfully discounted — that is if he/she possesses continuing prestige. Thus an adjusted citation index is likely to measure prestige or status, rather than current influence. This is reflected in the results of the previous studies for the High Court.[16] In these studies Dixon CJ comes out on top with three times the corrected score of Isaacs, Barwick and Mason CJJ. Yet in the constitutional sphere, at least, few of Dixon CJ's doctrines are considered good law today. The notion of 'strict and complete' legalism has been largely supplanted by a greater emphasis on the purpose of the constitutional drafters and the practical effect of the impugned legislation. The Dixon view of s 92 of the Constitution has been superseded and his Honour's views on Commonwealth immunity from State legislation were pretty thoroughly repudiated in the *Defence Housing Authority* case.[17] However, Dixon CJ's status is such that his decisions are still cited frequently, irrespective of whether their arguments or conclusions are still influencing current legal doctrine. His prestige or status is such that present judges prefer to 'explain' his decisions (as in the *Defence Housing Authority*) case, rather than flatly say they are no longer good law.

B *Counting Citations to Judges versus Counting Citations to Cases*

Most of the existing North American studies have attempted to measure a judge's influence or prestige through counting the number of times that a judgment which he has authored has been cited in a latter case, irrespective of whether the citing judge refers to him by name.[18] There are, however, two problems with this approach. First, Klein and Morrisroe note that 'case citations are not connected clearly enough to individual judges ... to be fully satisfactory measures of those judges' prestige'. [19] This is because citation to previous cases depends on a range of factors such as the nature of the proceedings before the court and the cases that are cited by counsel. Thus, it is possible that prestige plays little or no part in whether a decision in which a judge participates is cited. In contrast, if the judge is referred to by name, the connection is much clearer because it is an act of discretion. As McCormick states, 'a citation which explicitly names a judge concedes greater significance to that judge than a citation which simply identifies the case and leaves it to further research to identify the individual who authored it'.[20]

A second problem is of a practical nature. It does not affect the studies done for North America, but it is relevant in the Australian context. It relates to the fact that there are important differences between the Federal Court and United States Supreme Court, which affect the manner in which the data is collected, and interpreting the results. In the Federal Court there is no formal conference at the conclusion of a hearing where the Chief Justice (or senior puisne judge if the Chief

[16] Ibid.
[17] *Re: The Residential Tenancies Tribunal of New South Wales v Henderson & Another: Ex parte Defence Housing Authority* (1997) 190 CLR 410.
[18] See, for example, Kosma above n 7, McCormick, above n 7; Landes, Lessig and Solimine, above n 5.
[19] Klein and Morrisroe, above n 4, 375.
[20] McCormick, above n 7, 472–473.

Justice is in the minority) allocates cases to judges, which is what happens in North America. As a result there is usually no single 'majority opinion', as in the Supreme Court of Canada or United States Supreme Court. This means that in cases decided by the Full Court it is often impossible to know which judge was most responsible for expressing the views of the court in a given case.

For these reasons Klein and Morrisroe and the previous studies for the High Court just count the number of times that a judge is specifically named in a subsequent case. This approach also suffers from one major limitation, which is that it excludes some 'follow-up' citations. The term 'follow-up' citations refers to citations of previous decisions of the citing court.[21] In this study the writer followed the approach used by Klein and Morrisroe and the previous studies for the High Court. In addition to the practical reason for doing so, he believes that the benefits of avoiding muddying the analysis through counting all citations outweighs the costs in terms of reduction in the number of citations counted.

C *Limitations on using citation counts to measure prestige*

Before considering the methodology and results it is worth considering the limitations of this sort of study. The limitations on using citation counts to measure judicial influence or prestige have been considered in detail in previous studies. [22] One problem is the notion of the superprecedent. Landes and Posner define a superprecedent as 'a precedent that is so effective in defining the requirements of the law that it prevents legal decisions arising in the first place or, if they do arise, induces them to be settled without litigation'.[23] The authors of superprecedents would be under-represented in citation counts; however, superprecedents are unlikely to have a statistically significant effect. [24] It is arguable that even when the court does hand down a settlement-generating judgment, later courts are still likely to recognise its importance and cite it and its authors. [25]

A second problem is self-citation, which occurs where a judge refers to one of his/her own previous decisions. Landes, Lessig and Solimine suggest that self-citations are a 'way for judges to promote or advertise their own opinions'.[26] This can distort citation counts as a measure of prestige because current members of the court do, and retired members of the court do not, have the opportunity to mention themselves in their judgments. This problem can be overcome by excluding self-citations from the citation count. A third potential limitation is that judges might

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[21] Charles Johnson, 'Follow-up Citations in the US Supreme Court' (1986) 39 *Western Political Quarterly* 538; McCormick, above n 7.

[22] See Richard Posner, *Cardozo: A Study of Judicial Reputation* (1990); Richard Posner, *Aging and Old Age: A New Theoretical Framework* (1995) ch. 8; Virgil Blake, 'Citation Studies – The Missing Background' (1991) 12 *Cardozo Law Review* 1961; Keith Ann Stiverson and Lynn Wishart, 'Citation Studies – Measuring Rods of Judicial Reputation?' (1991) 12 *Cardozo Law Review* 1969. Most of the criticisms are brought together and discussed in Landes, Lessig and Solimine, above n 8, 271–276.

[23] William Landes and Richard Posner, 'Legal Precedent: A Theoretical and Empirical Analysis' (1976) 19 *Journal of Law and Economics* 249, 256.

[24] Ibid, 251.

[25] Kosma,above n 7, 339.

[26] Landes, Lessig and Solimine, above n 5, 274.

have ulterior reasons for citing another judge (in particular a colleague) by name. Klein and Morrisroe point out that some judges might cite others 'in hopes of reciprocation' or as a 'gesture of respect'.[27] This sort of citation, however, tends to be relatively rare.

Fourth, none of the studies attempt to distinguish between positive and negative references and no attempt will be made to do that in this study. This, though, should not be a serious problem. When measuring prestige, or influence, as opposed to quality, the distinction between positive and negative citations is irrelevant. In their citation study of the impact of law and economics scholarship, Landes and Posner note: 'When speaking of influence rather than quality, one has no call to denigrate critical citations. Scholars rarely bother to criticize work that they do not think is or is likely to become influential. They ignore it.'[28] These comments are even more apposite to judicial citations. A judge will rarely cite another judge by name unless he/she thinks that the opinion of the cited judge is worth attributing to the author. Also, as a practical matter, few judicial citations by name are critical. McCormick suggests that in his study for the Supreme Court of Canada, less than one-half of one per cent of all judicial citations were critical.[29]

Fifth, in the United States it is common for a judge's associate to write the judgment. Landes, Lessig and Solimine note:

> Some judges delegate the entire task of opinion writing to law clerks with minimal supervision and editing. Thus, citations may reflect the influence or quality of law clerks as 'ghost-writers', rather than that of judges.[30]

In Australia, however, this is not a problem because, in contrast to the United States, most, if not all, judges write their own judgments.[31] Sixth, citations could be sensitive to new technologies and, therefore, search costs. All judges and their associates have ready access to computerised data bases of law reports with search engines such as Lexis. It is possible that computer searches might generate a more egalitarian pattern of citation, rather than relying on judicial prestige to locate decisions. On the other hand, computer searches also make it possible to search by author's name (where prestige is relevant), so the overall effect on the citation/prestige relationship is difficult to predict.[32]

III DATA AND METHODOLOGY

The data were collected between June and September 2000. The sample cases in this study were all decisions reported in volumes 187 to 196 inclusive of the Federal Court Reports. These volumes cover cases decided over the period 1998 to 2000

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[27] Klein and Morrisroe, above n 4, 376.
[28] William Landes and Richard Posner, 'The Influence of Economics on Law: A Quantitative Study' (1993) 36 *Journal of Law and Economics* 385, 390.
[29] McCormick, above n 7, 462.
[30] Landes, Lessig and Solimine, above n 5, 274.
[31] P. W. Young, 'Judgment Writing' (1996) 70 *Australian Law Journal* 513, 514.
[32] Landes, Lessig and Solimine, above n 5, 275–276.

and were the 10 most recent volumes available when the data were collected. Each case in the sample was read and two types of information were collected. First, every follow-up citation to a previous Federal Court case was recorded irrespective of whether a judge was cited by name. This information was used to calculate the depreciation in the stock of legal capital. (The method and reasons for this are explained below.) All follow-up citations were counted, irrespective of where the cited case was reported (e.g. Federal Court Reports, Federal Law Reports or Australian Law Reports). Where it was not clear whether the cited case was a Federal Court decision, which sometimes happened when the cited case was reported in the Federal Law Reports or Australian Law Reports, the citation was manually checked by looking up the cited case in the relevant law reports.

Second, each time a current or retired Federal Court judge was cited by name it was counted. If a judge received repeat citations by name in the same paragraph it was counted only once. If the judge was cited by name in subsequent paragraphs, however, these were counted again on the basis that the judge was being cited for a different proposition and therefore the citation had separate significance. In order to give proper weight to citations in joint judgments, when calculating the total citations received, citations in joint judgments were multiplied by the number of participating judges.[33]

Consistent with previous Australian studies only citations to a judge writing in his/her judicial capacity were counted. Thus, the study did not include a citation to an academic article or book written by the judge, where the judge was cited by name. Finally, only previous citations to Federal Court cases were considered. A judge, other than the Chief Justice, may be a judge of one or more other courts or tribunals at the same time as he/she is a Federal Court judge. Some Federal Court judges hold their primary commissions in other courts or tribunals (notably the Family Court, Supreme Court of the ACT and the Administrative Appeals Tribunal). If, for example, Miles CJ was cited by name, while sitting as Chief Justice of the Supreme Court of the ACT, or O'Connor J was cited by name, while sitting as President of the Administrative Appeals Tribunal, this was not counted. Similarly, if a judge was cited by name while sitting as a member of another court, prior to appointment or after resigning from the Federal Court, this was not counted. Therefore, numerous citations by name to Brennan CJ, Deane, Toohey, Gummow and Kirby JJ, while members of the High Court were not counted.

IV RESULTS

A *Raw Citation Counts and Adjusting for Self-citations*

The first two columns of Table 1 give information on the raw citation counts for each judge. The first column lists the number of times that each judge was cited by

[33] This methodology is the same as that used in the previous two studies of judicial prestige in the High Court (see references in n 8) and Australian citation practice studies in general (see references in n 1).

name. The second column contains the number of times each judge was cited as a percentage of the total citations. There were 3585 citations by name in total. These were fairly heavily concentrated at the top of the list, with the 10 most cited judges receiving 40.7 per cent of the total citations. As with previous studies for the High Court and Supreme Court of Canada, a feature of the first column of Table 1 is the dominance of current judges at the top of the list.[34] All but two of the 10 most cited judges and all but three of the 25 most cited judges were current members of the Federal Court when the data were collected. At the other end of the spectrum, 12 judges received no citations and a further 11 received five citations or less. Most of the judges at the bottom of the table fall into reasonably well-defined categories. These include judges whose primary commissions were/are with other courts or tribunals (e.g. Blackburn, Forster, Gallop, Miles, A. Nicholson and O'Connor JJ), judges who served for a short period at the start of the court's existence (e.g. Nimmo, Sweeney, Ward JJ), or judges who just served for a short period (Kirby J).

In the sample self-citations accounted for just under two per cent of all citations by name (66 out of 3585), which is less than the High Court, where the figure is about five per cent.[35] The third column of Table 1 lists the number of times each judge was cited, excluding self-citations. The fourth column of Table 1 shows percentage figures excluding self-citations. The third and fourth columns of Table 1 suggest that self-citations have a minimal effect on the rankings. With the exception of Merkel, Lehane and Madgwick JJ, who each drop a few places, the rankings remain relatively unchanged.

B *Adjusting for the Depreciation of Precedent*

A major problem with the citation counts in Table 1 is that current judges get cited more than earlier judges. This, in itself, does not mean that current judges have more judicial prestige than retired judges. Instead, it reflects the fact that more recent cases are cited more frequently than older cases. Merryman was one of the first to observe this phenomenon in his citation practice studies of the Supreme Court of California. He suggested that cases have what he termed a 'citation half-life', which is the statistical probability that a citation of a case by the court will be reduced by 50 per cent every x years. [36] Merryman offered a number of reasons for this phenomenon. He suggested that one explanation could be that the stock of older decisions is reduced over time as cases are overruled either by later decisions or statute. Another factor is that legal opinion evolves over time so that even if earlier decisions are not overruled, their reasoning might not be as persuasive. A third consideration is that in general later cases are more relevant on the facts because the social context of earlier decisions have changed. [37]

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[34] For the High Court see Smyth, above n 8. For the Supreme Court of Canada see McCormick, above n 7.

[35] Smyth, above n 8.

[36] John H. Merryman, 'Toward a Theory of Citations: An Empirical Study of the Citation Practice of the California Supreme Court in 1950, 1960 and 1970' (1977) 50 *Southern California Law Review* 381, 395. See also Merryman's earlier study – Merryman, above n 3.

[37] Merryman, above n 3, 394–395.

Landes and Posner suggest a formal method to measure the depreciation of legal precedent over time.[38] Following Landes and Posner, assume that follow-up citations and Federal Court precedents, or the stock of citable cases, are related as follows:

$$P_0^t = kC_0^t \exp(u_t) \quad (1)$$

where:

P_0^t denotes the number of precedents produced t years ago (t=0, 1, 2, ... T)

C_0^t denotes the number of citations in period 0 to cases t years ago,

k is a proportionality factor between citations and precedents,

$\exp(u_t)$ is the exponential of the random error term.

We can estimate annual investment in precedent production as follows:

$$I_t^* = mI_t \exp(v_t) \quad (2)$$

where:

I_t^* equals the annual investment in precedent production that occurred t years ago

I_t is an estimate of I_t^* based on a count of cases decided t years ago,

m is a proportionality factor applicable to investment

$\exp(v_t)$ is the exponential of a random error term.

The number of precedents that have survived from t years ago to period 0 equals investment in the earlier period discounted by a depreciation rate. This can be written as:

$$P_0^t = I_t^* \exp(-\delta t) \quad (3)$$

where, in addition to the variables defined above, δ is the depreciation rate.

By making appropriate substitutions, taking logs and rearranging terms, we get:

$$\ln (C_0^t/I_t) = \alpha + \beta t + \varepsilon_t \quad (4)$$

where:

α is a constant (equal to $\ln(m/k)$),

β is the coefficient on time, which is equal to $-\delta$, and

ε_t is a disturbance term, subject to first-order serial correlation.

Provided data is available on (a) the age distribution of follow-up citations and (b) the annual number of cases in the Federal Court which become precedents, a simple regression of the log of the citation-investment ratio on time (with an adjustment for

[38] Landes and Posner, above n 23, 277–279.

serial correlation) will give an estimate of the depreciation rate. Information on the age distribution of follow-up citations in the sample cases was collected from the Federal Court Reports. The issue of measuring investment, or the stock of citable cases, is more problematic. As Landes and Posner point out, it is not simply a matter of measuring the number of cases decided in the court in a given year. This is because only a decision in which a written judgment is delivered is likely to be cited in subsequent cases.[39] This information is not readily available for each year in the Federal Court Annual Reports and, in any case, the Federal Court only started producing Annual Reports from 1991/92.

Thus, it is necessary to develop an alternative way of calculating I_t^*. One possible method of doing this would be to count the number of reported Federal Court decisions in the Federal Court Reports, Federal Law Reports and Australian Law Reports. There are, however, two problems with this approach. First, it would be extremely time consuming, even using a search engine on the electronic version of the reports, because some cases are reported in more than one series of law reports. These would have to be checked manually to avoid double counting. Second, particularly with the advent of services such as the Austlii data base, judges regularly cite unreported judgments so the set of reported decisions understates the stock of citable cases. Thus, I_t^* was calculated using the Austlii data base.[40] There are 14,755 Federal Court cases on the Austlii data base and it contains both reported and unreported decisions. Using the Boolean Operator on the search engine it was possible to identify the number of cases decided in each year.[41]

Figure 1 shows (a) all follow-up citations in the Federal Court, regardless of whether a judge was cited by name and (b) citable cases as per the Austlii database for each year from 1977 to 1999. Figure 1 clearly identifies two trends. First, the Federal Court prefers to cite its more recent decisions. There is a steady increase until the mid-1990s, followed by a sharp rise to citations in cases decided in the period 1995-1998. Citations to decisions made in 1999 drop off, reflecting when the citing cases were decided. Second, despite the dip in 1996, there has been a steady increase in the amount of citable cases (as per the Austlii database), with a sharp increase in the last few years.

Table 2 presents regression estimates for equation (4) using both ordinary least squares (OLS) and generalized least squares (GLS). In both cases the coefficient on time, which is equal to $-\delta$, is statistically significant. Using OLS, the coefficient on time is significant at five per cent and in the specification using GLS it is significant at one per cent. The Durbin-Watson statistic indicates there is no evidence of zero first-order serial correlation of the disturbance term when either OLS or GLS is used. The GLS estimate, however, is preferred because the Durbin-Watson statistic and t-statistic on β are higher. The GLS method suggests an annual depreciation rate of 5.7 per cent. This is similar to Landes and Posner's estimates for the United States Courts of Appeal, as they calculated depreciation rates for a range of subject

[39] Ibid, 279–280.
[40] The Austlii data base is accessible at <http://www.austlii.edu.au>
[41] For 1977, the author typed in #Date 1977; for 1978 #Date 1978 and so on.

matter classifications which varied between two and seven per cent per annum for a sample of cases decided in 1974 and 1975.[42]

The discount rate was used to calculate a score for each judge, giving an adjusted citation index following the approach pioneered by McCormick in his study for the Supreme Court of Canada and also used in the previous studies for the High Court.[43] A score for each citation (excluding self-citations) was calculated as $1/(1-\delta)$, where δ is the depreciation rate, raised to the nth power and n is the age of the citation in years.[44] The age of the citation is the difference in years between when the judgment was published and when it was cited. This weights the citations that each judge receives according to the age of the citation and therefore corrects for the Federal Court's proclivity to cite more recent cases, which is represented in Figure 1. Using a depreciation rate of 5.7 per cent, the score for each citation was 1.06 (or 1/.943) raised to the nth power. This value is computed for each citation individually, rather than the average for each judge. The total prestige score for judge 'i' is then the sum of his/her citation scores.

The total prestige score for each judge is given in Table 3 along with the period he/she was in office. The picture that emerges from Table 3 is still fairly similar to that in Table 1, although there are some differences. Eighteen of the top 20 in Tables 1 and 3 are the same. The changes are that Black CJ and Moore J drop out of the top 20 and are replaced by Bowen CJ and Deane J. In terms of relative ranking within the top 20, the five judges at the top of the list remain the same (Wilcox, Lockhart, Burchett, Hill and Beaumont JJ), albeit in a different order. Apart from these changes, which are at the margin, the effect of weighting older citations more heavily in Table 3 is that four judges who are no longer on the Federal Court (Bowen CJ, Gummow, Davies and Deane JJ) move into the top 10.

C *Adjusting for Period on the Bench*

A final correction is to adjust for differences in terms of time spent on the bench. Table 3 indicates quite clearly that some judges have been on the bench for much longer than others. Of the 20 judges with the highest total prestige scores, Lockhart and Davies JJ were on the Federal Court bench for 20 years, while judges such as Deane, Merkel, Mansfield and North JJ were, or have been, on the Federal Court bench for much shorter periods. This raises the prospect that in the case of some judges such as Lockhart and Davies JJ and to a lesser extent Wilcox and Burchett JJ, high total prestige scores might be a function of length of service. Judges who have served on the court for long periods have more opportunities to be cited than judges who were on the bench for short periods.

Following the method suggested in McCormick, Table 4 shows average prestige scores that attempt to address this distortion.[45] To calculate average prestige scores, total prestige scores were divided by n-1, where n is the number of years that the

[42] Landes and Posner, above n 23, 280–284.
[43] McCormick, above n 7; Bhattacharya and Smyth, above n 8; Smyth above n 8.
[44] McCormick, above n 7, 470.
[45] Ibid, 475–477

judge was on the bench.[46] Thus, average prestige scores give a measure of prestige per year served on the court. Dividing by n-1 counts from a judge's first full year on the bench. The reason for excluding the initial year on the bench is that some judges were appointed late in a given year. A more accurate measure of a judge's average prestige would be to divide total prestige by the number of written judgments he/she has written. However, it was not possible get a measure of prestige per judgment, because information is not readily available on how many written judgments each Federal Court judge has delivered.

D *Discussion and Qualifications*

The rankings that emerge from Table 4 tell a quite different story from Table 3. Three of the top 10 and 14 of the top 20, in terms of total prestige, are in the top 10 and top 20 respectively in terms of average prestige. However, as expected, several judges who were on the bench for long periods fall down the list; for example, Wilcox J falls from first to fifth, Lockhart J falls from second to twentieth and Davies J falls from seventh to thirty-ninth. At the same time, judges such as Hely, Emmett and Finkelstein JJ, who have been on the court for short periods of time, move up the list. An interesting feature of Table 4, like Table 1, is the dominance of current judges. Some retired judges start to feature more prominently in Table 3, but in Table 4 there is only one retired judge in the top 10 and four retired judges in the top 25.[47] This suggests that for current members of the court, who rank highly in terms of prestige, there is likely to be a high correlation between prestige and influence. It is also testament to the stature of the retired judges who still rank in the top 25 in terms of prestige per year, notably Bowen CJ, Deane, Gummow and Pincus JJ.

One might expect that Federal Court judges who were later appointed to the High Court might score highly in terms of average prestige. Landes, Lessig and Solimine offer a theoretical rationale for why this might be the case.[48] As indicated in the introduction, Landes Lessig and Solimine suggest that a prestigious judge develops a 'brand name' or 'trademark' that signifies quality. They further argue: 'Such a brand name reduces the cost of searching for high quality opinions to cite'.[49] It is reasonable to expect that Federal Court judges, who were later appointed to the High Court, would have well regarded 'brand names' for producing quality judgments. In their study of the United States Courts of Appeals, however, Landes, Lessig and Solimine found no evidence to support the view that judges later appointed to the United States Supreme Court had higher corrected citation scores.[50] As far as the Federal Court is concerned, leaving aside Kirby J, who was only on the court for a very short period, Table 4 provides at best mixed support for this

[46] There was one exception to following this method. The author calculated Giles J's average prestige score differently as he was appointed in 1999. His average prestige score was calculated as his total prestige score divided by n. As n=1 in his case, his average and total prestige scores are the same.
[47] Here 'retired' means retired at the time the data were collected. Since the data were collected there have been some retirements and new appointments. See the notes to Table 1.
[48] Landes, Lessig and Solimine, above n 5.
[49] Ibid, 272.
[50] Ibid, 287.

hypothesis. Deane and Gummow JJ rank relatively highly in terms of average prestige, while Brennan CJ and Toohey J are in the bottom half of Table 4.

In a previous study for the High Court, Bhattacharya and Smyth extended Landes, Lessig and Solimine's argument about brand name capital to argue that judges who served as Chief Justice should rank highly in terms of average prestige.[51] They argued that the title 'Chief Justice' represents a brand name that other judges will look to, when searching for cases to cite. This seemed to be borne out in terms of corrected citation scores. In that study, of the 10 Justices with the highest average prestige scores, six had served as Chief Justice — Dixon, Barwick, Griffith, Latham, Isaacs and Mason CJJ. The results of this study, however, are much more ambivalent on this point, with Bowen and Black CJJ ranking twenty-fifth and twenty-sixth respectively in terms of average prestige.

The attempt to measure judicial prestige in this study is subject to two important qualifications. The first relates to the relationship between prestige and merit. It is reasonable to expect that there is some sort of positive relationship between merit and prestige. This is reflected in the results of the previous studies of the High Court. In those studies Dixon CJ had the highest average and total prestige scores.[52] At the same time Sir Owen Dixon is widely regarded as 'the greatest ever' High Court Justice.[53] The relationship between merit and prestige, however, is likely to be inexact. McCormick makes the point that 'influence [or prestige] is only partly the product of merit in any hard and objective sense, and the citation frequency tables ... should not be taken in any simple way as measures of ability'.[54] McCormick goes on to point out that it is necessary to adjust the raw citation counts to take account of factors such as how recently the judge served and length of service in the manner which has been done in this study. Finally he concludes that, after these adjustments have been made, the average prestige scores, or average influence scores as he calls them, 'probably comes closest to assessing merit *simpliciter*, correcting as it does for both length and recency of service'.[55]

However, even average prestige scores give, at best, a qualified measure of merit. This is because citation practice will also reflect changes in the composition of the court's workload over time. McCormick points out that in the Supreme Court of Canada, 'private law cases are increasingly unlikely to be cited as the Supreme Court caseload becomes predominantly focused on public and criminal law'.[56] This means that, in the Supreme Court of Canada at least, judges strong in private law have less chance to be cited in judgments than judges strong in constitutional or criminal law. If the caseload of the court has changed over time, the implication is that any attempt to directly measure merit would be muddied by the existence of an uneven playing field. This is because judges who are stronger or in some sense

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[51] Bhattacharya and Smyth, above n 8.
[52] Bhattacharya and Smyth, above n 8; Smyth, above n 8.
[53] For example see Merralls, 'The Rt. Hon. Sir Owen Dixon, O.M., G.C.M.G., 1886-1972' (1972) 46 *Australian Law Journal* 429; Sir Ninian Stephen, *Sir Owen Dixon* (1986).
[54] McCormick, above n 7, 463.
[55] Ibid, 476.
[56] Ibid, 458.

'more meritorious' in areas of the law that come before the court most often will have more opportunities to be cited than judges who are stronger in areas of the law, which come before the court less frequently.

A second qualification to the results presented in the tables has been touched on earlier, but needs to be made explicit. The manner in which the data has been presented in the tables makes no allowance for whether the judge holds/held a primary commission with the Federal Court or other court or tribunal. Since the Federal Court started producing Annual Reports in 1991–92, it has published data on the number of Federal Court judges and the number of judges whose primary commission is with the Federal Court. This information is provided in Table 5 for the period 1991–92 to 1998–99. In most years, the number of judges who hold primary commissions with other courts or tribunals has varied between five and seven. As discussed earlier, prestige scores are calculated on the basis of citations to previous cases in the Federal Court. Thus, we cannot compare the prestige score of judges such as Nicholson CJ, Chief Justice of the Family Court, or O'Connor J, President of the Administrative Appeals Tribunal, who might seldom sit in the Federal Court, with the prestige scores of judges for whom the Federal Court is their primary commission. Therefore, interpreting the findings for judges whose primary commission is/was not with the Federal Court should be done with extreme caution.

V CONCLUSION

As with previous studies of this sort it is important to reiterate the limitations. The main limitations are those associated with any citation practice study. These include the existence of ulterior motives for citing, failure to distinguish between positive and negative citations and the uncertain effects of new technologies on citation practice. Each of these problems were discussed in detail in Section II, where it was noted that some of these issues are more problematic than others. Having said this, using citation analysis has some important advantages over more instinctive indicators of prestige. As Landes, Lessig and Solimine note, its most significant advantage is that 'citation analysis relies less on subjective and nonquantifiable factors and, instead, employs quantitative measures of influence [or prestige] using well-known statistical techniques'.[57]

Putting aside the advantages and disadvantages of using citation analysis as a methodology, the data set is limited to 10 volumes of the Federal Court Reports. This raises two possible limitations in terms of the representativeness of the sample. First, it is arguable that the fact that the sample is restricted to reported cases represents a limitation, although these are still likely to be the most important cases decided over the period. As McCormick puts it: 'Reported cases probably include a very high proportion of all the decisions sufficiently important to call for reasoned

[57] Landes, Lessig and Solimine, above n 5, 325.

judgment based on authority'. [58] Second, because the data set only covers 10 volumes of the Law Reports there is an issue about whether the cases reported in those volumes are representative of reported cases in general. Thus, for example, if there was a disproportionately high number of taxation cases reported in those 10 volumes, this might inflate the prestige scores of Hill J, who ranks high in terms of both total and average prestige. Certainly, we cannot be certain that the sample is representative and if it was larger we would be in a stronger position to draw firmer conclusions. However, previous studies have been based on comparable sample sizes. The previous studies for the High Court were based on cases decided between 1995 and 1999, reported in 10 volumes of the Commonwealth Law Reports.[59]

The stated aim of this article in the introduction was to learn something about the relative prestige of judges on an intermediate appellate court where the judges are not as visible as in the High Court. Because the Federal Court is an intermediate appellate court with a wide-ranging civil jurisdiction, most solicitors and barristers have had more professional contact with its judges than judges of the High Court. In the course of this contact, undoubtedly impressions form about the relative standing of Federal Court judges. In one of the previous studies for the High Court it was stated:

> The results of a study such as this are never going to be a substitute for conjecture or opinion. This is not the objective of such a study. The aim, rather, is to provide quantitative findings that bear on the relevant issues through the systematic application of a specific methodology.[60]

These conclusions are equally apposite for the findings in this study. If the objective evidence presented in this study is able to both inform and complement more subjective impressions of judicial prestige in the Federal Court acquired either in the courtroom or through casual reading of the law reports, the aims of the study have been realised.

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[58] Peter McCormick, 'The Evolution of Coordinate Precedential Authority in Canada: Interprovincial Citations of Judicial Authority, 1922–1992' (1994) 32 *Osgoode Hall Law Journal* 272, 277.
[59] Bhattacharya and Smyth, above n. 8, Smyth, above n. 8
[60] Smyth, above n 8.

TABLE 1 — MOST FREQUENTLY CITED JUSTICES BY NAME

Reported Decisions of the Federal Court of Australia

	Times Cited		Excluding Self-Cites	
Wilcox	243	6.8	234	6.6
Burchett	206	5.7	198	5.6
Hill	188	5.2	183	5.2
Beaumont	176	5.0	175	5.0
Lockhart	155	4.3	155	4.4
Davies	126	3.5	126	3.6
Gummow	92	2.6	92	2.6
von Doussa	92	2.6	92	2.6
Einfeld	90	2.5	90	2.6
French	89	2.5	89	2.6
Tamberlin	89	2.5	87	2.5
Merkel	89	2.5	83	2.4
Lindgren	86	2.4	86	2.4
Mansfield	85	2.4	84	2.4
Branson	84	2.3	83	2.4
Heerey	83	2.3	83	2.4
North	82	2.3	82	2.3
Sackville	80	2.2	80	2.3
Black	65	1.8	64	1.8
Carr	64	1.8	55	1.6
Moore	62	1.7	59	1.7
Drummond	57	1.6	57	1.6
Spender	55	1.5	55	1.6
Bowen	53	1.5	53	1.5

R. Nicholson	52	1.5	52	1.5
Sheppard	47	1.3	47	1.3
Northrop	46	1.3	46	1.3
Emmett	43	1.2	43	1.2
Pincus	43	1.2	43	1.2
Lehane	42	1.2	37	1.1
Finkelstein	39	1.1	38	1.1
Lee	38	1.1	37	1.1
O'Loughlin	37	1.0	35	1.0
Cooper	36	1.0	36	1.0
Deane	36	1.0	36	1.0
Hely	36	1.0	36	1.0
Madgwick	35	1.0	29	0.8
Ryan	34	1.0	33	0.9
Foster	33	0.9	33	0.9
Sundberg	33	0.9	32	0.9
Jenkinson	28	0.8	28	0.8
Fox	27	0.8	27	0.8
Whitlam	27	0.8	26	0.7
Kiefel	27	0.8	26	0.7
Marshall	26	0.7	26	0.7
Goldberg	24	0.7	24	0.7
Gray	24	0.7	24	0.7
Beazley	22	0.6	22	0.6
Finn	20	0.6	20	0.6
Smithers	19	0.5	19	0.5
Morling	18	0.5	18	0.5
Olney	18	0.5	18	0.5
Weinberg	18	0.5	18	0.5

C Sweeney	16	0.4	16	0.5
Fisher	14	0.4	14	0.4
Katz	13	0.4	13	0.4
Higgins	12	0.3	11	0.3
Toohey	12	0.3	12	0.3
Mathews	9	0.3	9	0.3
Neaves	9	0.3	9	0.3
Dowsett	8	0.2	8	0.2
Franki	8	0.2	8	0.2
Gyles	8	0.2	8	0.2
Kenny	8	0.2	8	0.2
Fitzgerald	6	0.2	6	0.2
Jackson	6	0.2	6	0.2
O'Connor	6	0.2	6	0.2
Brennan	5	0.1	5	0.1
Gallop	5	0.1	5	0.1
Miles	4	0.1	4	0.1
Woodward	4	0.1	4	0.1
Ellicot	3	0.1	3	0.1
Forster	3	0.1	3	0.1
Blackburn	2	0.1	2	0.1
Evatt	2	0.1	2	0.1
Hartigan	1	0.03	1	0.03
Keely	1	0.03	1	0.03
Riley	1	0.03	1	0.03
Connor	–	–	–	–
Everett	–	–	–	–
Giudice	–	–	–	–
Kelly	–	–	–	–

Kirby	–	–	–	–
McGregor	–	–	–	–
Muirhead	–	–	–	–
A. Nicholson	–	–	–	–
Nimmo	–	–	–	–
St. John	–	–	–	–
J. Sweeney	–	–	–	–
Ward	–	–	–	–
TOTAL	**3585**		**3519**	

Notes:

In this table, and in the following tables, bold typeface denotes that the judge was a current member of the court when the data were collected. Burchett, Lockhart and Gallop JJ have since retired. Conti and Stone JJ were appointed to the court after the data were collected.

Percentages do not add to 100 because of rounding.

TABLE 2 — REGRESSION ESTIMATES OF DEPRECIATION RATES

Federal Court Cases Reported in Volumes 187–196 of the Federal Court Reports

	Citations to Federal Court Cases	
	Ordinary Least Squares	**Generalized Least Squares**
α	-0.855*	-1.00*
	(3.29)	(4.16)
β (= $-\delta$)	-0.055**	-0.057*
	(2.23)	(3.06)
Adjusted R^2	0.25	
Durbin-Watson *d* statistic	2.27[d]	2.44

Notes:

Figures in parenthesis are t-statistics.

* Indicates coefficient is significant at the 0.01 level of significance using one-tailed t-test.

** Indicates coefficient is significant at the 0.05 level of significance using one-tailed t-test.

d With n=23, K′=1, d_L=1.02, d_U=1.19 at the .01 level. Thus, there is no evidence of positive serial correlation in either the OLS or GLS estimates at the .01 level.

TABLE 3 — TOTAL PRESTIGE SCORES

Reported Decisions of the Federal Court of Australia

	Total Prestige Score	Period in Office
Wilcox	355	1984–
Lockhart	299	1978–1999
Burchett	278	1985–2000
Hill	258	1989–
Beaumont	237	1983–
Gummow	158	1986–1995
Davies	153	1978–1998
Bowen	148	1977–1990
French	126	1986–
Deane	118	1977–1982
Von Doussa	115	1988–
Heerey	107	1990–
Tamberlin	106	1994–
Einfeld	105	1986–
Lindgren	103	1994–
Merkel	97	1996–
Mansfield	96	1996–
Branson	95	1994–
North	94	1995–
Sackville	94	1994–
Northrop	93	1977–1998
Black	90	1991–
Sheppard	88	1979–1997
Pincus	87	1985–1991

Drummond	71	1991–
Fox	71	1977–1989
Spender	71	1984–
Moore	70	1994–
Carr	63	1993–
R. Nicholson	60	1995–
Lee	52	1988–
Smithers	50	1977–1986
Emmett	48	1997–
Foster	47	1987–1998
Jenkinson	47	1982–1997
Cooper	46	1992–
O'Loughlin	44	1989–
Ryan	44	1986–
Finkelstein	43	1997–
Lehane	43	1995–
Fisher	39	1978–1989
Hely	39	1998–
Sundberg	39	1995–
Morling	37	1981–1993
Gray	35	1984–
Beazley	32	1993–1996
Madgwick	32	1995–
Whitlam	32	1993–
Toohey	30	1977–1987
Kiefel	29	1994–
Marshall	29	1995–
Goldberg	28	1997–
Franki	26	1977–1986

Olney	26	1988–
Finn	23	1995–
Weinberg	20	1998–
Fitzgerald	17	1981–1984
Brennan	16	1977–1981
C Sweeney	16	1977–1995
Neaves	15	1984–1995
Katz	14	1998–
Jackson	13	1985–1987
Higgins	12	1990–
Mathews	10	1994–
O'Connor	10	1990–
Woodward	10	1977–1990
Ellicot	9	1981–1983
Gyles	9	1999–
Kenny	9	1998–
Dowsett	8	1998–
Forster	7	1977–1989
Gallop	7	1978–2000
Blackburn	6	1977–1985
Evatt	6	1977–1987
Miles	4	1985–
Riley	4	1977–1978
Hartigan	2	1987–1990
Keely	2	1977–1996
Connor	_	1977–1982
Everett	_	1984–1987
Giudice	_	1997–
Kelly	_	1980–1990

Kirby	_	1983–1984
McGregor	_	1977–1985
Muirhead	_	1977–1986
A. Nicholson	_	1988–
Nimmo	_	1977–1980
St. John	_	1977–1985
J. Sweeney	_	1977–1981
Ward	_	Feb 1 – Nov. 24 1977

TABLE 4 — AVERAGE PRESTIGE SCORES

Reported Decisions of the Federal Court of Australia

	Average Prestige Score
Hely	39.0
Merkel	32.3
Mansfield	32.0
Hill	25.8
Emmett	24.0
Wilcox	23.7
Deane	23.6
North	23.5
Finkelstein	21.5
Tamberlin	21.2
Lindgren	20.6
Weinberg	20.0
Burchett	19.9
Branson	19.0
Sackville	18.8
Gummow	17.6
R. Nicholson	15.0
Beaumont	14.8
Pincus	14.5
Lockhart	14.2
Goldberg	14.0
Katz	14.0
Moore	14.0

Heerey	11.9
Bowen	11.4
Black	11.3
Lehane	10.8
Beazley	10.7
Carr	10.5
von Doussa	10.5
Sundberg	9.8
French	9.7
Gyles	9.0
Kenny	9.0
Drummond	8.9
Dowsett	8.0
Madgwick	8.0
Einfeld	8.1
Davies	7.7
Marshall	7.3
Cooper	6.6
Jackson	6.5
Fox	5.9
Finn	5.8
Kiefel	5.8
Fitzgerald	5.7
Smithers	5.6
Whitlam	5.3
Sheppard	4.9
Lee	4.7
Spender	4.7
Ellicot	4.5

Northrop	4.4
O'Loughlin	4.4
Foster	4.3
Brennan	4.0
Riley	4.0
Fisher	3.5
Ryan	3.4
Jenkinson	3.1
Morling	3.1
Toohey	3.0
Franki	2.9
Olney	2.4
Gray	2.3
Mathews	2.0
Neaves	1.4
Higgins	1.3
O'Connor	1.1
C. Sweeney	0.9
Blackburn	0.8
Woodward	0.8
Evatt	0.6
Forster	0.6
Gallop	0.3
Miles	0.3
Hartigan	0.2
Keely	0.1
Connor	–
Everett	–
Giudice	–

Kelly	_
Kirby	_
McGregor	_
Muirhead	_
A. Nicholson	_
Nimmo	_
St. John	_
J. Sweeney	_
Ward	_

TABLE 5 — NUMBER OF FEDERAL COURT JUDGES WITH PRIMARY COMMISSIONS ON THE FEDERAL COURT

	Number of Federal Court Judges	Number of Federal Court Judges with Primary Commissions
1991–92	33	28
1992–93	34	29
1993–94	37	30
1994–95	40	31
1995–96	45	32
1996–97	46	38
1997–98	48	41
1998–99	50	44

Source:

Federal Court of Australia Annual Report 1991–92 to 1998–99.

Notes:

The figure for 'judges with primary commissions' for 1995–96 excludes judges whose primary commission was in the Industrial Relations Court of Australia. On May 26 1997, the jurisdiction of the Industrial Relations Court of Australia was vested in the Federal Court. Accordingly, since that date judges who in previous years mostly heard matters in the Industrial Relations Court undertake that work as part of the jurisdiction of the Federal Court.