

The End of the Rainbow: Understanding Turnover among Federal Judges

Albert Yoon*
417 Robertson Hall
Princeton University
Princeton, NJ 08544
ayoon@princeton.edu
609-258-7311

* Benjamin Mazur Research Professor and Assistant Professor, Northwestern University School of Law; Assistant Professor of Political Science (by courtesy), Northwestern University; Fellow – Law and Public Affairs, Princeton University (2003-04). This paper benefited greatly from comments by Orley Ashenfelter, Richard Brooks, Greg Caldeira, Frank Easterbrook, Ellen Engel, Tracey George, Chris Guthrie, John Goldberg, Michael Greenstone, John Kelsh, Helen Levy, Tom Merrill, Douglas Miller, Richard Posner, Robert Rasmussen, Robert Sitkoff, James Speta, Kent Syverud, Emerson Tiller, Robert Weisberg, Christopher Yoo, and Jim Zafiris. I owe special thanks to Emily Taylor and Brook Long for their research assistance, and Pegeen Bassett for her library reference support. All remaining errors are my own.

The End of the Rainbow: Understanding Turnover among Federal Judges*Abstract*

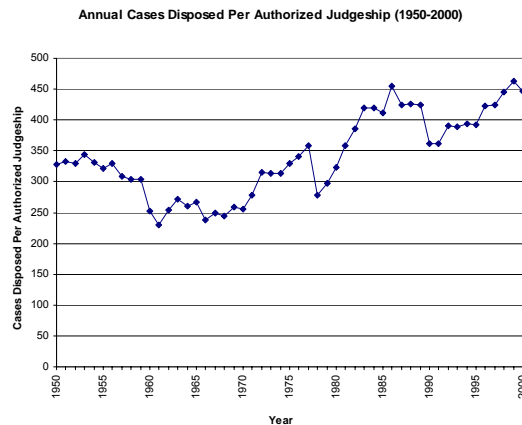
When Article III judges conclude their tenure of active service, they effectively abdicate their seat and enable the President and Senate to select a successor. Judicial scholars have concluded that political factors – both within and across institutions – largely influence this decision. In this Article, I construct a dataset that allows me to analyze, year by year, judicial turnover. Since the creation of a judicial pension in 1869, eligibility for which is determined by chronological age and years of active service, judges have increasingly synchronized their departure from active service with their qualification of the pension. By comparison, political and institutional factors, as well as other individual judge characteristics, appear to have little influence on turnover rates. These findings contradict much of the existing scholarship on judicial turnover and also offer more viable alternatives to existing calls for judicial reform.

INTRODUCTION

There is a conventional wisdom shared by journalists, legal scholars, and much of the public that federal judges are politically-minded. Notwithstanding their oath to uphold the U.S. Constitution,¹ judges have leanings – conservative, liberal, or moderate – that influence how they interpret and decide cases.² Judges also prefer a like-minded successor, someone who will support rather than overturn their contributions to the court. Democratic-appointed judges, the argument goes, are more inclined to leave the bench during a Democratic presidential administration, and similarly for Republican-appointed judges when a Republican is in office. Moreover, one would expect greater judicial turnover in the aftermath of a presidential election, when the foreseeable political environment has stabilized. The influence of politics in the judiciary is discussed most often in the context of the Supreme Court,³ but also for the district and circuit courts.⁴

There is a separate belief, advanced most prominently by Chief Justice William H. Rehnquist, that the work conditions of the judiciary adversely affect the labor market of federal judges. Higher caseloads, stagnant real salaries, and restrictions on outside income,⁵ he argues, deter many prospective judges –

¹ See U.S. CONSTITUTION, Art. VI (stating that judges “shall be bound by oath or affirmation, to support this Constitution”).
² See, e.g., Jeffrey A. Segal and Albert Cover, *Ideological Values and the Votes of U.S. Supreme Court Justices*, 83 AMER. POL. SCI. REV. 557 (1989) (describing the effect of judicial ideology on Supreme Court decision-making).
³ Thomas M. DeFrank, *O’Connor Quashes Retirement Rumors*, N.Y. DAILY NEWS, July 7, 2003, at 8 (addressing rumors that Justice Sandra Day O’Connor remained on the Court in 2000 out of concerns that former Vice President Al Gore might have been elected President); David Jackson and Allen Pusey, *High Court Lineup Under Watch; Even with Retirements on Hold, Pundits Still Guessing What’s to Come*, DALLAS MORNING NEWS, July 1, 2003, at 7A (quoting an Alliance for Justice spokesperson as describing the year preceding a presidential election as the optimal time for Supreme Court justices to retire from the court if their ideological views are similar to those of the sitting president); Joan Biscupic, *Chief Justice Shows No Sign of Leaving Soon*, USA TODAY, June 13, 2003, at 4A (stating that “[w]hen Republicans reclaimed a Senate majority in November’s elections, the stars seemed aligned for Rehnquist, a GOP partisan, to step down and ensure that a like-minded successor would be confirmed”); Linda Greenhouse, *The Supreme Court: The Issue of Confinement; Supreme Court Limits Detention in Cases of Deportable Immigrants*, N.Y. TIMES, June 28, 2001, at A1 (noting that Chief Justice William Rehnquist was not stepping down from the Court despite rumors that he would do so in the aftermath of the 2000 presidential election).
⁴ See text accompanying Part II, *infra*.
⁵ See the figure below describing the annual caseload, Figure 7 (showing graphically judicial salaries in constant dollars), *infra*, and the Ethics Reform Act of 1989, 5 U.S.C. § 503 (describing the limits on outside income and ban on honoraria).



Note: Caseload and judgeships are aggregated statistics from the Supreme Court, and the multiple district and circuit courts. The trend line reflect the number of disposed cases divided by the number of authorized judgeships for that year. Judgeships refer only to active Article III judges, and do not include senior, resigned, or retired judges. District and circuit court caseload statistics provided by the Annual Reports of the Administrative Office of the U.S. Courts (years covering 1950-2000). The Supreme Court caseload statistics were reported in Table 3-6 (p.228-29) of the 2003 edition of The Supreme Court Compendium, Epstein et al.

particularly those from more financially modest backgrounds – from being considered, forcing the president and Senate to choose from a less economically diverse, and arguably less qualified, pool of nominees. More significantly, he argues, these work conditions compel sitting judges to leave the bench at record rates,⁶ driven in part by the increasing attractiveness of employment opportunities in the private sector.

This Article is intended to shed light on the broader debate regarding judicial tenure. The evidence from which journalists and legal scholars draw their conclusions is largely anecdotal. While judicial scholars in other disciplines have empirically explored this issue, the methodological limitations of their studies – particularly at the district and circuit court level – make it difficult to accurately identify the causal factors of judicial turnover. Recent scholarship has shown that politics do not appear to influence how long federal judges serve on the bench.⁷ And, contrary to the claims Chief Justice Rehnquist, federal judges have over the past fifty years been serving slightly longer, not shorter tenures.⁸ The question that naturally arises is this: given that judges eventually leave the bench, what factors, if any, influence this decision? This Article provides an opportunity to examine these questions more rigorously by comparing how political and nonpolitical factors vary, if at all, during the period in which judges abdicate their seat compared with prior periods in which they remain on the bench.

This Article presents a comprehensive study of the factors that influence federal judges to abdicate their seats – through senior status, retirement, and resignation – on the bench. Drawing from data provided by the Administrative Office of the United States Courts, I construct an expanded dataset that documents differences not only across judges, but also over the active tenure of each judge. This structure for the data makes it possible to observe individual-level changes as well as broader institutional and political changes. In addition, this Article looks at additional factors previously unexplored in previous scholarship.

The key empirical finding of this Article identifies pensions – a retirement plan enacted by Congress in 1869 where chronological age and years of active service determine eligibility – as the clear determinant of judicial turnover.⁹ Perhaps not surprisingly, many, indeed most, judges eventually qualify for the pension. What is more startling, however, is that a large and growing percentage abdicate their seat the very year in which they qualify, suggesting that judges are increasingly synchronizing their tenure of active service with their pension qualification. This phenomenon is most pronounced among district judges, slightly less so for circuit judges, and essentially not at all among Supreme Court justices. By comparison, the rates at which federal judges – at all levels – abdicate their judgeships are largely unaffected by either political or institutional environment, or by individual characteristics. Moreover, even after accounting for changes in judicial salaries (in constant dollars), pension qualification trumps all factors. These findings contradict much of the existing judicial scholarship's emphasis on politics and bring into greater focus the motivational influence of pensions on judicial turnover. It also suggests, for those advocates for judicial reform, more viable alternatives to existing proposals.

Parts I and II of this Article provide a backdrop for the empirical analysis of federal judicial turnover. Part I briefly describes the logistics of federal judicial service, including the historical development of the pension system. Part II reviews the existing scholarship on turnover among federal

⁶ See Public Hearings of the National Commission on the Public Service, *A Time of Crisis and Opportunity*, BROOKINGS INSTITUTION, July 15, 2002, available at <http://www.brook.edu/dybdocroot/comm/transcripts/20020715/htm> (statement by Chief Justice Rehnquist comparing the relatively few departures during the 1960s with the greater number in recent years) (hereafter *Time of Crisis*).

⁷ See Albert Yoon, *Love's Labor's Lost? Judicial Tenure Among Federal Court Judges: 1945-2000*, 91 CAL. L. REV. 1030, 1053-54 (2003) (describing the regression results reported in Tables 4A and 4B).

⁸ See *id.* at 1047.

⁹ See note / /, describing the decision to refer to the post-abdication compensation as a pension.

judges. Part III provides a description of the data provided by the Administrative Office of the U.S. Courts and the process by which I reformatted it for my analysis. Part IV provides a graphical analysis of the data, comparing the effects of politics, age, and pension qualification on the rate at which judges vacate the bench. Part V presents the results of a discrete duration model to test whether the explanatory power of pension qualification observed in Part IV endures after accounting for individual, institutional, and political factors. Part VI discusses the implications of these results, particularly with regards to existing proposals to reform the federal judiciary.

I.

TERMS OF EMPLOYMENT FOR ARTICLE III JUDGES

Pursuant to Article II, Section 2 of the U.S. Constitution, the president and the Senate jointly select Article III judges.¹⁰ Upon their appointment, federal judges are guaranteed a non-decreasing salary and enjoy essentially lifetime tenure,¹¹ and can be removed from the bench only through impeachment by the House of Representatives and conviction by the Senate.¹² While on the bench, however, judges are prohibited from practicing law, earning honorarium, and generating most other forms of outside income.¹³ Perhaps because of these restrictions, which result in judges often earning less than they would in the private sector, Congress has enacted measures to financially provide for federal judges upon their departure from the bench.

In 1869, Congress passed legislation that allowed Article III judges, upon reaching seventy years of age and completing ten years of judicial service, to continue drawing their existing salary after leaving the bench.¹⁴ Prior to that time, judges were guaranteed under the U.S. Constitution a non-diminishing annual salary,¹⁵ but only for as long as they remained on the bench. As one might imagine, the original regime compelled some older judges to remain on the bench solely to draw their salary, to the detriment of the federal bench. As one judge described the pre-1869 period, “some [judges] have continued to hold their offices for some time after the ravages of time had so far wasted the tissues of their minds and bodies that they were no longer capable of properly administering the duties of their office.”¹⁶ By creating a

¹⁰ The relevant provision states,

[The President] shall have power, by and with the advice and consent of the Senate . . . shall nominate, and by and with the advice and consent of the Senate, shall appoint . . . judges of the Supreme Court, and all other officers of the United States, whose appointments are not herein otherwise provided for, and which shall be established by law: but the Congress may by law vest the appointment of such inferior officers, as they think proper, in the President alone, in the courts of law, or in the heads of departments.

U.S. CONSTITUTION, Article II, § 1.

¹¹ Federal judges “shall hold their offices during good behaviour, and shall, at stated times, receive for their services, a compensation, which shall not be diminished during their continuance in office.” U.S. CONSTITUTION, Article III, § 1.

¹² See e.g., *Nixon v. United States*, 938 F.2d 239, 240 (D.C. Cir 1991), *aff’d* 506 U.S. 224 (1993) (describing how federal judge continued to draw his salary even after being criminally prosecuted for bribery and perjury and sentenced to prison).

¹³ See 5 U.S.C. §§ 501-502 (2003) (stating the provisions of the Ethics in Government Act of 1978 and subsequent amendments).

¹⁴ See Act of April 10, 1869, ch. 22, §5, 16 Stat. 44, 45, providing the basis for Section 260 of the Judicial Code (discussing judicial pensions).

¹⁵ United States Constitution, Article III, Sec. 1.

¹⁶ *Johnson v. United States*, 79 F. Supp. 208, 211 (1948) (J. Whitaker).

pension,¹⁷ in which the departing judges would receive their then-salary for the remainder of their lifetimes,¹⁸ Congress could deter this type of adverse selection.

Fifty years later, in 1919, Congress allowed older judges the option of a more gradual exit from the bench by creating the position of a *senior judge*.¹⁹ Judges who had qualified for a pension could choose between retirement or semi-retirement, the latter in which the judge would continue to hear and decide cases, albeit typically on a reduced basis.²⁰ In either scenario, the judge would abdicate his or her seat on the bench, allowing the President and the Senate to appoint a full-time successor. Upon ending active status, vested judges would be entitled to the pension, irrespective of individual wealth or pensions earned from other prior employment. Moreover, their pension would not be considered as salary pursuant to Social Security regulations, and therefore exempt from federal, and in many cases, state taxes.²¹ Once retired, former judges would be unencumbered by the constraints imposed on active and senior judges, allowed to pursue employment and investment opportunities in the public or private sector – without affecting their entitlement to the pension. For qualifying judges who retire, the pension is locked in at their annual salary – in nominal dollars, not indexed for inflation – at the time of retirement; qualifying judges electing to take senior status also receive the same level of pension as their retired counterparts, but are eligible for subsequent pay raises for active judges extended by Congress.²²

Following the enactment of judicial pensions, Congress has kept the system largely intact, with only minor modifications making it easier to qualify. In 1954, Congress expanded the eligibility requirements to also include judges reaching sixty-five years of age and fifteen years of judicial service;²³ this amendment worked to the particular benefit of judges who had joined the bench at a relatively young age and for that fact alone had to remain on the bench for a longer period to qualify for the pension. Most recently, in 1984, Congress again amended the qualification requirements to allow a sliding scale of age and service requirements for judges between the ages of sixty-five and seventy.²⁴ Known as the *Rule of 80*, judges who reach a minimum age of sixty-five and minimum service ten years are entitled to a pension, provided that their age and years of service total eighty. Table 1 outlines the creation of the federal pension system, and its subsequent modifications.

¹⁷ The relevant statute technically refers to the lifetime compensation as an *annuity*, see 28 U.S.C. § 371. For the sake of clarity, this paper refers to the annuity as a *pension*, which is consistent with the general concept of a pension (compensation paid to a employee after retirement). In addition, there appears at an earlier point some debate how to categorize this compensation in an effort, with the judge distinguishing it from a pension, bounty, and gratuity, all of which the judge found to hold a less legal entitlement. See *Johnson v. United States*, *supra* note \, at 210.

¹⁸ The pension did not survive the death of the retired judge. Since 1956, however, Congress has offered a survivor pensions program, which allowed judges to contribute a maximum of 4.5% of their salary, matched by a contribution from the U.S. Treasury. See 28 U.S.C. §376 (for a discussion of federal judicial benefits, see SENIOR STATUS AND RETIREMENT FOR ARTICLE III JUDGES (1999), published by the Administrative Office of the U.S. Courts).

¹⁹ See Act of February 25, 1919, ch. 29, §6, 40 Stat 1156, 1157.

²⁰ Judges are also allowed to take senior status prior to qualifying for their pension if permanently disabled. See 28 U.S.C. §372(a).

²¹ See 28 U.S.C. §§3301, 3121 (stating judicial compensation for senior and retired judges are exempt from certain federal taxation, such as Old Age, Survivors, and Disability Insurance and Medicare); Darryl Van Duch, *Senior Judge Ranks Close Vacancy Gap; Vital Factor*, Nat'l L. J., July 22, 1996, at A1 (stating that “many states with an income tax exempt such income”).

²² Once senior judges fully retire, their salaries are locked in at the amount of their last year on the bench as a senior judge.

²³ See 28 U.S.C. § 371, 1954 Amendments (Act of February 10, 1954, ch. 6, §4(a), 68 Stat 12).

²⁴ See 28 U.S.C. § 371, 1984 Amendments (July 10, 1984, Pub. L. 98-353).

Table 1.
Qualifying for Judicial Pension Under 28 U.S.C. § 371

	Minimum Requirements At Time of Creating Vacancy	
	Age (years)	Service (years)
Pre-1869	no pension plan	
1869-1953	70	10
1954-1983	65	15
	70	10
1984-present	<u>Rule of 80</u>	
	1) judge's age and years of service must total at least 80;	
	2) judge must be at least 65 years old at time of vacancy; and	
	3) judge must have served at least 10 years at time of vacancy.	
	70	10
	69	11
	68	12
	67	13
	66	14
	65	15

An important distinction of the judicial pension system is its all-or-nothing nature. There is no such thing as partial vesting: judges, if they vest, do so fully. For example, a judge who leaves the bench at age sixty-four does not qualify for the pension, irrespective of the number of years he or she had served. Pensions in the private sector, while often less generous than in the past, typically allow employees to begin vesting at an earlier age or after fewer years of service. And compared to their peers in the executive and legislative branches, the pension requirements for the judiciary are more difficult to attain. For example, the president receives a lifetime pension pegged at the current salary of a secretary of the cabinet,²⁵ and members of Congress are eligible for either a partial or full pension (for an amount less than their existing salary), determined by their age and years of service at the completion of their final term in office.²⁶

²⁵ The president also receives other benefits, such as free office space and staff, postage, and Secret Service protection. *See* MICHAEL NELSON, CONGRESSIONAL QUARTERLY'S GUIDE TO THE PRESIDENCY (1996) (describing, in part, the pension benefits for former presidents).

²⁶ A member of Congress qualifies for a full pension upon reaching one of the following: 62 years of age with 5 years of service; 50 years or older with 20 years of service; or 25 years of service at any age. A Congressperson who does not qualify under these criteria may still qualify for a reduced pension, or leave their contributions behind and receive a deferred pension later. *See* 5 U.S.C. §§ 8413, 8414 (2003).

II.

EXISTING SCHOLARSHIP ON EMPLOYMENT TRENDS IN THE FEDERAL JUDICIARY

Legal and judicial scholars interested in federal judicial service have primarily directed their attention to the confirmation process for the Supreme Court.²⁷ The seminal studies in political science concluded that the president and Senate will scrutinize most closely appointments with the potential to shift the ideological balance of the Court.²⁸ This theory, for example, predicts why certain nominations, such as Robert Bork's, were particularly contested, and ultimately unsuccessful. Other scholars have similarly concluded that district and circuit court confirmations are largely influenced by the perceived differences in political ideology between the Senate Judiciary and the president's chosen nominee.²⁹

The early scholarship examining judicial turnover – when judges gave up their seat on the bench, allowing the president and Senate to choose a successor – was descriptive in nature. These studies typically described the individual circumstances which led a particular judge or justice to leave the court.³⁰ Much of the interest by legal scholars in judicial turnover has been directed at state courts, looking at political pressure facing elected judges³¹ and mandatory retirement provisions in many states.³² One of the few studies on federal judicial turnover focused on judicial misconduct, the sole mechanism where federal judges can be removed against their will.³³ In recent years, however, political science scholars have examined federal judicial turnover from an empirical perspective. In 1988, Peveril Squire found that political factors have had little effect on the timing of justices' retirement from the Supreme

²⁷ Labor economists have written extensively on factors, including pensions, which motivate individuals to terminate employment across different professions. See e.g., Sewin Chan and Ann Huff Stevens, *Do Changes in Pension Incentives Affect Retirement?: A Longitudinal Study of Subjective Retirement Expectations*, __ J. PUB. ECON. __ (2003); Orley Ashenfelter and David Card, *Did the Elimination of Mandatory Retirement Affect Faculty Retirement?*, 92 AMER. ECON. REV. 957 (2002); Patricia M. Anderson, Alan L. Gustman and Thomas L. Steinmeier, *Trends in Male Labor Force Participation and Retirement: Some Evidence on the Role of Pensions and Social Security in the 1970s and 1980s*, 17 J. LABOR ECON. 757 (1999); William E. Even and David A. Macpherson, *Employer Size and Labor Turnover: The Role of Pensions*, 49 IND. & LABOR REL. REV. 707 (1996).

²⁸ See, e.g., Jeffrey A. Segal, Charles Cameron, and Albert Cover, *A Spatial Model of Roll Call Voting: Senators, Constituents, Presidents and Interest Groups in Supreme Court Confirmations*, 36 AMER. J. POL. SCI. 96 (1992); Jeffrey A. Segal, Charles Cameron, and Albert Cover, *Senate Voting on Supreme Court Nominees: A Neoinstitutional Model*, 84 AMER. POL. S. REV. 525 (1990); Gary King, *Presidential Appointments to the Supreme Court: Adding Systematic Explanation to Probabilistic Description*, 15 AMER. POL. Q. 373 (1987) (identifying that the ideology of both the nominee and sitting justices will effect the intensity of the confirmation process); Peter Lemieux and Charles Stewart III, *Senate Confirmation of Supreme Court Nominations from Washington to Reagan*, Hoover Institution Working Paper Series, Domestic Studies Program (1990) (identifying that appointments which carry to potential to shift the ideological balance of the court are much more contentious than those that do not).

²⁹ See Wendy L. Martinek, Mark Kemper, and Steven R. Van Winkle, *To Advise and Consent: The Senate and Lower Federal Court Nominations*, 64 J. POL. 337, 346 (2002); STEPHEN L. CARTER, *THE CONFIRMATION MESS: CLEANING UP THE FEDERAL APPOINTMENTS PROCESS* (1995).

³⁰ See e.g., David N. Atkinson, *Bowing to the Inevitable: Supreme Court Deaths and Resignation, 1789-1864*, 198 ARIZ. ST. L. J. 615 (1982); David J. Danelski, *A Supreme Court Justice Steps Down*, 54 YALE L. J. (1965); John R. Schmidhauser, *When and Why Justices Leave the Court in POLITICS OF AGE* (Wilma Donahue, & Clark Tibbitts eds., 1962); Charles Fairman, *The Retirement of Federal Justices*, 51 HARV. L. REV. 397 (1938). For a recent comprehensive descriptive account of staffing of the federal judiciary, see generally SHELDON GOLDMAN, *PICKING FEDERAL JUDGES* (1997).

³¹ See e.g., M.G. Hall, *Voluntary Retirements from State Supreme Courts: Assessing Democratic Pressures to Relinquish the Bench*, 63 J. OF POL. 1112 (2001).

³² See e.g., Christopher R. McFadden, *Judicial Independence, Age-Based BFOQs, and the Perils of Mandatory Retirement Policies for State-Appointed Judges*, 52 S. CAR. L. REV. 81 (2000).

³³ Emily Field Van Tassel, *Resignations and Removals: A History of Federal Judicial Service—And Disservice—1789-1992*, 142 U. PA. L. REV. 333 (1993) (noting the difficulty of removing a judge from the bench against his or wishes).

Court.³⁴ Moreover, justices typically remained on the Court long after they had qualified for their pension, and their decision to leave was, not surprisingly, more related to health-related concerns.³⁵

The first major study on district and circuit court turnover, by Deborah Barrow and Gary Zuk in 1990,³⁶ studied turnover rates between 1900 and 1987 by examining the actual year each judge retired or resigned. In their analysis, they identified five factors: presidential elections, salary increases, improvements in retirement benefits (pensions), caseload, and major Supreme Court decisions. For the first half of the century (1900 to 1953) – they concluded that Republican judges – judges nominated by a Republican president – were more inclined to leave the bench when a Republican presidential candidate was elected to office.³⁷ During the latter half of the century (1954 to 1987), Democratic and Republican judges alike were more inclined to leave the bench when a politically like-minded candidate was elected president³⁸; at the same time, Supreme Court decisions during this period – typically characterized as liberal – encouraged Democratic judges to remain on the bench and Republican judges to exit.³⁹ Taken together, these inter- and intra-institutional political factors had a small but statistically significant effect on judicial turnover. Conversely, the authors found that retirement benefits – the pension as well as survivor benefits – did not have a statistically significant effect on judicial departure.⁴⁰

In 1995, James Spriggs and Paul Wahlbeck examined turnover on the federal courts of appeals.⁴¹ Looking at the same factors as Barrow and Zuk but including additional variables,⁴² Spriggs and Wahlbeck reached similar results. Over the period of 1893-1991, circuit judges were more inclined to leave the bench when the sitting president was of the same political party.⁴³ But, contrary to Barrow and Zuk, they found that pensions had a statistically significant effect on when circuit judges left the bench.⁴⁴ More recently, in 2000, David Nixon and J. Haskin constructed a discrete duration model of circuit court retirements between 1892 and 1995, also concluding that presidential politics influenced judges' decision to retire from the bench.⁴⁵

These empirical studies advance our understanding of judicial turnover but are ultimately limited by their methodological approaches.⁴⁶ The Barrow and Zuk, and Spriggs and Wahlbeck studies chose an aggregated longitudinal analysis, which accounts for secular but not individual level changes. For example, the length of service, the relative political affiliation between the judge and the sitting president, and the period remaining before a judge qualifies for a pension may vary from one period to the next.

³⁴ See Squire, *Politics and Personal Factors in Retirement from the United States Supreme Court*, 10 POL. BEHAVIOR. 180 (1988).

³⁵ Since the Squire article, other scholars have conducted similar studies of the Supreme Court, also concluding that justices are not heavily influenced by political factors. See Christopher J.W. Zorn and Steven R. Van Winkle, *A Competing Risks Model of Supreme Court Vacancies, 1789-1992*, 22 POL. BEHAVIOR. 145 (2000); Timothy M. Hagle, *Strategic Retirements: A Political Model of Turnover on the United States Supreme Court*, 15 POL. BEHAVIOR. 25 (1993).

³⁶ Deborah J. Barrow & Gary Zuk, *An Institutional Analysis of Turnover in the Lower Federal Courts, 1900-1987*, 52 J. POL. 457 (1990).

³⁷ See *id.* at 466-67 (Tables 2 and 3).

³⁸ See *id.* at 466-50.

³⁹ See *id.*

⁴⁰ See *id.* at 466-67 (Tables 2 and 3).

⁴¹ See James F. Spriggs III and Paul J. Wahlbeck, *Calling It Quits: Retirement on the Federal Courts of Appeals, 1893-1991*, 48 POL. RESEARCH Q. 573-97 (1995).

⁴² In choosing a different methodology, Spriggs and Wahlbeck asserted that their approach improved upon the methodological limitations of the Barrow and Zuk study, and allowed them to account for annual changes in the political environment. See *id.* at 578-79.

⁴³ See *id.* at 589 (Table 2).

⁴⁴ See *id.*

⁴⁵ See David C. Nixon and J. David Haskin, *Judicial Retirement Strategies - The Judge's Role in Influencing Party Control of the Appellate Courts*, 28 Amer. Pol. Q. 458 (2000).

⁴⁶ For a discussion of other limitations of the Zuk and Barrow study, see Spriggs and Wahlbeck, *supra* note \, at 577-78.

Although most judges remain on the bench for a considerable time, each period (e.g., year) represents a decision by that judge to stay or remain. It is important to include all the periods that judges confront this decision, in order to observe secular and individual-level changes. Looking only at the period of vacancy creates a selection bias and may lead to inaccurate estimates of the effect of some or all of the identified factors.⁴⁷ But no such study exists for the district court, a meaningful omission, given that nearly seventy-five percent of all federal judges serve at this level.

These studies also ignore important institutional changes that occur within courts, such as the number of vacant judgeships and the political composition of each court from year to year. If judges are concerned about the political ideology of their successor, it is also plausible that they would also be concerned about the administrative and political composition of their respective court as a whole. For example, they may be less inclined to end active status if they believe it would exacerbate the working conditions of the judges who remain, or if they believe that their departure would upset the political balance of the court (something that likely would be more significant at the appellate level, where judges sit in panels or *en banc*). Omitting these factors may similarly bias the analysis by erroneously over or understating the true effect of political or individual factors.

Most significantly, all of these studies measure pension as a single dichotomous variable, identifying only whether the departing judge had qualified for the pension. This is likely an inadequate measure of the effect of the pension. The existing studies reveal that the majority of judges eventually qualify for the pension; in fact, for the period 1869-2002, nearly seventy percent of judges leaving the bench had qualified for the pension, with the percentage steadily increasing over time.⁴⁸ In an aggregated longitudinal analysis, measuring pensions as a single dichotomous variable reveals little information, given the low variation on this measure. An individual-level longitudinal design would accurately measure the temporal variation regarding qualification, but fail to distinguish among any of the years after qualification, and again potentially lead to biased estimates of the effect of other factors. As a result, these studies provide limited insight into the true effect, if any, that pensions have on judicial turnover.

III.

DATA ON JUDICIAL TURNOVER

A. Design of the Data

The Federal Judicial Center, a division of the Administrative Office of the U.S. Courts, collects information on every Article III judge, dating back to 1789, when the federal judiciary was created, to the present. The dataset provides biographical information, such as each judge's date and location of birth and death (if applicable), gender, ethnicity, formal education, and employment prior to joining the federal judiciary. It also includes the date of the judge's nomination to the bench and the nominating president, the date and court to which he or she was nominated and confirmed, and, if applicable, the date ending active status (either by resigning, retiring, or taking senior status). As shown in Table 1, individuals have been confirmed to 3,206 Article III judgeships from 1789 through 2002.

Working from this original dataset, I expanded the dataset where the unit of analysis shifts from an individual judge to an individual judgeship-year. In other words, each year that each judge serves on

⁴⁷ For a critique of these studies, see Nixon and Haskin, *supra* note \ \ at 464. This limitation was circumvented by Squire in his study of the Supreme Court and Nixon and Haskin in their study of circuit courts.

⁴⁸ See Table 2, *infra*.

active status constitutes a single observation.⁴⁹ For example, a judge who served ten years counts as ten observations. The original 3,206 judges transforms to 44,517 observations for the same period of time, indicating that judges served nearly fourteen years on active status. The justification for expanding the dataset was to more accurately account for secular and individual-level changes from year to year, with an eye towards examining which factors, if any, explain when judges gave up their seats on the bench.

In the expanded dataset, I included most of the factors identified by the previous studies (e.g., political affiliation of sitting president and the judge), and constructed additional institutional and political variables, some of which varied from one year to the next. Two variables capture the percentage of authorized judgeships filled in the individual judge's jurisdiction,⁵⁰ and the percentage of those judgeships occupied by judges nominated by a Democratic president. Another variable identifies years in which the political affiliation of the judge matches that of the sitting president.⁵¹ I also include another variable that tallies the number of years the judge has served on active status thus far, and a variable that records the years a judge has relative to their year qualifying for a pension.⁵² Any of these factors might influence a judge to give up his seat.

For each judgeship-year, the key variable of interest is whether the judge stepped down from active status. This abdication occurs either when the judge takes senior status (after 1919), fully retires, or otherwise resigns. A judge remaining on active status throughout the entire calendar year counts as having remained active and generates an observation for the subsequent calendar year. Conversely, a judge who gives up his seat in that calendar year exits the dataset and does not appear in subsequent observations. When judges are elevated to a higher court, the dataset reflects the change in court affiliation but did not record them as having vacated their seat.⁵³ The rationale for coding elevated judges in this manner is to accurately reflect that the elevated judges' decision to remain on the federal bench, and also that their years of service toward pension qualification remain uninterrupted.⁵⁴

B. Overview of Data

Table 2 provides a brief description of the aggregate data. As described in the previous section, the entire dataset covers the period 1789-2002, but the main period of interest is from 1869-2002. The reasons for choosing this time period is threefold. One, relatively few judges served prior to 1869 (due to the paucity of states and small population), but grew dramatically thereafter.⁵⁵ Second, the political environment stabilized into a two-party system after 1869,⁵⁶ making it more feasible to measure political

⁴⁹ The full dataset includes an observation for each year that the judge served in either active or senior status (which began in 1919), as well as his or her final year before retiring.

⁵⁰ *Jurisdiction* refers to the particular court on which the judge serves (e.g., 8th Circuit Court of Appeals, Southern District of New York).

⁵¹ For example, whether a judge nominated by a Democratic judge is on the bench at the same time a Democratic president is in office, and vice versa.

⁵² For example, under the *Rule of 80*, a judge who began his tenure at age fifty-eight would have, at age sixty-five, three years remaining for the pension. At age sixty-eight, the judge would have served thirteen years: the age and years of service would now exceed eighty.

⁵³ Roughly ten percent of judges were elevated to a higher court.

⁵⁴ A handful of judges, most notably William Howard Taft, resign from the judgeship, only to return after a hiatus. The dataset codes these judges as having vacated their seats, but their return to the bench resumes the age and years-of-service tally toward their pension qualification. When they eventually re-retire, these judges in effect will have done so for a second time. These judges are distinguishable from their peers who elevated to a higher court without interruption in service, since the likelihood of a judge quitting the bench and subsequently returning is relatively low.

⁵⁵ Authorized judgeships grew only from 19 to 58 between 1789 and 1868. Between 1869 and 2002, judgeships grew from 67 to 852. See RICHARD A. POSNER, *FEDERAL COURTS* 397 (1996) (Table A.3). The current number of judgeships is provided by the Federal Judicial Center website (www.fjc.gov).

⁵⁶ Prior to the convergence of the Democrat and Republican two-party system, other parties included Federalists, Democrat-Republicans, and Whigs.

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influences. Most importantly, the pension system, one of the key variables of interest, began in 1869. For the period 1869-2002, I subdivide the data into three periods: 1869-1953, 1954-1983, and 1984-2002, to correspond to changes in the qualification requirements for the pension.

Table 2.

Table I: Characteristics of Article III Judges by Pension Regimes

	1789-1868 (1)	1869-1953 (3)	1954-1983 (4)	1984-2002 (5)
<i>Number of Judges</i>				
Total	186	710	770	1540
District Court	131	509	586	1200
Circuit Court	24	153	170	325
Supreme Court	31	48	14	15
<i>Judge Characteristics (percent of total Article III judgeship-years^a)</i>				
Total	100.0	100.0	100.0	100.0
District Court	72.6	72.3	77.2	77.0
Circuit Court	7.4	21.6	20.7	21.8
Supreme Court	19.7	6.1	2.0	1.2
<i>Age Distribution</i>				
40 and under	9.4	1.8	1.1	1.3
40-45	11.4	5.6	4.6	5.9
46-50	15.0	10.5	11.1	13.5
51-55	16.3	16.3	18.0	18.9
56-60	15.6	20.6	22.5	21.5
61-65	12.8	19.7	20.3	22.4
66-70	8.8	14.6	14.2	11.8
71-75	5.5	7.4	5.4	2.8
76-80	3.2	2.8	1.8	1.1
81 and over	2.1	0.7	1.0	0.8
<i>Other Characteristics</i>				
Percent female	0.0	0.2	2.3	14.5
Percent non-white	0.0	0.0	4.9	13.5
Percent Appointed by Democrat President	30.8	38.1	56.9	39.9
Percent Creating Vacancy Who Qualified for Pension at Time of Vacancy ^b	NA	46.6	73.4	86.0
Average Salary (\$2002 dollars)				
District Judge	NA	\$106,675 ^c	\$150,625	\$145,993
Circuit Judge	NA	\$128,806 ^c	\$164,819	\$154,770
Supreme Court Justice	NA	\$211,015 ^c	\$218,553	\$181,932

a: Judgeship-years is equal to the aggregate number of years that each judge served on active status.

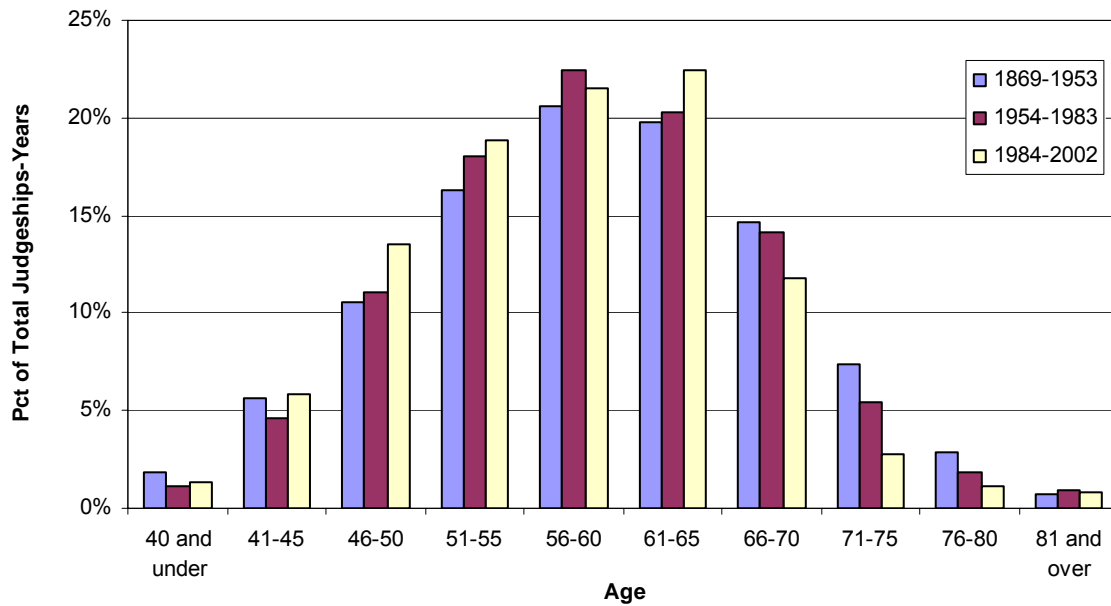
b: The figures in this row are drawn from a subset of the total number of judges, because 1) judges who departed pre-1869 were not eligible for a pension and 2) 772 judges were still active at the end of 2002.

c. salaries for the period 1869-1953 are actually for the period 1913-1953. The Consumer Price Index (CPI), which allows for comparison of salaries across years, began in 1913.

A couple of key points emerge from Table 2. As one might expect, Congress has consistently allocated a large majority of judgeships to the district court. Conversely, the presence of women and minority judges are a relatively recent phenomenon, although their numbers have dramatically increased in recent years. The percentage of Democratic and Republican-appointed judges corresponds – with a slight lag, given the tenure of the average judge typically exceeds that of most presidents – with the cyclical dominance of the political parties in the presidency. Judicial salaries (expressed in 2002 dollars) have fluctuated across pension regimes, from a high between 1954 and 1983, to its low in the period between 1984 and 2002. Because these salaries remain fixed in nominal dollars, they are typically declining in real dollars⁵⁷ until Congress decides to enact a raise, something it has done only intermittently. Although this fluctuation in salaries affects all level of judges, the Supreme Court justices have experienced the largest fluctuation, both as an absolute amount and as a percentage change. Notwithstanding the recent decline in salaries, a large and growing percentage of judges at all levels serve long enough to eventually qualify for their pension.

Second, while the age distribution of judges has changed over time, it has done so in a unanticipated direction. Figure 1 provides a graphical representation of the age distributions set forth in Table 2.

Figure 1.
Age Distribution of Article III Judges
(1869-2002)



In the latter pension regimes – 1953 to 1983 and 1984 to 2002 – the percentage of younger judges (e.g., those below the age of 55) has grown, while at the same time, the percentage of older judges on active status has declined. Given that the average human life expectancy has been steadily increasing since

⁵⁷ Constant salaries decline in real dollars during any inflationary period, which describes most years.

1900,⁵⁸ one might expect, all things equal, that the distribution curve would be more uniform, as a higher percentage of judges remain on the bench to a more advanced age. As this subsequent section will attempt to show, understanding the distributional changes in age across pension regimes will help explain trends in judicial service.

IV.

TRENDS IN JUDICIAL TURNOVER RATES

As stated in the introduction, the design of this dataset allows for a variety of measures of judicial vacancies. The primary variable of interest, for each year, is a judge's decision whether to create a vacancy on the bench, allowing for the president and Senate to appoint a successor. For the sake of simplicity, I refer to this as a *vacancy* decision, which occurs whenever a judge ends active status by taking senior status, retiring, or resigning. The percentage of judges who decide to vacate in any given year represents the *turnover* rate. I consider a series of causal factors expounded in judicial scholarship for why judges create the vacancy – political environment, age, and pension qualification – and observe what, if any trends emerge.⁵⁹ Of course, many other phenomena – *e.g.*, gender, ethnicity, differences across courts – may explain judicial vacancies, and for this reason, are addressed in the subsequent section.

A. Political Environment

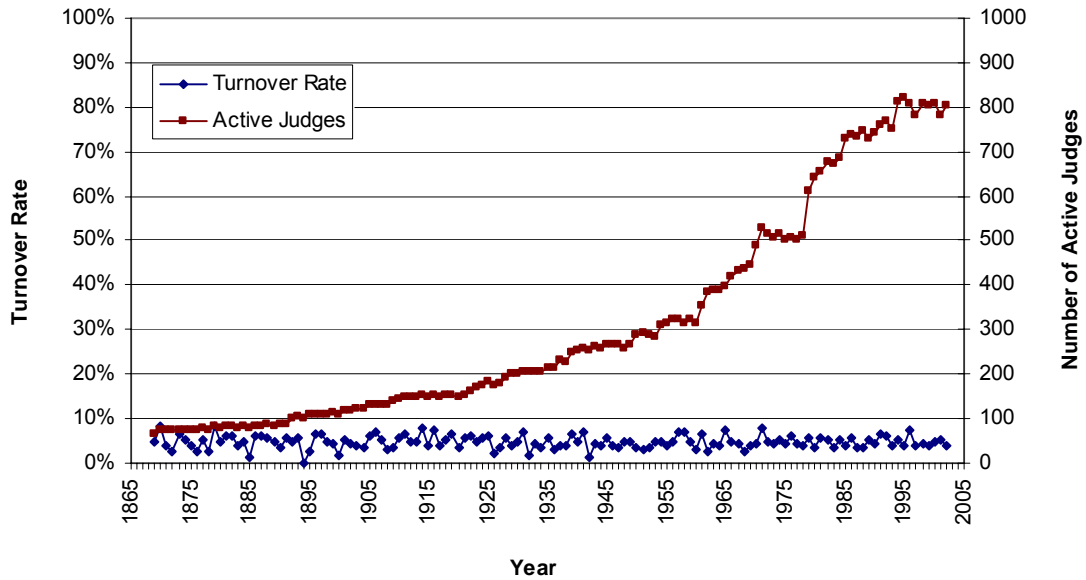
As discussed in Section I, judicial scholars contend that the political environment influences when judges vacate their seat. Judges are more inclined to leave the bench when they believe the sitting president will appoint a like-minded successor. Democrat-appointed judges, the argument follows, are more likely to leave when a Democrat president is in office, and the same theory applies for Republican-appointed judges with a Republican president.⁶⁰ Aggregate statistics do not reveal any clear political trend. Figure 2 shows that the annual turnover rate for all judges consistently falls below ten percent, ranging between one and eight percent. Presidential election years do not appear to systematically affect judicial turnover rates.

⁵⁸ See NAT'L CTR. FOR HEALTH STATISTICS, U.S. DEP'T HEALTH AND HUMAN SERV., tbl 28 (Life Expectancy at Birth, at 65 Years of Age, and at 75 Years of Age, According to Race and Sex: United States, selected years, 1900-2000), available at <http://www.cdc.gov/nchs/data/hus/tables/2002/02hus028.pdf>.

⁵⁹ Unless otherwise stated, the results in this section are drawn from the federal judicial dataset.

⁶⁰ While attributing to the judge the political ideology of the nominating president falls short of a perfect measure, it does serve as a strong proxy for the judge's "true" political affiliation, if any. Since 1977, Sheldon Goldman has gathered data on federal judges which includes, in part, the self-reported by judges of the political party to which he or she identified. In the vast majority of cases, the self-reported identification matched the political party of the nominating president. See Goldman data, on file with author.

Figure 2.
 Turnover Rate, by Year (1869-2002)



The summary statistics of judicial vacancies between 1869 and 2002, shown in Table 3, similarly do not reveal a clear political trend.

Table 3.
 Political Landscape When Judge Creates Vacancy (1869-2002)

Political Affiliation of President Currently in Office	Political Affiliation of Judge	
	D	R
D	45% (412)	55% (499)
R	43% (461)	57% (612)

Pearson $\chi^2 = 1.0225$; $P=0.312$

Note: The political affiliation of each judge corresponds to the political affiliation of the president who nominated that judge to his current judgeship. Number in parentheses refers to the number of judges.

While Republican-appointed judges were slightly more inclined to give up their seat during a Republican presidential administration, the same is also true of Democrat-appointed judges. A political breakdown of turnover rates, shown in Figure 3, reveals similar inconclusive results.⁶¹ Although there is considerable variation from one year to the next, the turnover rates for judges are not systematically higher when a president of the same political affiliation presides in office.

⁶¹ Using judgeship-year as the unit of analysis in the dataset raises the concern is that this coding may be imprecise. For example, judges who vacate their seat after a presidential election are categorized as having left during an election year, even though their decision came after the election (e.g., in November or December). I decided to leave the coding unchanged, however, given that there is no reason to believe, ex ante, that judges, regardless of political affiliation, are more inclined to leave in the final two months of an election year than they are to wait until the new year. The statistics in Figure 2 support this claim.

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Figure 3.
 Turnover Rates for Article III Judges Based on Political Environment:
 A) Republican-Appointed Judges; B) Democrat-Appointed Judges

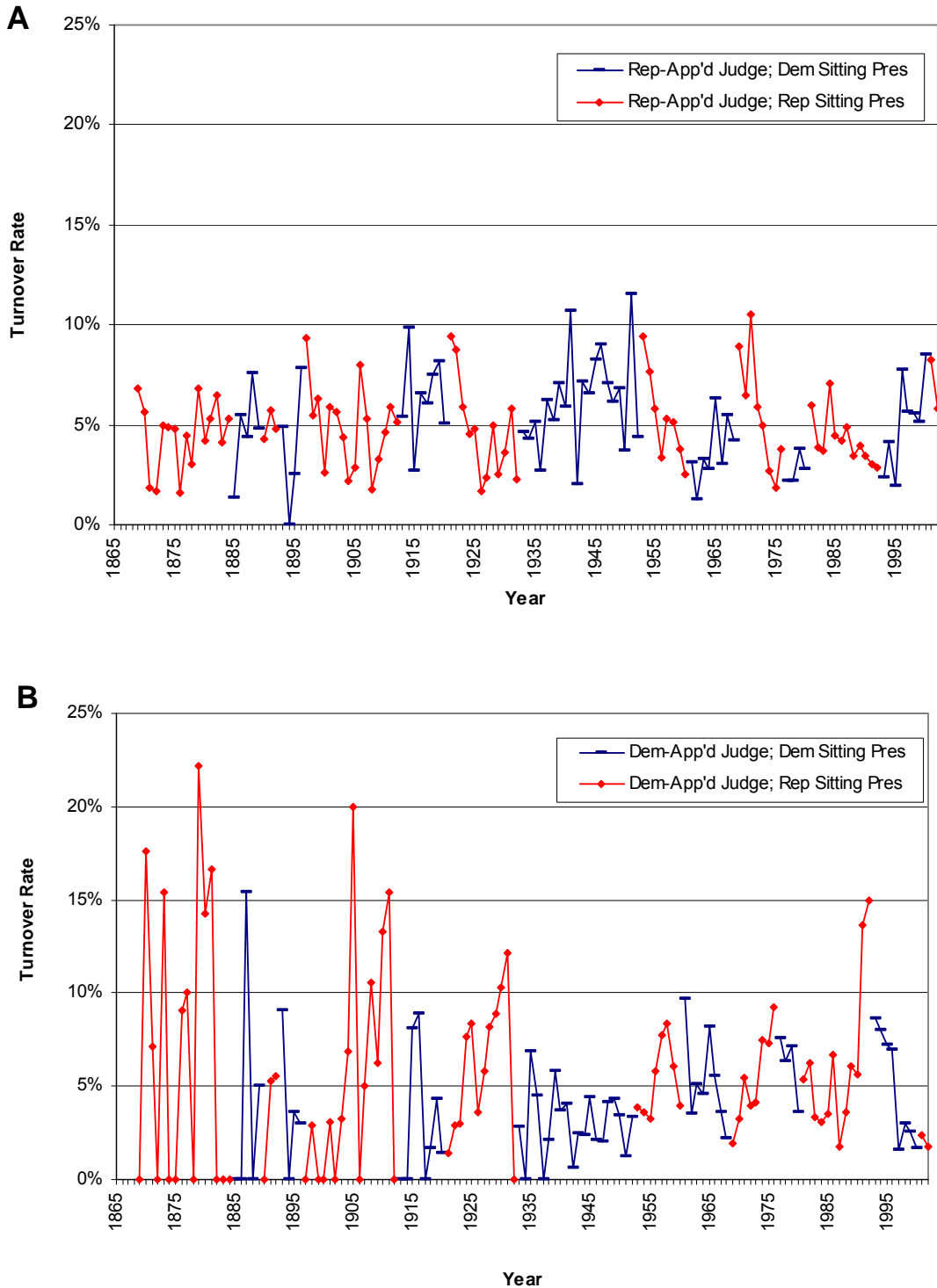


Table 2 and Figure 3, taken together, suggest that while judges may hold preferences regarding the political environment in which they vacate their seat, they do not appear to optimize solely over them. Much of this can be explained judges' lack of control over the political environment. Judges, while they may desire a favorable political environment to emerge, cannot compel it. The historical pattern of presidential politics is one of cycles: one party controls the presidency for a minimum of four years, often longer, and eventually cedes power to the other party, often for an extended period. Moreover, even when the political climate is favorable, the judge, when considering other factors – e.g., job satisfaction, institutional norms, a sense of civic duty – may choose to remain on the bench. A Democrat-appointed judge, for example, who prefers to relinquish her seat during a Democrat presidential administration, may nonetheless decline the opportunity to do so if it is early in her tenure. As a result, she may later be reconciled to abdicate her seat during a Republican presidential administration.⁶²

B. Age

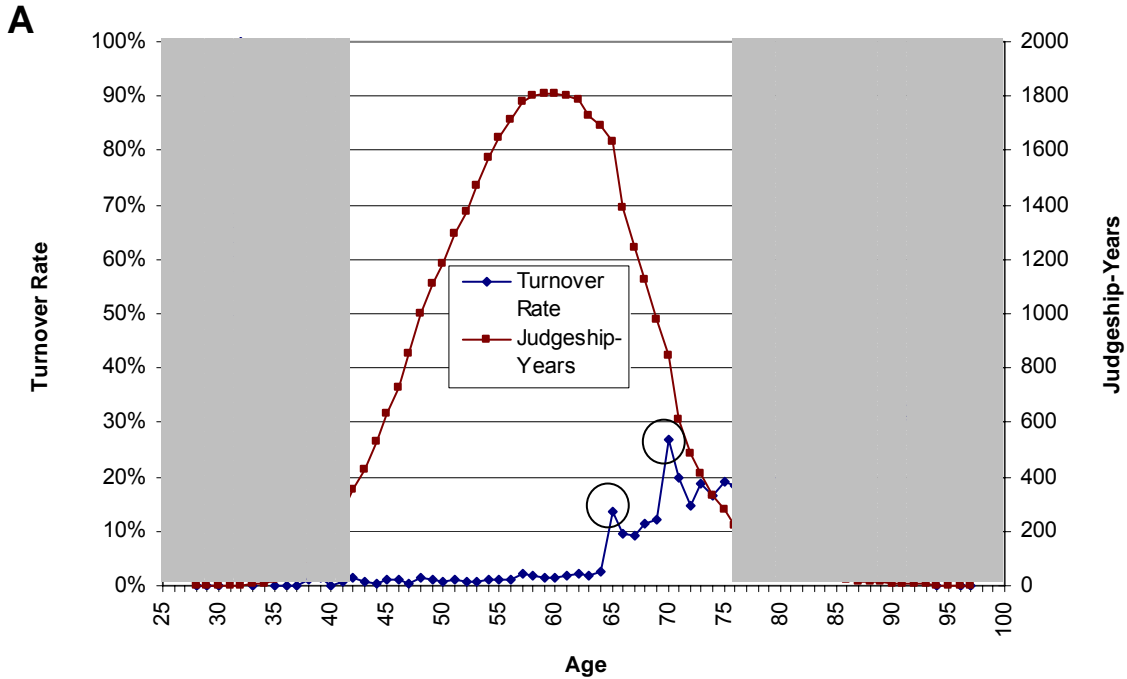
How much does age influence judicial turnover rates? A first glimpse at the answer is provided by looking at turnover rates at each age for the years 1869-2002. Figure 4A shows two data points for each chronological age: 1) the turnover rate; and 2) the total number of active judges who served on the bench. The purpose of including the number of active judges is to provide appropriate context for the turnover rate for any given age. For example, the “spike” in turnover rate at age thirty-one and thirty-two should be viewed in context, reflecting only three observations out of over 40,000.⁶³ Because the distribution of judges by age approximates a bell curve, one must view the turnover rates at the tails of the distribution with some caution, given the relatively small number of observations. Accordingly, the two shaded region represents age values that are at least 1.96 standard deviations (SD) from the mean, signifying that approximately 95 percent of all age values fall in the area between the shaded regions.

Overall, Figure 4A reveals that turnover rates, notwithstanding the aforementioned spikes, are uniformly low through the age of sixty-four. During these years, the turnover rate ranges between zero and three percent. At age sixty-five, the turnover rate jumps to *fourteen* percent. Unlike the spike at age thirty-four, one can ascribe greater significance to this increase, given that it is drawn from a pool of 1,600 judge-observations. The turnover rates for ages sixty-six through sixty-nine range from nine to twelve percent. At age seventy, the turnover rate again jumps up, to twenty-seven percent. Not surprisingly, the number of judge-observations is dropping dramatically during this period, as a significant percentage of judges leave active status each year. For ages greater than seventy, the turnover rates remain relatively high; but as with observations at the lower ages, these rates must be accorded less weight since the number of judges serving during those years converges toward zero.

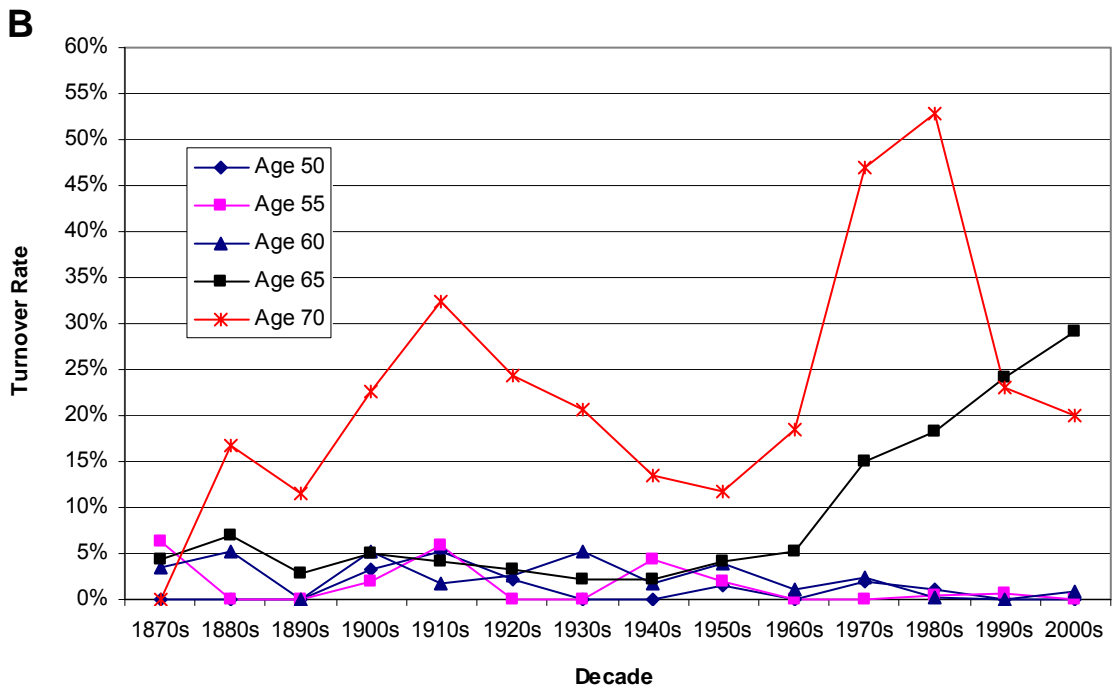
⁶² Looking at the data in Table 3 broken down by pension regime supports this claim. In the period 1953 to 1983, when the Democrats controlled the White House for much of the time, most Democrat-appointed judges were able to time their departure while a Democrat president was in office; this was also true of most Republican-appointed judges, who were unable to depart during a Republican presidential administration.

⁶³ In 1869, Judge William Story (Ark.-S.D.) left the bench at age thirty-one, after only four years on the bench. Thomas Boyton (FL-S.D.), remained on the bench through 1873 at the age of thirty-one, but left a year later in 1874. Similarly, Alexander Baldwin (Nev.) was the only one among eight judges to vacate his seat at the age of thirty-four.

Figure 4.
 Age-Specific Turnover Rates for Article III Judges:
 A) All Ages, All Years; B) Selected Ages, By Pension Regimes



Note: Gray regions signify age values greater than or equal to 1.96 standard deviations (SD) from the mean. Accordingly, given the distribution of ages, 94% of the age values fall within the clear regions.



While Figure 4A show a clear increase in turnover rates beginning at age sixty-five, it also raises the question whether this trend is constant over time or rather masks variation in age-related turnover rates over time. Figure 4B provides an answer, plotting average turnover rates at five different chronological ages, for each decade between 1870 and 2000. Although there is some variation, the turnover rates for judges for ages fifty, fifty-five, and sixty remain relatively constant, ranging between zero and six percent. Conversely, the turnover rate for age sixty-five and seventy reveal greater variation. The turnover rate for age sixty-five mirror those of the other age groups through the 1950s, then began to climb steadily in the subsequent decades. The turnover rate for age seventy fluctuates more, actually decreasing in the decades between 1910 and 1950 before reversing itself in the 1960s. An interesting phenomenon occurs in the 1990s and into the 2000s: the turnover rate increases for judges aged sixty-five, but decreases for those aged seventy.

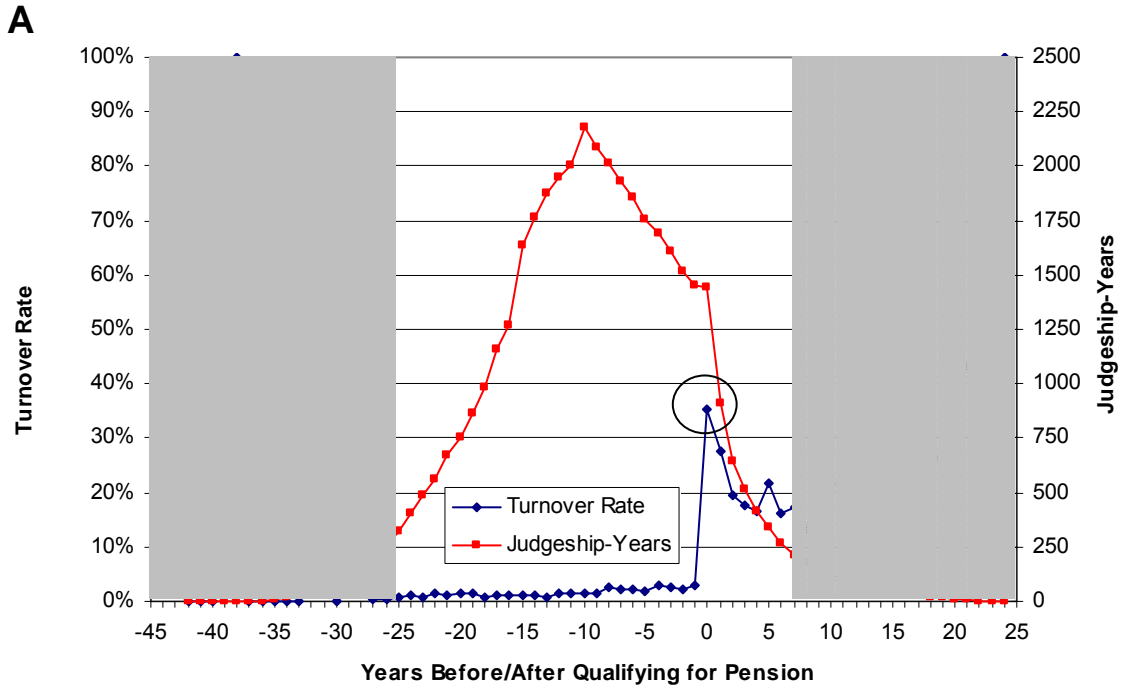
The results in Figure 4A and 4B make more sense in light of the pension qualification requirements set forth in 28 U.S.C. § 371. The statute attaches significance to the ages sixty-five through seventy. During the period 1869-1953, seventy was the target number for pension; for the period 1953-1984, both sixty-five and seventy were the qualifying years; since 1984, each age between sixty-five and seventy may qualify the judge for a pension. Figure 4A bears this out: sixty-five and seventy are watershed ages, while the intervening ages also yield turnover rates considerably higher than any of the ages preceding age sixty-five. The decade-by-decade variability of Figure 4B preclude any deeper interpretation, but the trend line for age sixty-five strongly suggests that judges took advantage of the change in pension requirements in 1954 allowing judges to qualify as early as age sixty-five. Similarly, the decline in turnover rates at age seventy following the 1980s may be attributable to the creation of the *Rule of 80*, the sliding scale of age/service requirements allowing more judges to qualify for their pension before age seventy.

C. Pension Qualification

The analysis of age suggests that discontinuities in turnover rates across judges' ages may be masking the effect of other factors. Another approach to this question is to look at turnover rates with respect to another factor, such as pension qualification. Figures 5A presents the results of such a comparison. The x-axis shows the number of years relative to qualifying for the pension: negative integers report the number of years remaining until the pension; the value zero means qualification for the pension in that given year; positive integers report the number of years after qualifying for the pension. As in Figure 4A, Figure 5A shows, for each year, both the turnover rate and the total number of active judges who served on the bench, with the shaded regions representing pension-year qualification values that fall at least 1.96 standard deviations (SD) from the mean. While age and years relative to the pension bear a similar relationships to turnover rates, they are distinguishable, since 28 U.S.C. § 371 states that the judge's age is only one of two determinants – years of service being the other – for pension qualification.

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Figure 5.
 Turnover Rates Based on Years Before/After Qualifying for Pension (1869-2002)
 A) All Judges; B) Each Level of Court, Ten Years Before and After Qualifying for Pension



Note: Gray regions signify year-before/after-pension values greater than or equal to 1.96 standard deviations (SD) from the mean. Accordingly, given the distribution of judgeship-years, 94% of the year-before/after-pension values fall within the clear regions.

B

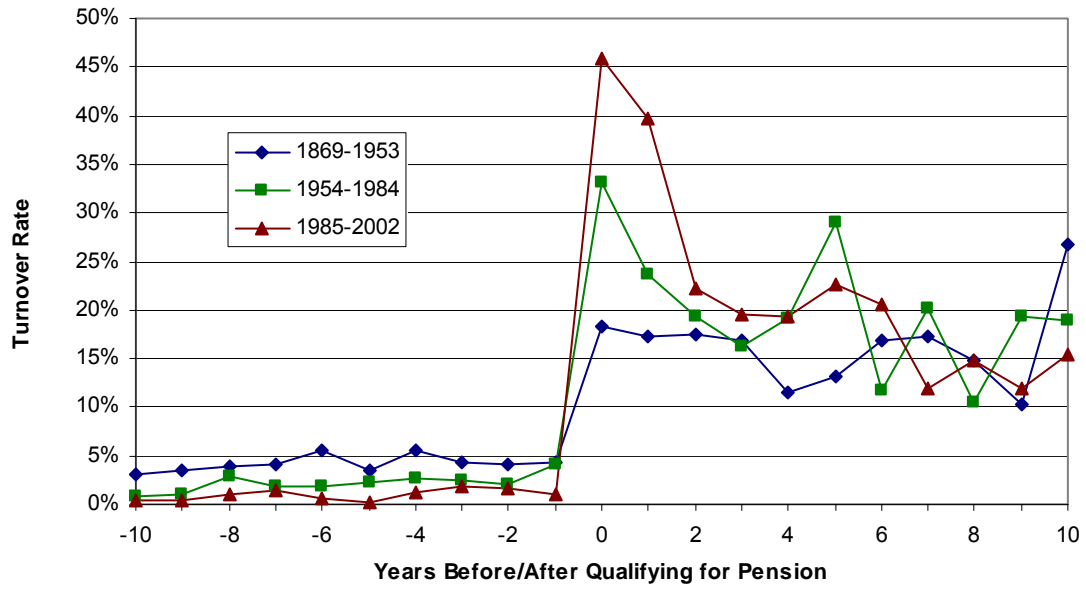


Table 4.

Turnover Rates Based on Years Before/After Pension Qualification, by Pension Regime (1869-2002)

Years Before/After Pension Qualification	(1)		(2)		(3)	
	1869-1953		1954-1983		1984-2002	
	N	Rate	N	Rate	N	Rate
≤ -11	6596	1.9 (0.2)	5579	0.9 (0.1)	5605	0.5 (0.1)
-10	628	3.0 (0.7)	777	0.9 (0.3)	781	0.5 (0.3)
-9	602	3.5 (0.7)	750	0.9 (0.4)	751	0.4 (0.2)
-8	569	3.9 (0.8)	703	3.0 (0.6)	751	0.9 (0.4)
-7	535	4.1 (0.9)	667	1.9 (0.5)	744	1.5 (0.4)
-6	503	5.6 (1.0)	647	1.9 (0.5)	722	0.7 (0.3)
-5	459	3.5 (0.9)	619	2.1 (0.6)	699	0.1 (0.1)
-4	427	5.6 (1.1)	583	2.6 (0.7)	694	1.2 (0.4)
-3	394	4.3 (1.0)	559	2.5 (0.7)	670	1.8 (0.5)
-2	369	4.1 (1.0)	511	2.2 (0.6)	647	1.7 (0.5)
-1	348	4.3 (1.1)	478	4.0 (0.9)	632	1.1 (0.4)
0	332	18.4 (2.1)	488	32.6 (2.1)	632	45.9 (2.0)
1	261	17.2 (2.3)	318	23.6 (2.4)	335	39.7 (2.7)
2	212	17.5 (2.6)	243	19.3 (2.5)	194	22.2 (3.0)
3	171	17.0 (2.9)	194	16.5 (2.7)	154	19.5 (3.2)
4	139	11.5 (2.7)	158	19.0 (3.1)	119	19.3 (3.6)
5	122	13.1 (3.1)	129	27.9 (4.0)	93	22.6 (4.4)
6	101	16.8 (3.7)	97	12.4 (3.4)	73	20.5 (4.8)
7	81	17.3 (4.2)	90	18.9 (4.1)	50	12.0 (4.6)
8	61	14.8 (4.6)	70	10.0 (3.6)	47	14.9 (5.2)
9	49	10.2 (4.4)	66	19.7 (4.9)	42	11.9 (5.1)
10	41	26.8 (7.0)	60	18.3 (5.0)	39	15.4 (5.9)
≥ 11	81	23.5	205	26.8 (3.1)	145	15.2 (3.0)

Note: Turnover rates are expressed as percent per year. Estimated standard errors are in parentheses. A judge is considered to have vacated his seat if he takes senior status, resigns, or retires at any point in a given year. Judges who vacate their seat as a result of immediate elevation to a higher federal court are not counted in this tally.

The patterns in Figure 5A are similar to that of Figure 4A. The spikes at the left-hand side of the graph re-appear, although one would surmise that the pension was probably the furthest thing from minds of these vacating judges, since they had nearly forty years remaining before qualifying. Notwithstanding the outlier data points, the turnover rate for judges with years remaining until their pension remains uniformly low, never exceeding three percent. But at year zero, the turnover rate jumps to thirty-five percent. In the years following their qualifying year, the turnover rates fluctuate, but nonetheless exceed the turnover rate of all years preceding qualification. As before, the turnover rate for the years at the tails must be discounted, given that the number of judges on the bench at these years converges to zero. Unlike Table 4A, which had two local maxima (at ages sixty-five and seventy), Table 5A presents only one peak, at year zero. In effect, the turnover rate at year zero absorbs most vacancies for judges aged sixty-five and seventy, as well as a large percentage of vacancies for the ages in between.

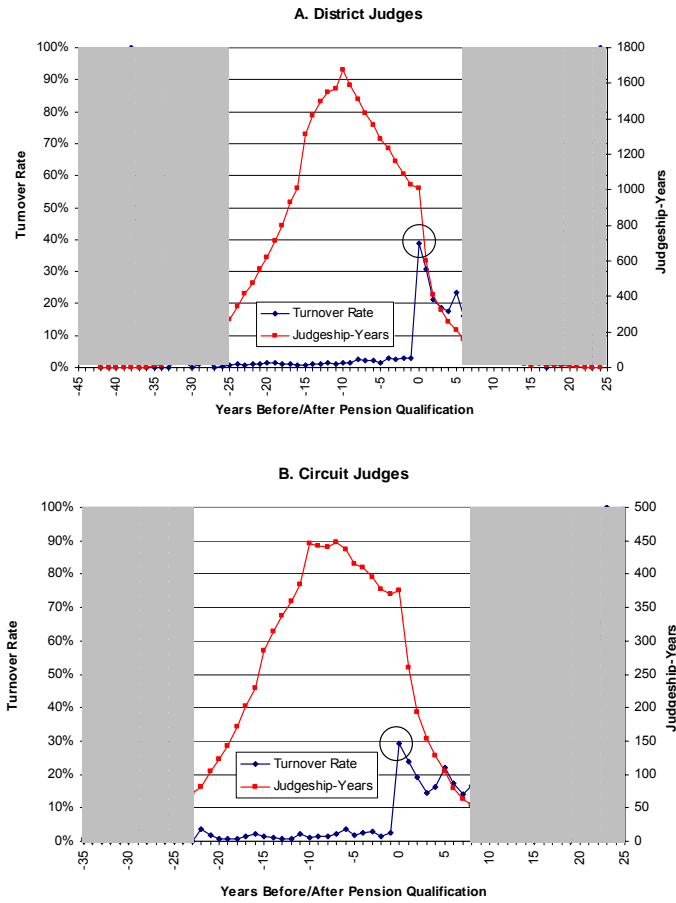
Table 4 and Figure 5B describe turnover rates over time, with Table 4 listing the number of judges and their turnover rates for the years before and after pension qualification, by pension regimes: 1869 to 1953, 1954 to 1983, and 1984 to 2002. Figure 5B provides a graphical representation of a subset of these years (ten years before and after pension qualification). The trends appear consistent across regimes: turnover rates are very lower prior to pension qualification and then jump at time zero. But differences emerge upon a closer look. For each successive regime, the turnover rates are slightly *lower* for the years leading up to qualification, but considerably *higher* at time zero. For example, for the period 1869 to 1953, the turnover rate in the years preceding qualification ranged from four to six percent, jumping to eighteen percent and time zero. In the middle period, 1954 to 1983, the pre-qualifying period turnover rate ranged from one to four percent, and then jumped to thirty-three percent at time zero. For the most recent period, 1984 to 2002, the turnover rate prior to qualification fell between zero and two percent, then at time zero jumped to forty-six percent. The pattern across the three regimes suggests that judges are increasingly timing their end of active status with the exact year of qualifying for the pension.

Does the spike in turnover rate at the year of pension qualification hold equally across district, circuit, and Supreme Court judges/justice? One might expect that for a plethora of reasons – prestige, influence on legal doctrine, salary – the correspondence between pension qualification and turnover rate would be less pronounced for judges who are situated higher on the judicial hierarchy. The evidence, exhibited in Figure 6 – which graphs the turnover rates of judges at the district, circuit, and supreme courts – supports this hypothesis.

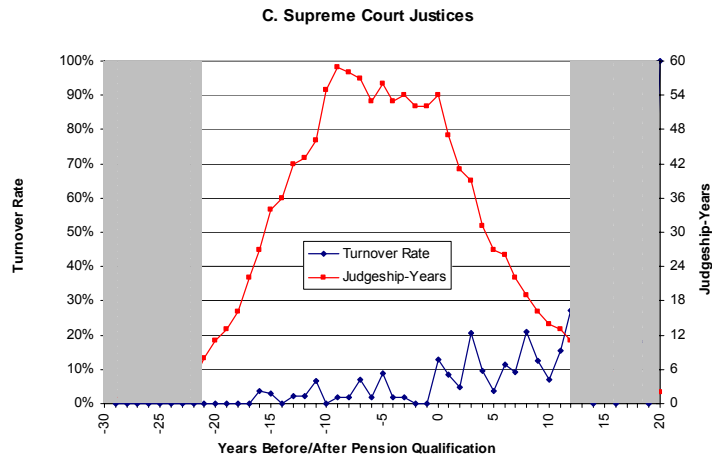
Figure 6.

Article III Judgeship Turnover Rates Based on Years Before/After Qualifying for Pension (1869-2002)

A) District Court; B) Circuit Court; C) Supreme Court



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Note: Gray regions signify year-before/after-pension values greater than or equal to 1.96 standard deviations (SD) from the mean. Accordingly, given the distribution of judgeship-years, 94% of the year-before/after-pension values fall within the clear regions.

The effect of pension on turnover rates is most pronounced for district judges (Figure 6A), for whom the turnover rate never rises above three percent in the years preceding pension qualification, and then jumps to thirty-nine percent at year zero. For circuit judges (Figure 6B), the pre-pension turnover rate also is uniformly low, peaking at four percent, but rising to twenty-nine percent at year zero, a smaller but still large increase. The relationship between pensions and turnover rates is least pronounced for Supreme Court justices (Figure 6C). The turnover rate does rise at year zero, but the magnitude of the increase is smaller – only thirteen percentage points. In fact, the Supreme Court is the only level of court where the maximum number of vacancies transpires at a period other than when justices first qualify for their pension. Collectively, these graphs reveal that pension qualification affects district, circuit, and Supreme Court judges and justices in distinguishable but ultimately similar ways.

D. Comparison of Turnover Rates of Judges Based on Age and Pension Qualification

The previous two sections indicate that judges are most likely to vacate their seat 1) between the ages of sixty-five and seventy, and 2) at the very year in which they qualify for their pension. How then do age and pension qualification interact? A simple but direct approach to answering this question is to compare turnover rates for judges, by age, based on whether they had yet qualified for their pension. The advantage of this approach is that it reveals how these two factors change with respect to one another, since for each age, there are two types of judges: those who qualified for the pension, and those that did not. Table 5 presents the results of such a comparison, looking at turnover rates for each of the three pension regimes by age.

The patterns in Table 5 bring to light what was merely suggestive in the preceding tables and figures: a judge's decision to vacate the bench is better explained not by age, but by pension qualification. In the first pension regime (1869 to 1953), the turnover rate for judges aged seventy who had qualified for their pension was nineteen percent; judges at the same age who had not yet qualified had a turnover rate of only seven percent. Similarly, in the second pension regime (1954 to 1983), when judges could qualify for the pension beginning at age sixty-five, the turnover rate for judges who had qualified always exceed their age counterparts who had not, mostly by a margin of double-digit percentage points. The contrast in turnover rate between qualifying and not-yet-qualifying judges is most stark in the most recent regime (1984 to 2002): for example, judges aged sixty-five vacated the bench at a rate of forty-eight percent when they had qualified for their pension, versus only one percent when they had not. Even more telling: not a single judge aged sixty-eight with time remaining to qualify for the pension abdicated his or her seat on the bench; their counterparts who had already qualified for the pension left at a rate of thirty-five percent.

The higher turnover rate for judges who have already qualified for the pension holds true for every age category and pension regime. Moreover, this disparity in turnover rates has grown with each successive pension regime. While Table 2 tells us only that the majority of judges qualify for their pension before vacating their seats on the bench, Table 5 provides strong support that many of these judges do not waste any time quitting active status once they do qualify. The timing between vacating and qualification hold true over time, even as the requirements for qualification become more attainable.⁶⁴ Thus, while many – indeed, most – judges continue to remain on active status beyond the first year they qualify for the pension, very few judges vacate their seats if they have yet to qualify.

⁶⁴ These observed turnover trends may also be explained in part by *selection effects*, reflecting a change in the type of individual who joins the federal bench. Testing the magnitude of this effect is difficult, given that many of characteristics are unobservable (e.g., personality of the individual) and the paucity of public data on the judge's activities prior to joining the bench.

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Table 5.
 Age-Specific Turnover Rates, by Pension Qualification Status and Pension Regime (1869-2002)

Age	[A] Qualified for Pension			[B] Did Not Qualify for Pension			[C] Difference: [B] - [A]						
	1869-1953		1954-1984	1869-1953		1954-1984	1869-1953		1954-1984	1953		1983	1984-2002
	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	Rate
59 & Under	2013	4.7 (0.5)			6606	1.9 (0.2)	7235	1.1 (0.1)	8297	0.6 (0.1)			
60	88	2.3 (1.6)			557	3.2 (0.8)	620	1.6 (0.5)	632	0.2 (0.2)			
61	88	5.7 (2.5)			556	3.6 (0.8)	593	1.0 (0.4)	651	0.6 (0.3)			
62	83	4.8 (2.4)			540	3.1 (0.8)	581	2.2 (0.6)	663	1.1 (0.4)			
63	79	6.3 (2.8)			522	4.2 (0.9)	557	1.1 (0.4)	650	0.9 (0.4)			
64	75	4.0 (2.3)			500	5.2 (1.0)	530	1.7 (0.6)	663	1.2 (0.4)			
65	72	6.9 (3.0)	169	30.2 (3.5)	301	47.5 (2.9)	352	3.1 (0.9)	347	1.2 (0.6)			-27.1 (3.7)
66	65	7.7 (3.3)	141	17.0 (3.2)	229	33.6 (3.1)	318	2.2 (0.8)	269	1.5 (0.7)			-14.8 (3.2)
67	60	10.0 (3.9)	146	16.4 (3.1)	213	27.7 (3.1)	282	3.5 (1.1)	198	1.0 (0.7)			-12.9 (3.2)
68	52	3.8 (2.7)	145	17.2 (3.1)	227	34.8 (3.2)	239	2.5 (1.0)	130	0.0 (0.0)			-14.7 (3.3)
69	50	6.0 (3.4)	149	12.1 (2.7)	204	36.8 (3.3)	203	3.4 (1.3)	65	4.6 (2.6)			-8.6 (4.3)
70	47	12.8 (4.9)	297	19.2 (2.3)	410	35.2 (4.0)	47	7.3 (4.1)	44	4.5 (3.2)			-11.9 (4.7)
71	41	7.3 (4.1)	240	16.7 (2.4)	105	31.4 (4.6)	34	5.9 (4.1)	25	4.0 (4.0)			-16.7 (5.1)
72 & Over	294	11.6 (1.9)	1114	16.3 (1.1)	499	16.8 (1.7)	57	12.3 (4.4)	62	9.7 (3.8)			-11.6 (4.6)

Note: Turnover rates are expressed as percent per year. Estimated standard errors are in parentheses. A judge is considered to have vacated his seat if he either takes senior status, resigns, or retires at any point in a given year. Judges who vacate their seat as a result of immediate elevation to a higher federal court are not counted in this tally. The gray zones in Column A reflect that judges in this age and time period were not eligible for an pension. Accordingly, the gray zones in Column C reflect the inapplicability of computing differences.

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V. REGRESSION ANALYSIS

A. Econometric Model

Ultimately, the results in the prior section are merely suggestive, since they do not account for many factors – demographic, political, and institutional – that also may influence judges’ decision to abdicate their seats. To examine these results more rigorously, I construct a discrete duration models that include these factors in addition to the ones already presented. Duration models – sometimes termed *hazard* models – are an approach developed by biostatisticians and engineers, to understand the determinants of how much time elapses before an event occurs.⁶⁵ Economists also use this approach to understand, among other things, trends in labor trends, such as when individuals find full-time employment or leave the work force.⁶⁶ The duration model is an appropriate approach to study judicial turnover rates because we are trying to understand the factors that influence judges to remain on, and ultimately leave, the federal judiciary.⁶⁷

Because I am primarily interested in modeling the *probability* of a judge vacating his seat at any given period, I construct the following probit model:

$$P(y_i = 1 \mid x_i) = \Phi[X(i, a, c, t) \cdot \beta]$$

where $y_i = 1$ is the probability that judge i , aged a and serving on court c , vacates his seat before the start of the next calendar year, conditional on having remained on the bench up to age a . The term, $X(i, a, c, t)$, represents a set of observed characteristics of judge i on court c , β is the coefficient vector, and Φ is the cumulative distribution function of the standard normal distribution. More simply stated, the model looks to explain what factors influence judges’ decision to vacate their seats.

Table 6 describes the variables of the model, which fall into five categories: pension, individual, institutional, political, and control variables. The first, *Pension*, includes two dichotomous variables.⁶⁸ This reflects a conceptual decision to collapse the sixty-seven unique before/after pension values⁶⁹ to only three: 1) the judge has not yet qualified; 2) the judge has qualified in the given year; and 3) the judge has been on the bench at least one year after qualifying.⁷⁰ Evaluating pensions in this manner makes more sense than a single dichotomous measure whether the judge had qualified for the pension, since the aggregate data alone reveals that most judges eventually qualify. More significantly, it allows us to rigorously test the significance of the year of pension qualification, by comparing the explanatory power at the time of qualifying for the pension (time zero) to all preceding and subsequent periods. If the effect

⁶⁵ The classic example is predicting how long a bulb remains lit before burning out, or the amount of toxins before a laboratory rat develops symptoms of a disease. For a discussion of the development of these models, see DAVID ROXBEE COX, D. OAKES, *ANALYSIS OF SURVIVAL DATA* (1984); OAKES ROSS L. PRENTICE AND JOHN D. KALBFLEISCH, *THE STATISTICAL ANALYSIS OF FAILURE TIME DATA* (1980).

⁶⁶ See, e.g., Orley Ashenfelter and David Card, *Did the Elimination of Mandatory Retirement Affect Faculty Retirement?*, 92 *AMER. ECON. REV.* 957 (2002) (using a duration model to understand the effect of changes in mandatory retirement laws on retirements by university professors).

⁶⁷ With very few exceptions, judges leave the bench only once, never to rejoin the federal bench (this excludes judges who vacate their seat on one level of the bench because of elevation to a higher court). Of the individuals appointed to the 3,206 judgeships, only nine judges left the bench and were later reconfirmed to a different court. The most notable exception was William Howard Taft, who was a judge on the U.S. Court of Appeals – 6th Circuit from 1892-1900, served as president of the United States in the interim, then served on the U.S. Supreme Court from 1921-1930. See section on federal judicial history, website of Federal Judicial Center (<http://www.fjc.gov>).

⁶⁸ Dichotomous – also termed *indicator* or *dummy* – variables are those in which take on a value of either zero or one.

⁶⁹ As shown in Figure 5A, *supra*, the years judges had before/after qualifying for their pension ranged from negative forty-two to twenty-four.

⁷⁰ The model includes only two of the variables, because with any series of dichotomous variables, one of the variables is omitted to avoid perfect collinearity. In the model, I omit the variable for all years in which the judge has yet to qualify for the pension.

of the year of pension qualification on turnover rates is as strong as the graphical representation suggests, then it should be reflected in the magnitude of the regression coefficients after controlling for other factors.

Table 6
Variables for Duration Model

Variables

Pension

Year of Pension Qualification	Judge Qualified for Pension in Given Year
Post-Pension Qualification Year	Judge Qualified for Pension One or More Years Ago

Individual Factors

Active Tenure	Years that Judge has Served in Active Status
Female	Judge is Female
Nonwhite	Judge is nonwhite (e.g., Hispanic, African-American)

Institutional Factors

Judgeship Capacity	Percentage of Authorized Judgeships Filled in Judge's Court
--------------------	---

Political Factors

Democratic President	Sitting President a Democrat
Democratic Judge	Judge Nominated by Democratic President
Political Unity	Judge and Sitting President Share Same Political Affiliation
Democratic-Majority Senate	Majority Control of Senate by Democrats
Democratic Court Composition	Percentage of Active Judgeships Filled in Judge's Court by Judges Nominated by Democrat President

Control Variables

1. Age	Age of Judge
2. Pension Regime	Time Period (1869-1953, 1954-1983, 1984-2002)
3. Presidential Year	Year of Presidential Administration
4. Court	Court to Which Judge Belongs (e.g., 7th Cir, S.D.N.Y.)

The individual factors describe the number of years the judge has served on active status on the bench (*Active Tenure*), and identify the judge's gender and ethnic origin.⁷¹ Although, as stated in Table 2, the presence of women and minority judges is a relatively recent phenomenon, the inclusion of these variables informs whether in recent years people of a certain age, gender, or ethnicity account for differences in turnover rates.

Although not discussed in the existing literature, this model includes an additional variable – *Judgeship Capacity* – that measures the percentage of authorized judgeships filled for each court in each year.⁷² For example, in 2002, ninety-six percent (twenty-seven out of twenty-eight) of the authorized

⁷¹ *Nonwhite* refers to any ethnic category other than white (Hispanic, African-American, Asian-American, Native-American).

⁷² The percentages are expressed as integers, ranging between 0 and 100, measuring the effect of a percentage point increase composition on the likelihood of leaving the bench. In actuality, in rare instances, the actual percentage exceeded 100%, usually corresponding to periods when Congress chose against making an temporary (but authorized) judgeship permanent, but allowed the judge to complete his or her tenure. This occurred most notably in the Supreme Court during the 1800s, when Congress increased, then decreased, and again increased the number of authorized justices.

judgeships in the Southern District of New York were filled. The purpose of this variable is to observe whether judges consider the effect of their leaving active status on their remaining colleagues, as it relates to workload. It is unclear, however, what effect, if any, this factor would have. If there are other vacancies already on the district or circuit,⁷³ an active judge may be less inclined to leave the bench, given that it would likely generate more work for the remaining active judges. Just as plausible, however, a judge with the same institutional concerns might be inclined to leave the bench if he or she were to continue hearing cases as a senior judge, while making way for the addition of another active judge via judicial confirmation; in that case, the caseload per judge would actually decrease.⁷⁴ To further complicate matters, a judge's willingness to create a vacancy may very well be affected by his or her annual caseload.

The third category is broadly termed Political Factors, including both judicial and executive politics. *Democrat President*, whether the president currently in office is a Democrat, measuring whether judges generally are more inclined to vacate their seat during Democratic administrations. *Democrat Judge*, whether the judge was appointed by a Democratic president, tests whether turnover rates differ based on the judge's political affiliation. *Political Unity* is an interaction term that looks at whether judges are more likely to vacate their seat when a politically like-minded president is in office,⁷⁵ a theory supported by the existing scholarship on judicial retirement. *Democrat Senate* describes whether the Democratic party had majority control of the Senate in that given year. Each of these three is a dichotomous variable.

The last of the Political Factors variable, *Democrat Court Composition*, is another variable previously unmeasured in the existing literature. It measures the percentage of active judges sitting in each court appointed by Democrat presidents.⁷⁶ Again using the 2002 Southern District of New York as an example, eighty-one percent (twenty-two out of twenty-seven) of the active judges were appointed by a Democrat president. This variable explores the degree to which judges consider the political balance of their respective court in their decision to give up their seat. One hypothesis is that judges are disinclined to abdicate their seat if they believe doing so would shift the political balance of their court in an undesirable direction, or exacerbate existing political disparities. The significance of this may be smaller for district court judges, who hear cases on an individual basis, but have greater relevance for circuit courts (via three-judge panels and the occasional *en banc* cases) and the Supreme Court.

⁷³ A pre-existing vacancy on the Supreme Court has occurred only rarely, the last time in the 1969-70 term, following Justice Abe Fortas's retirement from the Court. See THE SUPREME COURT COMPENDIUM, Table 5.2 379 (2003) (eds. Lee Epstein, Jeffrey A. Segal, Harold J. Spaeth, Thomas G. Walker) (listing each of the natural courts since the Court's creation).

⁷⁴ The Administrative Office of the U.S. Courts does not release information on the number of cases heard by each individual judge. However, the data reveals that in recent years, most judges, in vacating their seat, take up senior status rather than retire from the bench altogether.

⁷⁵ This occurs when either the judge or president are both of Democrat, or Republican, affiliation.

⁷⁶ The selection of *Democrat* as the party measure for court composition is arbitrary, and could easily have been *Republican*. In a two-party system such as in the United States, measuring the percentile effect of one party also by negative implication measures the effect of the other.

Table 7.
Parameter Estimates for Discrete Hazard Model of Judicial Turnover (1869-2002)

Variable	Full Sample with No Controls (1)	Full Sample with Controls (2)	District Judges (3)	Circuit Judges (4)	Supreme Court Justices (5)
<i>Pension</i>					
Year of Pension Qualification	0.3801 (0.0132)	0.2169 (0.0168)	0.2255 (0.0203)	0.1829 (0.031)	0.0052 (0.009)
Post-Pension Qualification Year	0.2028 (0.0066)	0.1327 (0.0131)	0.1413 (0.0168)	0.1160 (0.023)	0.0012 (0.002)
<i>Individual Characteristics</i>					
Active Tenure	--	-0.000008 (0.000101)	0.0001 (0.0001)	-0.0003 (0.0002)	0.00001 (0.00002)
Female	--	-0.0080 (0.00193)	-0.0050 (0.0022)	-0.0149 (0.0036)	--
Nonwhite	--	-0.0019 (0.0024)	-0.0020 (0.0023)	-0.0014 (0.0064)	-0.0001 (0.0003)
<i>Institutional Factors</i>					
Judgeship Capacity	--	-0.0011 (0.0000)	-0.0009 (0.0000)	-0.0016 (0.0001)	-0.00004 (0.00007)
<i>Political Factors</i>					
Democratic President	--	-0.0030 (0.0010)	-0.0026 (0.0011)	-0.0039 (0.0027)	-0.0001 (0.0003)
Democratic Judge	--	-0.0022 (0.0014)	-0.0027 (0.0014)	-0.0012 (0.032)	-0.00002 (0.00015)
Political Unity	--	0.0014 (0.0011)	0.0006 (0.0011)	0.0044 (0.0027)	-0.0001 (0.0003)
Democratic-Majority Senate	--	-0.0005 (0.0012)	-0.0014 (0.0013)	0.0027 (0.0031)	0.0002 (0.0004)
Democratic Court Composition	--	-0.000007 (0.000024)	-0.000007 (0.000025)	-0.00008 (0.00006)	0.000001 (0.000004)
Controls for 1) Age; 2) Pension Regime; 3) Presidential Year; 4) Court	no	yes	yes	yes	yes
N	41,405	41,405	31,298	8,848	1,259

Note: Coefficients report *marginal effects at the mean*. Standard errors are in parentheses. A judge is considered to have vacated his seat if he takes senior status, resigns, or retires altogether at any point in a given year. Judges who vacate their seat as a result of immediate elevation to a higher federal court are not counted in this tally.

Lastly, I include a series of dichotomous control variables for the age of the judge (*Age*), the current pension regime (*Pension Regime*), the corresponding year of a presidential administration (*Presidential Year*), and the particular court to which the judge is a member (*Court*). The inclusion of the first three control variables is to avoid erroneously attributing vacancy trends to other variables that could be merely explained by secular or temporal changes. The fourth control⁷⁷ is to account for any trends attributable to particular courts. Scholars interested in the effect of caseload differences across courts have included a variable for the size of the caseload, but in doing so relied on a court-level average for case load.⁷⁸ This aggregated approach is problematic because it does not truly measure individual differences in case load across judges. Including a dichotomous measure for each specific court picks up differences in case load across courts, as well as any additional court-specific differences not included in the other variables.⁷⁹

B. Results

Table 7 presents the estimation results based on the equation above, for the period 1869 to 2002. The specification in the first column of the table looks at the effect of the pension on turnover rates on the full sample of judges, without the inclusion of other explanatory or control variables. Column 2 again looks at the full sample of judges, but includes the aforementioned variables. Columns 3, 4, and 5 are identical to Column 2, except that they are specific to the district, circuit, and Supreme courts, respectively. The results report the coefficients, interpreted as the marginal effects of each variable.

The coefficients of the key covariates reported in Table 7 reveal, consistent with the findings in the prior section, the strong explanatory power of pensions, in particular, time zero of the pension. Column 1, the simplified model, reports that judges are thirty-eight percent more likely to vacate their seats in the exact year in which they qualify for their pension than they would for all years prior to qualifying. For all subsequent years following pension qualification, judges are twenty percent more likely to vacate their seats than they would prior to qualifying. These coefficients are statistically significant at the 0.01 level.⁸⁰

The inclusion of the additional variables to the full sample in Column 2 decreases the magnitude of the pension coefficients. Factoring in these other variables, judges are now twenty-two percent more likely to vacate their seat when they first qualify for the pension and only thirteen percent more likely thereafter, than before they qualify. These coefficients are again statistically significant at the 0.01 level. The coefficients for each of the other explanatory variables remain small, failing to affect – positively or negatively – the likelihood of judicial vacancy by even one percent. The largest of these coefficients – *Female* – is statistically significant at the 0.01 level, but its interpretation is that female judges are only 8/10 of a percent more likely to vacate their seats than male judges. Judges also appear to be largely uninfluenced by intra-institutional factors – *Judgeship Capacity*, *Democrat Court Composition* – in their decision when to give up their seat. They also appear largely uninfluenced by political factors, being only 3/10 of a percent less likely to vacate their seat during a Democrat presidential administration (*Democrat President*), and 1/10 of a percent more likely to leave when they have the same political affiliation as the current president (*Political Unity*) or if the Democrats have control of the Senate (*Democrat Senate*).

Columns 3, 4, and 5 support the conclusions drawn in Figure 6. The influence of pension qualification is strongest at the district court level, less so at the circuit court level, and essentially not at

⁷⁷ Each of these variables is a set of dichotomous (dummy) variables.

⁷⁸ In their articles, Zorn and Van Winkle, Spriggs and Wahlbeck, and Barrow and Zuk each include a variable for judicial caseload. Zorn and Van Winkle were able to record the exact number of opinions each Justice wrote, *see supra note //* at 161, but the other authors used only a caseload average for the given court given that the Administrative Office of the U.S. Courts does not release individual judge caseload information. *See Spriggs and Wahlbeck, supra note //* at 581; Barrow and Zuk, *supra note //* at 463.

⁷⁹ Some examples of potential court-level factors are geography or the distribution of the types of cases filed.

⁸⁰ The p-values refer to the significance level at which the null hypothesis can be rejected.

all at the Supreme Court level. And for each of the three levels, the other variables that we observe in the full model (Column 2) continue to have a relatively insignificant effect. Individual, institutional, and political considerations do not meaningfully explain when judges vacate their seats. Such insignificance might be expected at the district court level, which comprises the majority of observations in the full dataset and therefore reports similar coefficients to the full model. At the circuit and Supreme Court level, however, one might imagine that as the marginal effect of the pension decreases – reflecting that judges are less likely to “take the pension and run” – other political or institutional factors might gain greater significance. But the results refute this hypothesis.⁸¹ Lastly, modifying the model to allow for the possibility that observations may not be independent within each judge produces the same coefficients and does not meaningfully affect the standard errors.

The coefficients on the control variables for *Age* and *Pension Regime* support the graphical representations in the previous section. The coefficients on the age variables (series of dummies) support Figure 4A. Age has a small and statistically non-significant effect at prior to age sixty-five. Between ages sixty-five and seventy – corresponding to the years when most judges qualify for the pension – the probability of vacancy nearly doubles to roughly five percent (with statistical significance at the 0.01 level).⁸² In all subsequent years, the effect drops. Similarly, each successive pension regime had a small but negative (and statistically significant) effect on turnover, consistent with Figure 5B. As for the other control variables – *Presidential Year* and *Court* – their effect was systematically small, and with few exceptions, statistically non-significant.

As stated in Section IVA, one of the advantages of this econometric model is its ability to measure the differential effect of pension qualification, both as it relates to other factors and with respect to itself. In each of the models, the coefficient for *Year of Pension Qualification* is larger than the coefficient for *Post Pension Qualification Year*, meaning that on average, judges not only are likely to wait for the pension to vest before vacating their seat (something revealed in Table 2), but are more likely to vacate the very year in which they qualify than they are in any other year. Looking at the data from a different angle, over the entire period 1869 to 2002, 600 of the 35,774 pre-pension-qualification judgeship-year observations resulted in a departure from active status (a 1.7% turnover rate); after pension qualification, departure occurred 857 of the 5,631 observations (a 15.2% turnover rate). By contrast, 509 judges (out of 1,441 judge-years observations) left at the first opportunity after qualifying for the pension (a 35.3% turnover rate). Across all levels of court, the best predictor of judicial vacancy is pension qualification. This is a powerful result because it goes beyond confirming the belief that pensions provide a strong motivation for judges to stay on active status, also revealing that in the absence of that motivation, many judges leave at the first opportunity.

C. Specification Checks

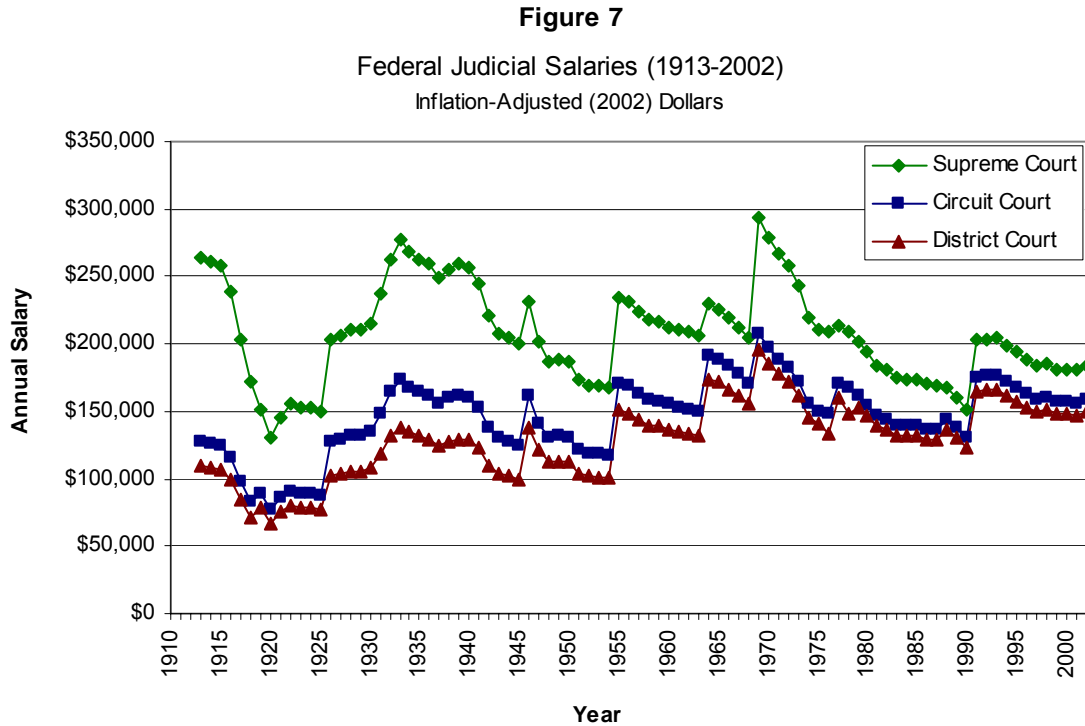
One question that naturally arises from the econometric model is whether the pension variables are significantly correlated with the individual, institutional, and political variables. If so, the model may overstate the true effect of pension and understate the effect of the other variables. As a check against this possibility, I reran the same regressions in Columns 2, 3, 4, and 5 within Table 7, but omitting the pension variables. In each regression, the coefficients on the other variables remain almost identical, both with respect to the coefficients and the standard errors. This result indicates a very low correlation between

⁸¹ An alternative hypothesis to explain the vacancy trends for circuit and Supreme Court judges is that they are more likely to remain on the bench as long as they are physically capable. Given that judges' health records are not public information, one cannot test this directly. Using proximity between vacancy from the court and date of death as a rough proxy for health – inferring that judges who die a short period after vacating their seat do so for health concerns – it appears that health is an important determinant for turnover rates.

⁸² The baseline comparison for the age dummies is “Below the age of 40.”

pension qualification and the other variables, and the unlikelihood that the coefficient estimates are biased.

A second question that arises is whether real changes in salaries affect judicial vacancies. As stated above, although Article III, Section 1 of the U.S. Constitution guarantees against nominal diminution of federal judicial salaries, judges are not afforded automatic cost-of-living-adjustments (COLAs), and Congress alone determines when to provide salary increases. Figure 7 shows how judicial salaries in real dollars fluctuate over time.



Given this variation, one might expect that significant changes in real salaries – such as in 1969 – might compel judges to leave the bench at higher or lower rates. As a check for this possibility, I reran the regressions, for the period 1913-2002, including real salaries as a variable.⁸³ Real salaries had a negligible effect on turnover rates,⁸⁴ and did not meaningfully change the relative effect of any of the other variables, including pensions. One should interpret this last regression with caution, however, since it is more a measure of the effect of salaries than it is of pensions. A more meaningful measure of the effect of pensions on judges would require information on judges’ net present valuations of the pension, which is a function of their anticipated lifespan and speculation on future salary. Such information is omitted from the dataset, and ultimately a subjective measure that is known only by each judge.

⁸³ I chose 1913 as the start date because the Bureau of Labor Statistics in the Department of Labor first constructed the Consumer Price Index (CPI) in 1913, allowing for the comparison of prices across years. For an annual listing of the CPI from 1913 to the present, see <ftp://ftp.bls.gov/pub/special.requests/cpi/cpi.ai.txt>

⁸⁴ In each of the models, salaries had less than a 0.001% effect on the probability of vacancy.

VI. BROADER IMPLICATIONS

This Article speaks to the broader discussion on judicial tenure, in particular proposals to influence the number of years that judges serve on the bench. On one side, scholars and jurists argue that federal judges, most notably Supreme Court justices,⁸⁵ often remain on the bench long after physical and mental decline has set in, threatening the integrity of the judicial system by the rendering of opinions that are both lower in quality and increasingly out of step with an evolving society. These concerns echo those of Congress in the nineteenth century when it created the pension system. The proposed remedy is to pass a constitutional amendment establishing a mandatory retirement age for federal judges.⁸⁶ But others, most notably Chief Justice Rehnquist and Justice Steven Breyer, believe the federal judiciary needs to confront the opposite phenomenon of premature departures from the bench. Judges need additional encouragement to remain on the bench, rather than to opt for more lucrative alternatives in the private sector.⁸⁷ The mechanism by which to accomplish this, they argue, is to increase judicial salaries to a level closer to those of law firm partners or at least law professors at top law schools.⁸⁸

The empirical findings in this Article provide new insight to both sides of the issue. First, it illustrates the danger of making generalizations regarding judicial service from anecdotal evidence. It is almost undoubtedly true that some judges remain on the bench long after their mental abilities have declined. But since 1869, roughly ninety percent of retired judges ended active service by the age of seventy-five, coordinating with their pension qualification. Thus, one can credibly argue that most judges leave the bench before the onset of “mental decrepitude.”⁸⁹ If one believes, however, that mental decline sets in before age seventy-five, Congress could amend the pension requirements to enable active judges to vest at an earlier age or with fewer years of service. Judges would vest at an earlier age and, assuming that pensions would continue to have a similar effect, many would abdicate their seat at an earlier age. This approach certainly would also be more politically feasible than passing a constitutional amendment imposing mandatory retirement for federal judges.⁹⁰

Second, the findings explain the stable but slightly increasing trend regarding years of judicial tenure: a higher percentage of judges are striving to vest in their pension, but at the same time, the requirements for vesting have become slightly easier. There are, of course, isolated stories of younger judges leaving the bench who attribute their decision to inadequate salary.⁹¹ As a general matter, however, any dissatisfaction by judges over annual salary appears to be trumped by their desire to vest. Therefore, if the objective is to increase years of (active) judicial tenure, increasing the age and/or service requirements – in effect transforming the *Rule of 80* to something like the *Rule of 85* or *Rule of 90* – would appear to be an effective mechanism. Congress could also experiment with partial vesting, where

⁸⁵ For example, some scholars argue that the Supreme Court exceeded their constitutional authority in *Bush v. Gore*, 531 U.S. 98 (2000). See ALAN M. DERSHOWITZ, *SUPREME INJUSTICE: HOW THE HIGH COURT HIJACKED ELECTION 2000* (2002), Pam Karlan, *When Freedom Isn't Free: The Costs of Judicial Independence in Bush v. Gore*, 64 OHIO ST. L. J. 265 (2003); but see RICHARD A. POSNER, *BREAKING THE DEADLOCK: THE 2000 ELECTION, THE CONSTITUTION, AND THE COURTS* (2001) (arguing that the Supreme Court acted within its constitutional authority).

⁸⁶ See David J. Garrow, *Mental Decrepitude on the U.S. Supreme Court: The Historical Case for a 28th Amendment*, 67 U. Chi. L. Rev. 995 (2000) (arguing in support of a constitutional amendment imposing mandatory retirement for federal judges at a specified age). For a historical discussion of retirements on the Supreme Court, see DAVID N. ATKINSON, *LEAVING THE BENCH: SUPREME COURT JUSTICES AT THE END* (1999).

⁸⁷ See *Time of Crisis*, *supra* note 1.

⁸⁸ Breyer explicitly compares judicial salaries to those in the private sector and academic. See *id.*

⁸⁹ See Garrow, *supra* note // at 995 (using the term “mental decrepitude” in the title of his article).

⁹⁰ A constitutional amendment requires passage by two-thirds of both chambers of the Senate, as well as ratification by three-fourths of the state legislatures. See U.S. CONSTITUTION, Art. V.

⁹¹ See e.g., Jonathan D. Glater, *Federal Bench Needs a Raise, Bar Groups Say in Report*, N.Y. TIMES, Feb. 13, 2001, at A23 (describing how some judges are leaving the bench because of their perceived inability to financially provide for their families).

judges could begin partial vesting at an earlier age, then allow full vesting after additional years of active service. Judges would arguably have the same motivation to qualify for their pension, and hence on average remain on the bench longer. Congress would likely be more receptive to adopting either of these approaches than it would be to raising judicial salaries, a measure Chief Justice Rehnquist has repeated advocated⁹² but Congress have historically been loathe to do.⁹³

Above all, judges appear to recognize – at least implicitly – the judicial compensation structure and how best to maximize it. The true monetary value of a judgeship exceeds the annual salary for that given year to also reflect the discounted value of the future revenue stream of the pension.⁹⁴ The advantages of the pension are several-fold. Whereas most prudent Americans have to set aside a non-trivial proportion of their existing salary for retirement, federal judges arguably do not.⁹⁵ And judges' pensions, unlike most private pensions,⁹⁶ are insured by the federal government and protected against modification post-vesting. In addition, retired senior judges do not pay social security⁹⁷ and, in depending on the state, state income taxes on the pension. Lastly, retired judges may supplement their pension by any other gainful means of employment. The decision of many judges to abdicate their seat shortly after vesting reflects their understanding that they are optimizing their judicial compensation. Since the salary remains the same whether they remain on active status, or opt for senior status or full retirement, there is no financial incentive to continue full-time. In fact, on pure financial terms, judges who have vested in their pension maximize their economic return by leaving the bench altogether, raising the question why they do not do so in every instance.⁹⁸

CONCLUSION

This Article reveals the powerful affect of pensions in explaining federal judicial tenure. While it may be true that judges are politically or institutionally motivated, these factors do not meaningfully explain judicial turnover. However strong judges' motivations to facilitate a politically like-minded successor to the bench, their goal of vesting in the pension dominates. Whatever dissatisfaction judges may feel over current salary, it does not deter them from remaining on the bench until they vest. Similarly, institutional concerns about caseload burden or ideological balance on the court are outweighed by vesting interests. Differences in the judge's age, gender, or ethnicity cannot predict when judges give up their seats on the bench nearly as well as the timing of when the judge vests in the pension.

⁹² Chief Justice Rehnquist has asked for judicial pay increases in each of the past six *Year-End Reports on the Federal Judiciary* (1997-2002). For a compilation of these reports, see <http://www.uscourts.gov>.

⁹³ See, e.g., Lawrence J. Fox, *Politics is Threatening the Federal Judiciary*, Nat'l L. J., Mar 18, 1996, at A19 (reporting how Congress is reluctant to incur public scrutiny over raising salaries for itself or federal judges).

⁹⁴ See Yoon, *supra* note / /, at 1058 (Figure 7) (showing how judicial salaries have remained relatively flat, but overall judicial expenditures growing at a geometric rate; while a comprehensive breakdown of expenditures is not available, one can infer that a non-trivial amount of the total judicial budget is allocated on judicial pensions).

⁹⁵ Federal judges bear two risks with respect to the pension: one, the possibility that they leave the bench before their pension vests; two, that their death, which terminates the pension, precedes their spouses' death.

⁹⁶ See Mary Williams Walsh, *Judge Says I.B.M. Pension Shift Illegally Harmed Older Workers*, N.Y. Times, Aug. 1, 2003, at A_ (describing a decision by the Southern District of Illinois that I.B.M. violated age discrimination laws in converting its pension plan to distribute to its older workers smaller benefits at retirement than younger workers would have when they eventually retired).

⁹⁷ Senior judges above the age of seventy (70) do not have to pay social security benefits either.

⁹⁸ The fact that vested judges do not uniformly leave active status at first opportunity is an interesting question, one that will be explored in subsequent work. One tentative hypothesis is that non-monetary objectives such as maintaining an office and possibly political factors may become salient.

What do these findings say about federal judges? They strongly suggest that judges, like most individuals, are motivated by self-interest. They respond to existing incentives,⁹⁹ which, with respect to exit from the profession, manifests itself in financial terms. Judges prefer more money to less money. Accordingly, they prefer to work full-time on the bench when there is a financial incentive to do so (having not yet vested in the pension) and to abdicate their seat when that incentive no longer exists (having already vested in the pension).

These findings call for additional analysis of labor trends, including a closer investigation of senior status.

Table 8.
Exit Options for Judges Vacating Their Seats, by Pension Regime (1919-2002)

How Vacated Seat	1919-2002		
	1919-1953	1954-1983	1984-2002
Senior Status	36% (123)	72% (478)	84% (588)
Retirement	66% (228)	30% (198)	18% (124)

Note: Method of creating vacancy expressed as a percent. The number in parentheses are the number of judges. The cumulative percentages exceed 100% in the different periods because a small number of judges vacated their seat by taking senior status, only to retire in that same calendar year (primarily due to illness or death). Prior to 1919, when senior status was created, judges vacated their seat only by retirement or elevation to a higher court.

As Table 8 shows, most judges who abdicate their seat opt for senior status rather than simply retire. If active judges are influenced by financial incentives, and those incentives largely disappear after they vest in their pension, what then motivates them to remain in semi-retirement during their twilight years? One can argue that, notwithstanding potential pay increases, vested judges who continue to work in any capacity do so at an effectively one hundred percent tax rate, since they do not receive any additional compensation for working. It may be the case that the political factors whose effects were inconsequential in explaining judicial turnover, may take on a larger role in understanding judicial retirement. This is a topic for future research.

⁹⁹ Legal scholars have looked at factors that motivate judges while they are on the bench. See e.g., Richard A. Posner, *What Do Judges and Justices Maximize? (The Same Thing Everybody Else Does)*, 3 SUP. CT. ECON. REV. 1 (1993).

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