

Labor Courts, Nomination Bias, and Unemployment in Germany

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Abstract

Labor courts play an important role in determining the effective level of labor market regulation in Germany, but their application of law may not be even-handed. Based on a theoretical model of the legal process and a new panel data set, we identify a nomination bias in labor court activity – that is, court activity varies systematically with the political leaning of the government that has appointed judges. In an extension, we find a significant positive relation between labor court activity and unemployment, even after controlling for the endogeneity of court activity. The results have potentially important policy implications regarding the independence of the judiciary and labor market reforms.

Keywords: Courts, labor courts, law production, nomination bias, unemployment, regulation, firing costs, Germany.

JEL-Classification: J53, K31, K41, E24

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1 Introduction

The activity of German labor courts is interesting from a number of perspectives.¹ From a normative point of view, most people would probably agree on the principle that the application of law should be independent from the specific judge or the appointing authority. The question of a possible nomination (or ideological) bias in the appointment process of judges – that is, a preference for nominating judges with political leanings close to the incumbent government – seems to be most relevant in court or case-law-based legal systems. This is a point underscored by the recurring battle over Supreme Court nominations in the United States and recent evidence that policymakers have an interest in binding the hands of possible successors by appointing life-time judges (Hanssen (2004)). However, the issue is also of considerable importance in German labor law. Labor law is the one domain in the German legal system where the interplay of lower-level and higher-level courts is more or less unrestrained by lawmakers.² As a consequence, judges enjoy an unusually high degree of independence in setting and implementing labor law and standards, leading to some degree of unpredictability even for legal experts (Sachverständigenrat (2003)).³ In particular, judges have an important influence on the discretion of firms to adjust their workforce through dismissals and on wage issues.⁴

The high unemployment rate also makes German labor court activity an object of interest to economists. The OECD (2004b) identifies labor courts as an important factor in the implementation of labor market regulation in general, and employment protection in particular – an area that many economists hold at least partially responsible for weak employment growth in

¹Throughout the text, we use the terms *court activity* or *court production* to summarize the full range of court actions, including the number of cases filed with courts, settlements, decisions, and appeals.

²For instance, the *Kündigungsschutzgesetz* of 1951, the German Protection Against Dismissal Law relevant for the majority of cases brought in front of labor courts, places few restrictions on court behavior. In principle, courts ask on a case-by-case basis whether dismissals were the “ultima ratio”, based on an “important” reason or “socially justified”, with the burden-of-proof placed on employers. Since most of these tests and terms are a matter of interpretation, the labor courts de facto determine the actual size of firing costs (see Richardi and Wlotzke (1992)).

³As we will argue below, an important part of the uncertainty may be changes in the composition of labor courts through the nomination process.

⁴Contract disputes over dismissals and, to a somewhat smaller degree, wage issues are behind the vast majority of cases filed with German labor courts. During the period 1970-2004, about 44 percent of all cases filed concerned dismissals (approaching 50 percent in more recent years) and about 39 percent wage disputes.

Germany and elsewhere in Europe.⁵ The literature also suggests that court activity may matter even if only some cases are actually heard simply because of the possibility of employees appealing to labor courts (OECD (2004b)).

As to the German case, there is some evidence that labor courts may indeed play an important and not necessarily positive role in the dismal performance of the German labor market since the 1970s. For instance, based mostly on anecdotal evidence, Soltwedel (1983) and Franz (1994) assert that a new generation of judges appointed to labor courts at all levels starting in the late 1960s moved systematically to strengthen the contractual position of workers, including by making it significantly more difficult for firms to reduce their workforce. This, in turn, sharply raised labor and firing costs, with negative repercussions for employment.⁶ While information on the actual level of court-induced firing costs is limited, the available evidence suggests it can be substantive. For instance, based on questionnaires, Hümmerich (1999) concludes that since the 1970s courts tend to follow a rule of thumb that sets severance pay at roughly half a monthly gross salary per year employed. The more recent literature surveyed by Grund (2004) comes to similar conclusions, stressing the scope of discretion of the courts.⁷

We extend the existing literature in a number of directions. First, we develop a simple model describing the behavior of employees and firms before and during labor court procedures at the lower and the higher level, yielding a number of testable hypotheses that can be used to identify the repercussions of a nomination bias in court activity. The model's key mechanism is the way nomination bias interferes with the trade-offs faced by forward-looking workers and firms along the different stages of the legal process. For instance, before allowing a case to go to the lower-level court, both sides will compare the safe payoff of a pre-court settlement with the uncertain outcome of the legal procedure. If there is nomination bias at the higher labor court level, then a change in the direction of the bias will influence the expected payoffs stemming from their interaction. The nomination-induced ideological leanings of higher-level labor courts may change because of, for instance, an increase in the share of judges biased in a certain direction. This will affect the behavior of firms and workers who compare the benefit from filing a claim with those a settlement would yield. Thus, empirically one should be able to trace an effect of nomination bias in the number of filed claims by workers

⁵See, *inter alia*, (Young (2003), OECD (2004a), OECD (2004b), and Berger and Daninger (2006)).

⁶This view has received some support from a macro perspective (Berger (1998)).

⁷Grund (2004) also suggest that tenure and monthly gross wages are the single most relevant determinants of severance payments captured in the German Socio-Economic Panel (GSOEP).

and firms. Working through the same channel, changes in the direction of nomination bias will, in addition, influence the willingness of workers and firms to accept a lower-level court settlement, the share of lower-level court decisions that is appealed, and the willingness of firms and workers to settle their case at the higher-level court.

To take these hypotheses to the data, we construct a new panel data set including information on lower- and higher-level labor court activity (i.e., decisions, settlements, and appeals), higher-level labor courts characteristics, the ideology of the state (*Länder*) governments nominating higher-level court judges, and relevant economic data for the German states starting in the 1970s (for the West German states) until 2004. The empirical analysis uses panel techniques, applying a robust modelling approach that controls for both time and state fixed effects based on feasible generalized least square (FGLS).

A number of interesting results stand out. First, demand for court activity matters. We find, perhaps not surprisingly, that claims filed by workers at lower-level German labor courts (*Arbeitsgerichte*, ArbG) are driven to a large extent by structural and economic variables that can be linked to the demand for contract protection by employees.⁸ Second, however, the production of German labor courts is not driven by demand factors alone. Among the supply-side factors are personal and professional characteristics of the judges and a measure of nomination bias. In particular, there is evidence that the political “color” of the appointing state government affects court production at higher-level labor courts (*Landesarbeitsgerichte*, LArbG), with significant repercussions on court activity at the lower level of the judiciary. This suggests that employers and employees act rationally along the lines suggested by the theoretical model. Last but not least, there is evidence that labor court activity is among the determinants of unemployment in Germany. Using the measure of nomination bias as an instrument to identify exogenous changes in labor court production, we show that an increase in court activity is associated with higher unemployment rates. The effects are both economically and statistically significant.

These results have potentially important policy implications. To the degree that evidence of nomination bias in German labor court activity might be disturbing from a normative perspective, an argument can be made for changes in the nomination process. On a more applied level, our results suggest that labor court activity is an important part of labor market regulation and deserves the attention of policy makers interested in influencing employ-

⁸This will include wage issues as well as dismissals. Unfortunately, the data does not allow us to differentiate between court activity concerning the one and the other.

ment conditions in Germany.⁹ Taking the nomination process as given, this suggests that placing restrictions on the leeway of labor courts in interpreting and determining existing law may have advantages.¹⁰

2 Related Literature

Our paper is linked to different strands of literature. A first group of papers looks at the role labor courts play in different countries. For instance, Autor (2003), Autor et al. (2004a), and Autor et al. (2004b) show that labor court decision-making affects firing costs and employment across the United States. Ichino et al. (2003) indicate that Italian labor courts may vary their stance regarding what is considered employee misconduct with the state of the labor market, with possible repercussions for unemployment itself. Bertola et al. (1999) point to evidence for other OECD countries with a similar message. Focusing on German labor courts, but taking a somewhat more macroeconomic perspective, Berger (1998) reports a small negative impact of aggregated lower-level labor court activity on real GDP growth in an endogenous growth model. And Berger and Danninger (2006) estimate a Vector Error Correction model suggesting that an increase in lower-level labor court activity has a positive and surprisingly persistent impact on the unemployment rate, even after controlling for the endogeneity of the latter with regard to real activity.

Our own contribution adds to this discussion by taking a closer look at the activity of German labor courts. This area has received some, albeit scattered, attention in the literature so far. Schneider (2002) produces regression models for the activity of higher-level labor courts between 1980 and 1996, showing that court production varies systematically with the age of judges, which could be hinting at a link between productivity and individual career motives. Moreover, the court production increases with unemployment, suggesting a role for demand factors. Frick and Schneider (1999) also report that the number of dismissal conflicts at German labor courts at the lower level in the years 1964 to 1996 is affected by regional labor market conditions. Finally, Goerke and Pannenberg (2005) show, based on German survey (GSOEP) data, that the number of dismissal conflicts and their resolution are systematically influenced by employment protection legislation (which

⁹Another implication is that indicators of labor market regulation based on readings of the law (e.g., some OECD indicators) may only give a partial picture of the actual level of regulation pertinent to the German labor market.

¹⁰Restricting the role of labor courts is also at the core of the proposal by Blanchard and Tirole (2003) on how employment protection should be reformed.

labor courts implement) and the tax-treatment of severance payments.

3 Recruitment of Judges and Legal Environment

The presence of ideologically biased court or judges requires a non-random process through which judges are appointed – a condition that is fulfilled in the German case for higher courts, including higher-level labor courts (i.e., LArbGs), where the nomination process is dominated by elected officials. In what follows, we will give a brief description of the nomination process for higher-level labor courts and argue that, for various reasons, lower-level labor courts are less likely to be subject to nomination bias.

The nomination process for higher-level labor courts is dominated by elected officials, with some limited variation in the institutional detail.¹¹ Higher-level labor courts are organized at the state (*Länder*) level, with the state governments, often represented by the Minister of Justice, being the principle authorities charged with appointing judges.¹² In some states like Bayern, Nord-Rhein Westfalen, Niedersachsen or Mecklenburg-Vorpommern, the executive alone appoints the judges. In other states, a selection committee (*Richterauswahlausschuss*) encompassing mostly members of the states' parliaments, judges, representatives of interest groups, and lawyers, votes on the executive's suggested appointee (Berlin and Schleswig-Holstein). In yet other cases, the selection committee jointly decides with the state government on the appointment (Bremen, Hamburg, Hessen, and Brandenburg). Where the executive power decides in collaboration with representatives of the court system, arbitration committees are in place (Baden-Württemberg, Rheinland-Pfalz, and Saarland).

Virtually in all cases, however, there is room for ideological interests playing a role. Where the executive is not directly involved in the appointment itself, members of parliament are. Parliamentary selection committee

¹¹In the empirical section, we will pick up any cross-section variation of this type using fixed effect methods.

¹²Note that higher-level courts divide in chambers consisting of three judges each, two of which are non-permanent, non-professional representatives of union and employer association interests. For various reasons, however, the decisive voice rests with the presiding judge (*Vorsitzender Richter*) appointed by the state government on a lifetime basis. Here and throughout the paper we focus on the latter. Teubner (1984) provides a survey of the appointment procedures for the West German states until the beginning of the 1980s. Further information including the appointment procedures in the Neue Länder can be found in the states' constitutional laws (*Länderverfassungen*) as well as in the states' laws that regulate the system of judges (*Richtergesetze*).

members are elected by the state parliament itself, all but guaranteeing that the currently governing party is represented in these committees. Moreover, with the exception of Rheinland-Pfalz, parliamentary members constitute the relatively largest group in the selection committee followed by the representatives of the judges. Similarly, arbitration committees include members of parliament (Baden-Württemberg, Rheinland-Pfalz) or representatives of the executive (Saarland).

Thus, it would seem that the process of appointing higher-level court judges has the potential to be strongly political in nature and, as a consequence, may give rise to a nomination bias. A plausible hypothesis is that, as a result of this process, the appointed higher-level labor court judges are likely to resemble the political leaning of the ruling or dominating government party at the time of the appointment. This is an empirically testable hypothesis, and the following section will use a theoretical model to explore its implications more fully.

There are a number of reasons to believe that ideological bias is mostly restricted to higher-level labor courts. First, lower-level labor courts (i.e., ArbGs), while handling the brunt of labor court production overall, are mostly concerned with the implementation of case-based labor law, developed by the higher level of the judiciary.¹³ This should render lower-level labor courts less interesting than higher-level courts from a political perspective. Second, and perhaps more importantly, there are theoretical reasons pointing in the same direction. When selecting candidates for entry level positions in the judiciary – which will, as a rule, mean at the lower-level courts – there is, as a rule, little or no information on the political stance of the candidates. This changes, however, over the course of a career, as judges interpret law on the job (see, *inter alia*, Levy (2005)), potentially revealing information on their ideological leanings. Once relevant information on the characteristics of judges is available, a politically charged appointment process for upper-level court positions is likely to take it into account.

Empirically, the identification of a possible ideological or nomination bias in court activity is helped by the absence of marked changes in the legal environment in our sample period. Indeed, Richardi (2005) reports that labor law as well as labor market policies followed a remarkably steady course. Labor law evolved more or less gradually through the law-building efforts of labor courts themselves, and labor market policy reforms, concerning employment protection and temporary work contracts, produced little measurable

¹³In interviews, practitioners characterized lower-level labor courts as being staffed by predominantly young, first-time judges, hired more or less straight from university. One expert saw the role of the lower-level courts mostly as a “filter” to reduce the caseload.

effects.¹⁴ The qualitative assessment is corroborated by the absence of significant changes in indices measuring the strictness of employment protection (Blanchard and Wolfers (2000)) and indices measuring wage determination structures such as collective bargaining coverage (Nickell et al. (2005) in Germany.

4 The Model

Setup

We model the decision process of workers and firms in the tradition of an economic analysis of legal disputes (see, e.g., Cooter and Rubinfeld (1989) or Daughety (2000)). Figure 1 gives an overview over the setup. The model encompasses four stages. The starting point is a dispute over a labor contract, for instance because of a wage cut or a dismissal of a worker by a firm. Then, at stage #1, the worker and firm decide on whether to agree to a *pre-court* settlement or take the matter before the lower-level labor court. If no agreement can be reached, the parties re-convene before the court. After having learned about certain characteristics of the case, the worker and firm will either agree to an *on-court* settlement or ask for a verdict (stage #2). Once the verdict is known, the worker and firm either accept the ruling or appeal it, taking the case to the higher-level labor court (stage #3). Finally, at stage #4 of the model, the worker and firm decide to either seek an *on-court* settlement now or to opt for a higher-level court ruling. The worker and firm are forward-looking and take into account the entire legal process when making decisions.

Before discussing the four decision stages in greater detail, we introduce some notation to help us capture the idea of nomination bias with regard to the characteristics of a labor dispute. To simplify, assume that all relevant aspects of a labor court case can be captured by an (one-dimensional) indicator in the range $[-a, a]$, where a is a positive number. At the beginning, nature randomly draws a case \tilde{x} from an interval $[-a, a]$ over which cases are cumulatively distributed according to a function G .

Workers and firms confronted with a case \tilde{x} know that judges are heterogeneous with respect to their personal perception of how the issue should be handled. While we assume that workers and firms do not know the type of a single judge, they are aware of the distribution of types. Types shall

¹⁴See e.g. Schmid and Oschmiansky (2005).

exist on the interval $[-a, a]$ with density

$$f(x) = \frac{1}{2a} + \theta x \quad (1)$$

where $-1/2a^2 \leq \theta \leq 1/2a^2$. Suppose, the worker and the firm are confronted with a case $\tilde{x} = 0$, then the worker would expect that all types of judges in the interval $[-a, 0)$ would be in favor of his case, whereas the firm would expect all judges of types $(0, a]$ supporting its case. Thus, the probability that a case \tilde{x} will be judged in favor of the worker follows by integration of equation (1) as

$$F(\tilde{x}) = \frac{1}{2a}\tilde{x} + \frac{1}{2} + \frac{1}{2}\theta(\tilde{x}^2 - a^2).$$

We will use the parameter θ to model ideologically biased judges with $\theta = 0$ referring to the unbiased case, that is, the case of no nomination bias. If nomination bias exists, it can take two directions: positive values of θ lower the worker's probability of winning a given case \tilde{x} . Negative values of θ introduce a bias against the firm. Note that the partial derivatives are $F_\theta \leq 0$ and $F_{\tilde{x}} \geq 0$.

Decisions

The following provides a general discussion of the decision making along the course of the legal proceedings (see Figure 1), setting the stage for an analysis of the effects of a change in the nomination bias on the behavior of the worker and the firm. Appendices 1 and 2 lay out the theoretical framework in full.

Stage #4 Approaching the model recursively, we focus first on the decision of the firm and worker whether to agree on an *on-court* settlement at the higher-level labor court (LArbG) or seek a court decision. For the worker this will depend on the expected payoffs of a trial net of trial costs.

Taking into account the probability that a case \tilde{x} will be judged in favor of the worker, $F(\tilde{x})$. H_W^{LArbG} is the worker's payoff associated with a court ruling in his favor, and $-U_W^{LArbG}$ is the worker's payoff when the court rules otherwise.

We assume that the costs of bringing a case before higher-level courts are revealed only after the claim has been filed (a similar assumption will be introduced for the lower-level courts). Behind this assumption is the fact that the cost of bringing a labor contract to court entails both transaction and opportunity costs. Court and attorney fees are often low and covered by

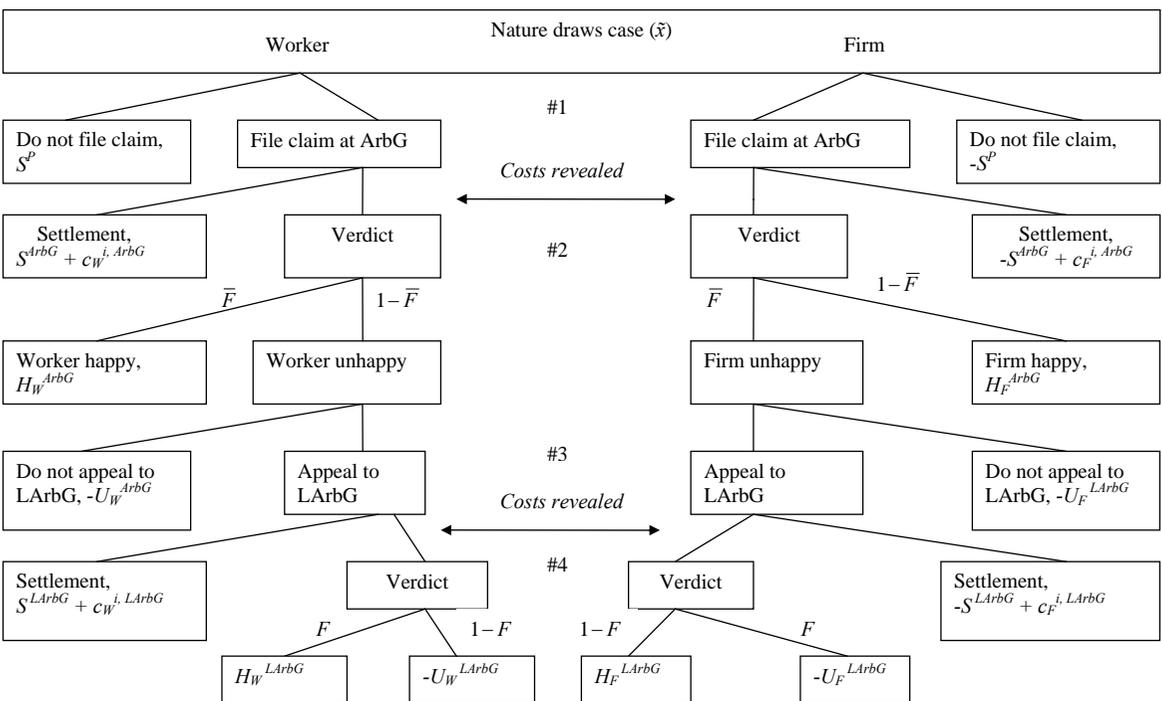


Figure 1: Worker and Firm Decisions on the Way to Higher-Level Labor Courts

insurance or provided for by trade unions for their members.¹⁵ What seems to be more relevant are opportunity costs to the worker and the firm. Depending on the issue it may take considerable time until a verdict is reached, which would reduce workers' opportunity to search for another job or engage in other activities. The exact amount of time, however, will, as a rule, be hard to gauge *ex ante*. At court both parties and the judge(s) meet in order to discuss the case first. During this process (*Güteverhandlung*) both the plaintiff and the defendant learn more about the legal situation, and it is only then that (most of) the uncertainty surrounding the opportunity cost is resolved. More formally, we assume that *ex ante*, the worker and the firm only know that those costs can either be high $c_j^{h,LABG}$ or low $c_j^{l,LABG}$, with $j = W, F$, where the superscripts stand for high and low costs at the higher-level labor court.

If the worker agreed on a settlement at the higher-level labor court, the payoff would be a fixed value S^{LABG} . Following the literature (Cooter and Rubinfeld (1989)), we abstract from transaction costs and assume that settlements take the simple form of a transfer from one party (usually the firm) to the other party.

Equivalently, the firm's decision will be influenced by H_F^{LABG} , its payoff associated with a favorable court ruling, by $-U_F^{LABG}$, the payoff when the court rules otherwise, and the cost associated with seeking a court decision, which can be either high ($c_F^{h,LABG}$) or low ($c_F^{l,LABG}$). The probabilities for a favorable or non-favorable court decision for the firm mirror the ones for the worker.

A settlement then requires that the expected joined surplus exceeds the expected surplus in case of a non-cooperative solution.

Stage #3 Here, the worker and the firm unilaterally decide whether to accept a lower-level court (ArbG) ruling or continue the legal process by filing an appeal to the higher-level labor court. Should the worker and the firm be content with the lower-level verdict, there is an associated fixed payoff $-U_W^{ArbG}$ and $-U_F^{ArbG}$, respectively. If either of the two parties appeals, however, there are again opportunity costs to consider, which can be either high or low ($c_j^{h,LABG}$ or $c_j^{l,LABG}$) with probabilities q_j^{LABG} and $1 - q_j^{LABG}$, respectively, for $j = W, F$. Similar to stage #4, the payoffs of relying on court action will be uncertain and depend on the future course of events.

¹⁵Frick and Schneider (1999) argue that, for instance, labor court fees play almost no role in the decision to seek legal remedies. Fees are very low, and no court fees accrue when *on-court* settlements are reached.

Stage #2 Similar to stage #4, we will observe a trial if the joined surplus of the non-cooperative game is larger than the value from the cooperative solution. As before, the value of the latter is zero because the *on-court* settlement payments S^{ArbG} are transfers from one party to the other and transactions costs are neglected. Because of the assumed absence of nomination bias at the lower-level labor court itself, the probability for the worker of winning, \bar{F} , depends only on the case \tilde{x} and the parameter a (see eq. (1)). Thus, if the case is decided by court verdict, the worker wins with probability $\bar{F}(\tilde{x})$ with payoff H_W^{ArbG} , and loses with probability $1 - \bar{F}(\tilde{x})$ with an uncertain payoff depending on the decisions to be taken at stages #3 and #4. In addition the worker has to carry the court costs $c_W^{i,ArbG}$ with $i = h, l$. Equivalently, the firm receives a payoff H_F^{ArbG} from a favorable court ruling with probability $1 - \bar{F}(\tilde{x})$ and a to-be-determined uncertain payoff otherwise with probability $\bar{F}(\tilde{x})$.

Stage #1 The worker and firm decide whether to file a claim to the lower-level labor court or to reach a *pre-court* settlement. It is probably safe to assume that some direct worker-firm interaction precedes court procedures, even though empirically it is workers rather than firms that bring labor disputes to lower-level courts.¹⁶ The firm faces a choice of approaching the worker to solve the dispute through a *pre-court* settlement or allowing the dispute to continue in front of the judges. The worker will have to determine whether to accept a settlement suggested by the firm or seek a lower-level court decision.¹⁷

As a consequence, worker-firm interaction at stage #1 can be modelled akin to stages #4 and #2: the dispute will go to trial if the joint surplus of the non-cooperative game exceeds the cooperative value based on a settlement. Absent transaction costs, the cooperative value is zero. Pursuing a filed claim until a settlement or verdict is reached entails costs. Ex ante, those costs can either be high $c_j^{h,ArbG}$ or low $c_j^{l,ArbG}$ for $j = W, F$ with probabilities q_j^{ArbG} and $1 - q_j^{ArbG}$, and the magnitude of those costs is revealed only once the claim is filed at the lower-level labor court. On the benefit side, the worker and firm are faced with uncertain payoffs depending on the later stages of the game.

Implications

Within this framework, a number of formal propositions regarding the impact of a change in nomination bias at higher-level labor courts on the behavior

¹⁶In our sample, more than 97 percent of claims were filed by workers. See Table 1.

¹⁷Note that in the absence of restrictions on payoffs or bargaining power the model will, in general, predict a positive number of cases being moved forward in the legal process.

of the worker and firm can be derived (see Appendix 2). In general, a change in the nomination bias will distort workers' and firms' probability of winning a case. As a consequence, with forward-looking behavior, we will observe a change in the behavior of both parties along all four stages of the legal process, including the decision to file a claim at the lower court level.

Signing the direction of the impact requires introducing a set of (albeit fairly plausible) restrictions. In particular, in addition to some technical conditions, we assume that workers' payoffs from court verdicts are higher than firms' and that settlements involve transfers from firms to the workers.¹⁸ This seems natural given the difference in financial positions of individual wage earners and firms and the fact that settlement payments do indeed, as a rule, flow from workers to firms (Falke et al. (1983) and Notter (2004)). Under these assumptions, we can determine the direction of the effect of a marginal increase in bias on aggregate court activity at stages #4, #3, and #2. Regarding stage #1, the direction of the impact remains an empirical question, but there is a testable theoretical implication regarding the compatibility of the reaction of firms and workers.

Hypothesis: *Under plausible conditions, an increase in nomination bias will: (H1) influence the number of claims filed by workers and firms at lower-level labor courts in the same way at stage #1, with the direction remaining undetermined; (H2) increase the number of lower-level labor court settlements at stage #2; (H3) increase the aggregate number of lower-level labor court verdicts appealed at stage #3; and (H4) increase the number of higher-level labor court settlements at stage #4.*

5 Empirical Results

5.1 The Data

Our data on the activity and characteristics of German labor court come from three principal sources. First, we use information on the activity of lower-level and higher-level labor courts provided by the *Bundesministerium für Wirtschaft und Arbeit*. The data includes information on the number of actual decisions and the structure of these decisions, that is, a breakdown into decision by verdict, settlement, and appeals, at lower-level labor courts

¹⁸In addition, on a more technical level, we also need (i) the distribution of case characteristics to be uniform, (ii) the expected value of court costs at higher-level courts to be equal across workers and firms, and (iii) firms' payoffs from a negative court verdict to exceed the payoff from a positive verdict (e.g., because "winning" for firms often means a reduction in payments due to workers). See the Appendix 1 for a formalization.

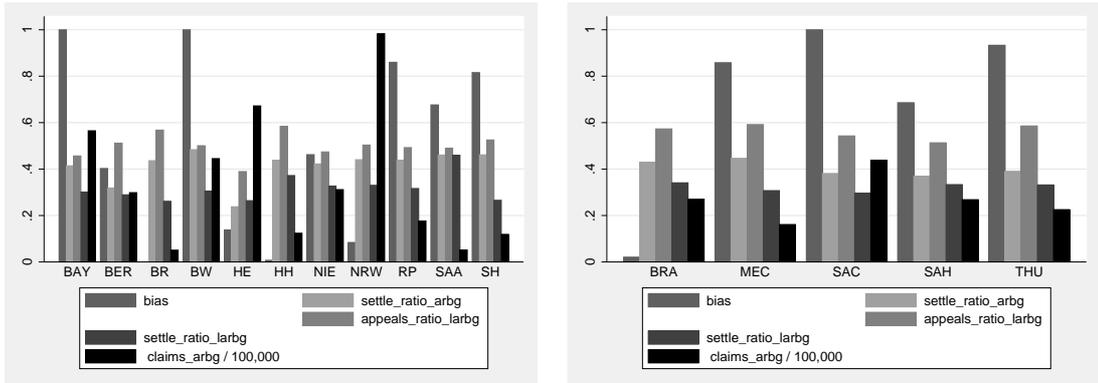


Figure 2: Indicators of Law Production and Nomination Bias (State Means – left panel for West and right panel for East states.)

(ArbG) and higher-level labor courts (LArbG) by state and year. A second type of data stems from a bi-annual publication by the German Association of Judges (*Richterbund*), providing details on personal characteristics of higher-level labor court judges, in particular the date of their nomination to the court, their age, gender, and academic degree by state and year. Third, we collected information on state governments, including the party affiliation of the Prime Minister and the Minister of Justice, and the distribution of parliamentary seats within coalition governments in a given year across states.¹⁹ Combining the year of nomination to a higher-level labor court with a measure of the dominating political color of the relevant state government allows us to identify the possible political nomination bias of a judge.

In addition, to capture the economic environment in which courts operate, we collect a number of structural and economic variables, some time-variant some constant over time, including population and real GDP growth, from the federal and state statistical offices and other sources. We will explain these variables in greater detail in Section 5.2. Details regarding all data used in the empirical section are available in Appendix 2. Table 1 provides summary statistics and short descriptions of key variables.

The data allow constructing an unbalanced panel, including 16 cross-sections (states) with about 190 bi-annual observations for the eleven West German states, starting 1972 and ending 2004, and about 25 bi-annual observations for the five East German states, starting in 1996 and ending in 2004. In general, the results below do not change significantly if we exclude the East German states from the regressions.²⁰

¹⁹We discuss alternative measure of the political color of government below.

²⁰Additional results available on request. We exclude East German states in the year

Table 1: Summary Statistics

Variable	Description	Mean	Min	Max	Std.err.
<i>filed_claims_workers</i>	Claims filed by workers at lower-level courts	32,551	3,207	136,385	28,052
<i>filed_claims_firms</i>	Claims filed by firms at lower-level courts	1,148	60	14,441	1,796
<i>claims_arbg</i>	Claims processed at lower-level courts	33,537	3,286	137,290	28,605
<i>dur_arbg</i>	Average duration for processing claim at lower-level courts (in years)	0.33	0.10	1.01	0.10
<i>settle_arbg</i>	Settlements at lower-level courts	13,442	1,130	73,075	12,562
<i>settle_ratio_arbg</i>	Ratio settlements lower-level courts/claims processed lower-level courts	0.41	0.15	0.60	0.08
<i>verdicts_arbg</i>	Verdicts at lower-level courts	2,911	281	12,168	12,562
<i>appeals_larbg</i>	Appeals to higher-level courts	1,441	129	6,661	1,246
<i>appeals_ratio_larbg</i>	Ratio appeals/verdicts at lower-level courts	0.51	0.23	0.89	0.10
<i>dur_larbg</i>	Average duration for processing an appeal at higher-level courts (in years)	0.52	0.04	1.57	0.22
<i>settle_larbg</i>	Settlements at higher-level courts	458	29	2,271	426
<i>settle_ratio_larbg</i>	Ratio settlements/appeals to higher-level courts	0.32	0.13	0.54	0.07
<i>bias</i>	Share of higher-level court judges nominated by conservative State governments	0.52	0	1	0.42
<i>doc</i>	Share of judges holding doctoral degree	0.32	0	0.8	0.19
<i>age</i>	Average age of judges	52.9	43.8	63.6	3.1
<i>gender</i>	Average share of female judges	0.12	0	0.5	0.12
<i>pop</i>	Population in 1,000	5,425	660	18,069	4,789
<i>ur</i>	Unemployment rate (unemployed/labor force)	0.087	0.004	0.241	0.055
<i>growth</i>	Real GDP growth	0.043	-0.036	0.258	0.045
<i>industry</i>	Industry share in total GDP	0.336	0.174	0.528	0.077

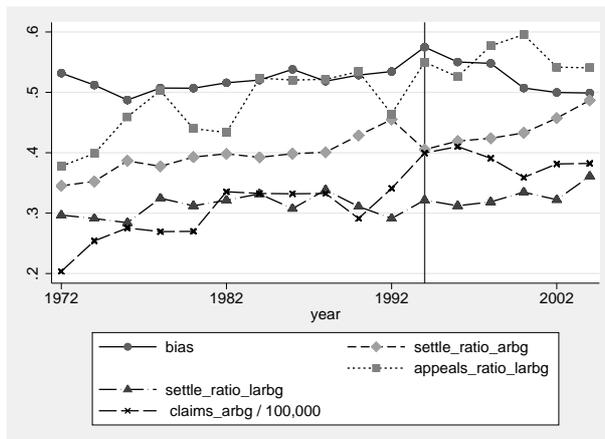


Figure 3: Indicators of Law Production and Nomination Bias (Sample Means)

Figures 2 and 3 illustrate that there is ample variance, across states and time, in our indicators of court production as well as in *bias*, our measure of nomination bias. The court production variables are constructed to allow testing the hypotheses introduced in the previous Section (see Table 1; we provide additional discussion below). The variable *bias* indicates the percentage share of judges in a given higher-level labor court that was nominated by a state government with a conservative (CDU or CSU) Prime Minister. If the nomination process does indeed bias the selection of judges to higher-level courts toward the governing party, we should expect *bias* to indicate the average conservative ideological leaning of the judges constituting the higher-level labor court.

The results in what follows are quite robust with regard to alternative measures of nomination bias. While the party affiliation of the Prime Minister gives the clearest indication of the dominating overall political leaning of a government, we also experimented with other measures of state governments' ideological direction, including the party affiliation of the Minister of Justice or weighted measures that take into account the share of parliamentary seats held by the parties involved in a coalition government. All yield broadly similar results.²¹ For the sake of clarity and because it is probably the most direct way to test the underlying hypothesis, we focus the presentation on the *bias* indicator as defined.

Our econometric approach stresses robustness. With modified Wald statistics indicating the possible presence of heteroscedastic errors, and first-degree

1994 mostly for reasons of GDP data reliability.

²¹Alternative results available on request.

autocorrelation in the residuals in some instances, we opted for using a feasible least square estimator to provide robust standard errors.²² Moreover, all models include a comprehensive set of cross-section and time fixed effects to capture any common period-specific factors and any time-invariant heterogeneity not picked up by other explanatory variables. Standard panel-based unit root tests indicate that the time series used in the econometric exercises are stationary; and the same holds for the residuals of the estimated models.²³

5.2 Regression Results

H1: Claims at Lower-Level Labor Courts

Theory suggests that, in the presence of nomination bias, a change in the relative number of judges appointed by conservative governments to higher-level labor courts will distort workers' and firms' probability of winning a case. Moreover, we should observe a change in (the log of) the overall number of annually filed claims by workers and firms at stage #1 ($\log(\text{filed_claims_workers})$ and $\log(\text{filed_claims_firms})$) to point in the same direction (*H1*), while the sign of the effect is an empirical question. Table 2 shows the results from a FGLS regression testing the hypothesis.

The estimated model includes a number of controls. First, we introduce a set of higher-level labor court characteristics which, in addition to the *bias* variable, could shape the actions of forward-looking workers or firms also at earlier stages of the legal process. This includes the share of judges holding a doctoral degree (*doc*), the average age of judges (*age*), and the average share of female judges (*gender*) in a particular year and state. While we not have a strong prior regarding the direction of their effect on filed claims, we note that previous empirical research has found the productivity of higher-level labor court judges to be increasing in their academic achievements and decreasing in age (see Schneider (2005)).

Second, we add demand-side determinants of lower-level labor court activity, which can be expected to influence the transaction and opportunity costs and payoffs from using labor courts. An indicator of economic size is $\log(\text{pop})$, the log of the state population in a given year. We expect states with larger populations to show more demand for labor court activity simply

²²We used the *xtgls* package with options *panels(heteroskedastic)* and *corr(psar)* implemented in Stata 9.1, with the latter assuming a panel specific AR(1) process in the errors.

²³A majority of tests included in the EViews 5.1 package rejects non-stationarity at conventional levels. Results were particularly clear-cut for the residuals.

because of size effects.²⁴ In addition, state real GDP growth may affect labor court activity. There are two opposing channels. On the one hand, workers may be more inclined to seek a confrontation with their employers in times of growth and high labor demand. On the other, the opportunity costs of taking legal action for employees and firms could be higher in times of more rapid growth. Depending on which channel dominates, real growth could be negatively or positively related to labor court demand. To allow for delayed impact, we include both contemporaneous and lagged GDP growth, *growth* and *growth*₋₁. The variables *industry* and *industry*₋₁ are time-variant indicators measuring the current and lagged share of the manufacturing sector in the economy. Because manufacturing is the area in the economy in which trade unions are strongest, and unions often lend support to court claims by unionized workers, including through transaction cost coverage, we would expect to see labor court activity to be higher in states and periods with a larger manufacturing sector. Finally, to allow the model to differentiate between a possible impact of the political leaning of the current government and the *bias* variable, we add *cdu_gov* and *fdp_gov*, which are dummy variables that take the value of one when conservative or market-oriented parties participate in a state government.

Here, as well in the remainder of this section, we present our results following a general-to-specific approach. First, we show the specification with the full set of controls. Then we proceed to discuss the model after a stepwise reduction of insignificant variables. Table 2 reveals that *bias* is highly significant as far as *log(filed_claims_workers)* is concerned: a higher share of conservative judges at the higher-level labor court decreases the number of claims filed by workers to the lower-level labor court. In line with hypothesis *H1*, the sign on *log(filed_claims_firms)* is negative as well, but the coefficient is not significant at conventional levels.²⁵ Evaluated at sample means, the elasticity of filed claims by workers with regard to *bias* is about -0.04 , implying that a one percent increase in *bias* reduces claims filed by about 4 basis points. The overall sum of claims processed at lower-level labor courts (*log(claims_arbg)*) is also negatively affected by *bias* with a coefficient in a similar range (results not reported).

Not all control variables show up significantly in the general specification.

²⁴We also experimented with models including the (log of) the workforce or the number of employees and unemployed. However, in general, these specifications are dominated by the set of variables described above.

²⁵The unconditional coefficient of correlations between *log(filed_claims_workers)* and *log(filed_claims_firms)* is about 0.75. Nevertheless, anecdotal evidence suggests that firms' filings are often driven by the ideosyncracies of German codetermination, for instance, the need to obtain a court injunction for hiring decisions blocked by the employees council.

Table 2: Claims At Lower-Level Labor Courts (*H1*)

	Dependent variable: <i>log(filed_claims_workers)</i>				Dependent variable: <i>log(filed_claims_firms)</i>			
	coef.	std.err.	coef.	std.err.	coef.	std.err.	coef.	std.err.
<i>bias</i>	-0.07	0.04*	-0.08	0.04**	-0.11	0.10	-0.06	0.10
<i>doc</i>	0.01	0.01*	0.01	0.00**	0.01	0.01		
<i>gender</i>	-0.08	0.08			-0.14	0.20		
<i>age</i>	-0.01	0.00***	-0.01	0.00***	-0.01	0.00		
<i>cdu_gov</i>	-0.00	0.01			0.02	0.04		
<i>fdp_gov</i>	0.00	0.01			0.05	0.04		
<i>log(pop)</i>	0.91	0.12***	0.97	0.12***	6.17	0.35***	5.06	0.40***
<i>growth</i>	-0.04	0.32			-0.54	0.81		
<i>growth₋₁</i>	0.55	0.16***	0.54	0.14***	0.49	0.35		
<i>industry</i>	0.46	0.70			6.83	1.71***	5.06	1.10***
<i>industry₋₁</i>	1.26	0.68*	1.44	0.49***	-2.59	1.61		
Time and state fix. eff.	Yes		Yes		Yes		Yes	
Number of obs.	198		199		198		211	

Note: Estimated with feasible generalized least squares allowing for heteroscedasticity of errors across panels and AR(1) autocorrelation of errors within panels.

Observe, for instance, that the government variables remain without significant impact, which indicates that it is indeed *bias* and not a current state governments' political leaning that shapes court activity at stage #1 of the legal process. Also note that other higher-level labor court characteristics than *bias* play some role for the number of claims filed by workers, which could be interpreted as a further sign of their forward-lookingness.²⁶ Significant demand-side control variables are the population measure and the lagged share of industry (both with the expected sign), as well as lagged GDP growth, which enters positively.

Overall, these results broadly support our hypotheses. We conclude that the vast majority of cases entering the legal process is significantly influenced by changes in *bias*, suggesting that participants (in particular, at this stage, workers) are forward-looking and take into account the consequences of a more conservative composition of labor courts further up the legal path.

²⁶The sign pattern is harder to interpret. One rationale may be that, as noted above, higher-level courts have been found to increase productivity as *doc* increases and *age* decreases. This is not necessarily true for all measures of higher court activity, however. See below.

Table 3: Settlements At Lower-Level Labor Courts ($H2$)

	Dependent variable: $\log(\text{settle_ratio_arbg})$				Dependent variable: $\log(\text{settle_arbg})$			
	coef.	std.err.	coef.	std.err.	coef.	std.err.	coef.	std.err.
<i>bias</i>	0.06	0.03**	0.07	0.03**	0.06	0.03**	0.05	0.02**
<i>doc</i>	-0.00	0.00			0.00	0.00		
<i>gender</i>	0.10	0.06*	0.10	0.06*	0.07	0.06	0.10	0.06*
<i>age</i>	0.00	0.00			-0.00	0.00		
$\log(\text{claims_arbg})$					0.72	0.04***	0.72	0.04***
<i>cdu_gov</i>	-0.00	0.01			-0.00	0.01		
<i>fdp_gov</i>	-0.02	0.01*			-0.01	0.00*	-0.01	0.01**
$\log(\text{pop})$	-0.35	0.10***	-0.37	0.10***	-0.08	0.10		
<i>growth</i>	0.09	0.20			0.27	0.23		
<i>growth</i> ₋₁	0.04	0.09			0.28	0.10***	0.31	0.10***
<i>industry</i>	-1.42	0.49***	-1.16	0.30***	-1.72	0.46***	-1.39	0.40***
<i>industry</i> ₋₁	1.03	0.45**	0.67	0.34**	1.53	0.46***	1.21	0.39***
Time and state fix. eff.	Yes				Yes			
Number of obs.	198		199		198		198	

Note: Estimated with feasible generalized least squares allowing for heteroscedasticity of errors across panels and AR(1) autocorrelation of errors within panels.

H2: Share of Settlements At Lower-Level Labor Courts

Hypothesis $H2$ suggests that a change in the relative number of higher-level judges nominated by conservative state governments will significantly increase the number of *on-court* settlements at stage #2. Table 3 presents two alternative models. The first regression explains the ratio of settlements to the overall number of claims processed at the lower-level labor court, settle_ratio_arbg , by the set of demand-side variables introduced in Table 2 as well as *bias*, implicitly assuming a unit-coefficient for $\log(\text{claims_arbg})$. The second model explains the log of the level of settlements with $\log(\text{claims_arbg})$ included on the right-hand-side of the equation.

Table 3 shows a significant positive impact of *bias* in both specifications, lending further support to the hypothesis that nomination bias influences German labor court activity and confirming the sign predicted by theory. Evaluated at sample means, the elasticity of settlements with regard to *bias* is about 0.03 or 0.04 depending on the specification. Among the other higher-level court characteristics, only gender composition seems to matter at stage #2, albeit not in all specifications and at low significance levels. The outcome for the demand-side variables is comparable to Table 2, except for the

Table 4: Share of Lower-Level Court Verdicts Appealed ($H3$)

	Dependent variable: $\log(\text{appeals_ratio_larbg})$				Dependent variable: $\log(\text{appeals_larbg})$			
	coef.	std.err.	coef.	std.err.	coef.	std.err.	coef.	std.err.
bias	0.09	0.05*	0.10	0.03***	0.15	0.05***	0.15	0.05***
$\log(\text{verdicts_arbg})$					0.57	0.07***	0.61	0.07***
doc	-0.02	0.00***	-0.02	0.00***	-0.01	0.00**	-0.01	0.00**
gender	-0.07	0.12			-0.16	0.11		
age	-0.01	0.00**	-0.01	0.00**	-0.01	0.00***	-0.01	0.00***
cdu_gov	0.01	0.02			-0.00	0.02		
fdp_gov	0.02	0.02			0.03	0.02*	0.03	0.01**
$\log(\text{pop})$	0.05	0.12			0.36	0.15**	0.40	0.13***
growth	0.15	0.50			0.10	0.50		
growth_{-1}	-0.46	0.21**	-0.40	0.17**	-0.30	0.21		
industry	0.37	0.90			0.35	0.92		
industry_{-1}	-1.25	0.95	-0.96	0.52*	-1.51*	0.92	-1.56	0.54***
Time and state fix. eff.	Yes				Yes			
Number of obs.	198		199		198		198	

Note: Estimated with feasible generalized least squares allowing for heteroscedasticity of errors across panels and AR(1) autocorrelation of errors within panels.

negative contemporaneous effect of industry and the marginally significant positive effect of fdp_gov .

H3: Share of Lower-Level Court Verdicts Appealed

According to Hypothesis $H3$, a change in bias should trigger a positive change in the number of of lower-level court verdicts that is appealed at stage #3. As before, we present two models, one looking at the share of verdicts appealed ($\log(\text{appeals_ratio_larbg})$) and one at the overall number of appeals ($\log(\text{appeals_larbg})$) on the left-hand-side, with $\log(\text{verdicts_arbg})$ as an additional right-hand-side variable. Both include the now familiar set of controls.

Again, the results do not allow rejecting the hypothesis that nomination bias influences the behavior of workers and firms (Table 4). In both models, bias has the significant positive impact on appeals predicted by $H3$, implying that more lower-level court decisions are appealed as the share of higher-level judges nominated by conservative state governments increases. Evaluated at sample means, the elasticity of appeals of lower-level court decisions with regard to bias is between 0.05 and 0.08 depending on the specification. As to the control variables, it is interesting to note that less appeals tend to

Table 5: Share of Settlements at Higher-Level Courts (H_4)

	Dependent variable: $\log(settle_ratio_larbg)$				Dependent variable: $\log(settle_larbg)$			
	coef.	std.err.	coef.	std.err.	coef.	std.err.	coef.	std.err.
$bias$	0.15	0.05***	0.20	0.04***	0.12	0.04***	0.12	0.04***
$\log(appeals_larbg)$					1.12	0.05***	1.13	0.05***
doc	0.02	0.01***	0.01	0.00**	0.01	0.01***	0.02	0.00***
$gender$	-0.23	0.13*	-0.50	0.11***	-0.21	0.13*	-0.31	0.12***
age	-0.02	0.00***	-0.02	0.00***	-0.02	0.00***	-0.01	0.00***
cdu_gov	-0.02	0.02			-0.02	0.02		
fdp_gov	0.02	0.02			0.02	0.02		
$\log(pop)$	0.15	0.20			0.05	0.20		
$growth$	-0.36	0.53			-0.27	0.52		
$growth_{-1}$	-0.01	0.24			0.00	0.24		
$industry$	-0.31	1.06			-0.24	1.05		
$industry_{-1}$	0.73	1.07			1.01	1.06	1.38	0.51***
Time and state fix. eff.	Yes				Yes			
Number of obs.	198		212		198		200	

Note: Estimated with feasible generalized least squares allowing for heteroscedasticity of errors across panels and AR(1) autocorrelation of errors within panels.

be filed if the higher-level labor court judges become more experienced in terms of age and academic credentials, perhaps because they are less likely to overturn lower-level court decisions. With the exception of the industry share variable, which becomes significant in the reduced model of the first specification, none of the other controls survives in both specifications.

H4: Share of Settlements at Higher-Level Courts

Finally, Hypothesis H_4 argues that, if the presence of ideologically biased judges at higher-level labor courts distort workers' and firms' probability of winning a case, we should observe an increase in the higher-level settlements at stage #4. Table 5 reports the results of the now familiar specifications, with the share of settlements in overall higher-level court production ($settle_ratio_larbg$) and the log of higher-level settlements ($\log(settle_larbg)$) as the dependent variables. In the latter case, we include the log of overall appeals to the higher-level labor court ($\log(appeals_larbg)$) on the right-hand-side.

The results in Table 5 show the predicted significantly positive sign for $bias$. Evaluated at sample means, the elasticity of higher-level labor court

settlements with regard to *bias* is between 0.06 and 0.10. With respect to the controls, only the personal characteristics of the judges enter significantly in both specifications. A higher share of judges with a doctoral degree increases the share of settlements, but the share of female judges and the average age variable have a significant negative impact.

6 Nomination Bias, Unemployment, and Employment

Finally, we discuss a simple extension of the empirical model, to explore the effect of court activity on unemployment. To that end, we relate the log of the unemployment rate ($\log(ur)$) to the lagged filed claims by workers to the lower-level labor court ($\log(\text{filed_claims_workers})$) and, in an alternative specification, to the lagged overall number of claims processed at lower-level labor courts ($\log(\text{claims_arbg})$).²⁷ In both cases, we add a set of additional controls. In particular, we include *growth*, *growth*₋₁, *industry*, *industry*₋₁, as well as a full set fixed time and cross-section effects to control for any remaining time-invariant cross-section and time-variant common effects. Note that the time fixed effects will not only capture any co-movement in real activity (e.g., business cycle, exchange rate, or oil price), they will also encapsulate any change in the federal regulatory and institutional environment, including labor and product market regulation, tax policies, or changes in the wage-bargaining framework.

We use instruments to control for the endogeneity of labor court activity with regard to economic activity and unemployment. More specifically, $\log(\text{filed_claims_workers})_{-1}$ and $\log(\text{claims_arbg})_{-1}$ are the lagged predicted values from a regression of the filed claims by workers or overall claims processed at lower-level labor courts, respectively, on *bias*, the set of other higher-level labor court characteristics (*doc*, *gender*, and *age*), the log of the population, and a constant. The instruments are a straightforward extension of our earlier investigation of court activity.

Table 6 presents the results for both variants of the model, first with the full set of controls and then after a stepwise reduction of insignificant variables. We find that an exogenous increase in labor court activity robustly and significantly increases unemployment. This holds for the number of lower-level labor court cases filed by workers as well as the number of overall claims processed by lower-level labor courts and across all specifications. The point estimates for the effect of court activity range between 0.14 and

²⁷The unemployment rate *ur* is defined as the ratio of unemployed to the labor force.

Table 6: Explaining Unemployment with Labor Court Activity

	Dependent variable: $\log(ur)$							
	coef.	std.err.	coef.	std.err.	coef.	std.err.	coef.	std.err.
$\log(\text{filed_claims_workers})_{-1}$	0.14	0.05***	0.15	0.06***				
$\log(\text{claims_arbg})_{-1}$					0.17	0.06***	0.18	0.06***
$growth$	-0.97	0.36***	-1.27	0.30***	-1.02	0.35***	-1.23	0.30***
$growth_{-1}$	-0.10	0.14			-0.20	0.14	-0.25	0.14*
$industry$	-1.17	0.82			-1.01	0.83		
$industry_{-1}$	-2.04	0.74***	-2.95	0.47***	-2.13	0.79***	-2.78	0.53***
Time and state fix. eff.	Yes				Yes			
Number of obs.	197		197		198		198	

Note: Estimated with feasible generalized least squares allowing for heteroscedasticity of errors across panels and AR(1) autocorrelation of errors within panels. See text for a discussion of instruments.

0.18, all of which are statistically significant at the 1-percent level. The effect seems highly relevant from an economic point of view: a 1 percent increase of claims filed or processed at lower-level labor courts would increase unemployment by about 1/6 percent. As to the controls, there are indications that a higher growth rate reduces unemployment and that a higher share of industry coincides with lower unemployment rates – both results are fairly plausible. In addition, the included state and time fixed effects tend to be highly significant across models (results not shown).

A number of reasons suggests that these results are robust in the sense that causality indeed runs from labor court activity to unemployment and not the other way around. Note, first, that *bias*, the one instrument most likely to suffer from reversed causality, is constructed to capture the average nomination bias of higher-level labor court judges nominated at different periods. By definition, this will limit the impact of a contemporaneous change in unemployment on the variable. Second, theoretically, any feedback mechanism between unemployment and *bias* would have to be a conditional one, depending, among other things, on voter behavior and the party composition of government.²⁸ Third, evidence on policy-oriented voting is scarce and

²⁸Assume, for a moment, that voters were motivated by economic concerns, policy-oriented, and for some reason considered left-wing parties better at dealing with unemployment (Lewis-Beck and Stegmaier (2000)). Then, if voters were forward-looking, an exogenous increase in unemployment may lead to more left-wing votes. If, on the other hand, voters acted retrospectively, we may observe fewer votes for left-wing governments in periods of high unemployment. As a result, there is little reason to expect a direct and unconditional link between unemployment, government party composition, and, ultimately,

not overwhelming. For instance, Powell and Whitten (1993) conclude from international data that voters only retrospectively penalize left-wing parties for high unemployment rates when there is clarity of responsibility between government action and economic outcomes – a condition they do not see as fulfilled in the German case.²⁹

Finally, there is little or no evidence of a direct link between unemployment rate and our measure of the nomination bias of higher-level labor courts. Standard Granger causality tests suggest that *bias* is independent from labor market developments (see Appendix 3). Indeed, the only at least marginally significant Granger relation indicates that causality runs from *bias* to unemployment. We found similar result for the relation (or rather the absence thereof) between the ideological orientation of *Länder* governments and labor market performance. In addition, attempts to significantly explain *bias* in a multivariate framework employing *cdu_gov*, *fdp_gov*, and a full set of economic variables, including the current and lagged unemployment rate and real GDP growth, proved unsuccessful. The same holds for the attempt to explain *cdu_gov* or *fdp_gov* by economic developments.³⁰

The unemployment effects of labor court activity have a potentially important policy implication. The empirical evidence indicates that labor courts indeed play some role in explaining the occurrence of unemployment across states and time, even after controlling for the endogeneity of court production. Because German labor courts are said to influence labor market outcomes mainly through their influence on the effective level of regulation (and, thus, the ability of firms to adjust wages and employment), this suggests that there may be gains from restraining labor court activity.

7 Conclusions

The possibility of nomination bias in German labor courts – that is, a preference for nominating judges with political leanings close to the incumbent government – is interesting from at least two perspectives. Normatively, the application of law by judges should be independent from the appointing authority. In addition, from an economic point of view, the presence of nomination bias would give support to the argument that an ideology-driven increase in labor market regulation starting in the 1970s contributed to a

bias.

²⁹Kiewiet (1981) suggests there is no impact of personal unemployment experience on US-voting patterns, and that higher national unemployment caused Democratic votes to decline in only 5 out of 12 Presidential and Congressional elections in his sample.

³⁰All additional results available on request.

decline in the discretion of firms to more flexibly adjust their wage bill and labor force to changing economic environments, with negative consequences for employment.

To better understand how the presence of a nomination bias may interfere with the legal process, we develop a simple model describing the behavior of workers and firms before and during legal action. An important implication of the model is that forward-looking workers and firms will react to the possible presence of nomination bias at the higher court level even at the early stages of the process. For example, before taking a case to a lower-level labor court, both sides will compare the certain payoff of a pre-court settlement with the uncertain expected outcome of a legal dispute that may take them further up the legal path all the way to a higher-level court. If there is nomination bias at the higher court level, any change in its direction would affect the expected payoffs and, thus, their decision to actually file the case. Thus, empirically one should be able to trace an effect of nomination bias in the number of filed claims by workers and firms. By the same token, the impact of a possible nomination bias should be detectable in the number of lower-level court settlements, appeals to lower-level court decisions, and settlements in front of the higher-level court.

Taking these hypotheses to the data, we construct a new panel data set including information on German labor court activity, court characteristics, and the ideological leaning of the state governments nominating higher-level court judges between the early 1970s and 2004. We find, among other things, that court activity is driven by structural and economic variables linked to the demand for contract protection by employees, as well as personal and professional characteristics of the judges. In addition, there is strong evidence of nomination bias. More specifically, the political leaning of the appointing state government affects court production at higher-level labor courts with significant repercussions at the lower level of the judiciary along the lines suggested by the theoretical model.

To assess the link between labor courts and the labor market, we provide a simple extension of the empirical model explaining court activity. The basic idea is to make use of the measure of nomination bias of higher-level labor courts as an instrument, among others, to control for the endogeneity of court activity with regard to unemployment. The results suggest that an exogenous increase in labor court activity has a positive and economically and statistically significant impact on German unemployment.

The results have potentially important policy implications. From a normative perspective, the evidence pointing to the existence of a nomination bias is worrying. It suggests that the existing appointment process, with its heavy involvement of the executive and legislative branches, does not

shield the judiciary from politization – on the contrary. Among the possible solutions would be a more independent nomination process, for instance, based on more intensive peer review or involving independent third parties. Shifting focus to the factor market repercussions of labor court activity, our findings support the view that German courts are an important part of labor market regulation, with negative consequences for the unemployment rate. This suggests that restricting the leeway of labor courts in interpreting and determining existing law – for instance, by imposing more specific legislative guidelines for court decisions aimed at lowering effective employment protection – may have advantages.

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Appendix 1: Model

Settlements

Bargaining over settlement payments implies that the cooperative surplus (CS) is shared between the firm and the worker, with the worker receiving share λ and the firm share $1 - \lambda$. CS is the difference between the cooperative value of the game (which is zero, as settlements are pure transfers) and the non-cooperative value of the game, defined as the sum of the (expected) threat values for the worker and the firm with $E[V_W]$ and $E[V_F]$, respectively. Thus, we have:

$$CS = 0 - (E[V_W] + E[V_F]). \quad (2)$$

The settlement payment for each party will be the threat value plus the share of the CS :

$$S_W = E[V_W] + \lambda CS \quad (3)$$

$$S_F = E[V_F] + (1 - \lambda)CS \quad (4)$$

for the worker and the firm, respectively.

Decisions

Decision #4

The worker agrees to a settlement if

$$F(\tilde{x})H_W^{LArbG} - (1 - F(\tilde{x}))U_W^{LArbG} - c_W^{i,LArbG} < S_W^{LArbG}, \quad (5)$$

with $i = h, l$. The left-hand side of (5) depicts the expected payoffs of a trial net of trial costs, the right-hand side the settlement transfers from the firm to the worker. $F(\tilde{x})$ is the probability that a case \tilde{x} will be judged in favor of the worker, H_W^{LArbG} is the worker's payoff associated with a court ruling in his favor, and $-U_W^{LArbG}$ is the worker's payoff when the court rules otherwise. Costs can either be high $c_j^{h,LArbG}$ or low $c_j^{l,LArbG}$, with $j = W, F$. Equivalently, the firm will opt to seek a settlement before the higher-level labor court if

$$(1 - F(\tilde{x}))H_F^{LArbG} - F(\tilde{x})U_F^{LArbG} - c_F^{i,LArbG} < S_F^{LArbG}, \quad (6)$$

where the interpretation of all terms is symmetrical to the case of the worker.

A settlement requires that inequalities (5) and (6) hold simultaneously.

Adding both left-hand and right-hand sides of (5) and (6) we have

$$\begin{aligned}
& F(\tilde{x})H_W^{LArbG} - (1 - F(\tilde{x}))U_W^{LArbG} - c_W^{i,LArbG} \\
& + (1 - F(\tilde{x}))H_F^{LArbG} - F(\tilde{x})U_F^{LArbG} - c_F^{i,LArbG} < 0.
\end{aligned} \tag{7}$$

Proposition 1 *If $H_W^{LArbG} + U_W^{LArbG} > H_F^{LArbG} + U_F^{LArbG}$, an increase in bias θ increases settlements.*

Proof 1 *Let us denote with \hat{x} the case of indifference for condition (7). Under the stated condition, the left-hand side is increasing in \tilde{x} . Thus, all cases in the interval $(\hat{x}, a]$ are decided by a verdict, while all cases in $[-a, \hat{x})$ are settled. $F_\theta \leq 0$ implies that a marginal increase in bias moves the case of indifference to $\hat{x}' > \hat{x}$ leading to more cases settled.*

Decision #3

The decision to appeal is taken separately by workers and firms. The worker will appeal if

$$Max[E[V_W^{LArbG}], E[T_W^{LArbG}]] > -U_W^{ArbG},$$

that is, if the maximum of the expected values of the two available options (i.e., settlement or verdict) is larger than the certain payoff from not appealing. Analogously, the firm will appeal if

$$Max[E[V_F^{LArbG}], E[T_F^{LArbG}]] > -U_F^{ArbG}.$$

The expected values are:

$$\begin{aligned}
E[V_W^{LArbG}] &= F(\tilde{x})H_W^{LArbG} - (1 - F(\tilde{x}))U_W^{LArbG} - q_W^{LArbG}c_W^{h,LArbG} \\
&\quad - (1 - q_W^{LArbG})c_W^{l,LArbG} \\
E[T_W^{LArbG}] &= E[V_W^{LArbG}] + \lambda(0 - (E[V_W^{LArbG}] + E[V_F^{LArbG}])) \\
E[V_F^{LArbG}] &= F(\tilde{x})H_F^{LArbG} - (1 - F(\tilde{x}))U_F^{LArbG} - q_F^{LArbG}c_F^{h,LArbG} \\
&\quad - (1 - q_F^{LArbG})c_F^{l,LArbG} \\
E[T_F^{LArbG}] &= E[V_F^{LArbG}] + \lambda(0 - (E[V_W^{LArbG}] + E[V_F^{LArbG}])).
\end{aligned}$$

This leaves us with four cases, two of which we can eliminate on consistency grounds. Assume the worker's maximum expected payoff occurs under a verdict and the firm's under a settlement: $E[V_W^{LArbG}] > E[T_W^{LArbG}]$ and $E[V_F^{LArbG}] < E[T_F^{LArbG}]$. Substituting for the expected values, we find $0 < -\lambda CS$ and $0 > -\lambda CS$, respectively. Obviously, this is a contradiction. A similar contradiction results, when the worker's maximum expected payoff

occurs under a settlement and the firm's under a verdict. Thus, there remain two relevant cases where both worker and firm expect either a settlement or verdict to provide maximum payoffs.

$$\text{Case 1: } E[V_W^{LArbG}] < E[T_W^{LArbG}] \text{ and } E[V_F^{LArbG}] < E[T_F^{LArbG}]$$

Proposition 2 *With a uniform distribution of cases and $U_F^{ArbG} < U_W^{ArbG}$, a marginal increase in bias will lead to more appeals.*

Proof 2 *We know that the worker will appeal if $E[V_W^{LArbG}] + \lambda(0 - (E[V_W^{LArbG}] + E[V_F^{LArbG}])) > -U_W^{ArbG}$ while the firm will appeal if $E[V_F^{LArbG}] + \lambda(0 - (E[V_W^{LArbG}] + E[V_F^{LArbG}])) > -U_F^{ArbG}$. As settlement payments are pure transfers we may write for the firm's decision $E[V_W^{LArbG}] + \lambda(0 - (E[V_W^{LArbG}] + E[V_F^{LArbG}])) < U_F^{ArbG}$. Then, because the left-hand sides of both inequalities are identical, the cases for which worker and firm are indifferent depend on U_F^{ArbG} and U_W^{ArbG} , respectively. Given that $F_\theta = 1/2(\tilde{x}^2 - a^2) \leq 0$ and quadratic in \tilde{x} , the marginal effect for firms will be larger than for the workers if $U_F^{ArbG} < U_W^{ArbG}$ given a uniform distribution of cases.*

$$\text{Case 2: } E[V_W^{LArbG}] > E[T_W^{LArbG}] \text{ and } E[V_F^{LArbG}] > E[T_F^{LArbG}]$$

Proposition 3 *Assuming a uniform distribution of cases \tilde{x} , $H_W^{LArbG} + U_W^{LArbG} > H_F^{LArbG} + U_F^{LArbG}$, $U_W^{LArbG} = U_W^{ArbG}$, and symmetrical expected court costs, $q_W^{LArbG} c_W^{h,LArbG} + (1 - q_W^{LArbG}) c_W^{l,LArbG} = q_F^{LArbG} c_F^{h,LArbG} + (1 - q_F^{LArbG}) c_F^{l,LArbG}$, the marginal increase in bias will lead to more appeals to the higher labor court if U_F^{LArbG} is in a critical range $\bar{U}_F^{LArbG} > U_F^{LArbG} > \underline{U}_F^{LArbG} > H_F^{LArbG}$.*

Proof 3 *Denote with \hat{x}_W and \hat{x}_F the cases of indifference for the worker and for the firm, respectively. Cases to the right of \hat{x}_W are appealed by the worker, cases to the left of \hat{x}_F are appealed by the firm. As $F_\theta \leq 0$, the marginal effect on the behavior of the worker is negative and the marginal effect on firms is positive. Under a uniform distribution of cases, a positive net-effect requires $|\hat{x}_F - \hat{x}'_F| > |\hat{x}_W - \hat{x}'_W|$. Because F_θ is quadratic in \tilde{x} , this holds if U_F^{LArbG} is not too high but sufficiently larger than H_F^{LArbG} .*

Decision #2

The two parties will opt for a settlement if the joined surplus from a verdict is smaller than the cooperative solution of the game:

$$\begin{aligned} & \bar{F}(\tilde{x}) H_W^{ArbG} + (1 - \bar{F}(\tilde{x})) \text{Max}[-U_W^{ArbG}, E[T_W^{LArbG}], E[V_W^{LArbG}]] - c_W^{i,ArbG} + \\ & (1 - \bar{F}(\tilde{x})) H_F^{ArbG} + \bar{F}(\tilde{x}) \text{Max}[-U_F^{ArbG}, E[T_F^{LArbG}], E[V_F^{LArbG}]] - c_F^{i,ArbG} < 0, \end{aligned} \quad (8)$$

Table 7: Stage #2 Effects of *bias*

		a	b	c
		$-U_F^{ArbG}$	$E[T_F^{LArbG}]$	$E[V_F^{LArbG}]$
1	$-U_W^{ArbG}$	0	≤ 0	≤ 0
2	$E[T_W^{LArbG}]$	≥ 0	d	x
3	$E[V_W^{LArbG}]$	≥ 0	x	d

d: ambiguous without imposition of further restrictions; x: does not apply

with $i = h, l$. The left-hand side of (8) consists of the sum of the expected payoffs for the worker and the firm from having a trial net of the trial costs. A worker winning the trial at the lower-level labor court receives H_W^{ArbG} , a winning firm receives H_F^{ArbG} . For both the payoffs from a defeat depend on how the case proceeds. First, if the decision is not appealed, the payoff is $-U_j^{ArbG}$ with $j = W, F$. Second, an appeal could result in either a settlement or a trial at the higher labor court. As a result, we have to distinguish nine cases for the impact of marginal increases in bias summarized in Table 7.

Case 1a Bias does not enter the decision of firms and workers. Thus, the marginal effect is zero.

Case 1b Here, as well as in the other remaining cases, the marginal effect of a higher bias enters through the expected payoffs in case of a defeat. The payoffs are weighted with the probabilities of losing at the lower-level labor court: $(1 - \bar{F})$ for the worker and \bar{F} for the firm. The product is a nonlinear relationship in \tilde{x} entering on the left-hand side of (8). To simplify, consider small variations of the nomination bias around the neutral reference value $\theta = 0$. Around the reference value, the nonlinearity will be quadratic. Depending on the case, there will be no, one or two indifference points, \hat{x}^h and \hat{x}^l , with $\hat{x}^h > \hat{x}^l$. Whether the quadratic term is u- or hump-shaped depends on the case under consideration.

For *Case 1b*, the left-hand side of (8) is hump-shaped. Thus, cases \tilde{x} close to the borders of the interval $[-a, a]$ get settled. A marginal increase in bias increases the left-hand side of (8) for all \tilde{x} . Consequently, settlements remain unchanged or decrease.

Case 2a The left-hand side of (8) is hump-shaped, but in this case it shifts down as bias increases. Thus, the effect on settlements is positive or zero.

Case 1c The left-hand side of (8) is hump-shaped, and the marginal effect positive. Consequently, a marginal increase in bias reduces settlements or leaves them unchanged.

Case 3a The right-hand side of (8) is u-shaped, and a marginal increase in bias shifts it down. Thus, the effect on settlements is positive or zero.

Case 2b We rewrite (8) such that

$$\begin{aligned} (1 - 2\bar{F}(\tilde{x}))E[T_W^{LArbG}] + \bar{F}(\tilde{x})H_W^{ArbG} - c_W^{i,ArbG} + \\ (1 - \bar{F}(\tilde{x}))H_F^{ArbG} - c_F^{i,ArbG} < 0. \end{aligned} \quad (9)$$

The left-hand side is hump-shaped. The marginal effect of bias depends on the case \tilde{x} as the term $(1 - 2\bar{F})$ enters. For cases closer to the left boundary of the interval for \tilde{x} the left-hand side of (9) increases and vice versa. Thus, fewer or more settlements may occur depending on the case, making the aggregate effect ambiguous.

Case 3c The left-hand side of (8) is hump-shaped. The marginal impact of a change in bias depends on the nature of the case \tilde{x} , resulting in an ambiguous aggregate effect.

Cases 2c and 3b Applying arguments akin to stage #2, we can exclude those cases.

Proposition 4 *If settlements involve transfers from firms to workers and $U_W^{ArbG} > E[V_F^{ArbG}]$, we can exclude cases 1b and 1c, where the impact of a marginal increase in bias on the number of settlements is always negative.*

Proof 4 *To exclude Case 1b, it must hold that $-U_W^{ArbG} > E[T_W^{LArbG}]$ and $-U_F^{ArbG} < E[T_F^{LArbG}]$. Because settlement payments are pure transfers, the two inequalities may be written as $-U_W^{ArbG} + U_F^{ArbG} > 2E[T_W^{LArbG}]$. Under the assumptions stated above, this inequality will never hold. To exclude Case 1c, the inequalities $-U_W^{ArbG} > E[T_W^{LArbG}]$ and $E[V_F^{ArbG}] > E[T_F^{LArbG}]$ must hold. After rearranging we get that $0 < E[V_F^{ArbG}] - U_W^{ArbG}$. Under the stated assumptions, this never holds.*

Decision #1

Finally we look at the decisions of the worker and the firm to file a claim at the lower-level labor court or settle the case *pre-court*. The logic is similar

to the settlement considerations at stages #2 and #4. We can derive a symmetry result regarding the individual reaction of the worker and firm to an increase in bias.

Proposition 5 *The sign of the marginal effect of a change in nomination bias is identical for the worker and firm.*

Proof 5 Write $E[C_W] = \text{Max}[E[T_W^{ArbG}], E[V_W^{ArbG}], E[T_W^{LArbG}], E[V_W^{LArbG}]$ and $E[C_F] = \text{Max}[E[T_F^{ArbG}], E[V_F^{ArbG}], E[T_F^{LArbG}], E[V_F^{LArbG}]$. The worker and the firm will not settle pre-court if $E[C_W] > E[C_W] + (0 - \lambda(E[C_W] + E[C_F]))$ and $E[C_F] > E[C_F] + (0 - (1 - \lambda)(E[C_W] + E[C_F]))$, respectively, where the right-hand sides are the pre-court settlement values. After elimination of the left-hand terms and division by λ and $1 - \lambda$, respectively, one sees immediately that both inequalities are identical. Thus, the sign of the marginal effects of an increase in bias is the same.

The discussion of the overall effect is somewhat more involved. Note that we will observe a settlement only if the joined surplus of the non-cooperative solution to the game is smaller than zero:

$$\begin{aligned} & \text{Max}[E[T_W^{ArbG}], E[V_W^{ArbG}], E[T_W^{LArbG}], E[V_W^{LArbG}]] \\ & + \text{Max}[E[T_F^{ArbG}], E[V_F^{ArbG}], E[T_F^{LArbG}], E[V_F^{LArbG}]] < 0, \end{aligned}$$

with $\text{Max}[\cdot]$ denoting the value of a claim for the worker and the firm, respectively. Not reaching a settlement at the *pre-court* stage leaves the two parties with uncertain payoffs. This uncertainty results from unknown court costs and the open outcome of the legal process, which could end by *on-court* settlements or decisions at the lower or higher court levels. As a consequence, the marginal effect of nomination bias disintegrates into 16 different cases. In addition, the payoffs of a defeated party depend on its expectations for higher-level labor court outcomes, adding additional subcases. There is, as far as we can see, no general and plausible set of conditions that would allow us to sign the overall effect of a marginal increase in bias on the propensity to enter a claim into the legal process.

Appendix 2: Data Sources

The following list gives a description of the variables and data sources. Note, that all data used is biannual due to the fact that the data source for our *bias* variable is only published every other year.

- *filed_claims_workers*: Filed claims by workers to lower-level labor courts in a state at time t . Source: Bundesministerium für Wirtschaft und Arbeit (BMWA)
- *filed_claims_firms*: Filed claims by firms to lower-level labor courts in a state at time t . Source: BMWA
- *claims_arbg*: Processed claims at lower-level labor courts (by verdict, settlement, or other means) in a state at time t . Source: BMWA
- *settle_arbg*: Settlements at a state's lower-level labor courts at time t ; Source: BMWA
- *settle_ratio_arbg*: Ratio of settlements over finished claims at lower-level labor courts in a state at time t . Source: BMWA
- *verdicts_arbg*: Verdicts at a state's lower-level labor courts at time t ; Source: BMWA
- *appeals_larbg*: Appeals to a state's higher-level labor court at time t ; Source: BMWA
- *appeals_ratio_larbg*: Ratio of appeals to a state's higher-level labor court over verdicts at local labor courts in a state at time t ; Source: BMWA
- *settle_larbg*: Settlements at a state's higher-level labor court at time t ; Source: BMWA
- *settle_ratio_larbg*: Ratio of settlements over appeals to a state's higher-level labor court at time t ; Source: BMWA
- *bias*: The 'Handbuch der Justiz: die Träger und Organe der Rechtssprechenden Gewalt in der Bundesrepublik Deutschland, Deutscher Richterbund (eds.)' (HdJ) is a biannual publication on judges at German courts. It gives information on the judges' names, their age, their appointment dates, their gender and whether they carry a higher academic degree. Appointment dates of judges at the higher-level labor court were matched with the ideological position of the party in power at the time the judge entered the higher labor court. If the prime minister in the state at the respective time was either a CDU or CSU party member ideology of the respective judge was coded with a 1 otherwise with a 0. Taking averages over the individual ideological dispositions of judges at a given higher labor court for a year t serves as the *bias* variable. The states' prime ministers party affiliation can be found at <http://www.election.de>

- *doc*: Denotes for a state and time t the share of higher-level judges holding a doctoral degree; Source: HdJ
- *gender*: On the individual level a female higher-level judge was coded with 1. Thus, *gender* varies between 0 and 1 with higher values indicating a larger share of female judges at a state's higher labor court at time t ; Source: HdJ
- *age*: Average age of judges at a state's higher labor court at time t ; Source: HdJ
- *pop*: Population (in thousands) in each state at time t ; Source: SBA
- *ur*: Unemployment rate, defined as the number of unemployed divided by the labor force in each state at time t ; Source: SBA
- *industry*: Industry share in total GDP, Source: SBA
- *growth*: Growth rate of the real GDP in a state at time t ; Source: Statistisches Landesamt Baden-Württemberg (SLA-BW)

Appendix 3: Granger Tests

Table 8: Granger Causality Tests On Unemployment Rate ($\log(ur)$) and *bias*

Lags	Hypotheses	p-value	number of obs.
1	$\log(ur)$ does not Granger cause <i>bias</i> <i>bias</i> does not Granger cause $\log(ur)$	0.46 0.37	195
2	$\log(ur)$ does not Granger cause <i>bias</i> <i>bias</i> does not Granger cause $\log(ur)$	0.67 0.45	178
3	$\log(ur)$ does not Granger cause <i>bias</i> <i>bias</i> does not Granger cause $\log(ur)$	0.29 0.06	161
4	$\log(ur)$ does not Granger cause <i>bias</i> <i>bias</i> does not Granger cause $\log(ur)$	0.32 0.13	144
5	$\log(ur)$ does not Granger cause <i>bias</i> <i>bias</i> does not Granger cause $\log(ur)$	0.28 0.13	127