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.

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 Unites 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 economist hold at least partially responsible for weak employment growth in

[1] Throughout 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.

[2] For 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)).

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

[4] Contract 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 case 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 (2006) 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

[5] See, inter alia, (Young (2003), OECD (2004a), OECD (2004b), and Berger and Danninger (2006)).

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

[7] Grund (2006) 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, population size, and state and time fixed effects as instruments 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

[8]This 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.

and deserves the attention of policy makers interested in influencing employment 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. (2006), and Autor et al. (2004) show that labor court decision-making affects firing costs and employment across the Unites 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 (2009) show, based on German survey (GSOEP) data, that severance payments are systematically influenced

[9] Another 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.

[10] Restricting 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.

by employment protection legislation (which labor courts implement) and their tax-treatment.

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 appoint-

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

[12] Note 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 (*Länderverfasssungen*) as well as in the states' laws that regulate the system of judges (*Richtergesetze*).

ment itself, members of parliament are. Parliamentary selection committee 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 reason 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 employ-

[13]In 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.

ment protection and temporary work contracts, produced little measurable 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

Legal Process

Following the literature on legal disputes (see, e.g., Cooter and Rubinfeld (1989) or Daughety (2000)), we model the decision process of workers and firms in a multiple stage setup. Figure 1 gives an overview. The starting point is a dispute over a labor contract, for instance because of a dismissal of a worker by a firm. 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 at stage #2. There, after having learned the costs of forcing a court verdict, the worker and firm will either agree to an *on*-court settlement (in which case no court costs have to be paid) or ask for a verdict. Once the verdict is known, at stage #3, the worker and firm either accept the ruling or appeal it, taking the case to the higher-level labor court. Finally, at stage #4, the worker and firm decide to either seek an *on*-court settlement now or to opt for a higher-level court ruling after having learned about court costs at this level.

The worker and firm are forward-looking and take into account the entire legal process when making decisions. Thus the propositions that we derive for the decisions of firms and workers at each stage of the legal process, and which we eventually take to the data, are based on what workers and firms expect to occur as they would take further legal steps. According to Priest and Klein (1984), Waldfogel (1995) or Eisenberg and Farber (1997) this is essential as the composition of cases that we will observe in the data at each legal stage will be driven by what firms and workers decided on previous stages having expectations on what is going to happen as litigation proceeds.

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

Case Characteristics

All relevant aspects of a labor court are captured by an (one-dimensional) indicator, x, which is equally distributed over an intervall $[-a, a]$, where a is a positive number. At the start of the legal process, nature randomly draws a case $\tilde{x}$. Workers and firms confronted with the case $\tilde{x}$ know that higher-level labor judges are heterogenous with respect to their personal perception of how the issue should be handled. While we assume that workers and firms do not know in advance the identity of the judge in charge of their litigation, they are aware of the distribution of types.

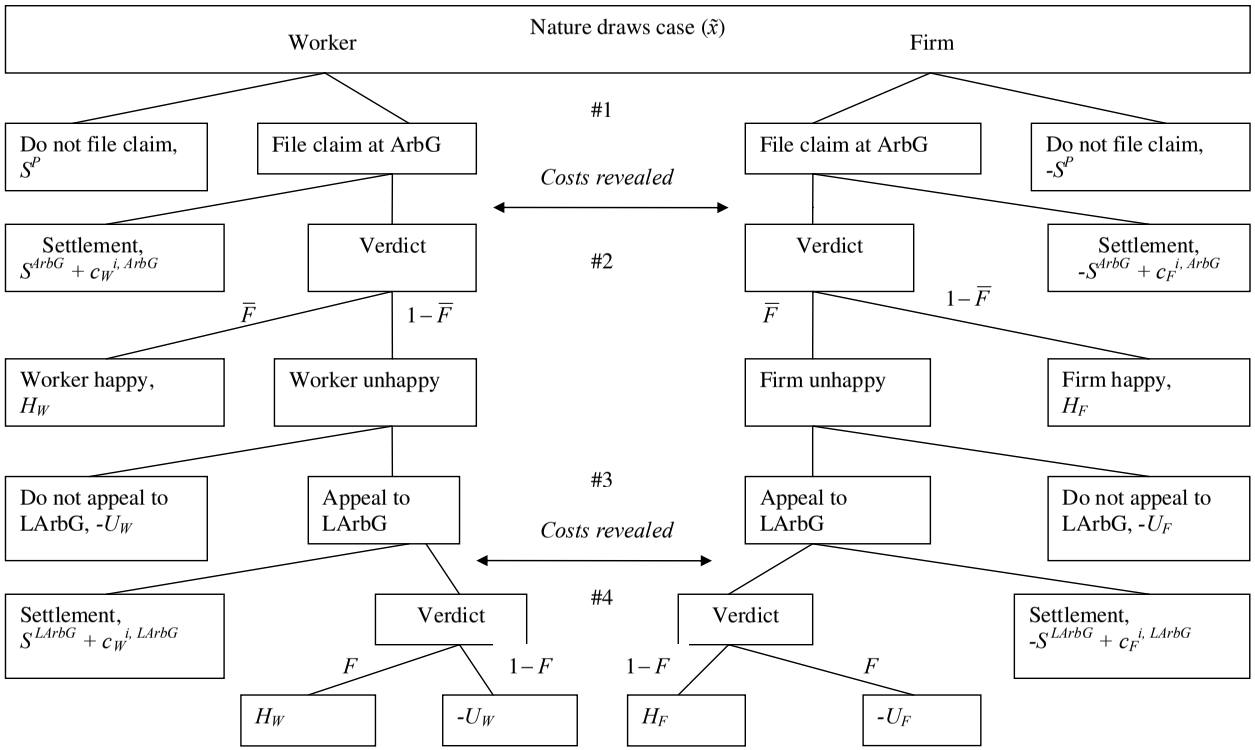

Figure 1: Worker and Firm Decisions on the Way to Higher-Level Labor Courts

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

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

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 at the higher-level labor court in favor of the worker follows by integration of equation (1) as

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

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 $F_{\tilde{x}} \geq 0$ and $F_\theta \leq 0$, and that F_θ is quadratic in $\tilde{x}$ with a minimum at $\tilde{x} = 0$.

At the lower-level labor court, because of the assumed absence of nomination bias, the probability for the worker of winning, $\overline{F}$, depends only on the case $\tilde{x}$ and the parameter a (see eq. (2)).

Costs and Benefits

We denote the uncertain *payoffs associated with court rulings* in favor of a party with H_j, where $j = F, W$ identifies firm or worker, respectively, and payoffs associated with a court ruling against a party as $-U_j$. To simplify, we assume that payoffs are constant across court levels. We also make the assumption that the workers's stake in the case are typically higher than the firm's:[15]

$$U_W + H_W > U_F + H_F. \tag{3}$$

The payoff structure reflects the characteristics of a representative labor court case, based on a disputed dismissal by a firm. Here a court decision usually implies a transfer from the firm to the worker if the worker wins ($H_W \approx U_F$). These transfers, as a rule, are comprised of compensation for wages lost since the layoff plus severance pay based on the length of past employment. If the firm wins, the layoff decision stands and no transfers are paid from the worker

[15]For technical reasons discussed in Appendix 1, we also assume that $H_j > \bar{H}_j$, $j = W, F$, where the $\bar{H}_j$ are constants compatible with (3).

to the firm. A plausible assumption is that $U_W > H_F$. For the worker loosing the case implies that the stigma from the unilateral dismissal becomes part of his or her career record, which is almost certain to reduce chances for re-employment elsewhere and increase future job search costs. In contrast, for the firm the likely impact on profits from a single and idiosyncratic labor court case will be limited.

As to *settlements*, we follow the literature (Cooter and Rubinfeld (1989)) by abstracting from transaction costs and assuming that settlements take the form of pure transfers. S^P, S^{ArbG}, and S^{LArbG} describe the settlement value occurring at the pre-court stage (P) or in front of the lower-level ($ArbG$) or higher-level ($LArbG$) labor courts, respectively. Empirically, settlement payments do, as a rule, flow from firms to workers (Falke et al. (1983) and Notter (2004)). Consequently, we assume $S_W = -S_F$ at any stage of the legal process. The exact size of the settlement is a result of bargaining over the cooperative surplus, determined by the difference between the cooperative outcome and the sum of the expected threat values from seeking a court ruling instead (see Appendix 1 for details).

A second source of uncertainty (in addition to those associated with court rulings) in the model are the *costs of forcing a lower- or higher-level court decision*. Uncertainty in this regard helps explaining why empirically we observe not only *pre*- but also *on*-court settlements.[16] We assume that the costs are revealed only after the claim has been filed. 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 the uncertainty surrounding the opportunity cost is resolved. 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 insurance or provided for by trade unions for their members.[17] What seems to be more relevant are opportunity costs to the firm and, in particular, to the worker. 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.

[16] With certain court costs, both parties would either always settle at the *pre*-court stage or always seek court decisions all the way to the higher-level labor court. No *on*-court settlements would occur. Under uncertainty, however, they may settle *on*-court after having learned the true level of court costs.

[17] Frick 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.

More formally, we assume that ex ante, the worker and the firm only know that the cost of asking for a court ruling can either be high $c_j^{h,k}$ with probability q_j^k or low $c_j^{l,k}$with probability $1 - q_j^k$, where $j = W, F$ and $k = ArbG, LArbG$, and where the superscripts h and l stand for a high and low cost level.

Decisions and Higher-Level Court Bias

We are now ready to discuss the influence of higher-level court bias on the decision-making of the worker and the firm along the course of the legal process (see Figure 1). Appendix 1 lays out the formal details of the results.

Stage #4 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 or seek a court decision. The worker agrees to a settlement if the expected payoffs of a trial, net of costs, is smaller than the settlement transfers,

$$F(\tilde{x})H_W - (1 - F(\tilde{x}))U_W - c_W^{i,LArbG} < S_W^{LArbG}, \tag{4}$$

with $i = h, l$. Equivalently, the firm will opt for a settlement if

$$(1 - F(\tilde{x}))H_F - F(\tilde{x})U_F - c_F^{i,LArbG} < S_F^{LArbG}, \tag{5}$$

where, as discussed, the nature of the settlement process is such that $S_F^{LArbG} = -S_W^{LArbG}$.

Under the assumed payoff structure, an increase in higher-level court bias in favor of firms will make settlements more frequent. As θ increases and $F(\tilde{x})$ decreases, the left-hand side in (4) becomes smaller, that is, the worker has less to expect from a court decision. The resulting reduction in the worker's threat value in the bargaining over settlements also lowers S_W^{LArbG}. However, the latter effect is smaller than the former if, as assumed, stakes are higher for the worker than the firm. The opposite holds for the firm, which sees its expected settlement payment decreasing by more than its expected net-payoffs from trial are increasing. As a consequence, settlements become more attractive for both parties.

Stage #3 Faced with a lower-level court ruling, the worker and the firm unilaterally decide whether to accept it or to continue the legal process by filing an appeal to the higher-level labor court. An appeal will be filed, if the expected value of a higher-level court decision (i.e., settlement or verdict)

exceeds the known payoff from accepting the lower-court decision. That is, an appeal requires for the worker

$$Max[E[V_W^{LArbG}], E[T_W^{LArbG}]] > -U_W, \tag{6}$$

or for the firm

$$Max[E[V_F^{LArbG}], E[T_F^{LArbG}]] > -U_F, \tag{7}$$

where V_j^{LArbG} and T_j^{LArbG}, $j = W, F$, indicate the payoffs associated with a higher-level court verdict or settlement, respectively.

An increase in higher-level court bias in favor of firms is likely to increase the number of appeals of lower-level court decisions at stage #3. Quite intuitively, an increase in bias will heighten the incentive for the firm to seek a higher-level court decision. On the other hand, the worker will take fewer cases to the next level. To see how this balances out, consider the scenario where both parties expect to settle in front of the higher-level court. According to (6) and (7), worker and firm will appeal any case $\tilde{x}_j$, $j = W, F$, up to the point where the expected stage #4 settlement payoff just equals the payoff from accepting the lower-level court decision. Given the payoff structure, the indifference point of the worker will be more extreme than the firm's in the sense that $|\tilde{x}_W| > |\tilde{x}_F| > 0$. As a consequence, because the impact of a change in θ on $F(\tilde{x})$ is smaller at more extreme values of $\tilde{x}$, the firm's indifference point will change by more than the worker's, leading to more appeals overall.

Stage #2 Here the parties decide whether to settle their dispute in front of the lower-level labor court. The problem is similar to stage #4. We will observe an *on*-court settlement if the joined surplus of the non-cooperative game is smaller than the value from the cooperative solution:

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

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. The probability for the worker of winning the lower-level court decision, $\overline{F}$, is not subject to any bias, but bias plays a role for the expected payoffs if the parties refuse to settle and trigger a lower-court verdict. In this case, the parties will either win, accept the payoff from defeat, or appeal, which would lead up to the decisions at stages #3 and #4 just discussed.

Owing to the cumulating uncertainties of the legal process further on, the effect of an increase in higher-level court bias at stage #2 can be ambiguous

– but the likely outcome is an increase in settlements. Take, for instance, the scenario where the worker, in the absence of a settlement, expects to appeal and ultimately force a higher-level court decision, while the firm would accept the lower-level court decision.[18] Here the change in bias will influence (8) only through the worker's expected payoffs from a higher-level court verdict. Because these payoffs decline as θ increases and $F(\tilde{x})$ decreases, the left-hand side becomes smaller and settlements will become more likely. Going through all other relevant scenarios, it turns out that an increase in bias will, as a rule, have a non-negative impact on the number of settlements at stage #2.[19]

Stage #1 On this stage 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.[20] 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. Following arguments related to the discussion of 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:

$$\begin{aligned} Max[E[T_W^{ArbG}],&E[V_W^{ArbG}], E[T_W^{LArbG}], E[V_W^{LArbG}]] \\ &+ Max[E[T_F^{ArbG}], E[V_F^{ArbG}], E[T_F^{LArbG}], E[V_F^{LArbG}]] > 0. \end{aligned} \tag{9}$$

Under given assumptions, the effect of a change of bias on (9) cannot be signed consistently, rendering the overall impact an empirical matter. The reason for this indeterminacy is that the uncertainties of the legal process ahead increase as we move from stage #2 to stage #1. Not reaching a settlement at the *pre*-court stage leaves the two parties with only uncertain payoffs. As a consequence, the direction the marginal effect of nomination bias disintegrates into multiple scenarios, the majority of which we cannot evaluate given assumptions. In other words, while we should expect both

[18] That is, the scenario is $Max[.] = E[V_W^{LArbG}]$ for the worker but $Max[.] = -U_F$ for the firm in (8). Note that $E[V_W^{LArbG}] = F(\tilde{x})H_W - (1 - F(\tilde{x}))U_W - q_W^{LArbG} c_W^{h,LArbG} - (1 - q_W^{LArbG}) c_W^{l,LArbG}$.

[19] There are four possible scenarios overall. Given payoffs, two produce a weakly positive and one a zero impact on the number of settlements. A fourth scenario cannot be signed, rendering the impact an empirical matter. See Appendix 1 for details.

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

worker and firm react to changes in bias, we have to turn to the data to evaluate the overall impact on claims filed at stage #1.

Implications

The results discussed above can be summarized like this: *Given payoffs, an increase in nomination bias is likely to*

(H1): change the number of claims filed at stage #1,

(H2): increase the number of lower-level court settlements at stage #2,

(H3): increase the number of lower-level court verdicts appealed at stage #3,

(H4): increase the number of higher-level court settlements at stage #4.

The next step is to confront these hypotheses with the data. Note, that as we go on we carefully take into account the selection issue which we referred to earlier on. The propositions stated above are derived from forward looking firms and workers, and furthermore these propositions are explicitly related to the set of cases that reached a certain legal stage taking into account decision of firms and workers on previous stages to proceed or to not proceed the litigation. Putting it differently, what we ultimately test, guided by our theoretical considerations, is the impact of a nomination bias on decisions taken by firms and workers at each stage of the legal process conditional on the cases having reached that particular stage. In total we can check on all four stages whether nomination bias impacts on the court production.

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 (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

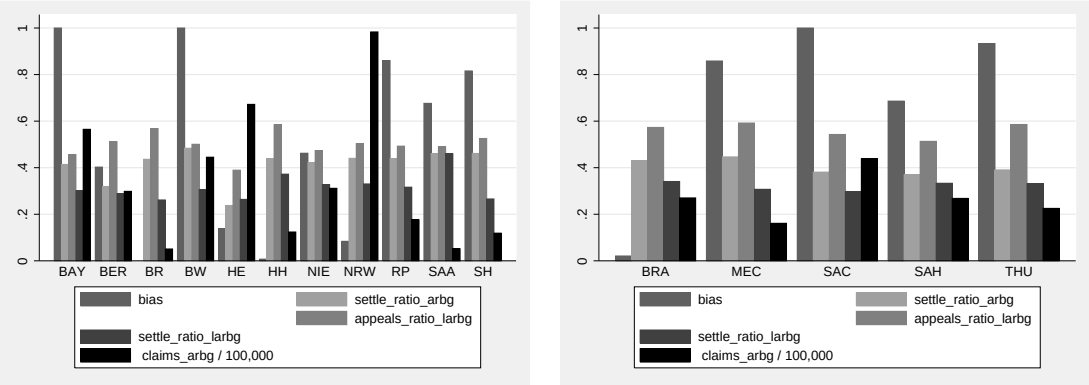

Figure 2: Indicators of Law Production and Nomination Bias (State Means – left panel for West and right panel for East states.)

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.[21] 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.[22]

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

[21] We discuss alternative measure of the political color of government below.

[22] Additional results available on request. We exclude East German states in the year 1994 mostly for reasons of GDP data reliability.

Table 1: Summary Statistics

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

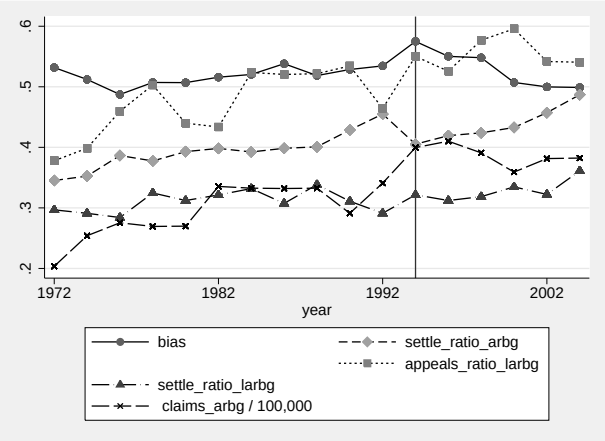

Figure 3: Indicators of Law Production and Nomination Bias (Sample Means)

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.[23] 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 autocorrelation in the residuals in some instances, we opted for using a feasible least square estimator to provide robust standard errors.[24] Moreover, all

[23]Alternative results available on request.

[24]We used the *xtgls* package with options *panels(heteroscedastic)* and *corr(psar)* implemented in Stata 9.1, with the latter assuming a panel specific AR(1) process in the

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.[25]

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 change (the log of) the overall number of annually filed claims by workers at stage #1 ($log(filed\_claims\_workers)$). 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 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(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 because of size effects.[26] 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

errors.

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

[26] We 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.

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

	Dependent variable: $log(filed\_claims\_workers)$			
	coef.	std.err.	coef.	std.err.
$bias$	-0.07	0.04^{*}	-0.08	0.04^{**}
doc	0.01	0.01^{*}	0.01	0.00^{**}
$gender$	-0.08	0.08		
age	-0.01	0.00^{***}	-0.01	0.00^{***}
cdu_gov	-0.00	0.01		
fdp_gov	0.00	0.01		
$log(pop)$	0.91	0.12^{***}	0.97	0.12^{***}
$growth$	-0.04	0.32		
$growth_{-1}$	0.55	0.16^{***}	0.54	0.14^{***}
$industry$	0.46	0.70		
$industry_{-1}$	1.26	0.68^{*}	1.44	0.49^{***}
Time and state fix. eff.	Yes		Yes	
Number of obs.	198		199	

Note: Estimated with feasible generalized least squares allowing for heteroscedasticity of errors across panels and AR(1) autocorrelation of errors within panels. $*$, $**$, and $***$ denote significance levels at 10%, 5% and 1%, respectively.

costs of taking legal action for employees 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 as 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: 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. 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.[27]

Not all control variables show up significantly in the general specification. 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.[28] 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.

We conclude that the vast majority of cases entering the legal process is significantly influenced by changes in *bias*, suggesting that workers are forward-looking and take into account the consequences of a more conservative composition of labor courts further up the legal path.

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 is likely to 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(claims_arbg)*. The second model explains the log of the level of settlements with *log(claims_arbg)* included on the right-hand-side of the equation.

Table 3 shows the expected significant positive impact of *bias* in both specifications. 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 signifi-

[27] 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).

[28] The 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(settle_ratio_arbg)*				Dependent variable: *log(settle_arbg)*			
	coef.	std.err.	coef.	std.err.	coef.	std.err.	coef.	std.err.
bias	0.06	0.03**	0.07	0.03**	0.06	0.03**	0.05	0.02**
doc	−0.00	0.00			0.00	0.00		
gender	0.10	0.06*	0.10	0.06*	0.07	0.06	0.10	0.06*
age	0.00	0.00			−0.00	0.00		
log(claims_arbg)					0.72	0.04***	0.72	0.04***
cdu_gov	−0.00	0.01			−0.00	0.01		
fdp_gov	−0.02	0.01*			−0.01	0.00*	−0.01	0.01**
log(pop)	−0.35	0.10***	−0.37	0.10***	−0.08	0.10		
growth	0.09	0.20			0.27	0.23		
$growth_{-1}$	0.04	0.09			0.28	0.10***	0.31	0.10***
industry	−1.42	0.49***	−1.16	0.30***	−1.72	0.46***	−1.39	0.40***
$industry_{-1}$	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. ∗, ∗∗, and ∗ ∗ ∗ denote significance levels at 10%, 5% and 1%, respectively.

cance levels. The outcome for the demand-side variables is comparable to Table 2, except for the 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 appealed at stage #3. As before, we present two models, one looking at the share of verdicts appealed (*log(appeals_ratio_larbg)*) and one at the overall number of appeals (*log(appeals_larbg)*) on the left-hand-side, with *log(verdicts_arbg)* as an additional right-hand-side variable. Both include the now familiar set of controls.

In both models, *bias* has the significant positive impact on appeals, implying that more lower-level court decisions are appealed as the share of higher-level judges nominated by conservative state governments increases (Table 4). 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

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

	Dependent variable: *log(appeals_ratio_larbg)*				Dependent variable: *log(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(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(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. ∗, ∗∗, and ∗ ∗ ∗ denote significance levels at 10%, 5% and 1%, respectively.

appeals tend to 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.

H4: Share of Settlements at Higher-Level Courts

Finally, Hypothesis *H4* 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 expected significantly positive sign for

Table 5: Share of Settlements at Higher-Level Courts (*H4*)

	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. $*$, $**$, and $***$ denote significance levels at 10%, 5% and 1%, respectively.

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 and Unemployment

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 appealed cases to the higher-level courts (*log(appeals_larbg)*) and, in an alternative specification, to the filed claims by workers to the lower-level labor court (*log(filed_claims_workers)*).[29] In both cases, we add a set of additional controls. In particular, we include *growth* and *industry*, as well as a full set of fixed time and cross-section ef-

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

fects to model 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.

In order to control for the endogeneity of labor court activity we run a two-stage regression. We instrument *log(appeals_larbg)* and *log(filed_claims_workers)* using *bias*, *doc*, *gender*, *age*, the log of the population. These instruments are a straightforward extension of our earlier investigation of court activity.

Table 6: Explaining Unemployment with Labor Court Activity

	Dependent variable: $log(ur)$			
	coef.	std.err.	coef.	std.err.
$IV\_log(appeals\_larbg)$	0.52	0.11^{***}		
$IV\_log(filed\_claims\_workers)$			0.32	0.15^{**}
$growth$	-0.52	0.53	-0.75	0.49
$industry$	-2.02	0.76^{***}	-3.42	0.84^{***}
Time and state fix. eff.	Yes		Yes	
Number of obs.	208		208	

Note: Two stage regressions using STATA's command *ivreg2* allowing for heteroscedasticity of errors across panels and AR(1) autocorrelation of errors within panels. See text for a discussion of instruments. $**$, and $***$ denote significance levels at 5% and 1%, respectively.

Table 6 presents the results for both variants of the model. We find that an exogenous increase in labor court activity robustly and significantly increases unemployment. The point estimates are 0.51 and 0.32, statistically significant at the 1-percent level and 5-percent level, respectively. The effect seems highly relevant from an economic point of view: a 1 percent increase of claims appealed to higher-level courts or processed at lower-level labor courts would increase unemployment by about 1/2 percent or 1/3 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. The included state and time fixed effects tend to be highly significant across models (results not shown).

Standard tests support the choice of instruments. For the first stage, F-tests clearly reject the hypothesis of weak instruments. In addition, a number of reasons suggests that causality indeed runs from labor court activity to unemployment. First, at a very practical level, *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 any possible impact of a contemporaneous change in unemployment on the variable. Remember also that, with judges appointed for life, the chance to nominate a new higher-level labor court member is independent from contemporaneous changes in the political (or the economic) environment. In addition, *bias* is but one instrument among a set of exogenous instruments used (see above). Second, from a theoretical perspective, any feedback mechanism between unemployment and *bias* would have to be conditional, depending on, among other things, voter behavior and the party composition of government.[30] Given the underwhelming evidence on policy-oriented voting, this seems a difficult case to make.[31] Finally, from an empirical standpoint, 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 in our data. For instance, standard Granger causality tests suggest that *bias* is indeed independent from labor market developments (see Appendix 3).[32]

[30]Assume, 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, *bias*.

[31]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. Kiewiet (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.

[32]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. All additional results available on request.

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 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, a worker will compare the certain payoff of a pre-court settlement with the uncertain expected outcome of a legal dispute that may take him 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, his 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. 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:

$$CS = 0 - (E[V_W] + E[V_F]). \tag{10}$$

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

$$S_W = E[V_W] + \lambda CS \tag{11}$$
$$S_F = E[V_F] + (1-\lambda)CS \tag{12}$$

for the worker and the firm, respectively.

Decisions

Decision #4

A settlement requires that inequalities (4) and (5) hold simultaneously. Adding both left-hand and right-hand sides of (4) and (5) and using the assumption $S_W^{LArbG} = -S_F^{LArbG}$ we have

$$\begin{aligned} &F(\tilde{x})H_W - (1-F(\tilde{x}))U_W - c_W^{i,LArbG} \\ &+ (1-F(\tilde{x}))H_F - F(\tilde{x})U_F - c_F^{i,LArbG} < 0. \end{aligned} \tag{13}$$

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

Proof 1 *Let us denote with $\hat{x}$ the case of indifference for condition (13). 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 expected values in (6) and (7) are:

$$
\begin{aligned}
E[V_W^{LArbG}] &= F(\tilde{x})H_W - (1 - F(\tilde{x}))U_W - EC_W \\
E[T_W^{LArbG}] &= E[V_W^{LArbG}] + \lambda(0 - (E[V_W^{LArbG}] + E[V_F^{LArbG}])) \\
E[V_F^{LArbG}] &= (1 - F(\tilde{x}))H_F - F(\tilde{x})U_F - EC_F \\
E[T_F^{LArbG}] &= E[V_F^{LArbG}] + (1 - \lambda)(0 - (E[V_W^{LArbG}] + E[V_F^{LArbG}])),
\end{aligned}
$$

with $EC_j = q_j^{LArbG} c_j^{h,LArbG} + (1 - q_j^{LArbG}) c_j^{l,LArbG}$ and $j = F, W$.

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 a worker and a firm expect either a settlement or verdict to provide maximum payoffs.

We assume that the payoff structure satisfies (3) and, in addition,

$$H_F > \bar{H}_F \tag{14}$$

$$H_W > \bar{H}_W \tag{15}$$

where $\bar{H}_F = 2EC_F - U_F$ and $\bar{H}_W = \max\left(\bar{H}_{W1}, \bar{H}_{W2}, \bar{H}_{W3}\right)$ with

$$
\begin{aligned}
\bar{H}_{W1} &= \frac{2\lambda}{(1-\lambda)} H_F + U_F - \frac{1}{\lambda\,(1-\lambda)} U_W + EC_W - \frac{\lambda}{(1-\lambda)} EC_F \\
\bar{H}_{W2} &= (1 - EC_W)\,\frac{H_F + U_F}{EC_F} - U_W \\
\bar{H}_{W3} &= EC_W - \frac{\lambda}{1-\lambda} EC_F + H_F.
\end{aligned}
$$

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

Proposition 2 *When both parties expect to settle at stage #4 a marginal increase in bias will lead to more appeals if conditions (14) and (15) are satisfied.*

Proof 2 *From* $E[V_W^{LArbG}] + \lambda(0 - (E[V_W^{LArbG}] + E[V_F^{LArbG}])) = -U_W$ *and* $E[V_F^{LArbG}] + (1 - \lambda)(0 - (E[V_W^{LArbG}] + E[V_F^{LArbG}])) = -U_F$ *we can derive the*

cases of indifference $\hat{x}_W$ and $\hat{x}_F$ for the worker and the firm, respectively. If conditions 14 and 15 hold we can establish that $\hat{x}_F > 0$ and $-\hat{x}_W > \hat{x}_F$. 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.

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

Proposition 3 *When both parties expect not to settle at stage #4 a marginal increase in bias leads to more appeals to the higher labor court if conditions 14 and 15 are satisfied.*

Proof 3 *Denote again with $\hat{x}_W$ and $\hat{x}_F$ the cases of indifference for the worker and for the firm, respectively. We can derive the cases of indifference from $E[V_W^{LArbG}] = -U_W$ and $E[V_F^{LArbG}] = -U_F$. 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. Because F_θ is quadratic in $\tilde{x}$, sufficient conditions for a positive net-effect are that $\hat{x}_W > \hat{x}_F \geq 0$. These hold if 14 and 15 are fulfilled.*

Decision #2

Based on (8), there are nine scenarios governing the direction of the impact of a marginal increase in bias depending on the relative size of payoffs in case of a loss in front of the lower-level labor court—that is, $-U_j$, $E[T_j^{LArbG}]$, and $E[V_j^{LArbG}]$, $j = W, F$—for worker and firm. Table 7 summarizes the outcomes discussed below, with the column (row) heading indicating which term is assumed to dominate in case of the firm (the worker).

Table 7: Stage #2 Effects of *bias*

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

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

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

Cases 2a and 3a 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 loosing at the lower-level labor court: $(1 - \overline{F})$ for the worker and $\overline{F}$ for the firm. The product is a nonlinear relationship in $\tilde{x}$. 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 $\hat{x}^h > \hat{x}^l$. For *Case 2a* and *Case 3a* this function is hump-shaped It shifts down as bias increases. Thus, the effect on settlements is positive or zero.

Case 3c The marginal impact of a change in bias depends on the nature of the case $\tilde{x}$, resulting in an ambiguous aggregate effect.

Proposition 4 *If settlements involve transfers from firms to workers, $U_W > E[V_F^{LArbG}]$, and H_W sufficiently large, we can exclude cases 1b, 1c, 2b, 2c, and 3b.*

Proof 4 *To exclude* Case 1b*, it must hold that $-U_W > E[T_W^{LArbG}]$ and $-U_F < E[T_F^{LArbG}]$. Because settlement payments are pure transfers, the two inequalities may be written as $-U_W + U_F > 2E[T_W^{LArbG}]$. As the left hand side is negative and, for settlements from workers to firms the right hand side positive, this inequality never holds. For* Case 1c *to occur, the inequalities $-U_W > E[T_W^{LArbG}]$ and $E[V_F^{LArbG}] > E[T_F^{LArbG}]$ would have to hold. After rearranging we get that $U_W < E[V_F^{ArbG}]$ which does not hold for sufficiently high U_W. For* Case 2b *to occur the two inequalities $E[T_F^{LArbG}] > E[V_F^{LArbG}]$ and $E[T_W^{LArbG}] > E[V_W^{LArbG}]$ must jointly hold. However, $0 > E[V_F^{LArbG}] + E[V_W^{LArbG}]$ is violated for sufficiently high H_W. Finally, applying arguments akin to stage #2, we can exclude* 2c *and* 3b*.*

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)

- *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
- *cdu_gov*: Christian democratic party participates in government at time t; Source: www.election.de
- *fdp_gov*: Free democratic party participates in government at time t; Source: www.election.de
- *bias*: The 'Handbuch der Justiz: die Träger und Organe der Rechtsprechenden 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 *bias*	0.46	195
	bias does not Granger cause $log(ur)$	0.37	
2	$log(ur)$ does not Granger cause bias	0.67	178
	bias does not Granger cause $log(ur)$	0.45	
3	$log(ur)$ does not Granger cause *bias*	0.29	161
	bias does not Granger cause $log(ur)$	0.06	
4	$log(ur)$ does not Granger cause *bias*	0.32	144
	bias does not Granger cause $log(ur)$	0.13	
5	$log(ur)$ does not Granger cause *bias*	0.28	127
	bias does not Granger cause $log(ur)$	0.13	