Judge Bias in Labor Courts and Firm Performance

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Motivation

- A majority of European countries have set rules that limit the amounts granted by judges in case of wrongful dismissal
- Italy (2014, Jobs Act), France (2017, Macron reform): cap on severance payments
  - According to the French government:
    "Differences in compensations cannot be explained by differences in the salary and seniority of employees in the company. In particular, **they reflect differentiated treatment by judges in comparable situations**."
  - According to judges' trade unions:
    "Each dismissal is different and the resulting prejudice cannot be standardized."

$\Rightarrow$ Unresolved debate about the discretion to give to judges

▸ data vs legislation

Research Questions

1. **Do judges contribute to explaining the heterogeneity of compensations for wrongful dismissal?**

2. **If applicable, what are the consequences for firms (and workers)?**

What's new?

1. Construct novel data on compensations for wrongful dismissals and document the heterogeneity of judgments

2. Identify judges biases and document their effect on compensations (judges fixed effects)

3. Estimate the effects of judges biases on firms performance

4. Analyze the impact of unexpected shocks on dismissal costs on firms performance

▸ Literature

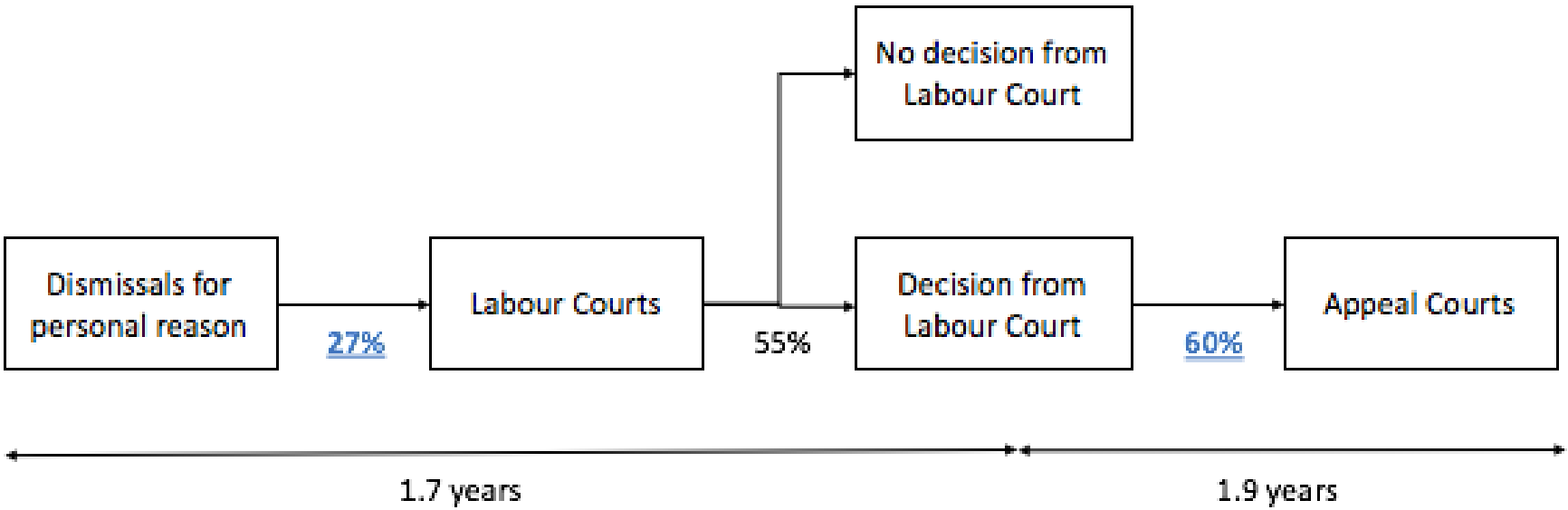
Legal framework in France

- Termination of an open-ended contract
  - legal severance = one fifth of monthly salary per year of tenure, plus an additional two fifteenths after a ten-year tenure
  - These amounts can be topped up by collective agreements

- Terminations are lawful if they are justified by a "real and serious cause"
  - economic (to "safeguard" firms, but not to improve their profitability) $\rightarrow$ 1% go to court
  - personal $\rightarrow$ 27% go to court

▸ Separations

Contested dismissals in France



⇒ **Appeal Court = important level to analyze effects on firms**

▸ Map of Appeal courts

Appeal Courts

There are **210** Labour Courts (Prud'hommes councils) in France and **36** Appeal courts

- Appeal Courts = professional judges
- Each Appeal Court has several chambers, among which at least one social chamber treats cases coming from the Prud'hommes council
- There is one president for each social chamber
  - Administrative responsibilities within the court
  - Presides all the chamber's trails, assisted by two councillor-judges

$\Rightarrow$ **Presidents of social chambers play key role in dismissal cases**

Data sources

1. **Novel data on severance pay decided before Courts: 2006-2016** (149,638 cases)

2. Matched employer-employee dataset (DADS Postes): 2002-2015

3. Tax data (FICUS-FARE): 2002-2015

⇒ 1st study matching severance pay for wrongful dismissal to firms data

▸ construction

Severance pay data

- Sample:
  - Metropolitan France, 2006-2016
  - Exclude public sector, firms liquidated at the judgment date

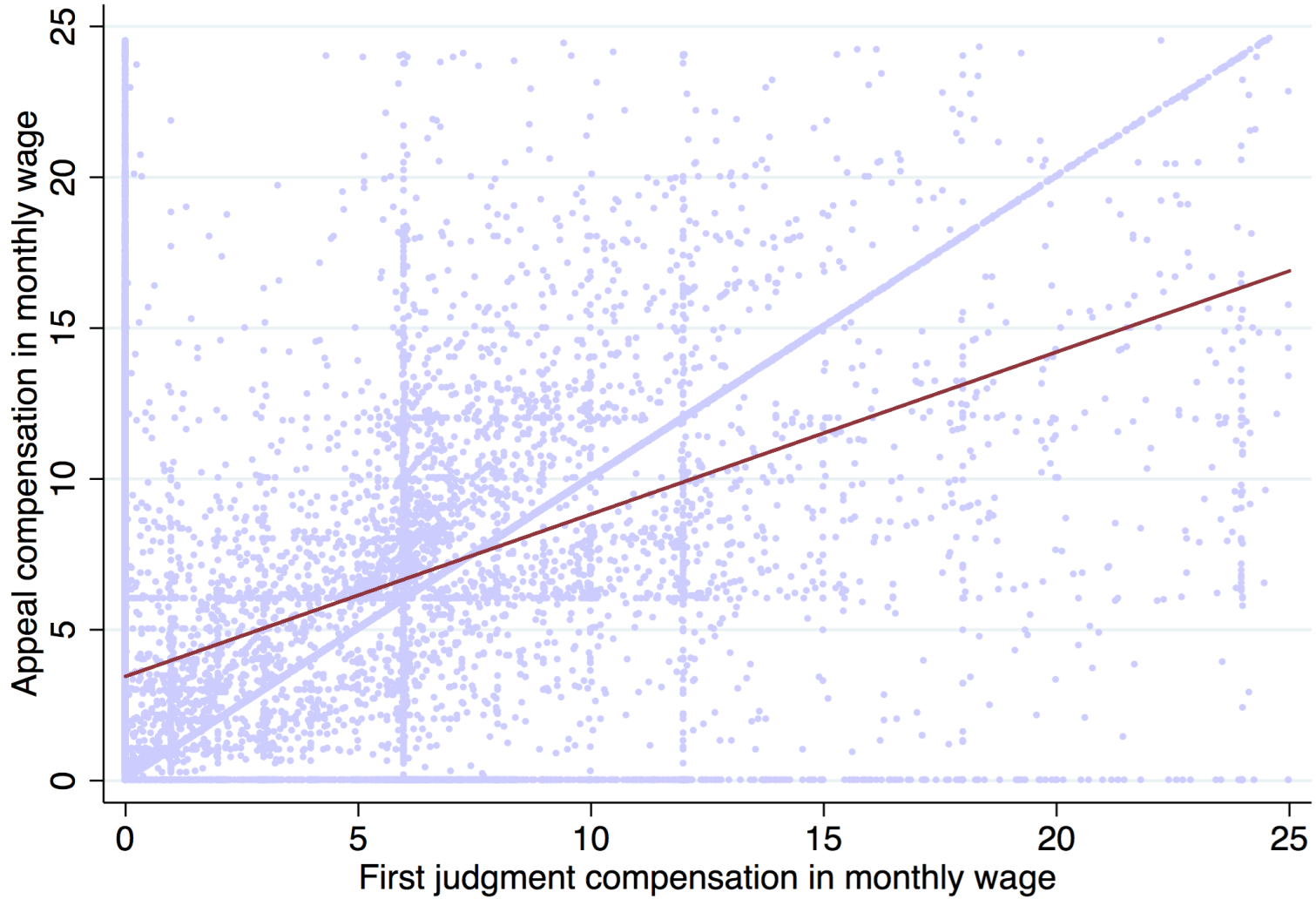
- Main information available:
  - Nature of dismissal: personal versus economic
  - Whether worker won the case
  - Value of the amount of severance pay for wrongful dismissal (in euros and months of salary) and other compensations (unpaid hours of work, compensation for moral prejudice...)
  - Identity of the judges
  - Identity of the firm $\rightarrow$ Enables to merge with matched employer-employee dataset (DADS) and other tax data

$\Longrightarrow$ 37,149 cases, without missing information

$\Longrightarrow$ 159 presidents, cover 93.3% of cases among the universe of all cases, each president judged 234 cases on average

▸ example ruling ▸ # obs

Basic descriptive statistics

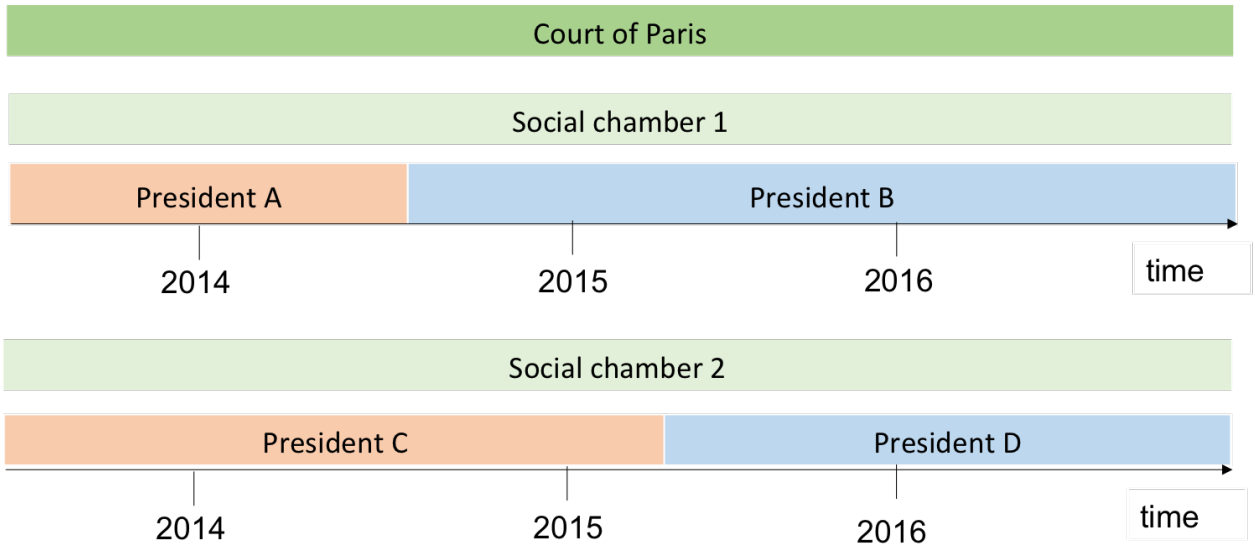


32134 observations. 1% top compensations are trimmed

▸ Histogram ▸ Discontinuity ▸ Data vs legislation ▸ More stats

Computing judges' pro-worker bias

Identification: Judges' mobility across social chambers



→ Random assignment exploited: differences between decisions of presidents belonging to the same social chamber within the same year
→ Ex: Within year 2014, Paris Court and social chamber 1, being judged by president A versus president B

▸ Selection ▸ Back IV

Computing judges' pro-worker bias

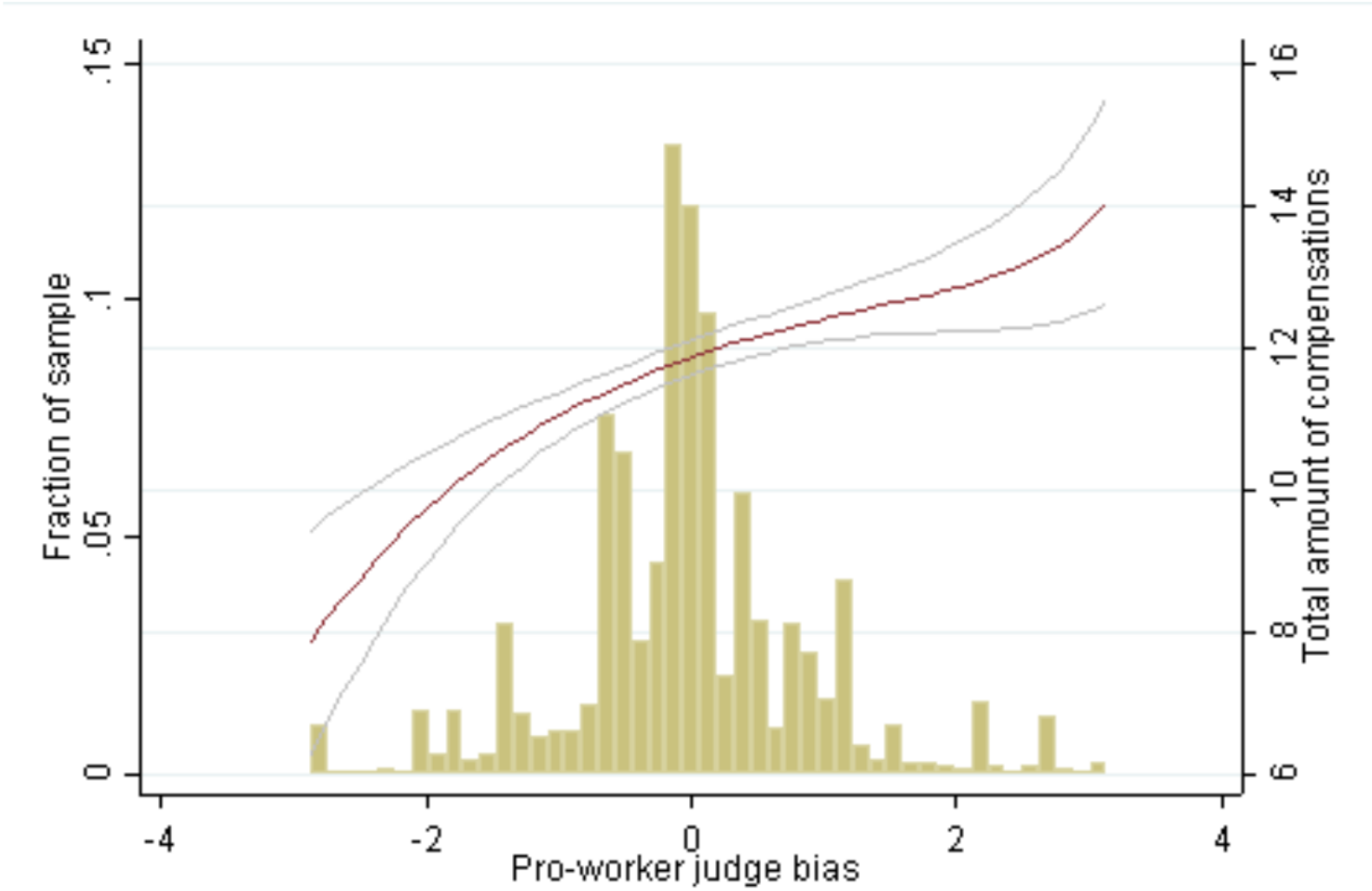
- For each case i we compute the leave one out difference between
  1. the average of all the outcomes for cases of the judge assigned to case i in all chambers where he judges

     and

  2. the average of all outcomes of other judges in these chambers year by year

- Average these residuals per judge $\Rightarrow$ judge bias

Relation between bias and compensations



▸ Dismissal qualification ▸ Judges network ▸ Share of the variation of compensations explained by judges bias ▸ Back IV

Impact of pro-worker judges on firms performance

1. $\Longrightarrow$ Unexpected negative cash-flow shock
   - $\rightarrow$ Firm destruction, more likely for small, low performing firms
   - $\rightarrow$ Enter into credit constrained regime, also more likely for small, low performing firms
     - $\rightarrow$ Less job creation
     - $\rightarrow$ More job destruction
     - $\rightarrow$ Larger share of temporary jobs

2. $\Longrightarrow$ Revision of expectations on future dismissal costs
   - $\rightarrow$ Less job creation
   - $\rightarrow$ More or less job destruction ?
     - More because job destruction cost $\uparrow$
     - Less because firm survival $\downarrow$ (dominates for small low-performing firms)
   - $\rightarrow$ Larger share of temporary jobs

Impact of pro-worker judges on firms performance

Conclusion:

- $\downarrow$ job creation for all firms
- $\downarrow$ job destruction for large and high performing firms (anticipation effect)
- $\uparrow$ job destruction for small low-performing firms (profitability effect)

Therefore, we expect

- Negative employment effect on small, low performing firms
- Ambiguous employment effect on large and/or high performing firms

$\Longrightarrow$ Analysis of heterogeneity

1. Firms below and above the median size equal to 15 FT employees
2. Firms below and above the median of returns to assets (ROA)

Judges bias and firms performance

- Select firms
  - going to court once
  - going to court no later than 2012 in order to analyze outcome variables up to three years after the judgment
  - matched with judge with fixed effect
- Drop collective dismissals.

$\Longrightarrow$ 7,329 firms

- Average amount of compensation (if positive): 11% of annual payroll, 19% for firms below 15 employees
- Fourth quartile of amount of compensation (if positive): 35% of annual payroll

Empirical strategy: OLS estimates

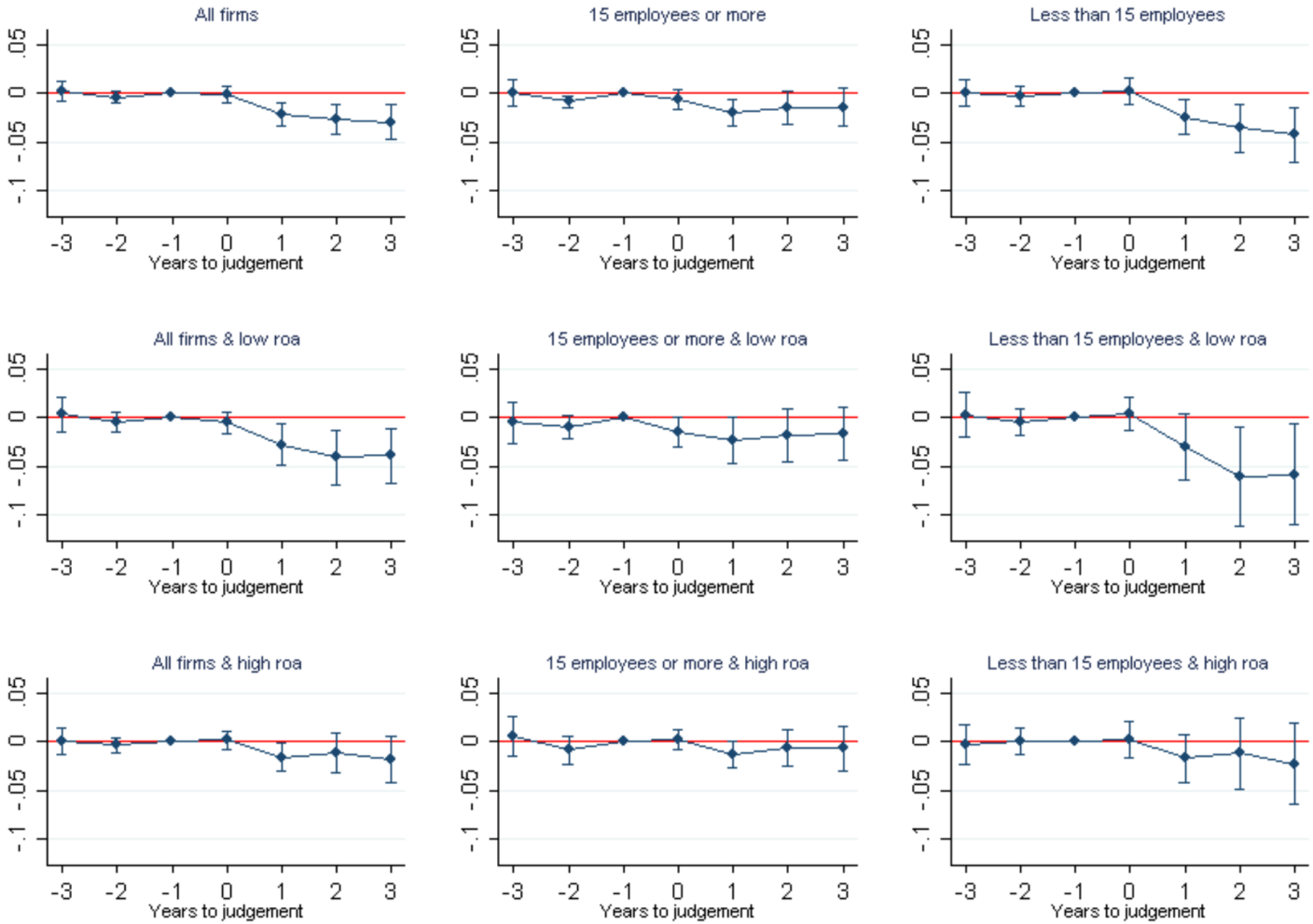
For every year-to-event $k \in [-3, 3], k \neq -1$, we estimate

$$Y_{ik} = \alpha_{0k} + \alpha_{1k} bias_{ij} + \alpha_{2k} X_{ik} + \eta_{ik}$$

- Y_{ik}: the outcome of interest k years before/after the judgement for firm i assigned to judge
- $bias_{ij} = (\bar{\varepsilon}_{ij} - \bar{\varepsilon})/\sigma_{\varepsilon}$, is the judge j's leave-one-out normalized bias
- X_{ik}: covariates.

Back to selection issues

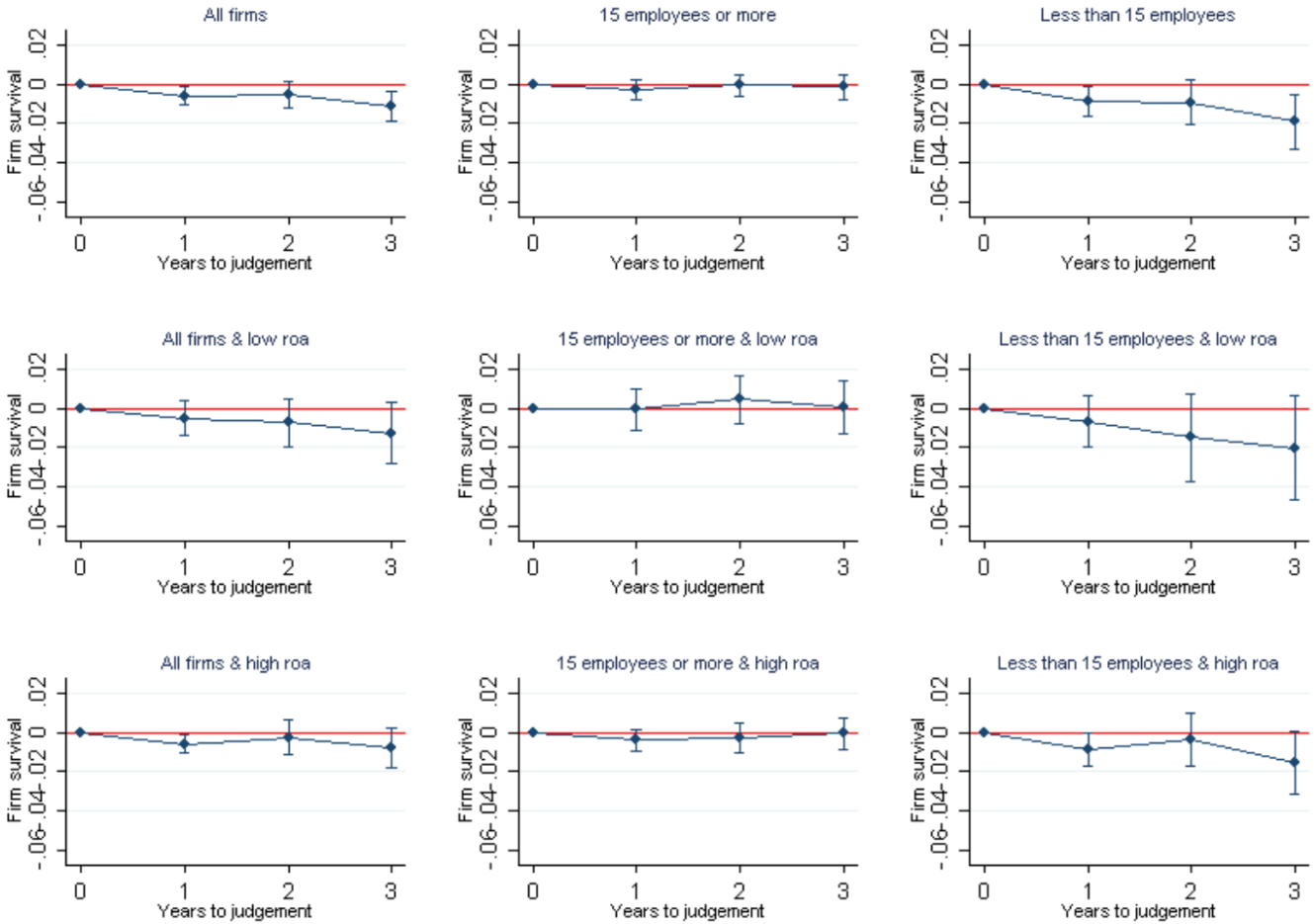
Event study: Employment growth rate



Davis-Haltiwanger employment growth rate
Covariates: social chamber, year fixed effect, firm age, economic dismissals, return on assets in the previous year and the leave-one-out average industry annual growth rate of sales. SE, clustered at judge level.

▸ Without control variables ▸ Back to selection issues

Event study: Firm survival



Firm survival rate
Covariates: social chamber, year fixed effect, firm age, economic dismissals, return on assets in the previous year and the leave-one-out average industry annual growth rate of sales. SE, clustered at judge level.

▸ Employment growth conditional on survival

Mechanisms

Impact of pro-worker judge bias:

- Job creation $\downarrow$ in all firms
- Job destruction
  - $\downarrow$ in large and high performing firms $\Leftrightarrow$ the anticipation effect dominates
  - $\uparrow$ in small low-performing firms $\Leftrightarrow$ the profitability effect dominates
- Effect on permanent contracts only $\rightarrow$ share of temp contracts $\uparrow$
- Effect on workers present at the judgment date
  - In large and high performing firms, more likely to keep their jobs
  - In small low-performing firms, more likely to lose their jobs
  - No effect on wages

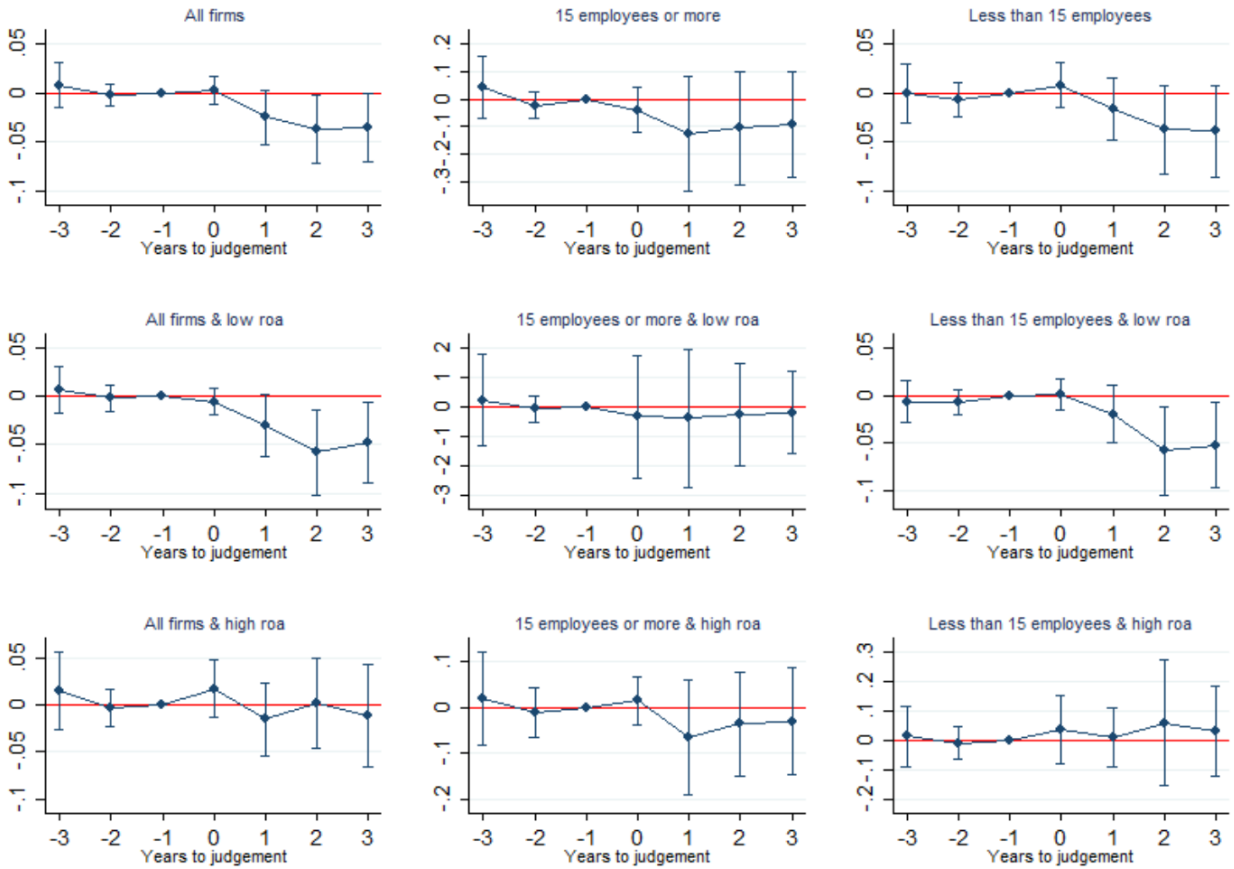
Empirical strategy: IV estimates

IV estimation $\rightarrow$ evaluate the impact of unexpected shocks on the amount of compensation induced by the subjectivity of judges on firms.

$$Y_{ik} = \beta_{0k} + \beta_{1k} f_i + \beta_{2k} X_{ik} + \epsilon_{ik}$$

- f_i = amount of compensation in the previous year payroll, instrumented by the leave-one-out measure $bias_{ij}$ of the judge bias.
- The OLS estimates can be interpreted as the reduced-form of the IV model.
- Assumptions IV model:
  - 1. Conditional independence
  - 2. Exclusion restriction
  - 3. Relevance of the instrument
  - 4. Monotonicity

Event study: IV estimates, employment growth



Davis-Haltiwanger employment growth rate depending on the amount of compensation in the previous year payroll instrumented by judge bias.
Covariates: social chamber, year fixed effect, firm age, economic dismissals, return on assets in the previous year and the leave-one-out average industry annual growth rate of sales. SE, clustered at judge level.

▸ 1. Conditional independence ▸ 2. Exclusion restriction ▸ 3. Relevance of the instrument ▸ 4. Monotonicity

Conclusion

1. Judge subjectivity in labor courts has a significant impact on
   - the probability that a dismissal is judged lawful
   - the amount of dismissal compensation for unlawful dismissals

2. For small, low performing firms, the surprises on dismissal costs arising from judge subjectivity have significant impact on
   - employment growth
   - the share of permanent jobs
   - firm survival

New data and results $\rightarrow$ new research questions

- Contribution of uncertainty due to "within judge" variability of decisions depending on specific features of each case
- Impact of shocks on anticipations
- Impact of uncertainty (beyond shocks) about dismissal costs on job creation and job destruction
- Impact on workers

APPENDIX

Related literature

- Differentiated treatment by judges in wide spectrum of domains:
  - Criminal sentencing: Scott (2010), Dobbie et al. (2018), Yang (2015), Cohen and Yang (2019)
  - Bankruptcies: Bernstein et al. (2018a), Bernstein et al. (2018b), Chang and Schoar (2013)
  - Disability benefits: Autor et al. (2015), Dahl et al. (2014), French and Song (2014), Kostol et al. (2017), Maestas et al. (2013)

$\rightarrow$ Lack of data on compensations granted (exception: Desrieux et al. (2019)) and on judges $\Rightarrow$ **No analysis of potential judges biases on dismissal compensation**

Related literature

- In Labor economics:
  - Effects of legislation/jurisprudence regarding wrongful dismissals on firms' outcomes: Autor (2003), Autor et al. (2006), Autor et al. (2007), Bamieh (2016), Boeri and Garibaldi (2018), Fraisse et al. (2015), Gianfreda and Vallanti (2017), Martins (2009).
  - Impact of extraneous factors on the qualification of wrongful dismissals: Ichino et al. (2003), Marinescu (2011), Jimeno et al. (2018), Desrieux et al. (2019)
  - Araujo et al. (2021): labor effects of pro-labor bias in bankruptcy

$\rightarrow$ Lack of data on compensations granted (exception: Desrieux et al. (2019)) and on firms going to Court $\Rightarrow$ **No firm-level study with data on compensation granted by labor courts**

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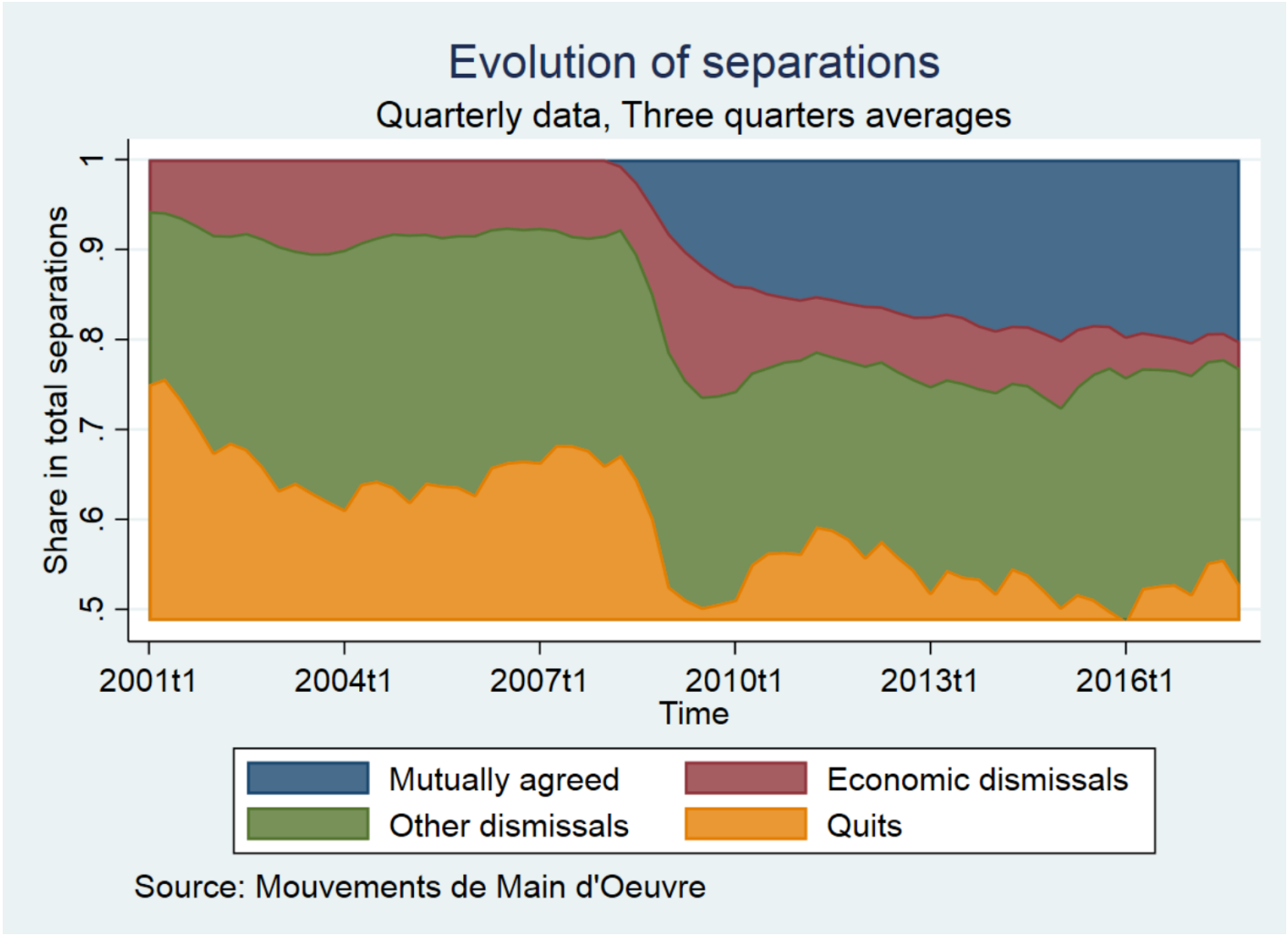
Appendix: Legal framework in France



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Map of Appeal Courts in France

Caveats of severance data

- **Non-exhaustivity**: we do not observe all Appeal Courts cases but only cases for which we manage to extract the information
  $\rightarrow$ quasi-exhaustive sample of Appeal Courts texts but extraction of main variables not possible for all cases (due to very high heterogeneity and mistakes in appeal court texts). Characteristics of firms for which we obtain the information are not statistically different from those of firms for which we do not retrieve the information

- **Measurement error linked to automatic extraction from texts**
  $\rightarrow$ we estimate the proportion of cases for which the amount of severance pay is incorrect to 5%

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Example of Appeal Court ruling

Often 3 to 10 PDF pages. Example of end of ruling:

PAR CES MOTIFS

LA COUR,

Statuant par arrêt contradictoire,

INFIRME PARTIELLEMENT le jugement déféré et statuant à nouveau,

CONDAMNE la Société Cilomate Transports à verser à Monsieur B. 30.000 € (TRENTE MILLE EUROS) à titre d'indemnité pour licenciement sans cause réelle et sérieuse ;

ORDONNE le remboursement par la Société Cilomate Transports à l'organisme concerné des indemnités de chômage effectivement versées à Monsieur B. par suite de son licenciement et ce dans la limite de trois mois ;

DÉBOUTE Monsieur B. de sa demande au titre de dommages et intérêts pour manquement aux obligations conventionnelles ;

CONFIRME pour le surplus le jugement déféré ;

Y ajoutant,

CONDAMNE la Société Cilomate Transports à verser à Monsieur B. la somme de 1.000 € (MILLE EUROS) au titre de l'article 700 du Code de Procédure Civile ;

DÉBOUTE la Société Cilomate Transports de sa demande au titre de l'article 700 du Code de Procédure Civile ;

CONDAMNE la Société Cilomate Transports aux entiers dépens.

Prononcé publiquement par mise à disposition de l'arrêt au greffe de la Cour, les parties en ayant été préalablement avisées dans les conditions prévues au deuxième alinéa de l'article 450 du Code de Procédure Civile,

Et signé par Madame SCHMEITZKY, président, et par Madame BARBIER, greffier, auquel la minute de la décision a été remise par le magistrat signataire.

LE GREFFIER LE PRÉSIDENT

Minute en sept pages.

Composition de la juridiction : Madame GUIOT MLYNARCZYK, Siégeant,KREMSER (Me), Me CODAZZI
Décision attaquée : C. Prud. Longwy, Nancy 2011-02-25

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Example of Appeal Court ruling

Example of middle of ruling:

En conséquence, le jugement entrepris sera confirmé en ce qu'il a condamné la SITH LA BAULE à payer à madame T. les sommes de :

- 2 687,44 € bruts au titre de l'indemnité compensatrice de préavis,

- 1315,48 € nets au titre de l'indemnité spéciale de licenciement,

-16124,64 € nets au titre de l'indemnité pour défaut de consultation des délégués du personnel.

Sur l'obligation de reclassement :

Selon l'article L.1226-12 du Code du Travail, lorsque l'employeur est dans l'impossibilité de proposer un autre emploi au salarié, il lui fait connaître par écrit les motifs qui s'opposent au reclassement ; l'employeur ne peut rompre le contrat de travail que s'il justifie, soit de son

impossibilité de proposer un autre emploi dans les conditions prévues à l'article L.1226-10 du même Code, soit du refus par le salarié de l'emploi proposé dans ces conditions.

L'avis d'inaptitude à tout emploi dans l'entreprise délivré par le médecin du travail ne dispense pas l'employeur de rechercher une possibilité de reclassement au sein de l'entreprise, au besoin par la mise en oeuvre de mesures telles que mutation, transformation de poste de travail ou aménagement du temps de travail.

C'est à l'employeur de démontrer qu'il s'est acquitté de son obligation de reclassement, laquelle est une obligation de moyens, et de rapporter la preuve de l'impossibilité de reclassement qu'il allègue.

En l'espèce, le 22 décembre 2009, l'employeur a reçu la salariée dans le cadre d'un entretien de reclassement, afin de connaître ses souhaits, puis a consulté l'ensemble des établissements du Groupe Lucien B. en leur transmettant le compte rendu de l'entretien de reclassement, le curriculum vitae de Madame T. et les avis du médecin du travail.

Le 7 janvier 2010, l'employeur a adressé à Madame T. cinq propositions de poste à savoir : un poste d' hôtesse d'accueil à l' hotel B. à Paris, un poste d'hôtesse en restauration (à temps partiel), un poste d' hôtesse d'accueil, un poste de standardiste et poste d'assistante de direction à l'hôtel Barrière à Lille.

Le SITH justifie avoir sollicité les observations du médecin du travail sur ces postes, Madame T. les ayant refusé tous, sans justifications, par courrier daté du 11 janvier 2010.

Il ressort de l'ensemble de ces éléments, que l'employeur a bien tenté, de manière sérieuse et loyale, de reclasser son ancienne salariée aux conditions préconisées par le médecin du travail, même si ces offres de reclassement étaient de nature à terme à entraîner une modification des conditons de travail de la salariée.

En conséquence, la décision déférée qui a débouté Madame T. de sa demande à ce titre, sera confirmée .

Sur l'indemnité de non réentraînement au travail :

L'article L. 5213-5 du Code du Travail énonce que :

"Tout établissement ou groupe d'établissements appartenant à une même activité professionnelle de plus de cinq mille salariés assure, après avis médical, le ré entraînement au travail et la rééducation professionnelle de ses salariés malades et blessés. Les inspecteurs du travail peuvent mettre les chefs d'entreprise en demeure de se conformer à ces prescriptions. "

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Description of Appeal Court's rulings

- decision of the *Prud'hommes* council
- claims of the parties for the appeal court
- summary of all payments to be made by one party to the other:
  - Compensation for wrongful dismissal (*indemnité pour licenciement sans cause réelle et sérieuse*)
  - Compensation for non-respect of the dismissal procedure
  - Minimal legal dismissal compensation (*indemnité légale de licenciement*)
  - Compensation for moral damages (*indemnité pour préjudice moral*)
  - Compensation in lieu of notice (*indemnité compensatrice de préavis*)
  - Compensation in the name of the article 700 of the French Code of Civil Procedure
  - Special compensation (dismissal after work accident or occupational desease)
  - Compensation for non-consultation of employees representatives...

$\Rightarrow$ The compensation for wrongful dismissal represents about 50% of total compensations

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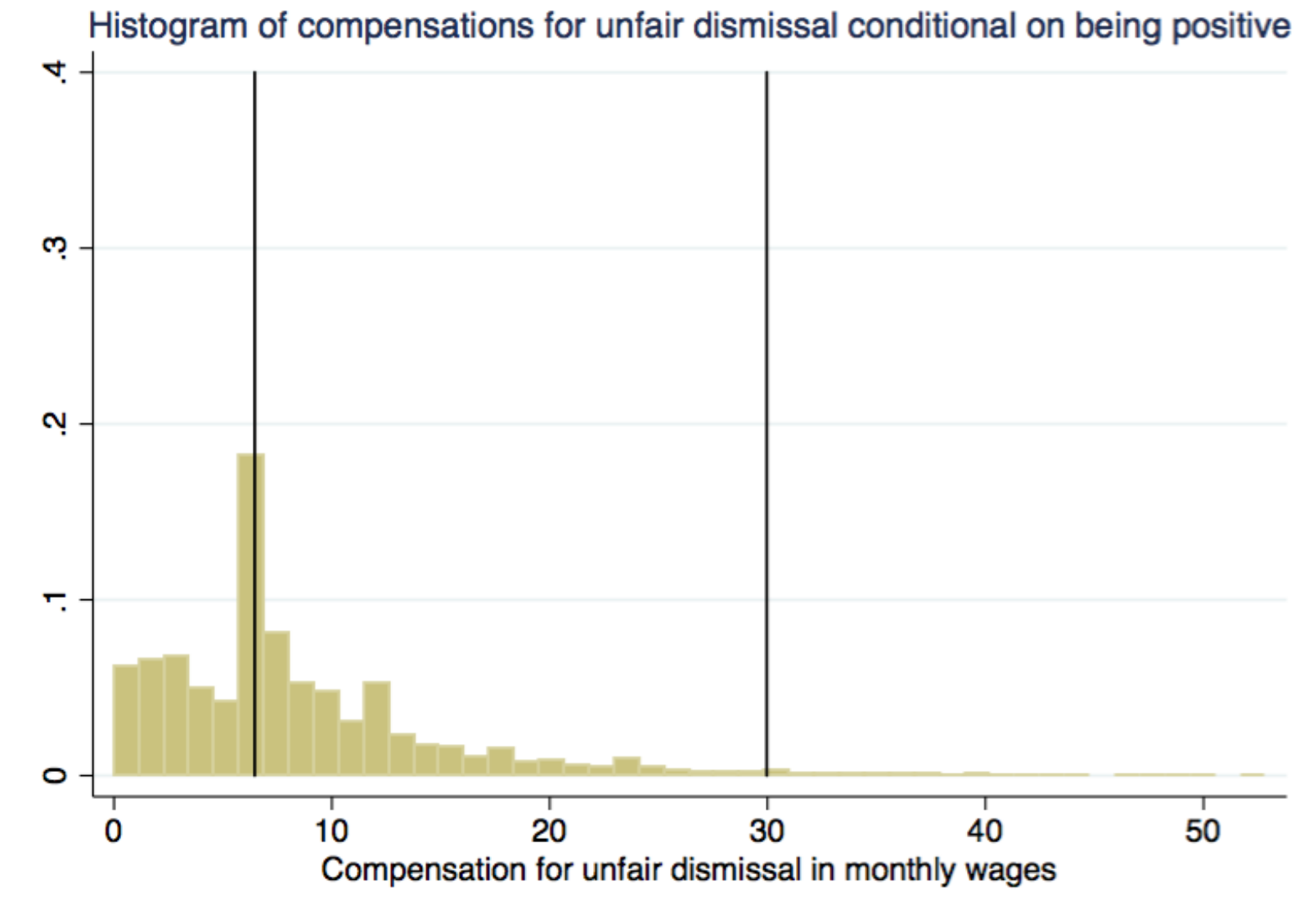
Histogram of severance pay in months of salary



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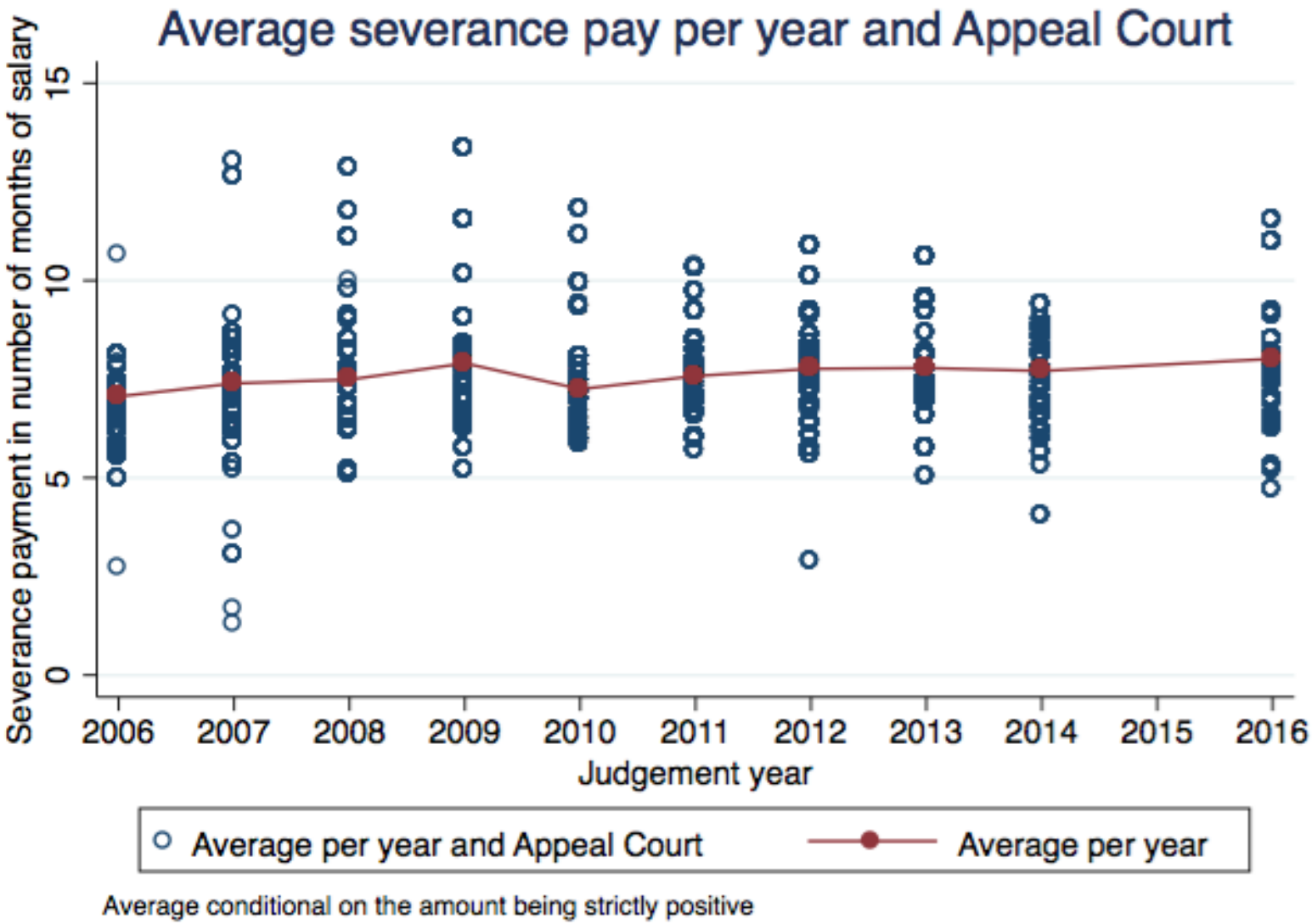
Heterogeneity of severance pay amounts across Courts



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Number of cases in final sample

	# of cases	# of judges
Initial severance pay data	145,638	-
(a) Cases for firms not already liquidated	123,304	-
(b) Cases with non-missing president name and surname	117,989	1,039
(c) Cases with non-missing total amount of compensation	84,151	878
(d) Cases with non-missing monthly wage	61,728	731
(e) Elimination of cases in the public sector	39,843	652
(f) Cases restricted to judges with at least 50 cases	37,149	159

back desc stats back regression

Computing judges' pro-worker bias - Formally

- Regress the compensation for wrongful dismissal for all cases on court $\times$ chamber $\times$ year fixed effects and month fixed effects
- Compute the residual ϵ_{ij} for each case i with the corresponding judge j

  $\Rightarrow$ For each case i, pro-worker bias = leave-one-out mean of the residuals:

$$bias_{ij} = \frac{1}{N_j - 1} \sum_{i' \neq i} \epsilon_{i'j}$$

- Average these residuals per judge $\Rightarrow$ judge bias

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Computing judges' pro-worker bias - formally

1. Define leave-one-out residuals:

$$\bar{\varepsilon}_{ijkt} = \left(\frac{1}{n_{jkt} - 1} \sum_{i' \in (j,k,t), i' \neq i} y_{i'jkt} \right) - \left(\frac{1}{n_{kt} - 1} \sum_{i' \in (k,t), i' \neq i} y_{i'jkt} \right) \quad (1)$$

   - $i \in (j, k, t)$ means that case i is judged by judge j in chamber k and year t
   - $i \in (k, t)$ means that case i is judged in chamber k and year t
   - y_{ijkt} is the outcome of case i set by judge j in chamber k in year t
   - n_{jkt} the number of judgments of judge j in chamber k during year t
   - n_{kt} is the number of judgments in chamber k during year t

2. Average residuals per judge:

$$\bar{\varepsilon}_{ij} = \sum_{(k,t) \in (K,T)(j)} \sum_{i', i' \neq i} \frac{n_{jkt}}{n_j - 1} \bar{\varepsilon}_{i'jkt} \quad (2)$$

   - $(K, T)(j)$ is the set of all chamber $\times$ year pairs (k, t) observed for judge j
   - $\bar{\varepsilon}_j$ is the bias of judge j

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Share of the variation of compensations explained by judges bias

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Qualification of dismissal				Compensation in months of salary			
Pro-worker bias	No	Yes	No	Yes	No	Yes	No	Yes
Case controls	No	No	Yes	Yes	No	No	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.021	0.026	0.073	0.076	0.032	0.035	0.329	0.331
Adj. R^2	0.016	0.021	0.067	0.070	0.027	0.030	0.325	0.326
# obs	7021	7021	7021	7021	7021	7021	7021	7021

Court and year fixed effects are included in all regressions. Columns (1) to (4) present the R^2 and adjusted R^2 of the regression of the qualification of the dismissal - ie dummy indicating whether the dismissal was deemed wrongful - on some case controls and judges bias, while columns (5) to (8) display similar results for the regression of the compensation in monthly salaries. Columns (1) and (5) display the R^2 when only adding fixed effects, columns (2) and (6) when controlling for the judge's pro-worker bias, columns (3) and (7) when controlling for some case characteristics (dummy indicating whether the firm has more than 11 workers at the time of the dismissal, *Prud'hommes* compensation, salary, seniority), column (4) and (8) when controlling for both case characteristics and the judge's pro-worker bias.

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Random Assignment of Cases?

	(1) Compensation in months	(2) Judge's severity
Amount claimed by worker	0.000***	0.000
	(4.20)	(-0.01)
Amount at Prud'hommes	0.000***	-0.000
	(4.76)	(-0.41)
Number of workers in firm	-0.000	0.000
	(-1.18)	(1.12)
Seniority	0.200***	0.000
	(9.83)	(-0.84)
Legislation threshold applied	1.053***	0.011
	(4.41)	(1.14)
Worker salary	-0.000***	-0.000
	(-6.28)	(-1.39)
Economic dismissal	1.881***	-0.003
	(7.20)	(-0.36)
Worker who appealed	-0.995***	-0.011
	(-3.83)	(-0.66)
Time between dismissal and Appeal Court	0.000**	-0.000
	(2.31)	(0.38)
Joint F-Test	0.0000	0.5044
Observations	3,538	4,525

Mechanisms

Why should severance pay matter for firms' survival and employment ?

1. Cash effect
2. Learning effect: update of beliefs about expected firing costs
3. Incentive effect on remaining workers of the firm (effort reduction? wage re-negotiations?)

$\Rightarrow$ Cannot disentangle the above-mentioned mechanisms $\Rightarrow$ Additional caveat: we focus on ex-post effect of judges' bias

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Severance pay data

- Novel data on severance pay decided before Courts
- Main information available:
  - Nature of dismissal: disciplinary versus economic
  - Whether worker won the case
  - Value of the amount of severance pay for wrongful dismissal (in euros and months of salary)
  - Value of the other compensatory amounts
  - Seniority before the dismissal
  - Information on judges
  - Identity of the firm $\rightarrow$ Enables to merge with matched employer-employee dataset (DADS) and other tax data

$\Rightarrow$ First time French data on severance pay decided at Courts
$\Rightarrow$ **First time ever one can match this amount to firm-level data**

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Number of firms in final sample

	# of cases	# of firms	# of judges
a. Initial sample used to compute judge fixed effects	30,717	-	159
b. Sample of cases judged by judges for which we have computed a fixed effect	101,010	-	159
c. Cases with non-missing firm identifier	65,623	39,966	159
d. Cases for which firm identifier is matched in DADS and FARE	43,882	25,833	159
e. Firms with only one Appeal Court case	18,046	18,046	159
f. Restriction to years of judgement < 2013	16,123	16,123	159
g. Surviving firms with non-missing required variables in DADS data	9,227	9,227	142
h. Trimming first and last centiles of judges' bias	9,035	9,035	135
i. Firms with non-missing required variables in FARE	7,329	7,329	133

▸ Back empirical strategy ▸ Back results

Descriptive statistics: all firms

	mean	min	med	max	sd	count
Nb of workers	47.89	1.00	14.00	4645.00	142.57	7329.00
Nb of hires	10.95	0.00	4.00	725.00	32.25	7324.00
Nb of exiters	10.37	0.00	3.00	996.00	35.84	7329.00
Sales (in K euros)	6237.23	0.00	2008.00	64482.00	10360.51	6960.00
Value added (in K euros)	1819.74	0.00	778.00	17798.00	2717.28	6867.00
Share of firms in manufacturing	0.19	0.00	0.00	1.00	0.40	7329.00
Share of firms in construction	0.11	0.00	0.00	1.00	0.31	7329.00
Share of firms in services	0.33	0.00	0.00	1.00	0.47	7329.00
Share of firms $<$ 10 years	0.27	0.00	0.00	1.00	0.44	7329.00
Survival at t+1	0.95	0.00	1.00	1.00	0.22	7329.00
Survival at t+2	0.90	0.00	1.00	1.00	0.30	7329.00
Survival at t+3	0.87	0.00	1.00	1.00	0.34	7329.00
Wrongful dismissal	0.52	0.00	1.00	1.00	0.50	5344.00
Amount in wage bill (when $>$0)	10.68	0.00	2.15	1336.30	40.08	5340.00
Judge pro-worker bias	-0.04	-2.05	-0.04	2.73	0.76	7329.00
Amount	11.81	0.00	8.40	442.43	15.68	3553.00

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Descriptive statistics: firms below 15 employees

	mean	min	med	max	sd	count
Nb of workers	6.56	1.00	6.00	14.00	3.67	3677.00
Nb of hires	2.42	0.00	2.00	251.00	4.94	3677.00
Nb of exiters	2.50	0.00	2.00	320.00	7.22	3677.00
Sales (in K euros)	1489.21	0.00	847.00	61353.00	2531.33	3607.00
Value added (in K euros)	466.57	0.00	338.00	14315.12	584.92	3534.00
Share of firms in manufacturing	0.14	0.00	0.00	1.00	0.35	3677.00
Share of firms in construction	0.11	0.00	0.00	1.00	0.32	3677.00
Share of firms in services	0.32	0.00	0.00	1.00	0.47	3677.00
Share of firms $<$ 10 years	0.38	0.00	0.00	1.00	0.48	3677.00
Survival at t+1	0.93	0.00	1.00	1.00	0.26	3677.00
Survival at t+2	0.87	0.00	1.00	1.00	0.34	3677.00
Survival at t+3	0.82	0.00	1.00	1.00	0.38	3677.00
Wrongful dismissal	0.52	0.00	1.00	1.00	0.50	2641.00
Amount in wage bill (when $>$0)	18.98	0.00	6.39	1336.30	55.30	2641.00
Judge pro-worker bias	-0.02	-2.05	-0.04	2.73	0.76	3677.00
Amount	10.82	0.00	7.49	442.43	16.82	1809.00

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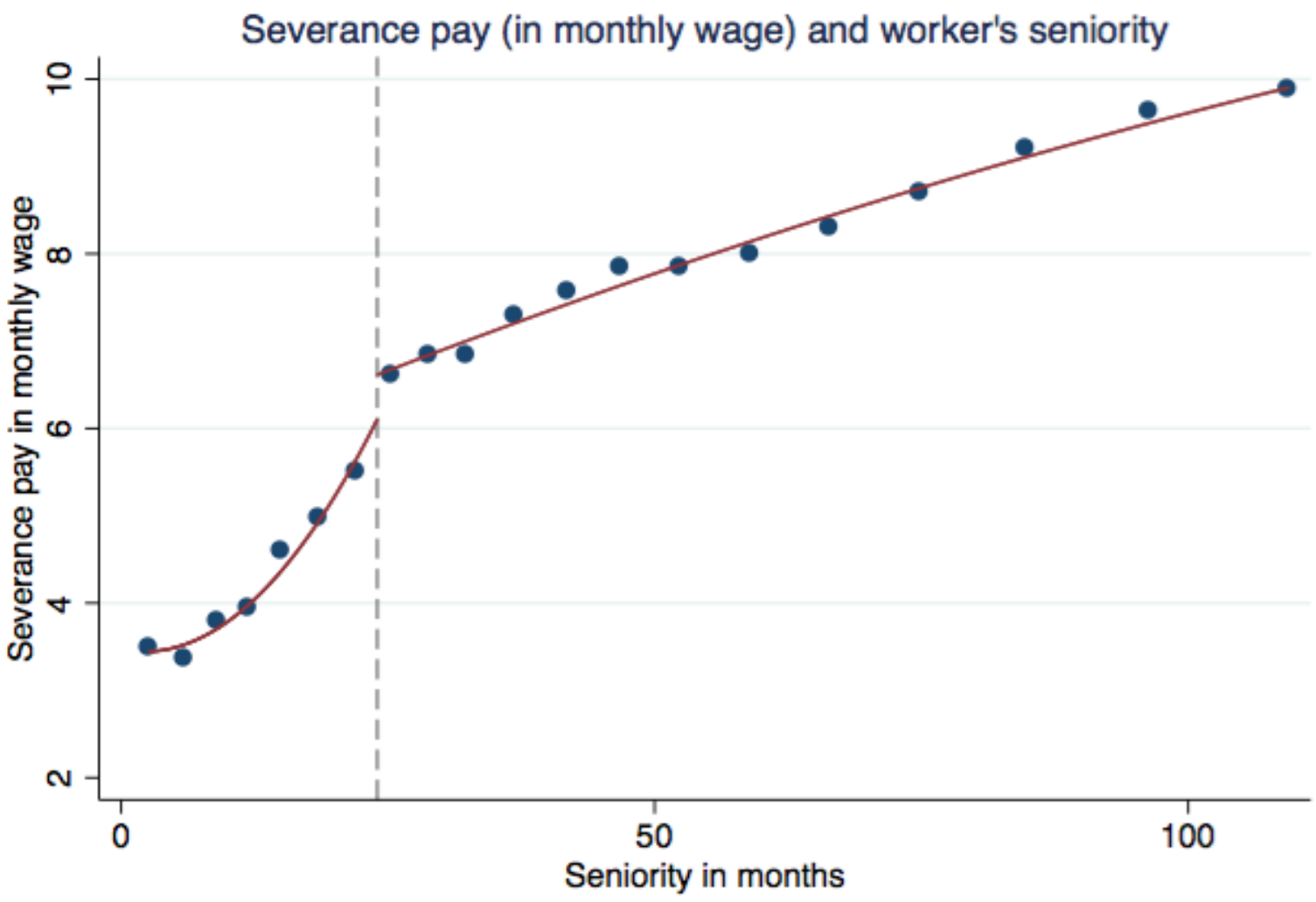
BODACC data

- Public data from the *Bulletin des Annonces Civiles et Commerciales*
- All judicial redress and liquidation events between 2008 and 2016
- We define a liquidation as the firm's first event of liquidation
- We then define dummy variables indicating whether the firm had a redress or liquidation event
  - within 1 year after the Appeal Court ruling
  - within 2 years
  - within 3 years

back

Discontinuity of severance pay in seniority



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Basic stat descs: firms that go to Court

Table 1: Summary main variables of firm-level data

	mean	min	max	sd	count
Nb of workers	14.51	0	49.5	12.52	7050
Sales (in K euros)	3175.44	0	64175	5286.1	5955
Value added (in K euros)	913.4	0	16163	1146.5	5851
Share of firms in manufacturing	0.15	0	1	0.36	6947
Share of firms in construction	0.11	0	1	0.32	6947
Share of firms in merchant services	0.33	0	1	0.47	6947
Share of firms 10 years	0.36	0	1	0.48	7024
Redress or liquidation at t+1	0.047	0	1	0.21	6017
Redress or liquidation at t+2	0.80	0	1	0.27	6017
Redress or liquidation at t+3	0.10	0	1	0.30	6017
Positive amount in wage bill	0.65	0	1	0.48	6933
Amount in wage bill	0.07	0	2.8	0.18	6933

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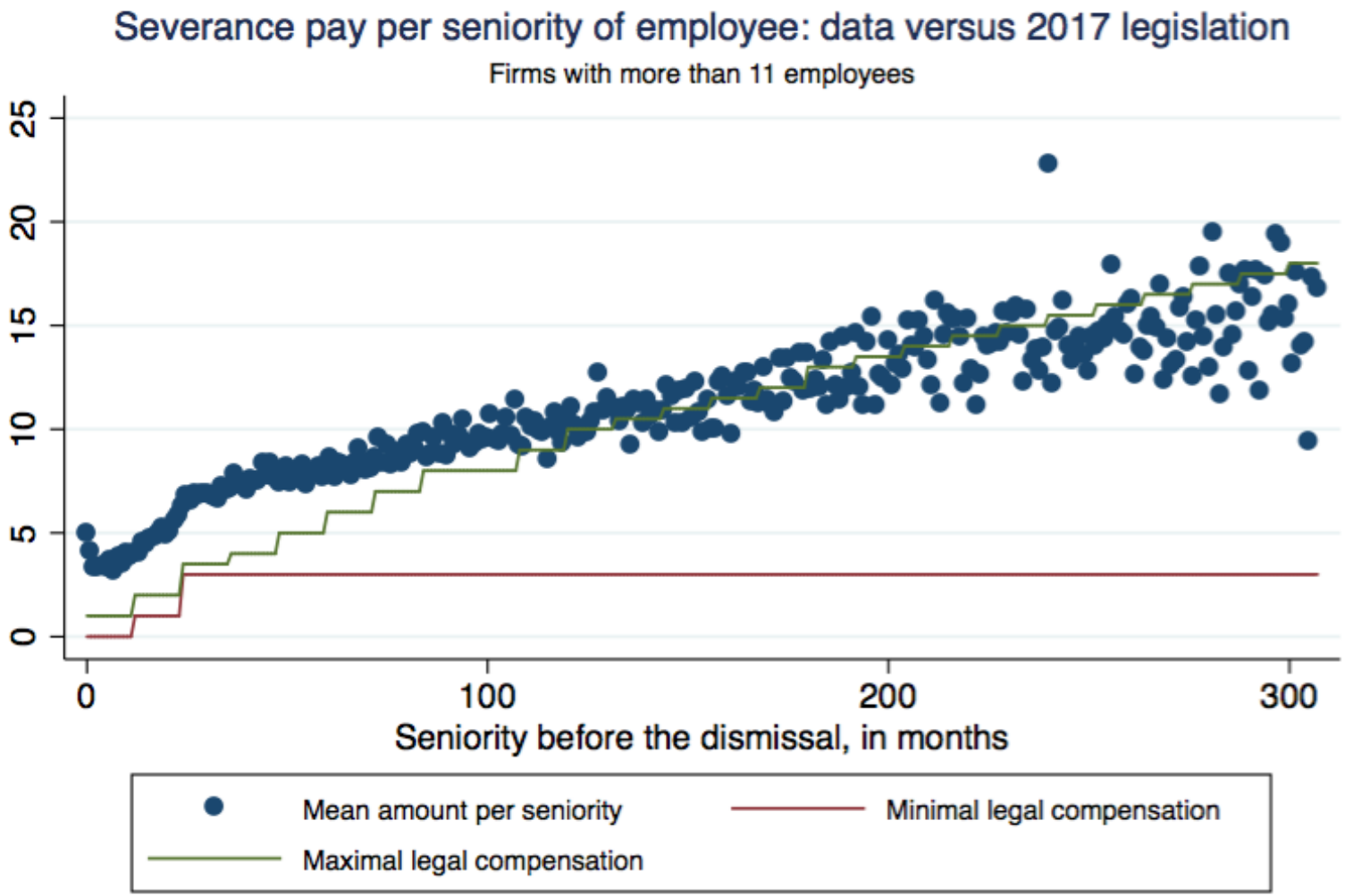
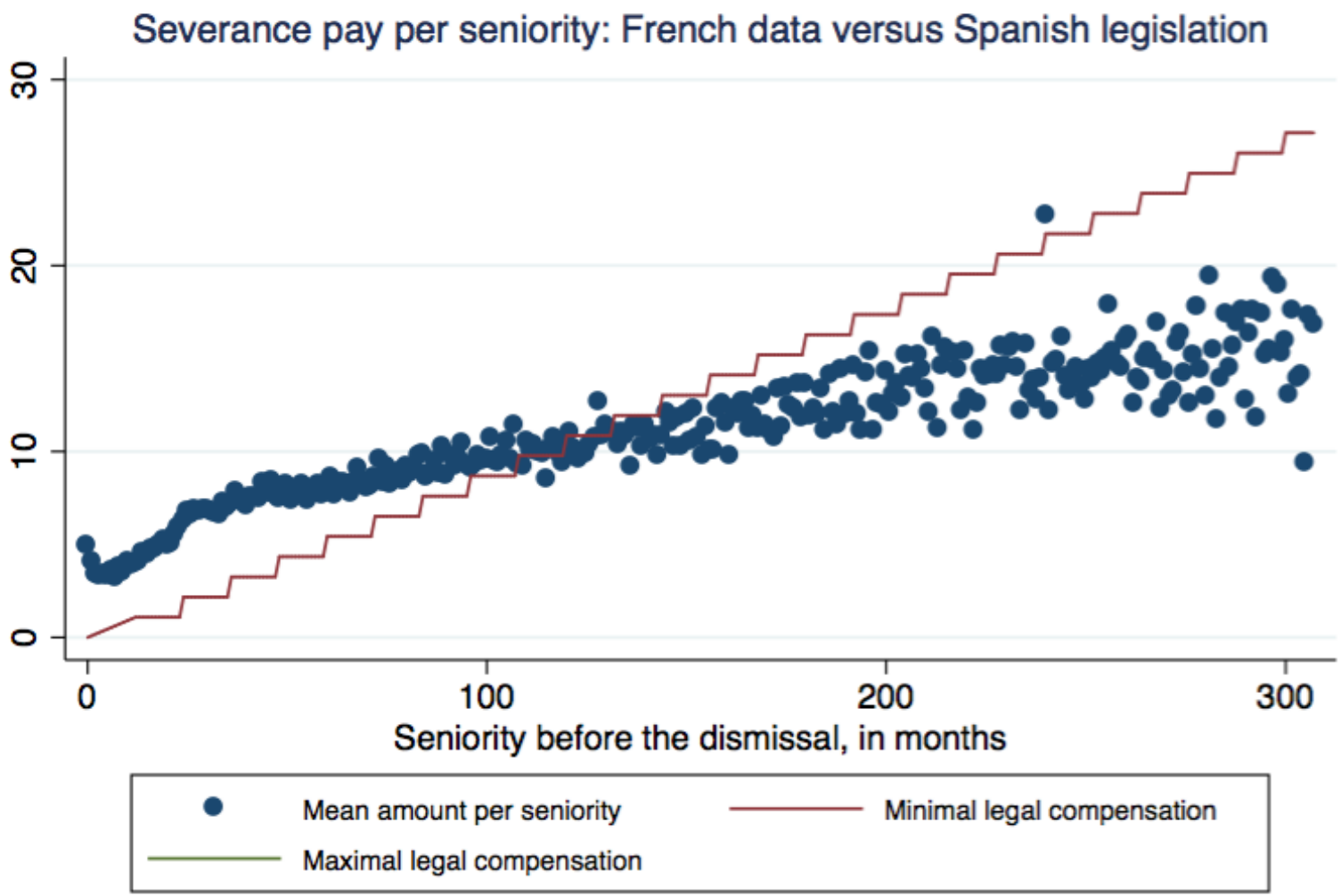
Severance pay data versus 2017 legislative scale



French severance pay data versus Spanish legislative scale



Conditional on the amount being positive. Data for more than 360 months of seniority are not displayed.
360 months of seniority is between p95 and p99 of seniority in our data

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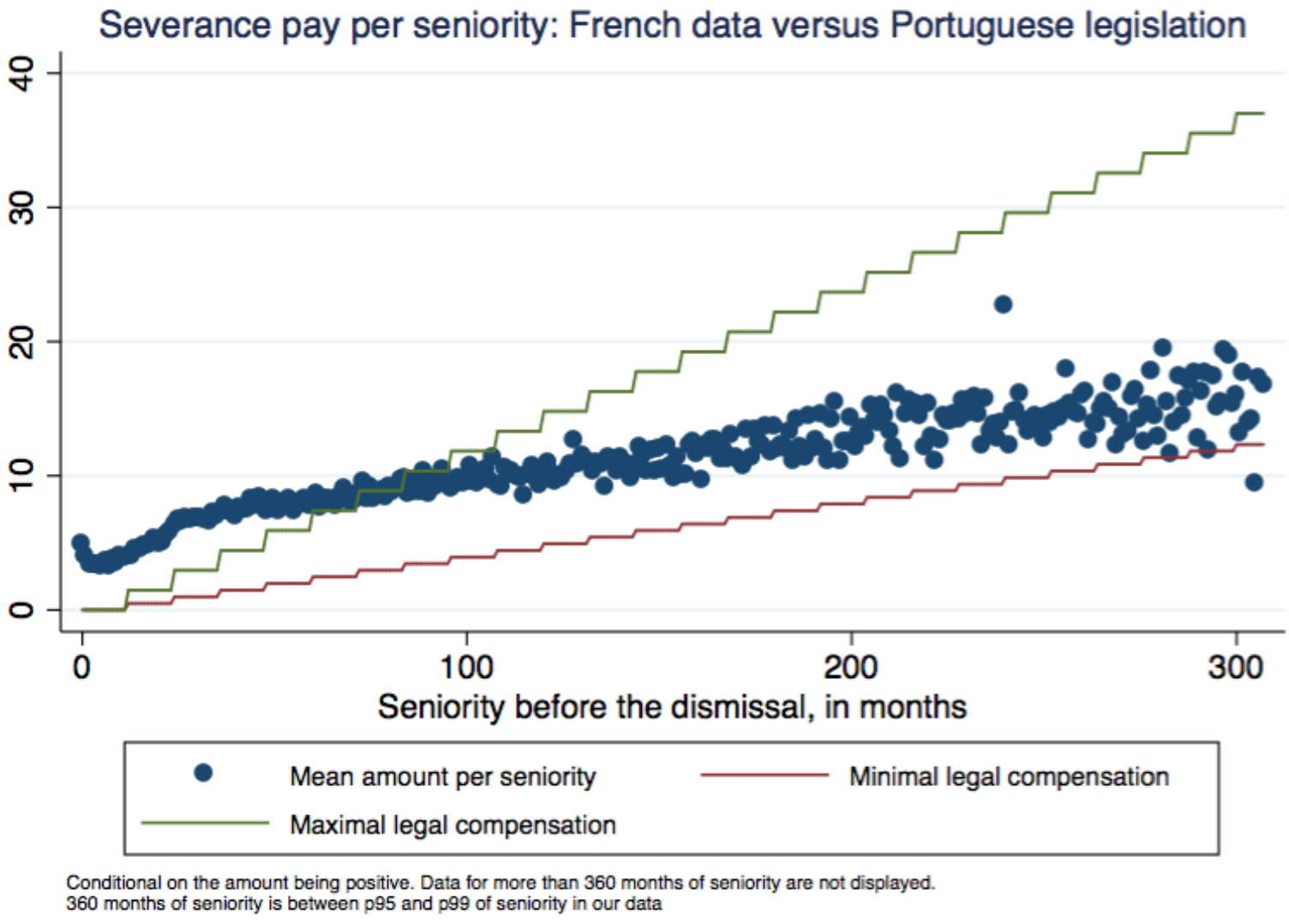
French severance pay data versus Portuguese legislative scale



The court may grant between 15 (minimum) and 45 (maximum) days of salary per year of seniority with a minimum of 3 months.

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More desc stats of case-level data

	mean	min	med	max	sd	count
Total amount in euro	29,794	0	15,724	963,154	50,056	37,149
Total amount in months of salary	10.47	0	7.84	76.26	11.12	37,149
Positive total amount	0.89	0	1	1	0.31	37,149
Amount for unfair dismissal in euro	12,288	0	3,000	530,000	24,193	37,149
Amount for unfair dismissal in months of salary	4.32	0	1.55	73,17	6.10	37,149
Positive amount for unfair dismissal	0.58	0	1	1	0.49	37,149
Other amount in euro	17,506	0	6,197	963,154	38,024	37,149
Prud'hommes amount	7,326	0	0	277,200	17,649	27,725
Amount demanded by worker	44,458	1	25,000	985,536	64,439	19,371
Higher amount than prud'hommes	0.38	0	0	1	0.49	27,725
Lower amount than prud'hommes	0.17	0	0	1	0.37	27,725
Same amount as prud'hommes	0.45	0	0	1	0.50	27,725
Worker who appealed	0.61	0	1	1	0.49	33,767
Economic dismissal	0.16	0	0	1	0.36	37,149
Worker's seniority in months	81,66	0	50.00	538	87.20	27,147

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Construction of severance pay data

1. Gathered Appeal Courts texts from legal databases (Legifrance, Dalloz)
2. Extracted from these texts, using Python programming, variables of interest
3. Recovered the firm identifier, using Python programming, from websites such as societe.com
4. Merged this severance data with administrative data thanks to the firm identifier

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Random Assignment of Cases

	Severance pay in months	Judge's severity
Firms' age in t	0.020***	0.000
	(3.36)	(0.44)
Number of workers in t-1	-0.011**	0.000
	(-2.49)	(1.49)
Sales in t-1	0.000	-0.000
	(0.74)	(-1.04)
Total wages in t-1	0.001**	0.000
	(2.48)	(0.39)
Value added in t-1	-0.000	-0.000
	(-1.18)	(-0.43)
Net income in t-1	0.000	0.000
	(1.13)	(0.22)
Debt in t-1	-0.000	0.000
	(-0.37)	(0.37)
Cash in t-1	-0.000	0.000
	(-0.59)	(0.11)

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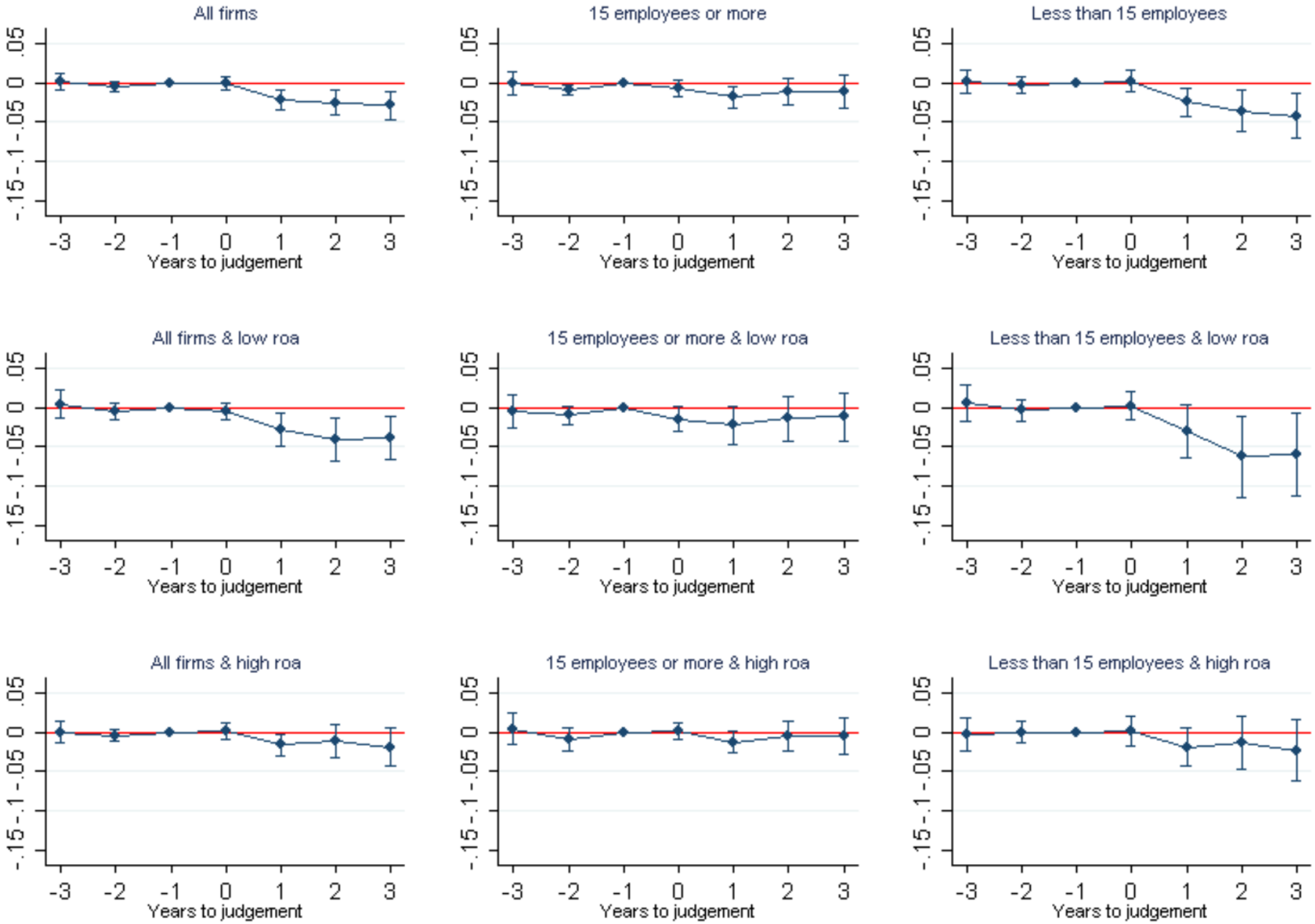
Random Assignment of Cases: $E(\epsilon_{ijt}|bias_{ij}) = 0$?

	Severance pay in months	Judge's severity
Growth of number of workers in t-1	0.429	-0.0326
	(1.14)	(-1.32)
Growth of sales in t-1	-1.639**	0.008
	(-2.47)	(0.17)
Growth of total wages in t-1	-0.064	0.039
	(-0.11)	(1.24)
Growth of value added in t-1	-0.054	0.025
	(-0.12)	(0.65)
Growth of net income in t-1	-0.022	-0.000
	(-0.96)	(-0.00)
Growth of debt in t-1	0.012	-0.000
	(0.78)	(-1.28)
Growth of cash in t-1	0.006	0.000
	(0.58)	(0.07)
Joint F-Test	0.000	0.608
Observations	4,473	8,660

Back

Event study



Employment growth rate (no covariate)

▸ Back

Results: 1 year after the judgment

	(1)	(2)	(3)	(4)	(5)	(6)
	Survival within $[t, t+1]$	growth rate between $t-1$ and $t+1$				
		Employment	Employment *cdi*	Employment *cdd*	Share *cdi*	Sales
Pro-worker bias	-0.001	-0.009	-0.003	0.001	-0.000	-0.007
	(0.001)	(0.006)	(0.007)	(0.017)	(0.002)	(0.005)
R^2	0.025	0.037	0.037	0.030	0.032	0.036
Pro-worker bias	0.000	-0.018**	-0.005	-0.019	0.005	-0.014*
× Low Roa	(0.002)	(0.008)	(0.010)	(0.022)	(0.003)	(0.007)
Pro-worker bias	-0.003	-0.000	-0.001	0.020	-0.005	-0.001
× High Roa	(0.002)	(0.010)	(0.010)	(0.028)	(0.004)	(0.007)
R^2	0.025	0.037	0.037	0.030	0.033	0.037
# obs	4486.000	4486.000	4112.000	4112.000	4112.000	4418.000

Note: t **denotes the year of the Appeal Court judgment. The dependent variable is in Column (1) an indicator variable equal to one if the firm faced a judicial liquidation within 1 year after the judgment, and in columns (2) to (6) Haltiwanger growth rates of corresponding variables.**

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Results: 2 years after the judgment

	(1)	(2)	(3)	(4)	(5)	(6)
	Survival within $[t, t+2]$	growth rate between $t-1$ and $t+2$				
		Employment	Employment *cdi*	Employment *cdd*	Share *cdi*	Sales
Pro-worker bias	-0.003	-0.015**	-0.014	0.008	-0.004	-0.017**
	(0.003)	(0.008)	(0.009)	(0.017)	(0.004)	(0.007)
R^2	0.035	0.043	0.037	0.026	0.033	0.030
Pro-worker bias	-0.007*	-0.033**	-0.024**	0.000	-0.004	-0.030***
× Low Roa	(0.004)	(0.011)	(0.012)	(0.024)	(0.005)	(0.009)
Pro-worker bias	0.001	0.001	-0.005	0.015	-0.005	-0.005
× High Roa	(0.004)	(0.012)	(0.014)	(0.024)	(0.006)	(0.010)
R^2	0.035	0.044	0.037	0.026	0.033	0.031
# obs	4486.000	4486.000	4112.000	4112.000	4112.000	4395.000

Note: t **denotes the year of the Appeal Court judgment. The dependent variable is in Column (1) an indicator variable equal to one if the firm faced a judicial liquidation within 2 years after the judgment, and in columns (2) to (6) Haltiwanger growth rates of corresponding variables.**

▸ Back

Results: 3 years after the judgment firms, non-linearity

	(1)	(2)	(3)	(4)	(5)	(6)
	Survival within $[t, t+3]$	growth rate between $t-1$ and $t+3$				
		Employment	Employment *cdi*	Employment *cdd*	Share *cdi*	Sales
Pro-worker bias	-0.026**	-0.058**	-0.055**	0.005	-0.025**	-0.066**
	(0.012)	(0.024)	(0.026)	(0.041)	(0.012)	(0.023)
Pro-worker bias^2	-0.004	0.009	0.004	0.008	-0.004	0.006
	(0.006)	(0.014)	(0.015)	(0.029)	(0.008)	(0.015)
R^2	0.134	0.111	0.113	0.109	0.135	0.104
# obs	973.000	973.000	911.000	911.000	911.000	966.000

Note: t **denotes the year of the Appeal Court judgment. The dependent variable is in Column (1) an indicator variable equal to one if the firm faced a judicial liquidation within 3 years after the judgment, and in columns (2) to (7) Haltiwanger growth rates of corresponding variables.**

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IV estimates: first stage

	(1)	(2)	(3)	(4)
	All size	All size	Small firms	Small firms
All Roa	1.910***		2.267***	
	(0.262)		(0.500)	
Low Roa		1.595***		2.393***
		(0.385)		(0.866)
High Roa		2.208***		2.924***
		(0.457)		(0.928)
R^2	0.064	0.064	0.075	0.075
F	15.79	13.17	6.01	5.05
# obs	4486	4486	1902	1902

Note: First stage IV estimates. Compensation amount instrumented with judge fixed effects

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Results: 3 years after the judgment - surviving firms

	(1)	(2)	(3)	(4)	(5)
	growth rate between t-1 and t+3				
	Employment	Employment *cdi*	Employment *cdd*	Share *cdi*	Sales
Pro-worker bias	-0.002	-0.003	0.008	-0.000	-0.009*
	(0.006)	(0.007)	(0.022)	(0.004)	(0.006)
R^2	0.040	0.038	0.033	0.027	0.029
Pro-worker bias × Low Roa	-0.016**	-0.013	0.006	0.000	-0.027**
	(0.008)	(0.008)	(0.025)	(0.004)	(0.008)
Pro-worker bias × High Roa	0.011	0.006	0.010	-0.001	0.006
	(0.009)	(0.012)	(0.033)	(0.005)	(0.009)
R^2	0.041	0.038	0.033	0.027	0.030
# obs	4149.000	3797.000	3797.000	3797.000	4062.000

Note: *t* **denotes the year of the Appeal Court judgment. Haltiwanger growth rates of corresponding variables.**

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Judges' network

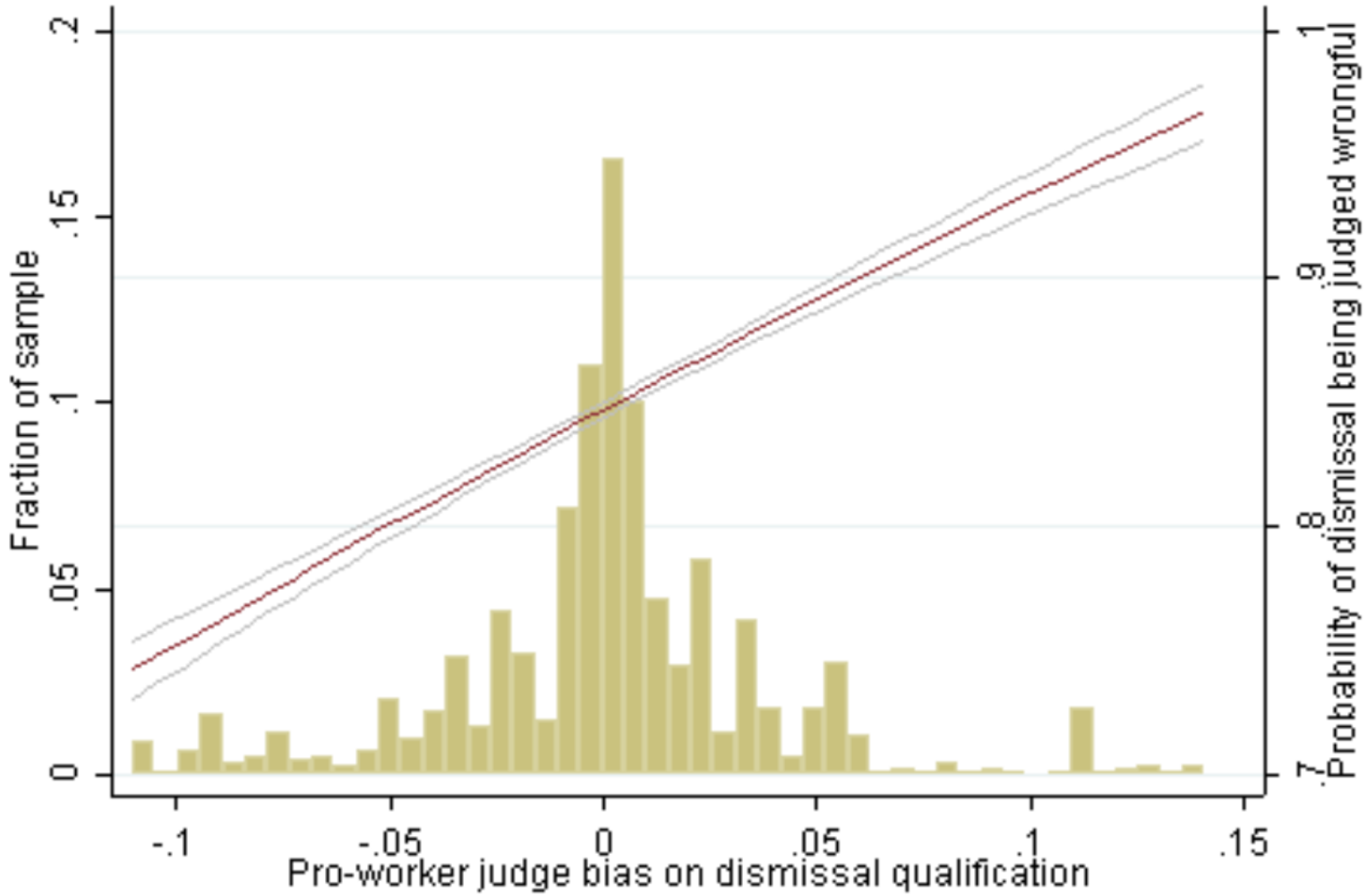
Figure 1: Judges network: each dot represents a judge. Two dots are connected if the two judges shared the same social chamber at least once

Random Assignment of Cases: $E(\epsilon_{ijt}|bias_{ij}) = 0$?

	(1) Compensation in months	(2) Judge's severity
Amount claimed by worker	0.000***	0.000
	(4.20)	(-0.01)
Amount at Prud'hommes	0.000***	-0.000
	(4.76)	(-0.41)
Number of workers in firm	-0.000	0.000
	(-1.18)	(1.12)
Seniority	0.200***	0.000
	(9.83)	(-0.84)
Legislation threshold applied	1.053***	0.011
	(4.41)	(1.14)
Worker salary	-0.000***	-0.000
	(-6.28)	(-1.39)
Economic dismissal	1.881***	-0.003
	(7.20)	(-0.36)
Worker who appealed	-0.995***	-0.011
	(-3.83)	(-0.66)
Time between dismissal and Appeal Court	0.000**	-0.000
	(2.31)	(0.38)
Joint F-Test	0.0000	0.5044
Observations	3,538	4,525

▸ firm variables ▸ Back

Judge pro-worker bias with respect to the dismissal qualification



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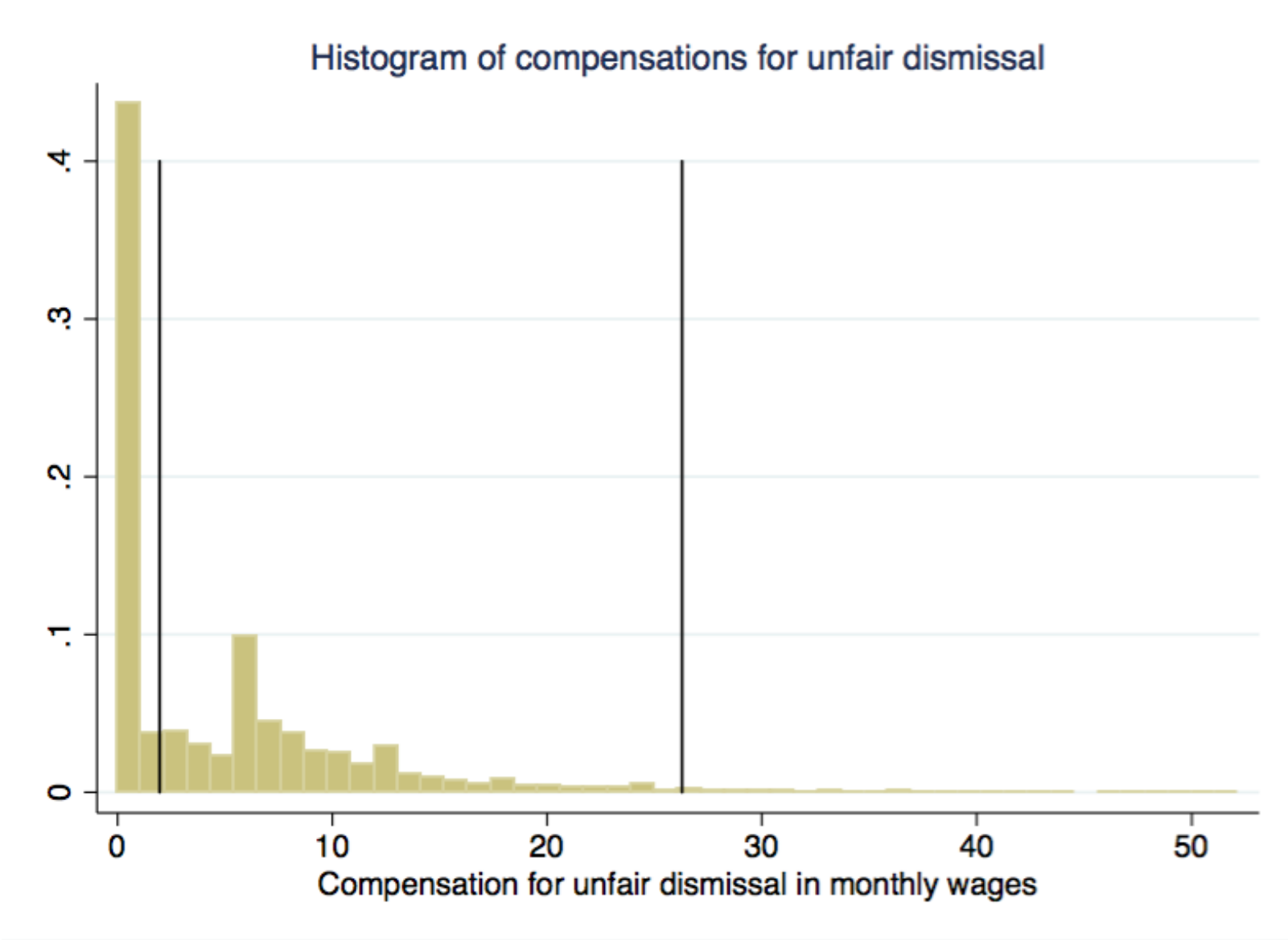
Effect of bias on compensations granted



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Identification threats

1. **Non-random assignment of cases to judges**.
   - judges inherit a large backlog $\rightarrow$ average waiting time before judgments = 667 days
   - cases are allocated to the social chambers at the start of the appeal procedure. At that time, no precise date for the next judge's arrival
   - have to respect order of arrival of cases

2. **Selection of firms and workers depending on judge assignment**. Ex: firm chooses not to go to Court when assigned to very pro-worker judge
   - Defendants and plaintiffs have limited information about the identity of the judge until the judgment date
   - Robustness specification:
     - sub-sample of Appeal Courts with several Social Chambers
     - frequent judge rotation and long waiting time: at Prud'hommes stage, workers and firms expect the current Appeal Court judge to change in the meantime + we eliminate cases for which judge does not change
     - robustness specification: controlling for severity of judge present at Prud'hommes time

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Judges 'network'

- Each dot represents a judge. Two dots are connected if the two judges shared the same social chamber at least once
- The higher the degree of judges mobility, the higher the probability to achieve a perfect ranking of judges

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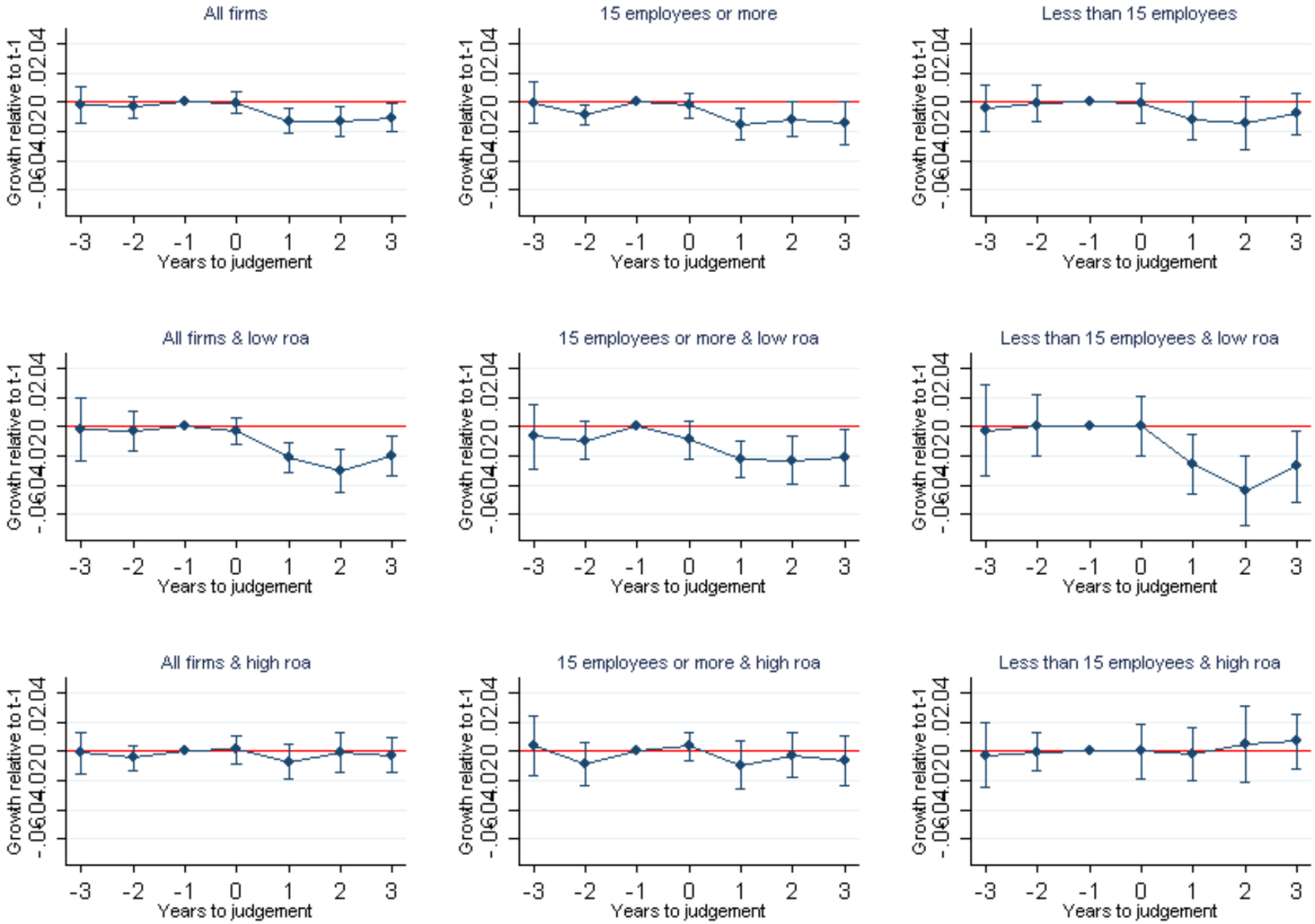
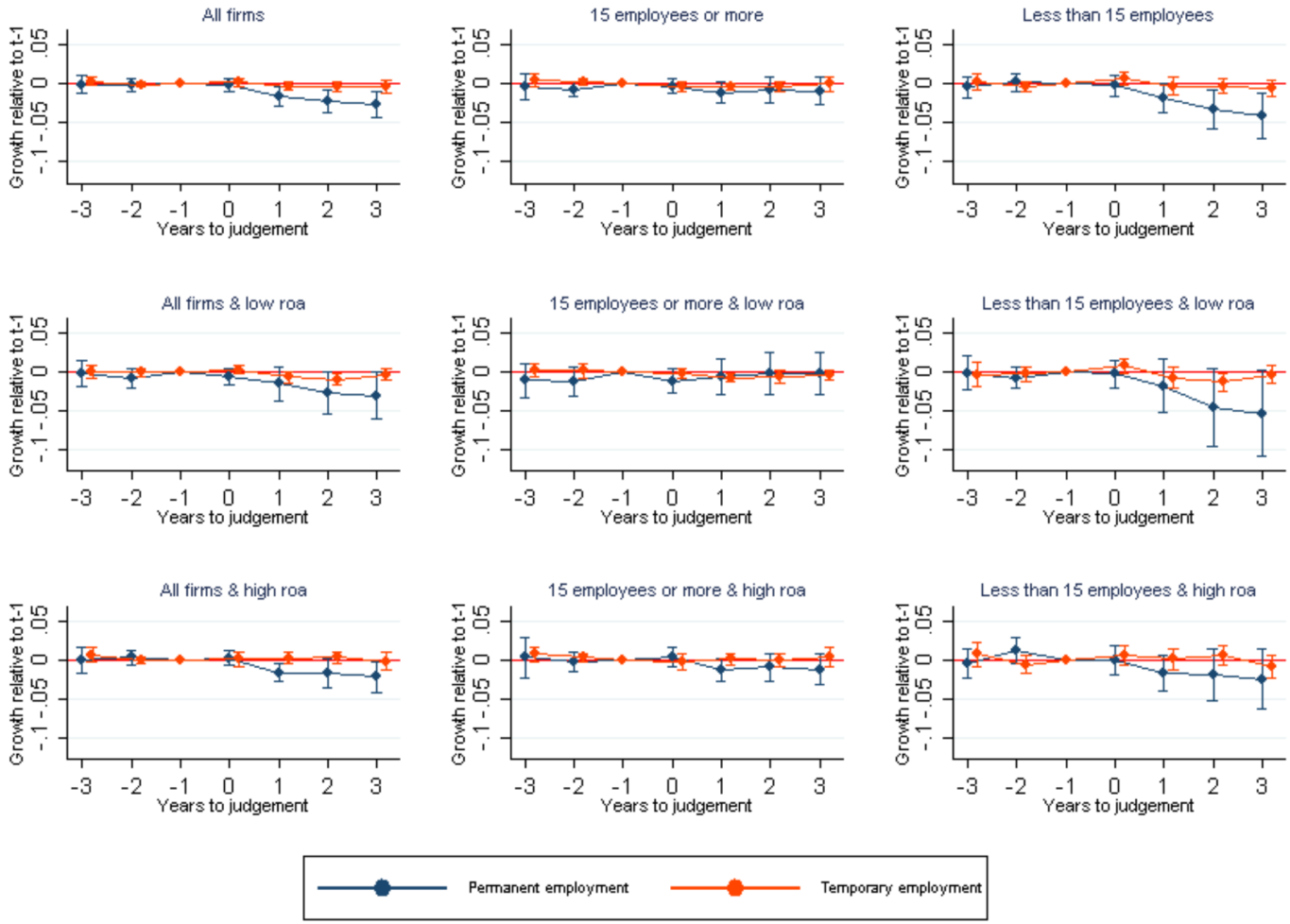
Event study: Employment growth conditional on survival



Davis-Haltiwanger employment growth rate
Covariates: social chamber, year fixed effect, firm age, economic dismissals, return on assets in the previous year and the leave-one-out average industry annual growth rate of sales. SE, clustered at judge level.

▸ Back to survival ▸ Back to selection issues

Event study: Temp and Perm employment growth



Davis-Haltiwanger employment growth rate.
Covariates: social chamber, year fixed effect, firm age, economic dismissals, return on assets in the previous year and the leave-one-out average industry annual growth rate of sales. SE, clustered at judge level.

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Appendix: IV estimates, exclusion restriction

- The amount of compensation determined by judges should affect firms only through the compensation channel and not directly in any other way.

- Judges decisions include
  1. the compensation for wrongful contract breach
  2. the qualification of dismissal which can impact their performance independently of the amount of compensation

$\Longrightarrow$ Add the indicator variable for wrongful dismissal in the vector of explanatory variables of the IV model

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