

**Online Appendix to**

**Inside Post-Socialist Courts: The Determinants of  
Adjudicatory Outcomes in Slovenian Commercial Disputes**

Peter Grajzl<sup>1</sup>    Valentina Dimitrova-Grajzl<sup>2</sup>    Katarina Zajc<sup>3</sup>

<sup>1</sup> (Corresponding author) Department of Economics, The Williams School, Washington and Lee University, Lexington, VA 24450, USA and CESifo, Munich, Germany. Email: grajzlp@wlu.edu

<sup>2</sup> Department of Economics and Business, Virginia Military Institute, Lexington, VA 24450, USA. E-mail: dimitrova-grajzlv@vmi.edu

<sup>3</sup> Faculty of Law, University of Ljubljana, 1000 Ljubljana, Slovenia. Email: katarina.zajc@pf.uni-lj.si

This Online Appendix, available at <http://home.wlu.edu/~grajzlp/ipsc-Online-Appendix.pdf>, examines the robustness of our result discussed in Sections 5 and 6. We, first, illustrate that the estimates of the parameters in the Plaintiff Win equation, discussed in Section 5 and reported in the first two columns of Table 4, are robust to alternative estimation strategies. Specifically, Table A1 shows that our results are robust to the use of Heckman's (1979) two-step method without any exclusion restrictions; in this case, the identification of parameters of the Plaintiff Win equation is based on the (non-linear) functional form stemming from the inclusion of the inverse Mills ratio among the regressors. Table A2 further shows that our results are robust to the use of Heckman's (1979) two-step method where Mediation is the only exclusion restrictions.

Second, we show how the estimates of the parameters in the Trial equation and the corresponding marginal effects, discussed in Section 6 and reported in the last two columns of Table 4 and in Table 5, change if we use Heckman's (1979) two-step method with Mediation as the only exclusion restrictions. The comparison of results in Tables 4 and 5 with results in Tables A2 and A3 demonstrates that dropping the proxy for parties' expectations about the trial outcome from the Trial equation renders the marginal effects associated with legal representation dummies statistically significant (see Table A3). This finding is consistent with the interpretation that a disputing party's choice to seek external legal representation by hiring an attorney or a law firm is conditional on the disputing party's expectation about the prospects of trial-based resolution. Thus, once we control for parties' expectation about trial outcome (see Table 4), attorney or law firm representation no longer affects the mode of case resolution (see Table 5).

Third, to address the possible endogeneity of legal representation in the Plaintiff Win equation, we explore the sensitivity of our results to an instrumental variable approach. To this end, given the statistically indistinguishable effects of representation by attorney versus

representation by law firm (see above), we first replace the four legal representation dummy variables reported in Tables 3-5 with two dummy variables: (i) Plaintiff Representation by Attorney or Law Firm and (ii) Defendant Representation by Attorney or Law Firm. Each of these variables takes on the value 1 if the relevant disputing party is represented either by an attorney or a law firm; and 0 otherwise. The reduction of four possibly endogenous legal representation dummies into two reduces the minimum number of required instruments. This is advantageous as the set of suitable candidate instrumental variables in our dataset is limited.

As an instrumental variable for a disputing party's legal representation by attorney or law firm, we use the party's average number of employees in the year prior to filing of the lawsuit. Our rationale for the validity of this instrument is as follows. Holding all else equal, the larger the number of a disputing party's employees, the more likely it is that the disputing party houses its own legal division or personnel legally permitted to represent the party in court. In contrast, the smaller the number of a party's employees, the more likely it is that in the case of a dispute the party will seek legal representation externally, on the attorney market. At the same time, once controlling for a disputing parties' assets and profitability, case complexity, stakes, and court fixed effects, which *inter alia* control for any court-specific norms of adjudication, the average number of the disputing party's employees is, we argue, unlikely to directly affect the likelihood of plaintiff victory at trial.

Reporting of the average number of employees in the AJPEs database is overall spottier than reporting of assets or profits. As a result, the size of our estimated sample of tried cases shrinks to 63 observations. Given the large number of covariates in our model, the associated number of degrees of freedom is very limited. Rather than restricting our analysis to the subsample in which our instruments are non-missing, which leads to efficiency losses, we follow

Angrist et al. (2010) and Mogstad and Wiswall (2012: Sec. 3.1) and use linear projection to form an instrument set that is defined for a larger sample of observations. Specifically, we replace a subset of the missing values for the average number of employees for each disputing party using fitted values from the linear regression of the party's average number of employees on all exogenous variables.<sup>1</sup> Under the assumption that the values of instruments are missing randomly, which applies well in our context, the resulting instrumental variables estimator is consistent (Mogstad and Wiswall 2012).<sup>2</sup>

To simultaneously address the endogenous selection of tried cases and the endogenous choice of legal representation, we implement a procedure suggested by Wooldridge (2002: 567-569). We first run a probit of the Trial equation. As explanatory variables, we use all exogenous variables, including Mediation and the two instruments for plaintiff and attorney legal representation. Using the resulting probit coefficient estimates, we obtain the corresponding inverse Mills ratio. We then estimate a two-stage-least-squares (2SLS) regression which includes the inverse Mills ratio as a regressor and instruments for Plaintiff Representation by Attorney or Law Firm and Defendant Representation by Attorney or Law Firm with Plaintiff Average Number of Employees and Defendant Average Number of Employees, respectively.

Table A4 presents the results. Column (1) shows the benchmark OLS results. Plaintiff victory is statistically significantly negatively associated with defendant's representation by

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<sup>1</sup> Using only the subsample in which the values of our instruments are non-missing,  $R^2$  for the regression of the plaintiff's average number of employees on all exogenous variables equals 0.68;  $R^2$  for the regression of the defendant's average number of employees on all exogenous variables equals 0.46.

<sup>2</sup> For completeness, we also estimated the two-stage-least squares model with sample selection correction described in this section without relying on imputation (full results are available upon request). The first-stage regression results were strong: Plaintiff Average Number of Employees and Defendant Average Number of Employees were, as conjectured, respectively statistically significantly negatively associated with Plaintiff Representation by Attorney or Law Firm and Defendant Representation by Attorney or Law Firm. In the second-stage regression, the coefficient on Defendant Representation by Attorney or Law Firm was negative (as in Tables 3, 4, A1, and A2) but statistically insignificant.

attorney or law firm and statistically significantly positively associated with plaintiff's profitability. No other explanatory variable featured in column (1) is statistically significant.

Results in column (2) are based on 2SLS estimation while correcting for the selection of tried cases using Heckman's (1979) two-step method. The qualitative pattern of results is identical to that displayed in the OLS column (1). The only statistically significant explanatory variables featured in column (2) are the dummy variable for defendant's representation by attorney or law firm (using a one-sided test of significance) and plaintiff's ROA. The signs of the coefficients on these variables match the signs of the corresponding coefficients in the OLS column (1). The implied magnitude of the effect of the defendant's representation by attorney or law firm, however, is larger in column (2), which suggests that addressing possible endogeneity of legal representation is quantitatively important. The first-stage results (Table A5) confirm our hypothesis: all else equal, the likelihood of a party's representation by attorney or law firm decreases with the party's average number of employees. The effect is highly significant in the case of defendant representation and marginally insignificant (using a one-sided test) in the case of plaintiff representation.

The coefficient on the inverse Mills ratio in column (2) is statistically highly insignificant ( $p$ -value equals 0.728). We thus fail to reject the null that that the error term in the Plaintiff Win equation is uncorrelated with the error term in the Trial equation. Column (3) presents results based on 2SLS estimation without correcting for sample selection. The resulting coefficient estimates and standard errors are very similar to those reported in column (2). In sum, while subject to the small sample the instrumental variable results with or without the sample selection correction resonate with the results discussed in Sections 5.1 and 5.2 of the paper.

**References** (used in this Appendix and not listed in the References list in the paper)

- Angrist, Joshua, Victor Lavy, and Analia Schlosser. 2010. "Multiple Experiments for the Causal Link between the Quantity and Quality of Children." *Journal of Labor Economics*, 28:4, 773-824.
- Mogstad, Magne and Matthew J. Wiswall. 2012. "Instrumental Variables Estimation with Partially Missing Instruments." *Economics Letters*, 114, 186-189.

**Table A1: Regression Results,  
Heckman (1979) Two-Step Method Without Exclusion Restrictions**

Explanatory Variables	Plaintiff Win Equation		Trial Equation	
	Coefficient	Standard Error	Coefficient	Standard Error
<i>Parties' Legal Representation</i>				
Plaintiff Representation Attorney	0.002	(0.251)	0.511	(0.487)
Plaintiff Representation Law Firm	0.072	(0.277)	0.559	(0.563)
Defendant Representation Attorney	-0.388**	(0.155)	1.025**	(0.399)
Defendant Representation Law Firm	-0.0342*	(0.186)	0.983**	(0.433)
<i>Parties' Legal Form</i>				
Plaintiff Legal Entity in Public Interest	0.562	(0.850)	2.227**	(1.126)
Plaintiff Company	-0.057	(0.694)	-1.901	(1.327)
Plaintiff Sole Trader Enterprise	0.008	(0.725)	-2.429*	(1.422)
Defendant Company	0.744	(0.799)	-5.249***	(1.135)
Defendant Sole Trader Enterprise	0.923	(0.828)	-4.851***	(1.255)
<i>Parties' Size and Profitability</i>				
Plaintiff Assets (in EUR 100 million)	-0.012	(0.015)	-0.013	(0.035)
Defendant Assets (in EUR 100 million)	-0.000	(0.007)	0.034	(0.024)
Plaintiff ROA	1.172***	(0.427)	0.355	(0.943)
Defendant ROA	0.007	(0.482)	-5.778***	(2.064)
<i>Case Characteristics</i>				
Stakes (in EUR 100,000)	-0.004	(0.026)	-0.036	(0.034)
Court Expert	-0.106	(0.215)	1.272**	(0.522)
<i>Fixed Effects</i>				
Court FEs		Yes [ $p=0.004$ ]		Yes [ $p=0.030$ ]
Plaintiff Industry FEs		Yes [ $p=0.328$ ]		Yes [ $p=0.608$ ]
Defendant Industry FEs		Yes [ $p=0.030$ ]		Yes [ $p<0.001$ ]
Filing Year FEs		Yes [ $p=0.008$ ]		Yes [ $p=0.593$ ]
Disposition Year FEs		Yes [ $p=0.267$ ]		Yes [ $p=0.182$ ]
<i>Inverse Mills Ratio</i>				
Lambda-hat	-0.112	(0.244)		

*Notes:* Results based on Heckman (1979) two-step estimation method. Total number of observations is 191 and the number of uncensored observations is 91. For both plaintiff's and defendant's legal form respectively, the omitted category is municipality. For both plaintiff's and defendant's legal representation respectively, the omitted category is self-represented or represented by a court-authorized representative who is neither an attorney nor a law firm. Reported standard errors are heteroskedasticity-robust. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively. The reported  $p$ -values for the groups of fixed effects are for the Chi-Square test of joint significance.

**Table A2: Regression Results,  
Heckman (1979) Two-Step Method With Mediation as the Only Exclusion Restriction**

Explanatory Variables	Plaintiff Win Equation		Trial Equation	
	Coefficient	Standard Error	Coefficient	Standard Error
<i>Parties' Legal Representation</i>				
Plaintiff Representation Attorney	0.026	(0.249)	0.545	(0.509)
Plaintiff Representation Law Firm	0.096	(0.272)	0.371	(0.574)
Defendant Representation Attorney	-0.426***	(0.151)	1.221***	(0.436)
Defendant Representation Law Firm	-0.357**	(0.183)	1.174**	(0.466)
<i>Parties' Legal Form</i>				
Plaintiff Legal Entity in Public Interest	0.663	(0.830)	1.539	(1.141)
Plaintiff Company	0.062	(0.661)	-2.368*	(1.394)
Plaintiff Sole Trader Enterprise	0.154	(0.691)	-3.100**	(1.513)
Defendant Company	0.590	(0.806)	-4.771***	(1.253)
Defendant Sole Trader Enterprise	0.765	(0.825)	-4.673***	(1.356)
<i>Parties' Size and Profitability</i>				
Plaintiff Assets (in EUR 100 million)	-0.008	(0.015)	0.022	(0.037)
Defendant Assets (in EUR 100 million)	-0.000	(0.006)	0.023	(0.025)
Plaintiff ROA	1.125**	(0.434)	0.771	(1.050)
Defendant ROA	0.103	(0.449)	-4.964**	(2.208)
<i>Case Characteristics</i>				
Stakes (in EUR 100,000)	-0.006	(0.025)	-0.019	(0.035)
Court Expert	-0.128	(0.181)	0.970*	(0.533)
<i>Fixed Effects</i>				
Court FEs		Yes [ $p=0.004$ ]		Yes [ $p=0.096$ ]
Plaintiff Industry FEs		Yes [ $p=0.343$ ]		Yes [ $p=0.484$ ]
Defendant Industry FEs		Yes [ $p=0.022$ ]		Yes [ $p=1.101$ ]
Filing Year FEs		Yes [ $p=0.007$ ]		Yes [ $p=0.309$ ]
Disposition Year FEs		Yes [ $p=0.352$ ]		Yes [ $p=0.154$ ]
<i>Exclusion Restriction</i>				
Mediation			-1.701***	(0.501)
<i>Inverse Mills Ratio</i>				
Lambda-hat	-0.200	(0.191)		

*Notes:* Results based on Heckman (1979) two-step estimation method. Total number of observations is 191 and the number of uncensored observations is 91. For both plaintiff's and defendant's legal form respectively, the omitted category is municipality. For both plaintiff's and defendant's legal representation respectively, the omitted category is self-represented or represented by a court-authorized representative who is neither an attorney nor a law firm. Reported standard errors are heteroskedasticity-robust. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively. The reported  $p$ -values for the groups of fixed effects are for the Chi-Square test of joint significance.

**Table A3: Trial Equation, Marginal Effects  
Based on Estimates in Table A2**

Explanatory Variables	Marginal Effect	Standard Error
<i>Parties' Legal Representation</i>		
Plaintiff Representation Attorney	0.126	(0.117)
Plaintiff Representation Law Firm	0.086	(0.133)
Defendant Representation Attorney	0.282***	(0.094)
Defendant Representation Law Firm	0.271***	(0.102)
<i>Parties' Legal Form</i>		
Plaintiff Legal Entity in Public Interest	0.326***	(0.027)
Plaintiff Company	-0.548*	(0.314)
Plaintiff Sole Trader Enterprise	-0.717**	(0.337)
Defendant Company	-1.103***	(0.308)
Defendant Sole Trader Enterprise	-1.081***	(0.331)
<i>Parties' Size and Profitability</i>		
Plaintiff Assets (in EUR 100 million)	0.005	(0.009)
Defendant Assets (in EUR 100 million)	0.005	(0.006)
Plaintiff ROA	0.178	(0.242)
Defendant ROA	-1.148**	(0.488)
<i>Case Characteristics</i>		
Stakes (in EUR 100,000)	-0.004	(0.008)
Court Expert	0.224*	(0.120)
<i>Exclusion Restrictions</i>		
Mediation	-0.393***	(0.105)

*Notes:* Average marginal effects, and their standard errors, of explanatory variables for the Trial equation based on the estimates in Table A2. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

**Table A4: Robustness Checks, Plaintiff Win Equation**

Explanatory Variables	(1) OLS		(2) 2SLS with Heckit		(3) 2SLS	
	Coeff.	Std. Error	Coeff.	Std. Error	Coeff.	Std. Error
<i>Parties' Legal Representation</i>						
Plaintiff Representation Attorney or Law Firm	0.023	(0.258)	-0.514	(0.725)	-0.471	(0.671)
Defendant Representation Attorney or Law Firm	-0.357**	(0.171)	-0.620†	(0.426)	-0.657†	(0.425)
<i>Parties' Size and Profitability</i>						
Plaintiff Assets (in EUR 100 million)	-0.011	(0.022)	-0.018	(0.015)	-0.017	(0.015)
Defendant Assets (in EUR 100 million)	0.002	(0.009)	0.003	(0.007)	0.002	(0.007)
Plaintiff ROA	1.209**	(0.558)	1.391***	(0.486)	1.382***	(0.493)
Defendant ROA	-0.144	(0.466)	-0.760	(0.838)	-0.596	(0.578)
<i>Case Characteristics</i>						
Stakes (in EUR 100,000)	-0.003	(0.034)	0.013	(0.028)	0.016	(0.029)
Court Expert	-0.053	(0.220)	-0.079	(0.219)	-0.124	(0.202)
<i>Fixed Effects</i>						
Court FEs	Yes [ $p=0.059$ ]		Yes [ $p<0.001$ ]		Yes [ $p<0.001$ ]	
Plaintiff Legal Form FEs	Yes [ $p=0.409$ ]		Yes [ $p=0.159$ ]		Yes [ $p=0.130$ ]	
Defendant Legal Form FEs	Yes [ $p=0.271$ ]		Yes [ $p=0.179$ ]		Yes [ $p=0.100$ ]	
Plaintiff Industry FEs	Yes [ $p=0.071$ ]		Yes [ $p=0.029$ ]		Yes [ $p=0.013$ ]	
Defendant Industry FEs	Yes [ $p=0.043$ ]		Yes [ $p<0.001$ ]		Yes [ $p<0.001$ ]	
Filing Year FEs	Yes [ $p=0.127$ ]		Yes [ $p=0.023$ ]		Yes [ $p=0.024$ ]	
Disposition Year FEs	Yes [ $p=0.426$ ]		Yes [ $p=0.311$ ]		Yes [ $p=0.335$ ]	
<i>Inverse Mills Ratio</i>						
Lambda-hat			0.110	(0.315)		

*Notes:* Robustness checks. For regressions in all four columns, the dependent variable is Plaintiff Win. Column (1) is based on OLS. Column (2) is based on 2SLS with Heckman (1979) sample selection correction (two-step method). Column (3) is based on 2SLS without sample correction. For the regressions in columns (2) and (3), the instruments for the variables Plaintiff Representation Attorney or Law Firm and Defendant Representation Attorney or Law Firm are Plaintiff Average Number of Employees and Defendant Average Number of Employees; results of the first-stage regressions for the regression in column (2) are presented in Table A5. Results in column (2) use Mediation as the only exclusion restriction in implementing the Heckman (1979) two-step method (see Table A2). For regressions in columns (1) and (3), the number of observations equals 90. For regression in column (2), the number of uncensored observations equals 90. For both plaintiff's and defendant's legal representation respectively, the omitted category is self-represented or represented by a court-authorized representative who is neither an attorney nor a law firm. Reported standard errors are heteroskedasticity-robust. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively. † indicates significance at the 10% level for a one-sided test. The reported  $p$ -values for the groups of fixed effects are for either the  $F$ -test or the Chi-Square test of joint significance.

**Table A5: First-Stage Regressions for 2SLS Estimates of Plaintiff Win Equation Reported in Table A4, Column (2)**

Explanatory Variables	Dependent Variable: Plaintiff Represent. Attorney or Law Firm		Dependent Variable: Defendant Represent. Attorney or Law Firm	
	Coefficient	Standard Error	Coefficient	Standard Error
<i>Instruments for Parties' Legal Representation</i>				
Plaintiff Avg. No. of Employees (in 100s)	-0.026‡	(0.024)	0.028	(0.024)
Defendant Avg. No. of Employees (in 100s)	-0.010	(0.008)	-0.045**	(0.018)
<i>Parties' Legal Form</i>				
Plaintiff Legal Entity in Public Interest	1.082**	(0.480)	3.703***	(1.316)
Plaintiff Company	0.205	(0.273)	0.167	(0.718)
Plaintiff Sole Trader Enterprise	0.147	(0.295)	0.125	(0.806)
Defendant Company	1.698***	(0.281)	-0.013	(0.932)
Defendant Sole Trader Enterprise	1.745***	(0.301)	0.253	(0.921)
<i>Parties' Size and Profitability</i>				
Plaintiff Assets (in EUR 100 million)	0.016	(0.021)	-0.020	(0.025)
Defendant Assets (in EUR 100 million)	0.003	(0.004)	0.021**	(0.010)
Plaintiff ROA	0.156	(0.158)	0.439	(0.540)
Defendant ROA	-0.978***	(0.281)	-0.186	(0.818)
<i>Case Characteristics</i>				
Stakes (in EUR 100,000)	0.006	(0.015)	0.040*	(0.022)
Court Expert	-0.030	(0.132)	0.265	(0.229)
<i>Fixed Effects</i>				
Court FEs		Yes		Yes
Plaintiff Industry FEs		Yes		Yes
Defendant Industry FEs		Yes		Yes
Filing Year FEs		Yes		Yes
Disposition Year FEs		Yes		Yes
<i>Inverse Mills Ratio</i>				
Lambda-hat	0.208	(0.150)	0.142	(0.337)
R-squared		0.8946		0.7084
No. Obs.		90		90

Notes: Results of first-stage regressions for the 2SLS estimates in column (2) of Table A4. Reported standard errors are heteroskedasticity-robust. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively. ‡:  $p$ -value for a one-sided test equals 0.136.