

Technical Appendix to
EMPLOYMENT AND WAGE EFFECTS OF PRIVATISATION:
EVIDENCE FROM HUNGARY,
ROMANIA, RUSSIA AND UKRAINE

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Appendices

A. Pre-Privatisation Characteristics of Firms Later Privatised

To provide diagnostic information about possible selection bias in the data, we estimate variants of (1) where the sample is restricted to state-owned firms (either never or not yet privatised, so that the single post dummy variable $Private_{it-1} = 0$). We set $\mathbf{w}_t \equiv 0$, and $\boldsymbol{\theta}_{it} \equiv (Pre-Domestic_{it}, Pre-Foreign_{it})$. We retain the full set of industry-year interactions, \mathbf{D}_{jt} , so that all effects are measured within industry-year cells. Under these assumptions, employment and wage differences between firms never privatised and those privatised in the future can be estimated from the equation

$$y_{it} = \mathbf{D}_{jt}\boldsymbol{\gamma}_{jt} + \boldsymbol{\theta}_{it}\boldsymbol{\delta} + u_{it}. \tag{A1}$$

Table A1 shows that the estimated differences vary greatly across countries, ownership types, and dependent variables. Hungarian firms domestically privatised by the end of the period tend to have much smaller employment and somewhat lower wages than the average always state-owned firm, but the pre-domestic effect on employment and wages is positive elsewhere. The foreign results are more consistent, as firms that will be foreign-owned have higher employment and wages than either pre-domestic firms or always state firms in all four countries.

Table A1

	Hungary	Romania	Russia	Ukraine
Employment				
Pre-Domestic	−0.437** (0.059)	0.653** (0.099)	0.695** (0.019)	0.205** (0.039)
Pre-Foreign	0.513** (0.132)	1.177** (0.162)	1.347** (0.089)	1.327** (0.168)
$Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.000	0.000	0.000
N	14,005	16,581	198,597	47,993

A. (*Continued*)

	Hungary	Romania	Russia	Ukraine
	Wage			
Pre-Domestic	-0.050** (0.014)	0.091** (0.022)	0.074** (0.011)	0.030* (0.015)
Pre-Foreign	0.084** (0.029)	0.236** (0.033)	0.180** (0.038)	0.234** (0.068)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.000	0.003	0.003
N	13,850	15,745	104,120	46,611

Notes. All regressions include industry-year effects. Estimates of (A1). Standard errors (corrected for firm clustering) are shown in parentheses. The p values for the F test on the difference between the Foreign and Domestic coefficients are reported below the foreign standard errors. * = significant at 5% level. ** = significant at 1% level.

B. *Matching Estimators*

The matching method is implemented by first estimating a multinomial logit regression with three outcomes (remaining state, privatised to domestic owners and privatised to foreign owners) as a function of log employment, squared log employment, log wage, squared log wage, log ratio of capital stock to employment and multifactor productivity, all measured in the year prior to privatisation, as well as 19 sector dummies and year dummies.¹ Log of employment in the year prior to privatisation minus its value two years before privatisation is also included to control for pre-privatisation trends. The sample consists of privatised firms in the year of privatisation and always state-owned (never privatised) firms in industry-year cells containing at least one privatisation. Based on the propensity scores for the domestic and foreign privatisation outcomes from this regression, we match each privatised firm to the nearest always state-owned firm in the same industry-year cell.² We then estimate the following outcome regression:

$$y_{it} - y_{mt} = \alpha_i + \theta_{it}\delta + u_{it},$$

where m denotes the matched control firm, and the other variables are defined as in (1). All available pre and post-privatisation observations for the matched pairs are included in these regressions. The inclusion of firm fixed effects removes time-invariant differences between the privatised firms and matched controls.

¹ Imbens (2000) suggests a multinomial regression in cases of multiple treatments. Our use of this method takes into account possible differences in the selection into domestic and foreign private ownership and indeed we find significant differences between the coefficients explaining domestic versus foreign privatisation in the multinomial logits. Multifactor productivity is the residual from an industry-specific Cobb-Douglas production function in capital and labour (using 19 sectors).

² The matching is with replacement – i.e., a never privatised firm could potentially serve as the control firm for more than one privatised firm. If replacement were not allowed, many privatised firms could not be matched, as the data contain more firms that are privatised than never privatised, creating even worse sample selection problems.

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Table B1
Estimated Employment and Wage Effects of Privatisation
(Multinomial Logit Propensity Score Matching)

	Hungary	Romania	Russia	Ukraine
Employment				
$\hat{\delta}_d$	-0.038 (0.034)	0.820** (0.024)	0.039** (0.004)	-0.075** (0.010)
$\hat{\delta}_f$	0.479** (0.136)	1.042** (0.084)	0.470** (0.043)	0.313** (0.092)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.010	0.000	0.000
N	6,286	18,011	133,243	34,179
Wage				
$\hat{\delta}_d$	-0.051** (0.018)	-0.059** (0.009)	-0.049** (0.004)	-0.041** (0.008)
$\hat{\delta}_f$	0.089 (0.048)	0.202** (0.039)	0.284** (0.042)	0.294** (0.065)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.005	0.000	0.000	0.000
N	6,231	16,301	88,397	33,663

Notes. The dependent variable is the difference in log employment between the treated firm and a matched always state firm, using one-to-one nearest neighbour propensity score matching, taken from multinomial logit regressions. Matches are restricted to firms within the common support and the same industry-year. Firm fixed effects are included. Bootstrapped standard errors using 100 replications based on firm clustering are shown in parentheses. The p values for the F test on the difference between the Foreign and Domestic coefficients are reported below the foreign standard errors. * = significant at 5% level. ** = significant at 1% level.

Table B2
Estimated Employment and Wage Effects of Privatisation
(Multinomial Logit Propensity Score Matching without Trends)

	Hungary	Romania	Russia	Ukraine
Employment				
$\hat{\delta}_d$	0.062 (0.033)	0.938** (0.024)	0.037** (0.004)	-0.048** (0.012)
$\hat{\delta}_f$	0.393** (0.098)	1.002** (0.073)	0.331** (0.047)	0.539** (0.101)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.003	0.410	0.000	0.000
N	6,524	18,588	132,075	34,833
Wage				
$\hat{\delta}_d$	-0.074** (0.016)	-0.058** (0.010)	-0.035** (0.004)	-0.043** (0.008)
$\hat{\delta}_f$	0.158** (0.050)	0.174** (0.037)	0.198** (0.033)	0.280** (0.057)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.000	0.000	0.000
N	6,467	16,702	93,310	34,274

Notes. The dependent variable is the difference in log employment between the treated firm and a matched always state firm, using one-to-one nearest neighbour propensity score matching, taken from multinomial logit regressions. Matches are restricted to firms within the common support and the same industry-year. Firm fixed effects are included. Bootstrapped standard errors using 100 replications based on firm clustering are shown in parentheses. The p values for the F test on the difference between the Foreign and Domestic coefficients are reported below the foreign standard errors. * = significant at 5% level. ** = significant at 1% level.

Table B3
Estimated Employment and Wage Effects of Privatisation
(Multinomial Logit Propensity Score Matching with Propensity Score
Differences ≤ 0.05)

	Hungary	Romania	Russia	Ukraine
Employment				
$\hat{\delta}_d$	-0.066* (0.032)	0.782** (0.024)	0.038** (0.004)	-0.074* (0.011)
$\hat{\delta}_f$	0.459** (0.152)	1.081** (0.098)	0.470** (0.051)	0.313** (0.083)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.005	0.003	0.000	0.000
N	5,691	14,555	133,016	34,058
Wage				
$\hat{\delta}_d$	-0.061** (0.014)	-0.036** (0.009)	-0.049** (0.004)	-0.041** (0.008)
$\hat{\delta}_f$	-0.008 (0.058)	0.279** (0.055)	0.284** (0.040)	0.294** (0.062)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.467	0.000	0.000	0.000
N	5,639	13,255	88,263	33,546

Notes. The dependent variable is the difference in log employment between the treated firm and a matched always state firm, using one-to-one nearest neighbour propensity score matching, taken from multinomial logit regressions. Matches are restricted to firms within the common support, the same industry-year, and differences in propensity scores of no more than 0.05. Firm fixed effects are included. Bootstrapped standard errors using 100 replications based on firm clustering are shown in parentheses. The p values for the F test on the difference between the Foreign and Domestic coefficients are reported below the foreign standard errors. * = significant at 5% level. ** = significant at 1% level.

C. Pre-Privatisation Coefficients

	Hungary	Romania	Russia	Ukraine
<i>OLS</i>				
	Employment			
$\hat{\delta}_{dt-4}$	-0.610** (0.065)	0.197** (0.051)	0.438** (0.014)	0.081** (0.030)
$\hat{\delta}_{dt-3}$	-0.564** (0.064)	0.222** (0.055)	0.548** (0.018)	0.122** (0.030)
$\hat{\delta}_{dt-2}$	-0.606** (0.063)	0.172** (0.060)	0.563** (0.018)	0.138** (0.030)
Domestic F test	37.13 (0.000)	8.70 (0.000)	367.53 (0.000)	8.88 (0.000)
$\hat{\delta}_{ft-4}$	0.524** (0.199)	0.735** (0.140)	1.231** (0.097)	1.233** (0.224)
$\hat{\delta}_{ft-3}$	0.339 (0.185)	0.700** (0.145)	1.310** (0.095)	1.279** (0.208)
$\hat{\delta}_{ft-2}$	0.408** (0.163)	0.788** (0.141)	1.193** (0.104)	1.274** (0.191)
Foreign F test	3.21 (0.022)	16.01 (0.000)	65.81 (0.000)	16.34 (0.000)
<i>FE</i>				
$\hat{\delta}_{dt-4}$	0.052 (0.073)	0.102** (0.033)	-0.017** (0.005)	-0.041* (0.017)
$\hat{\delta}_{dt-3}$	0.029 (0.079)	0.129** (0.043)	-0.032** (0.007)	-0.071** (0.021)
$\hat{\delta}_{dt-2}$	0.057 (0.086)	0.203** (0.052)	-0.035** (0.009)	-0.086** (0.025)

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C. (Continued)

	Hungary	Romania	Russia	Ukraine
Domestic F test	0.74 (0.529)	9.07 (0.000)	6.12 (0.000)	4.82 (0.002)
$\hat{\delta}_{f\tau-4}$	-0.157 (0.120)	0.276** (0.071)	0.024 (0.025)	0.029 (0.097)
$\hat{\delta}_{f\tau-3}$	-0.169 (0.128)	0.320** (0.086)	0.033 (0.029)	0.059 (0.128)
$\hat{\delta}_{f\tau-2}$	-0.036 (0.143)	0.435** (0.096)	-0.048 (0.044)	0.041 (0.147)
Foreign F test	0.86 (0.461)	8.11 (0.000)	3.29 (0.020)	0.18 (0.912)
<i>FE & FT</i>				
$\hat{\delta}_{d\tau-4}$	0.052 (0.047)	-0.020 (0.021)	0.007 (0.005)	-0.020 (0.014)
$\hat{\delta}_{d\tau-3}$	0.011 (0.056)	-0.031 (0.029)	0.013 (0.009)	-0.040* (0.019)
$\hat{\delta}_{d\tau-2}$	0.005 (0.065)	-0.030 (0.037)	0.017 (0.011)	-0.057* (0.024)
Domestic F test	2.04 (0.106)	0.69 (0.556)	0.83 (0.480)	2.34 (0.072)
$\hat{\delta}_{f\tau-4}$	-0.148 (0.073)	-0.047 (0.051)	-0.004 (0.035)	-0.060 (0.069)
$\hat{\delta}_{f\tau-3}$	-0.219** (0.081)	-0.127 (0.078)	0.019 (0.052)	-0.102 (0.125)
$\hat{\delta}_{f\tau-2}$	-0.220* (0.101)	-0.160 (0.105)	0.001 (0.068)	-0.093 (0.154)
Foreign F test	2.66 (0.047)	1.78 (0.148)	1.16 (0.325)	0.40 (0.753)
<i>Matching & FE</i>				
$\hat{\delta}_{d\tau-4}$	0.416** (0.075)	0.042 (0.033)	0.000 (0.006)	0.012 (0.019)
$\hat{\delta}_{d\tau-3}$	0.337** (0.076)	0.027 (0.031)	0.015 (0.006)	-0.014 (0.020)
$\hat{\delta}_{d\tau-2}$	0.343** (0.072)	0.108** (0.030)	0.014** (0.005)	-0.044 (0.018)
Domestic F test	33.07 (0.000)	14.27 (0.003)	11.42 (0.010)	11.23 (0.011)
$\hat{\delta}_{f\tau-4}$	-0.335 (0.203)	0.224 (0.149)	0.031 (0.093)	0.017 (0.154)
$\hat{\delta}_{f\tau-3}$	-0.376 (0.207)	0.163 (0.134)	0.092 (0.082)	0.014 (0.122)
$\hat{\delta}_{f\tau-2}$	-0.272 (0.188)	0.275* (0.132)	0.088 (0.058)	-0.115* (0.154)
Foreign F test	4.11 (0.250)	4.86 (0.183)	3.15 (0.370)	0.89 (0.828)
<i>OLS</i>			Wage	
$\hat{\delta}_{d\tau-4}$	-0.058** (0.017)	0.035** (0.013)	0.022** (0.007)	-0.010 (0.013)
$\hat{\delta}_{d\tau-3}$	-0.059** (0.017)	0.052** (0.013)	0.051 (0.028)	0.004 (0.014)
$\hat{\delta}_{d\tau-2}$	-0.046** (0.018)	0.058** (0.014)	0.112** (0.013)	0.016 (0.014)
Domestic F test	5.39 (0.001)	5.91 (0.001)	30.04 (0.000)	2.76 (0.041)
$\hat{\delta}_{f\tau-4}$	0.111* (0.045)	0.187** (0.034)	0.036 (0.060)	0.257** (0.101)
$\hat{\delta}_{f\tau-3}$	0.074 (0.052)	0.218** (0.037)	0.133 (0.155)	0.353** (0.106)

C. (Continued)

	Hungary	Romania	Russia	Ukraine
$\hat{\delta}_{f\tau-2}$	0.089 (0.052)	0.230** (0.034)	0.214** (0.057)	0.295** (0.090)
Foreign F test	2.35 (0.071)	15.95 (0.000)	4.81 (0.002)	4.71 (0.003)
<i>FE</i>				
$\hat{\delta}_{d\tau-4}$	0.036 (0.025)	0.007 (0.012)	0.027** (0.010)	-0.025 (0.011)
$\hat{\delta}_{d\tau-3}$	0.037 (0.027)	0.011 (0.015)	0.045* (0.019)	-0.027* (0.013)
$\hat{\delta}_{d\tau-2}$	0.054 (0.030)	0.016 (0.017)	0.081** (0.015)	-0.026 (0.015)
Domestic F test	1.14 (0.330)	0.29 (0.836)	9.91 (0.000)	1.84 (0.137)
$\hat{\delta}_{f\tau-4}$	0.129** (0.045)	0.028 (0.030)	-0.019 (0.094)	0.075 (0.069)
$\hat{\delta}_{f\tau-3}$	0.101* (0.056)	0.068 (0.036)	-0.000 (0.105)	0.140 (0.090)
$\hat{\delta}_{f\tau-2}$	0.141** (0.057)	0.080** (0.032)	0.070 (0.076)	0.035 (0.078)
Foreign F test	3.29 (0.020)	2.62 (0.049)	0.65 (0.582)	1.20 (0.309)
<i>FE & FT</i>				
$\hat{\delta}_{d\tau-4}$	-0.047 (0.031)	-0.002 (0.012)	0.002 (0.012)	0.007 (0.012)
$\hat{\delta}_{d\tau-3}$	-0.022 (0.034)	0.005 (0.016)	-0.013 (0.020)	0.018 (0.015)
$\hat{\delta}_{d\tau-2}$	0.007 (0.040)	0.004 (0.020)	0.008 (0.018)	0.029 (0.019)
Domestic F test	2.75 (0.041)	0.21 (0.889)	0.60 (0.618)	1.04 (0.371)
$\hat{\delta}_{f\tau-4}$	0.115* (0.045)	0.008 (0.026)	-0.078 (0.076)	0.098 (0.054)
$\hat{\delta}_{f\tau-3}$	0.096 (0.061)	0.041 (0.041)	-0.077 (0.103)	0.193** (0.078)
$\hat{\delta}_{f\tau-2}$	0.143 (0.068)	0.043 (0.049)	0.047 (0.071)	0.148* (0.074)
Foreign F test	2.55 (0.054)	0.47 (0.703)	1.52 (0.206)	2.12 (0.096)
<i>Matching & FE</i>				
$\hat{\delta}_{d\tau-4}$	-0.075 (0.042)	-0.008 (0.015)	-0.003 (0.016)	-0.033* (0.014)
$\hat{\delta}_{d\tau-3}$	-0.078** (0.042)	-0.001 (0.014)	-0.015 (0.025)	-0.043** (0.015)
$\hat{\delta}_{d\tau-2}$	-0.027 (0.045)	-0.034* (0.014)	0.033* (0.015)	-0.052** (0.014)
Domestic F test	15.54 (0.001)	6.50 (0.090)	9.34 (0.025)	14.39 (0.002)
$\hat{\delta}_{f\tau-4}$	0.135 (0.076)	-0.017 (0.053)	0.186 (0.155)	0.067 (0.108)
$\hat{\delta}_{f\tau-3}$	0.032 (0.075)	0.040 (0.062)	0.149 (0.218)	0.104 (0.099)
$\hat{\delta}_{f\tau-2}$	0.093 (0.082)	0.008 (0.054)	0.223 (0.137)	-0.144 (0.107)
Foreign F test	3.65 (0.301)	0.90 (0.826)	2.67 (0.446)	7.52 (0.057)

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D. Alternative Specifications Concerning Exit

Table D1
Estimated Effects of Privatisation on the Probability of Exit

	Hungary	Romania	Russia	Ukraine
$\hat{\delta}_d$	-0.040** (0.003)	-0.015** (0.001)	0.001 (0.001)	-0.006** (0.001)
$\hat{\delta}_f$	-0.043** (0.002)	-0.009** (0.001)	-0.017** (0.001)	-0.008** (0.001)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.267	0.000	0.029
R^2	0.086	0.132	0.125	0.127
Mean Exit	0.080	0.029	0.070	0.027
N	33,642	33,978	234,313	81,028

Notes. Probit marginal effect estimates. Industry and year dummies are included in the regressions. Standard errors (corrected for firm clustering) are shown in parentheses. The p values for the F test on the difference between the Foreign and Domestic coefficients are reported below the foreign standard errors. ** = significant at 1% level.

Table D2
Regressions with Zeros Imputed for Exiting Firms

	Hungary	Romania	Russia	Ukraine
Employment				
$\hat{\delta}_d$	-0.041* (0.017)	0.070** (0.012)	0.040** (0.005)	0.002 (0.007)
$\hat{\delta}_f$	0.149** (0.037)	-0.058 (0.042)	0.097** (0.026)	0.049 (0.050)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.003	0.027	0.353
N	30,554	32,940	315,231	85,969
Employment, post-exit = 0				
$\hat{\delta}_d$	0.052** (0.014)	0.080** (0.012)	0.020** (0.005)	0.001 (0.007)
$\hat{\delta}_f$	0.343** (0.040)	-0.048 (0.043)	0.154** (0.028)	0.049 (0.051)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.004	0.000	0.341
N	60,586	37,620	395,889	97,207
Wage				
$\hat{\delta}_d$	-0.055** (0.013)	-0.018* (0.008)	-0.050** (0.006)	-0.026 (0.011)
$\hat{\delta}_f$	0.079** (0.023)	0.062 (0.034)	0.117** (0.036)	0.081 (0.084)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.020	0.000	0.207
N	30,156	30,388	219,038	85,180
Wage, post-exit = 0				
$\hat{\delta}_d$	0.133** (0.013)	-0.023** (0.009)	-0.152** (0.006)	-0.019 (0.012)
$\hat{\delta}_f$	0.293** (0.028)	0.054 (0.041)	0.138** (0.036)	0.148 (0.096)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.067	0.000	0.082
N	60,188	35,068	299,696	96,419

Notes. The dependent variables are not logged and they are divided by the firms' means. The regressions include firm fixed effects, firm-specific trends and industry-year dummies. Zeros are imputed in all years after exit in the second and fourth panels. Standard errors (corrected for firm clustering) are shown in parentheses. Foreign = 1 if the majority of shares are foreign-owned at the beginning of year t . Domestic = 1 if private but not majority-owned by foreigners in the beginning of year t . The p values for the F test on the difference between the Foreign and Domestic coefficients are reported below the foreign standard errors. * = significant at 5% level. ** = significant at 1% level.

Table D3
Employment and Wage Regressions without Exiting Firms

	Hungary	Romania	Russia	Ukraine
<i>OLS</i>				
$\hat{\delta}_d$	-0.522** (0.113)	-0.223** (0.069)	1.007** (0.027)	0.124** (0.039)
$\hat{\delta}_f$	0.589** (0.154)	0.453** (0.143)	1.723** (0.112)	1.450** (0.192)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.000	0.000	0.000
<i>FE</i>				
$\hat{\delta}_d$	-0.178** (0.047)	-0.036 (0.029)	0.058** (0.015)	-0.046* (0.021)
$\hat{\delta}_f$	0.248** (0.093)	0.168 (0.095)	0.175** (0.056)	0.256* (0.131)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.034	0.035	0.022
<i>FE & FT</i>				
$\hat{\delta}_d$	-0.049 (0.029)	-0.024 (0.018)	0.061** (0.010)	-0.009 (0.014)
$\hat{\delta}_f$	0.053 (0.050)	-0.099 (0.068)	0.105** (0.037)	-0.007 (0.104)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.058	0.281	0.221	0.979
<i>N</i>	14,817	23,974	127,807	58,485
<i>OLS</i>				
$\hat{\delta}_d$	0.013 (0.031)	-0.015 (0.017)	0.193** (0.019)	-0.001 (0.016)
$\hat{\delta}_f$	0.551** (0.041)	0.248** (0.043)	0.568** (0.050)	0.673** (0.112)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.000	0.000	0.000
<i>FE</i>				
$\hat{\delta}_d$	0.013 (0.022)	-0.031** (0.011)	-0.001 (0.011)	-0.022** (0.012)
$\hat{\delta}_f$	0.414** (0.037)	0.145** (0.036)	0.269** (0.043)	0.311** (0.088)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.000	0.000	0.000
<i>FE & FT</i>				
$\hat{\delta}_d$	0.002 (0.017)	-0.025** (0.009)	-0.038** (0.011)	-0.009 (0.013)
$\hat{\delta}_f$	0.185** (0.033)	0.071* (0.032)	0.049 (0.040)	0.158 (0.105)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.004	0.027	0.112
<i>N</i>	14,547	21,128	92,177	58,759

Notes. FE=firm fixed effects; FT=firm-specific trends. Standard errors (corrected for firm clustering) are shown in parentheses. The p values for the F test on the difference between the Foreign and Domestic coefficients are reported below the foreign standard errors. * = significant at 5% level. ** = significant at 1% level.

E. Dynamics of Privatisation Effects on Employment and Wage

	Hungary	Romania	Russia	Ukraine
<i>FE</i>				
$\hat{\delta}_{d\tau-5-}$	-0.055 (0.104)	-0.347** (0.074)	0.016 (0.012)	0.093** (0.033)
$\hat{\delta}_{d\tau-4}$	-0.002 (0.051)	-0.245** (0.048)	-0.001 (0.010)	0.052* (0.021)
$\hat{\delta}_{d\tau-3}$	-0.025 (0.044)	-0.218** (0.037)	-0.016 (0.008)	0.022 (0.016)

EMPLOYMENT AND WAGE EFFECTS OF PRIVATISATION

E. (Continued)

	Hungary	Romania	Russia	Ukraine
$\hat{\delta}_{d\tau-2}$	0.003 (0.034)	-0.144** (0.026)	-0.019** (0.006)	0.007 (0.011)
$\hat{\delta}_{d\tau-1}$	-0.036 (0.021)	-0.081** (0.014)	-0.013** (0.004)	0.002 (0.006)
$\hat{\delta}_{d\tau1}$	-0.011 (0.017)	0.071** (0.015)	0.018** (0.004)	-0.000 (0.007)
$\hat{\delta}_{d\tau2}$	0.002 (0.030)	0.159** (0.027)	0.029** (0.007)	-0.033** (0.013)
$\hat{\delta}_{d\tau3}$	-0.032 (0.041)	0.265** (0.039)	0.031** (0.009)	-0.077** (0.018)
$\hat{\delta}_{d\tau4}$	-0.044 (0.051)	0.376** (0.051)	0.009 (0.011)	-0.106** (0.023)
$\hat{\delta}_{d\tau5+}$	-0.094 (0.072)	0.709** (0.074)	-0.023 (0.015)	-0.098** (0.032)
$\hat{\delta}_{f\tau-5-}$	0.078 (0.151)	-0.700** (0.114)	-0.068 (0.051)	-0.165 (0.157)
$\hat{\delta}_{f\tau-4}$	-0.079 (0.139)	-0.424** (0.070)	-0.044 (0.042)	-0.136 (0.132)
$\hat{\delta}_{f\tau-3}$	-0.091 (0.118)	-0.380** (0.060)	-0.035 (0.039)	-0.106 (0.072)
$\hat{\delta}_{f\tau-2}$	0.042 (0.082)	-0.265** (0.044)	-0.117** (0.037)	-0.124** (0.043)
$\hat{\delta}_{f\tau-1}$	0.226** (0.051)	-0.145** (0.028)	-0.080** (0.020)	-0.010 (0.056)
$\hat{\delta}_{f\tau1}$	0.172** (0.035)	0.119** (0.033)	0.032 (0.031)	0.090 (0.070)
$\hat{\delta}_{f\tau2}$	0.295** (0.053)	0.231** (0.069)	0.096** (0.037)	0.097 (0.097)
$\hat{\delta}_{f\tau3}$	0.414** (0.059)	0.356** (0.085)	0.193** (0.039)	0.155 (0.104)
$\hat{\delta}_{f\tau4}$	0.452** (0.068)	0.454** (0.109)	0.208** (0.040)	0.032 (0.154)
$\hat{\delta}_{f\tau5+}$	0.707** (0.096)	0.726** (0.144)	0.192** (0.064)	0.062 (0.228)
N	28,823	31,962	308,334	80,234
FE			Wage	
$\hat{\delta}_{d\tau-5-}$	-0.125** (0.034)	-0.054* (0.023)	-0.072** (0.016)	-0.002 (0.018)
$\hat{\delta}_{d\tau-4}$	-0.084** (0.022)	-0.047** (0.016)	-0.045** (0.014)	-0.028 (0.015)
$\hat{\delta}_{d\tau-3}$	-0.082** (0.019)	-0.043** (0.013)	-0.028 (0.018)	-0.029* (0.013)
$\hat{\delta}_{d\tau-2}$	-0.065** (0.019)	-0.038** (0.010)	0.009 (0.009)	-0.028** (0.010)
$\hat{\delta}_{d\tau-1}$	-0.042** (0.015)	-0.020** (0.008)	0.008 (0.005)	0.005 (0.008)
$\hat{\delta}_{d\tau1}$	-0.030** (0.011)	-0.019** (0.008)	-0.029** (0.004)	-0.025** (0.008)
$\hat{\delta}_{d\tau2}$	-0.050** (0.015)	-0.048** (0.011)	-0.039** (0.007)	-0.052** (0.010)
$\hat{\delta}_{d\tau3}$	-0.069** (0.018)	-0.059** (0.014)	-0.044** (0.008)	-0.053** (0.013)
$\hat{\delta}_{d\tau4}$	-0.100** (0.021)	-0.066** (0.018)	-0.032** (0.010)	-0.043** (0.015)
$\hat{\delta}_{d\tau5+}$	-0.141** (0.026)	-0.094** (0.024)	0.007 (0.011)	-0.044** (0.016)
$\hat{\delta}_{f\tau-5-}$	-0.266** (0.055)	-0.107** (0.037)	-0.123 (0.085)	-0.105 (0.075)

E. (Continued)

	Hungary	Romania	Russia	Ukraine
$\hat{\delta}_{f\tau-4}$	-0.136** (0.051)	-0.079** (0.033)	-0.145** (0.056)	-0.030 (0.062)
$\hat{\delta}_{f\tau-3}$	-0.164** (0.051)	-0.039 (0.038)	-0.126 (0.098)	0.035 (0.066)
$\hat{\delta}_{f\tau-2}$	-0.124** (0.045)	-0.027 (0.027)	-0.056 (0.054)	-0.070 (0.066)
$\hat{\delta}_{f\tau-1}$	-0.120** (0.039)	-0.016 (0.023)	-0.014 (0.026)	-0.011 (0.050)
$\hat{\delta}_{f\tau1}$	0.091** (0.023)	0.069** (0.026)	0.022 (0.036)	0.111** (0.044)
$\hat{\delta}_{f\tau2}$	0.152** (0.029)	0.140** (0.056)	0.122** (0.039)	0.166** (0.061)
$\hat{\delta}_{f\tau3}$	0.145** (0.032)	0.146** (0.058)	0.155** (0.041)	0.153* (0.072)
$\hat{\delta}_{f\tau4}$	0.150** (0.033)	0.109 (0.068)	0.233** (0.044)	0.222* (0.091)
$\hat{\delta}_{f\tau5+}$	0.216** (0.040)	0.112* (0.052)	0.405** (0.050)	0.358** (0.124)
<i>N</i>	28,487	29,540	212,535	79,527
<i>FE & FT</i>			Employment	
$\hat{\delta}_{d\tau-5-}$	-0.003 (0.088)	0.038 (0.054)	-0.058** (0.016)	0.068 (0.036)
$\hat{\delta}_{d\tau-4}$	0.048 (0.062)	0.017 (0.040)	-0.052** (0.013)	0.048 (0.027)
$\hat{\delta}_{d\tau-3}$	0.008 (0.048)	0.006 (0.031)	-0.045** (0.010)	0.028 (0.021)
$\hat{\delta}_{d\tau-2}$	0.001 (0.035)	0.008 (0.021)	-0.041** (0.007)	0.011 (0.014)
$\hat{\delta}_{d\tau-1}$	-0.041 (0.019)	0.001 (0.012)	-0.027** (0.004)	0.002 (0.008)
$\hat{\delta}_{d\tau1}$	-0.030 (0.018)	-0.011 (0.013)	0.030** (0.004)	-0.004 (0.008)
$\hat{\delta}_{d\tau2}$	-0.047 (0.031)	-0.009 (0.022)	0.058** (0.008)	-0.041** (0.016)
$\hat{\delta}_{d\tau3}$	-0.063 (0.040)	-0.002 (0.030)	0.074** (0.012)	-0.097** (0.023)
$\hat{\delta}_{d\tau4}$	-0.074 (0.050)	0.015 (0.040)	0.060** (0.015)	-0.133** (0.030)
$\hat{\delta}_{d\tau5+}$	-0.108 (0.067)	0.065 (0.053)	0.023 (0.018)	-0.160** (0.038)
$\hat{\delta}_{f\tau-5-}$	0.223 (0.127)	0.179 (0.154)	-0.083 (0.090)	0.037 (0.183)
$\hat{\delta}_{f\tau-4}$	0.075 (0.117)	0.132 (0.117)	-0.086 (0.060)	-0.023 (0.131)
$\hat{\delta}_{f\tau-3}$	0.004 (0.099)	0.052 (0.093)	-0.063 (0.047)	-0.065 (0.093)
$\hat{\delta}_{f\tau-2}$	0.003 (0.074)	0.019 (0.061)	-0.081* (0.038)	-0.056 (0.065)
$\hat{\delta}_{f\tau-1}$	0.071* (0.036)	-0.006 (0.035)	-0.062** (0.021)	0.012 (0.062)
$\hat{\delta}_{f\tau1}$	0.076** (0.031)	-0.032 (0.038)	0.047 (0.026)	0.048 (0.080)
$\hat{\delta}_{f\tau2}$	0.114* (0.050)	-0.074 (0.075)	0.113** (0.041)	0.074 (0.121)
$\hat{\delta}_{f\tau3}$	0.141* (0.061)	-0.095 (0.098)	0.189** (0.052)	0.077 (0.137)
$\hat{\delta}_{f\tau4}$	0.131 (0.070)	-0.078 (0.121)	0.197** (0.061)	-0.047 (0.175)

EMPLOYMENT AND WAGE EFFECTS OF PRIVATISATION

E. (Continued)

	Hungary	Romania	Russia	Ukraine
$\hat{\delta}_{f\tau 5+}$	0.123 (0.089)	-0.013 (0.152)	0.189** (0.075)	-0.137 (0.211)
N	28,823	31,962	308,334	80,234
$FE \ \& \ FT$			Wages	
$\hat{\delta}_{d\tau-5-}$	-0.091 (0.047)	-0.040 (0.027)	0.024 (0.023)	-0.089** (0.026)
$\hat{\delta}_{d\tau-4}$	-0.123** (0.035)	-0.042 (0.020)	0.026 (0.018)	-0.081** (0.020)
$\hat{\delta}_{d\tau-3}$	-0.095** (0.027)	-0.035* (0.015)	0.011 (0.020)	-0.071** (0.017)
$\hat{\delta}_{d\tau-2}$	-0.064** (0.022)	-0.036** (0.011)	0.031** (0.011)	-0.060** (0.013)
$\hat{\delta}_{d\tau-1}$	-0.024 (0.015)	-0.020** (0.008)	0.019** (0.006)	-0.015 (0.009)
$\hat{\delta}_{d\tau 1}$	-0.032** (0.012)	-0.021** (0.008)	-0.037** (0.006)	-0.006 (0.008)
$\hat{\delta}_{d\tau 2}$	-0.036** (0.018)	-0.049** (0.011)	-0.055** (0.009)	-0.015 (0.013)
$\hat{\delta}_{d\tau 3}$	-0.067** (0.022)	-0.059** (0.014)	-0.074** (0.013)	0.001 (0.018)
$\hat{\delta}_{d\tau 4}$	-0.091** (0.027)	-0.067** (0.019)	-0.080** (0.016)	0.032 (0.022)
$\hat{\delta}_{d\tau 5+}$	-0.112** (0.033)	-0.086** (0.024)	-0.081** (0.019)	0.062* (0.027)
$\hat{\delta}_{f\tau-5-}$	-0.232** (0.076)	-0.066 (0.073)	-0.016 (0.080)	-0.206 (0.113)
$\hat{\delta}_{f\tau-4}$	-0.111* (0.058)	-0.058 (0.060)	-0.094 (0.054)	-0.108 (0.099)
$\hat{\delta}_{f\tau-3}$	-0.128* (0.058)	-0.025 (0.049)	-0.093 (0.089)	-0.013 (0.094)
$\hat{\delta}_{f\tau-2}$	-0.078 (0.046)	-0.023 (0.035)	0.031 (0.051)	-0.057 (0.083)
$\hat{\delta}_{f\tau-1}$	-0.054 (0.037)	-0.012 (0.023)	0.012 (0.026)	0.001 (0.060)
$\hat{\delta}_{f\tau 1}$	0.087** (0.024)	0.067* (0.028)	0.022 (0.033)	0.119* (0.052)
$\hat{\delta}_{f\tau 2}$	0.153** (0.032)	0.126* (0.055)	0.113** (0.044)	0.177* (0.078)
$\hat{\delta}_{f\tau 3}$	0.120** (0.035)	0.132* (0.057)	0.130** (0.049)	0.157 (0.099)
$\hat{\delta}_{f\tau 4}$	0.113** (0.040)	0.098 (0.064)	0.177** (0.056)	0.240 (0.129)
$\hat{\delta}_{f\tau 5+}$	0.139** (0.048)	0.092 (0.078)	0.312** (0.070)	0.215 (0.165)
N	28,487	29,540	212,535	79,527

Notes. The coefficients in the FE specifications correspond to those graphed in Figures 1 and 2. FE includes firm fixed effects; FT add firm-specific trends. Standard errors corrected for firm clustering are shown in parentheses. * = significant at 5% level. ** = significant at 1% level.

F. *Decomposition of Privatisation Effect on Employment*

	Hungary	Romania	Russia	Ukraine
<i>FE</i>				
$\hat{\delta}_d$	-0.073*	0.109**	0.001	-0.059**
	(0.031)	(0.027)	(0.008)	(0.016)
$\hat{\delta}_f$	0.380**	0.341**	0.214**	0.302**
	(0.065)	(0.087)	(0.043)	(0.110)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.008	0.000	0.001
<i>FE & FT</i>				
$\hat{\delta}_d$	-0.015	-0.014	0.012**	-0.010
	(0.019)	(0.016)	(0.005)	(0.010)
$\hat{\delta}_f$	0.072	-0.049	0.075**	0.154
	(0.040)	(0.055)	(0.028)	(0.091)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.043	0.538	0.027	0.073
<i>FE</i>				
$\hat{\delta}_d$	0.016	0.332**	-0.067**	-0.019
	(0.034)	(0.038)	(0.019)	(0.026)
$\hat{\delta}_f$	0.912**	0.799**	0.697**	0.849**
	(0.072)	(0.113)	(0.092)	(0.209)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.000	0.000	0.000
<i>FE & FT</i>				
$\hat{\delta}_d$	0.061**	0.086**	-0.039**	0.000
	(0.022)	(0.024)	(0.011)	(0.019)
$\hat{\delta}_f$	0.287**	0.147	0.209**	0.397*
	(0.050)	(0.082)	(0.062)	(0.178)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.464	0.000	0.026
<i>FE</i>				
$\hat{\delta}_d$	0.089**	0.223**	-0.068**	0.040*
	(0.020)	(0.022)	(0.015)	(0.018)
$\hat{\delta}_f$	0.531**	0.459**	0.484**	0.547**
	(0.042)	(0.073)	(0.077)	(0.157)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.001	0.000	0.001
<i>FE & FT</i>				
$\hat{\delta}_d$	0.076**	0.100**	-0.051**	0.010
	(0.019)	(0.017)	(0.010)	(0.016)
$\hat{\delta}_f$	0.215**	0.196**	0.133*	0.243
	(0.035)	(0.065)	(0.055)	(0.142)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.148	0.001	0.101
<i>N</i>	30,004	32,003	291,382	82,357

Notes. The FE&FT coefficient estimates correspond to those reported in Figures 1-4, while the standard errors and FE estimates supplement those results. Other notes are the same as in Table 4. * = significant at 5% level. ** = significant at 1% level.

EMPLOYMENT AND WAGE EFFECTS OF PRIVATISATION

G. Decomposition of Privatisation Effect on Wage

	Hungary	Romania	Russia	Ukraine
<i>FE</i>				
$\hat{\delta}_d$	-0.036** (0.014)	-0.031** (0.009)	-0.036** (0.007)	-0.040** (0.010)
$\hat{\delta}_f$	0.309** (0.027)	0.171** (0.043)	0.351** (0.043)	0.404** (0.086)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.000	0.000	0.000
<i>FE & FT</i>				
$\hat{\delta}_d$	-0.033** (0.012)	-0.019* (0.008)	-0.051** (0.006)	-0.021* (0.010)
$\hat{\delta}_f$	0.135** (0.024)	0.078* (0.036)	0.133** (0.039)	0.249** (0.098)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.007	0.000	0.006
<i>FE</i>				
$\hat{\delta}_d$	-0.127** (0.018)	-0.254** (0.021)	-0.005 (0.008)	-0.081** (0.014)
$\hat{\delta}_f$	-0.226** (0.036)	-0.289** (0.056)	-0.123* (0.051)	-0.145 (0.107)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.006	0.535	0.022	0.551
<i>FE & FT</i>				
$\hat{\delta}_d$	-0.108** (0.016)	-0.116** (0.017)	-0.016** (0.007)	-0.034** (0.012)
$\hat{\delta}_f$	-0.085** (0.032)	-0.119* (0.054)	0.070 (0.044)	-0.007 (0.095)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.501	0.952	0.050	0.777
<i>FE</i>				
$\hat{\delta}_d$	0.091** (0.020)	0.223** (0.022)	-0.030* (0.012)	0.041* (0.018)
$\hat{\delta}_f$	0.535** (0.042)	0.461** (0.073)	0.474** (0.071)	0.550** (0.157)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.001	0.000	0.001
<i>FE & FT</i>				
$\hat{\delta}_d$	0.075** (0.019)	0.097** (0.017)	-0.034** (0.009)	0.013 (0.016)
$\hat{\delta}_f$	0.219** (0.036)	0.197** (0.066)	0.063 (0.055)	0.256 (0.143)
$\Pr(\hat{\delta}_f = \hat{\delta}_d)$	0.000	0.137	0.078	0.089
<i>N</i>	29,757	29,741	201,518	82,109

Notes. The FE&FT coefficient estimates correspond to those reported in Figures 1–4, while the standard errors and FE estimates supplement those results. Other notes are the same as in Table 4. * = significant at 5% level. ** = significant at 1% level.