

Appendices

Appendix A: Firm-Level Data Analysis

Firm ID (i)	Year (t)	Revenue (R'bn)	ROA (%)	Firm Size (Log)	Firm Age	GDP (current USD)	GDP per capita (current USD)	Inflation (CPI, annual %)	FDI inflows (current USD)
1	2014	22.5	6.5	2.76	74	381198869776.1	6856.7	6.1	5791659020.1
1	2015	24.8	6.3	2.82	75	346709790458.6	6112.3	4.5	1521139945.3
1	2016	28.1	6.2	2.91	76	323585509674.5	5651.2	6.6	2215307020.4
1	2017	29.5	6.5	2.95	77	381448814653.5	6618.3	5.2	2058579911.1
1	2018	31.4	6.8	3	78	405260723892.5	6914.2	4.5	5569462350.2
1	2019	32.8	6.6	3.05	79	389330032224.3	6533.7	4.1	5116098443.5
1	2020	34.2	5.2	3.11	80	337974655408.1	5580.6	3.2	3153552569.4
1	2021	38.5	6	3.2	81	419986284375.4	6828.8	4.6	40658789144.9
1	2022	42.1	6.4	3.3	82	407596043067.9	6534.2	7.0	9238990828.5
1	2023	46.8	6.9	3.38	83	381440724491.2	6034.3	6.1	3862994369.6
1	2024	51.3	7.2	3.47	84	401144998373.6	6267.2	4.4	2330218039.3
2	2014	18.2	9.2	2.55	98	381198869776.1	6856.7	6.1	5791659020.1
2	2015	19.4	9.3	2.6	99	346709790458.6	6112.3	4.5	1521139945.3
2	2016	20.8	9.5	2.67	100	323585509674.5	5651.2	6.6	2215307020.4
2	2017	22.4	9.6	2.75	101	381448814653.5	6618.3	5.2	2058579911.1
2	2018	24.5	9.8	2.83	102	405260723892.5	6914.2	4.5	5569462350.2
2	2019	24.9	9	2.86	103	389330032224.3	6533.7	4.1	5116098443.5
2	2020	25.1	7.5	2.9	104	337974655408.1	5580.6	3.2	3153552569.4
2	2021	28.3	8.2	3.01	105	419986284375.4	6828.8	4.6	40658789144.9
2	2022	31.2	8.6	3.11	106	407596043067.9	6534.2	7.0	9238990828.5
2	2023	34.6	9.1	3.23	107	381440724491.2	6034.3	6.1	3862994369.6
2	2024	38.6	9.5	3.35	108	401144998373.6	6267.2	4.4	2330218039.3

3	2014	16.5	8.2	2.42	103	381198869776.1	6856.7	6.1	5791659020.1
3	2015	17.8	8.3	2.51	104	346709790458.6	6112.3	4.5	1521139945.3
3	2016	19.2	8.5	2.6	105	323585509674.5	5651.2	6.6	2215307020.4
3	2017	20.7	8.6	2.68	106	381448814653.5	6618.3	5.2	2058579911.1
3	2018	22.8	8.9	2.76	107	405260723892.5	6914.2	4.5	5569462350.2
3	2019	23.4	8	2.83	108	389330032224.3	6533.7	4.1	5116098443.5
3	2020	24.1	6.8	2.9	109	337974655408.1	5580.6	3.2	3153552569.4
3	2021	26.8	7.4	2.98	110	419986284375.4	6828.8	4.6	40658789144.9
3	2022	29.8	7.9	3.05	111	407596043067.9	6534.2	7.0	9238990828.5
3	2023	33.1	8.2	3.12	112	381440724491.2	6034.3	6.1	3862994369.6
3	2024	36.5	8.5	3.2	113	401144998373.6	6267.2	4.4	2330218039.3

Appendix B: Descriptive Statistics

```
. rename firmidi firm
```

```
. xtset firm year
```

```
panel variable: firm (strongly balanced)
```

```
time variable: year, 2014 to 2024
```

```
delta: 1 unit
```

```
. summarize revenue roa firm_size firm_age gdp gdp_pc inflation fdi
```

Variable	Obs	Mean	Std. Dev.	Min	Max
revenue	33	28.50606	8.470203	16.5	51.3
roa	33	7.854545	1.244008	5.2	9.8
firm_size	33	2.935152	.2648363	2.42	3.47
firm_age	33	96.66667	13.24921	74	113
gdp	33	3.80e+11	3.00e+10	3.24e+11	4.20e+11
gdp_pc	33	6357.409	452.7721	5580.6	6914.2
inflation	33	5.118182	1.143037	3.2	7
fdi	33	7.41e+09	1.09e+10	1.52e+09	4.07e+10

```
. xtsum revenue roa
```

Variable		Mean	Std. Dev.	Min	Max	Observations	
revenue	overall	28.50606	8.470203	16.5	51.3	N =	33
	between		5.444812	24.60909	34.72727	n =	3
	within		7.166779	16.27879	45.07879	T =	11
roa	overall	7.854545	1.244008	5.2	9.8	N =	33
	between		1.324374	6.418182	9.027273	n =	3
	within		.584555	6.327273	8.636363	T =	11

Appendix C: Correlation Analysis

```
pwcorr revenue roa firm_size firm_age gdp gdp_pc inflation fdi, sig
```

	revenue	roa	firm_size	firm_age	gdp	gdp_pc	inflation	fdi
revenue	1.0000							
roa	-0.3891 0.0252	1.0000						
firm_size	0.9632 0.0000	-0.3401 0.0528	1.0000					
firm_age	-0.3200 0.0695	0.7305 0.0000	-0.1930 0.2818	1.0000				
gdp	0.4063 0.0190	0.0952 0.5982	0.4428 0.0099	0.1181 0.5128	1.0000			
gdp_pc	-0.0693 0.7015	0.1541 0.3919	-0.0823 0.6490	-0.0238 0.8954	0.8194 0.0000	1.0000		
inflation	0.0021	0.1525	-0.0422	-0.0210	0.0307	0.0759	1.0000	
inflation	0.0021 0.9909	0.1525 0.3970	-0.0422 0.8155	-0.0210 0.9074	0.0307 0.8654	0.0759 0.6747	1.0000	
fdi	0.1239 0.4921	-0.1736 0.3338	0.1847 0.3035	0.0571 0.7524	0.5329 0.0014	0.4253 0.0136	-0.0607 0.7371	1.0000
fdi								1.0000

```
xtreg roa firm_size firm_age gdp gdp_pc inflation fdi, fe vce(robust)
```

Appendix D: Fixed effect within Regression

```

Fixed-effects (within) regression      Number of obs   =      33
Group variable: firm                 Number of groups =       3

R-sq:                                Obs per group:
    within = 0.5564                    min =          11
    between = 0.7545                    avg =         11.0
    overall = 0.5594                    max =          11

corr(u_i, Xb) = -0.9971                F(3,2)          =      .
                                           Prob > F         =      .

```

(Std. Err. adjusted for 3 clusters in firm)

roa	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
firm_size	4.082922	2.879618	1.42	0.292	-8.307077	16.47292
firm_age	-.6295766	.1889429	-3.33	0.079	-1.442532	.1833789
gdp	6.42e-11	1.43e-11	4.48	0.046	2.55e-12	1.26e-10
gdp_pc	-.002946	.0007336	-4.02	0.057	-.0061024	.0002104
inflation	.0683006	.0295278	2.31	0.147	-.0587474	.1953486
fdi	-3.61e-11	4.23e-12	-8.54	0.013	-5.43e-11	-1.79e-11
_cons	51.01141	11.00574	4.63	0.044	3.657542	98.36528

```

Fixed-effects (within) regression      Number of obs   =      33
Group variable: firm                 Number of groups =       3

R-sq:                                Obs per group:
    within = 0.9442                    min =          11
    between = 0.9660                    avg =         11.0
    overall = 0.7383                    max =          11

```

```

corr(u_i, Xb) = 0.0735                F(3,2)          =      .
                                           Prob > F         =      .

```

(Std. Err. adjusted for 3 clusters in firm)

revenue	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
firm_size	6.978856	15.32118	0.46	0.693	-58.94288	72.90059
firm_age	.0205923	1.05046	0.02	0.986	-4.499174	4.540358
gdp	3.19e-10	5.03e-11	6.34	0.024	1.03e-10	5.36e-10
gdp_pc	-.0173537	.0027907	-6.22	0.025	-.0293612	-.0053463
inflation	.2974432	.1584953	1.88	0.201	-.384507	.9793935
fdi	-9.63e-11	1.91e-11	-5.04	0.037	-1.78e-10	-1.42e-11
_cons	-5.697221	61.0717	-0.09	0.934	-268.4676	257.0731

```

Fixed-effects (within) regression      Number of obs   =    33
Group variable: firm                 Number of groups =     3

R-sq:                                Obs per group:
  within = 0.9093                      min =          11
  between = 0.7592                     avg =          11.0
  overall = 0.5987                     max =          11

corr(u_i, Xb) = -0.9999                F(2,2)          =      .
                                          Prob > F        =      .

(Std. Err. adjusted for 3 clusters in firm)

```

roa	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
firm_size	-2.317845	3.003534	-0.77	0.521	-15.24101	10.60532
firm_age	4.171792	1.068127	3.91	0.060	-.4239871	8.767571
gdp	-6.94e-10	1.58e-10	-4.40	0.048	-1.37e-09	-1.56e-11
gdp_pc	.0434909	.0098054	4.44	0.047	.0013014	.0856803
inflation	.0515198	.0163561	3.15	0.088	-.0188547	.1218943
fdi	-1.77e-11	2.05e-12	-8.60	0.013	-2.65e-11	-8.83e-12
year						

Appendix E: Random Effects GLS Regression

```
. xtreg roa firm_size firm_age gdp gdp_pc inflation fdi, re
```

```

Random-effects GLS regression      Number of obs   =    33
Group variable: firm                 Number of groups =     3

R-sq:                                Obs per group:
  within = 0.4116                      min =          11
  between = 0.8305                     avg =          11.0
  overall = 0.7314                     max =          11

corr(u_i, X) = 0 (assumed)          Wald chi2(4)    =      .
                                          Prob > chi2     =      .

```

roa	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
firm_size	6.660441	3.708449	1.80	0.072	-.6079856	13.92887
firm_age	.1321851	.0337075	3.92	0.000	.0661197	.1982505
gdp	-1.16e-10	5.92e-11	-1.96	0.050	-2.32e-10	1.79e-13
gdp_pc	.0072703	.0033313	2.18	0.029	.000741	.0137996
inflation	.1284064	.1115911	1.15	0.250	-.0903081	.3471208
fdi	-1.66e-11	1.64e-11	-1.01	0.311	-4.88e-11	1.55e-11
_cons	-27.24449	12.92386	-2.11	0.035	-52.57479	-1.914185

Appendix F: Diagnostic Tests

```
. predict resid, e
. swilk resid
```

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
resid	33	0.88010	4.093	2.931	0.00169

```
.
. sktest resid
```

Skewness/Kurtosis tests for Normality

Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj	joint chi2(2)	Prob>chi2
resid	33	0.0044	0.0717		9.44	0.0089

```
.
. qnorm resid
. ssc install xttest3
checking xttest3 consistency and verifying not already installed...
installing into c:\ado\plus\...
installation complete.
. xttest3
```

Modified Wald test for groupwise heteroskedasticity
in fixed effect regression model

H0: $\sigma(i)^2 = \sigma^2$ for all i

```
chi2 (3) =          0.55
Prob > chi2 =       0.9079
```