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

	fdi
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

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

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

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

                                                Wald chi2(4)       =         .
corr(u_i, X)   = 0 (assumed)                    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
                                                       ------- joint ------
    Variable |        Obs  Pr(Skewness)  Pr(Kurtosis) adj 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
```