

SUPPLEMENTAL TABLES AND CHARTS

TABLE 3: PARTNERS RANKED BY FREQUENCY PER YEAR

Partner Rank – FREQUENCY	2011	2012	2013	2014	2015	2016	2017	2018	AVG Change
Ukraine	1	1	1	1	1	1	1	1	0
Georgia	2	2	2	3	4	4	4	3	0.142857
Serbia	3	24	8	9	4	6	5	5	0.285714
Japan	4	4	3	5	14	18	11	18	2
Pakistan	4	9	13	21	27	18	15	30	3.714286
Qatar	4	10	28	17	32	27	31	16	1.714286
Sweden	7	3	8	12	2	3	3	2	-0.71429
Iraq	7	12	8	21	27	13	7	8	0.142857
Israel	7	12	23	32	21	31	11	8	0.142857
Bosnia	10	12	13	10	16	6	8	11	0.142857
Uzbekistan	10	30	35	27	19	21	29	30	2.857143
Finland	12	6	6	5	3	4	2	5	-1
Jordan	13	4	6	5	7	2	6	7	-0.85714
North Macedonia	13	12	3	2	8	9	9	4	-1.28571
Moldova	13	24	3	5	8	6	11	14	0.142857
Azerbaijan	13	20	12	4	16	16	9	13	0
Morocco	13	10	13	10	10	13	25	19	0.857143
Australia	13	6	18	16	16	18	21	22	1.285714
Egypt	13	12	18	17	21	25	21	24	1.571429
Kazakhstan	13	24	28	12	19	21	25	36	3.285714
Kyrgyzstan	13	24	18	21	21	25	34	36	3.285714
Tajikistan	13	24	28	27	25	36	39	36	3.285714
Turkmenistan	13	34	38	36	27	34	34	36	3.285714
Tunisia	24	20	23	33	6	9	21	16	-1.14286
United Arab Emirates	24	12	18	12	25	11	20	14	-1.42857
Armenia	24	12	28	19	11	12	25	30	0.857143
Mauritania	24	12	23	12	21	27	15	22	-0.28571
Kuwait	24	30	35	21	32	16	15	10	-2
New Zealand	24	24	28	21	14	21	25	25	0.142857
Switzerland	24	8	8	27	35	34	21	25	0.142857
Mongolia	24	30	23	27	27	27	30	34	1.428571
Belarus	24	36	38	39	32	36	31	19	-0.71429
Austria	33	20	13	27	11	15	15	19	-2
Algeria	33	23	23	19	11	21	15	11	-3.14286

Ireland	33	34	13	33	35	31	11	30	-0.42857
Bahrain	36	30	18	21	35	27	31	25	-1.57143
Korea	36	36	28	33	27	31	34	25	-1.57143
Colombia	36	36	28	36	35	36	34	25	-1.57143
Malta	36	36	35	36	39	39	34	35	-0.14286

TABLE 4: PARTNERS RANKED BY INTENSITY COUNT PER YEAR

Partner Rank - INTENSITY	2011	2012	2013	2014	2015	2016	2017	2018	AVG Change
Ukraine	1	2	1	1	1	1	1	1	0
Georgia	2	1	2	3	2	2	3	2	0
Serbia	3	23	7	12	5	8	5	6	0.428571
Japan	6	3	4	6	12	16	10	18	1.714286
Pakistan	7	11	17	28	31	22	16	32	3.571429
Qatar	3	9	26	16	31	31	34	16	1.857143
Sweden	10	5	12	14	3	4	4	3	-1
Iraq	8	15	7	20	23	9	8	7	-0.14286
Israel	5	21	21	30	26	28	14	7	0.285714
Bosnia	11	12	14	9	20	7	7	11	0
Uzbekistan	8	32	37	27	18	22	29	32	3.428571
Finland	12	8	6	8	4	5	2	5	-1
Jordan	18	5	7	7	9	3	6	9	-1.28571
North Macedonia	21	10	3	2	8	12	9	4	-2.42857
Moldova	18	23	4	5	7	6	11	14	-0.57143
Azerbaijan	21	17	7	4	16	17	12	12	-1.28571
Morocco	15	12	13	10	14	14	27	20	0.714286
Australia	18	4	19	17	16	19	22	21	0.428571
Egypt	23	18	22	18	26	31	22	27	0.571429
Kazakhstan	15	27	30	13	14	21	28	36	3
Kyrgyzstan	12	26	14	21	21	27	34	36	3.428571
Tajikistan	12	27	22	23	22	36	39	36	3.428571
Turkmenistan	15	34	38	36	23	35	36	36	3
Tunisia	26	22	26	34	6	13	22	18	-1.14286
United Arab Emirates	30	16	22	10	29	10	22	17	-1.85714
Armenia	23	12	32	18	11	10	21	29	0.857143
Mauritania	26	18	30	15	26	28	18	25	-0.14286
Kuwait	26	32	33	23	34	17	13	9	-2.42857

New Zealand	23	23	33	22	12	20	22	21	-0.28571
Switzerland	30	7	11	30	35	33	18	28	-0.28571
Mongolia	30	30	22	28	23	25	30	31	0.142857
Belarus	26	36	38	39	30	37	32	21	-0.71429
Austria	30	18	19	32	10	15	16	15	-2.14286
Algeria	35	27	26	23	18	24	14	12	-3.28571
Ireland	34	35	14	33	35	28	18	29	-0.71429
Bahrain	36	31	17	23	37	25	30	26	-1.42857
Korea	36	36	26	34	31	33	36	21	-2.14286
Colombia	36	36	36	38	38	38	38	34	-0.28571
Malta	36	36	33	36	39	39	32	35	-0.14286

FIGURE 1: INTENSITY HISTOGRAM

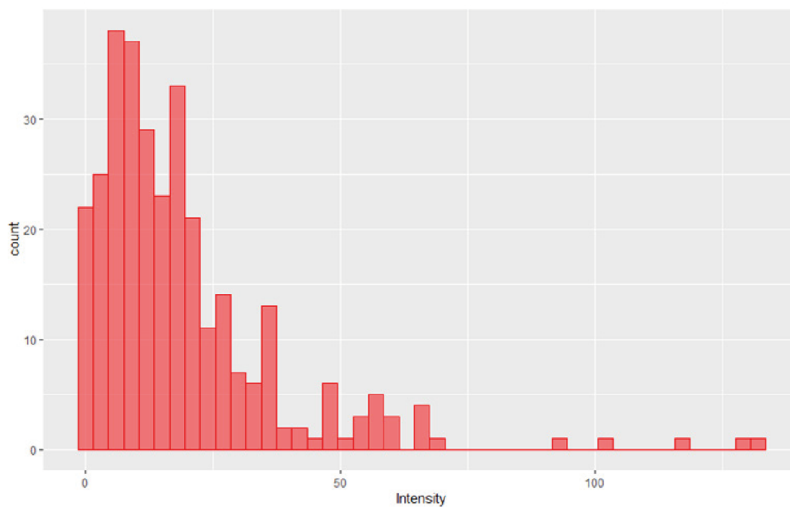


FIGURE 2: FREQUENCY HISTOGRAM

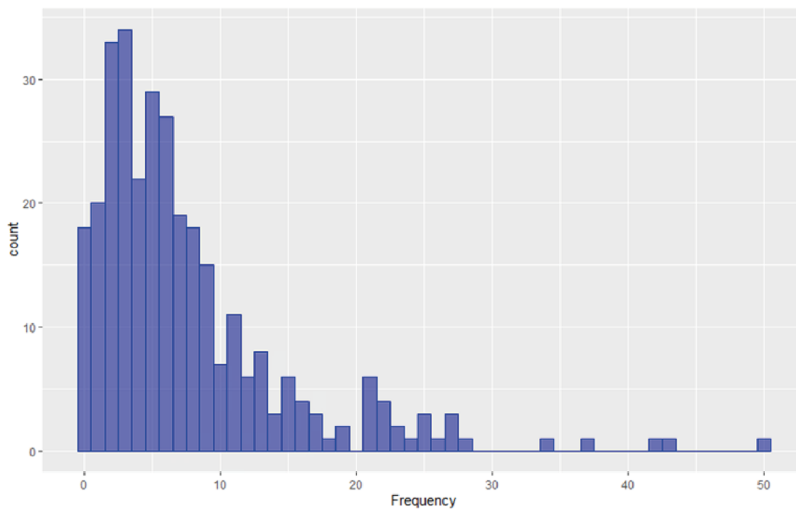


FIGURE 3: INTENSITY INTERACTION COUNT

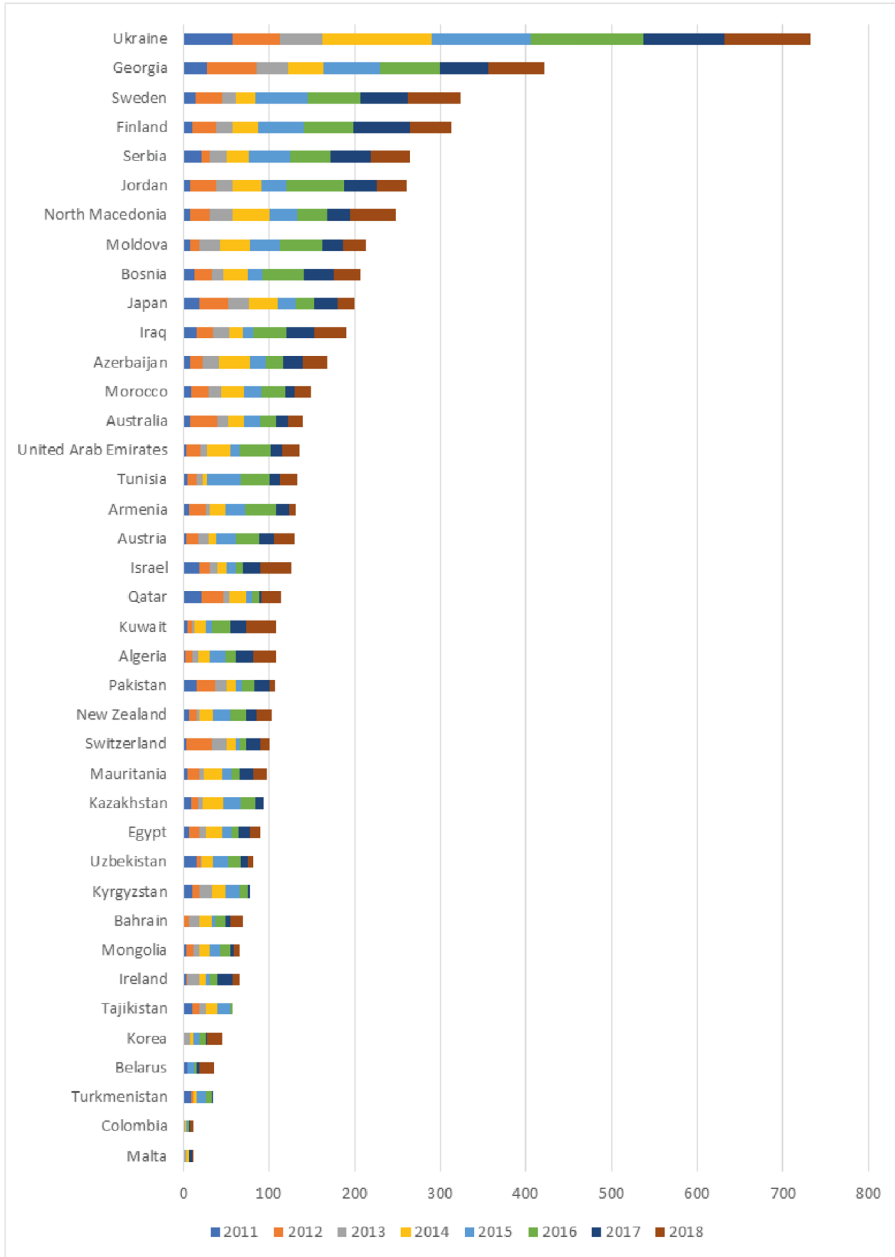


FIGURE 4: PARTNER FREQUENCY

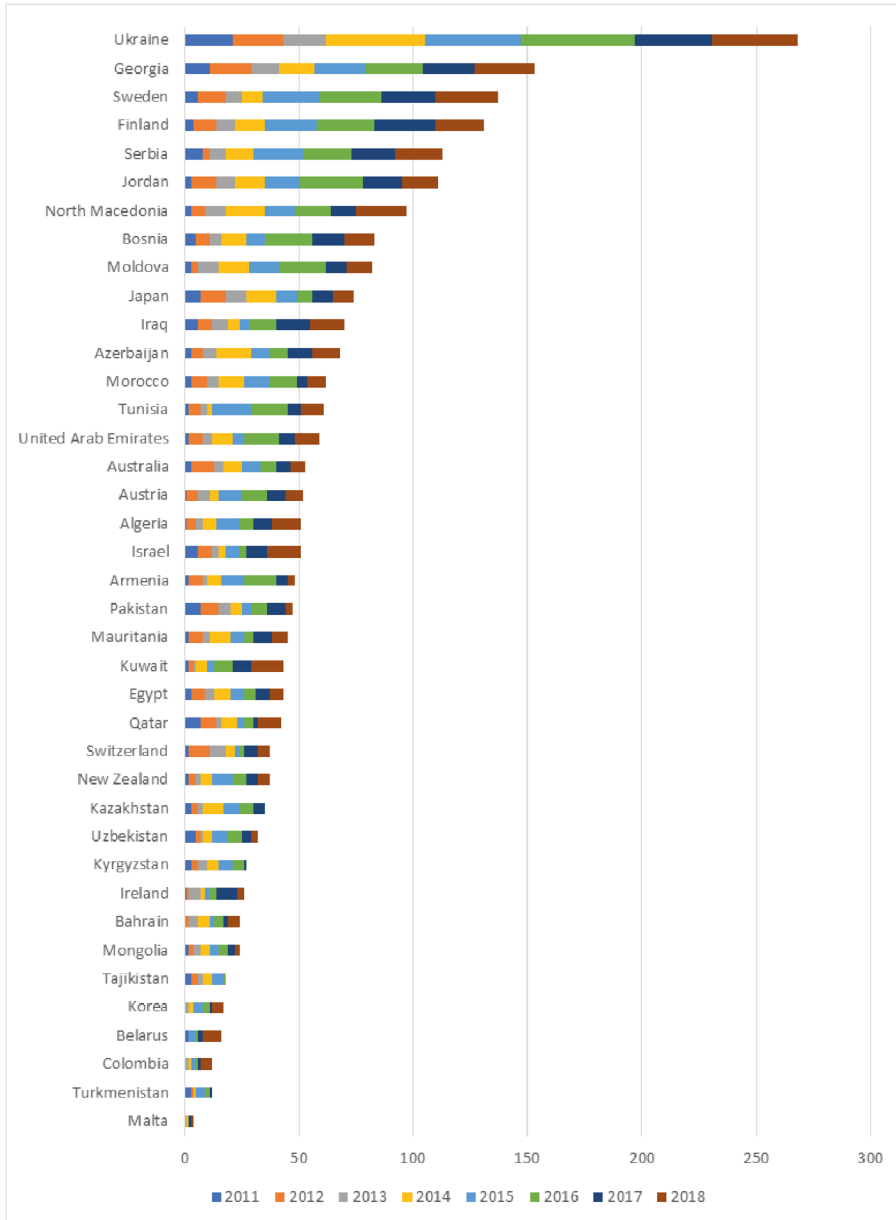


FIGURE 5: REGRESSION RESULTS FOR DATA PRE-2014 – FREQUENCY

Negative binomial regression				Number of obs		156
Dispersion				Wald chi2 (47)		1443.01
Log pseudolikelihood				Prob > chi2		0.0000
	mean					
	-299.56398					
Frequency	Coef.	Robust Std. Err.	z	P> z	95% Conf.	Interval
LogPower	-.9080208	1.59034	-0.57	0.568	-4.025029	2.208988
finPowDif	-.9839695	1.071697	-0.92	0.359	-3.084457	1.116518
Democracy	-1.328747	1.01734	-1.31	0.192	-3.322696	.6652017
Stability	.0164473	.1041286	0.16	0.874	-.187641	.2205356
Trade	2.0528	1.498772	1.37	0.171	-.8847388	4.990339
KOPPoGI	-.0317551	.0429598	0.74	0.460	-.0524445	.1159547

FIGURE 6: REGRESSION RESULTS FOR DATA POST-2014 – FREQUENCY

Negative binomial regression				Number of obs		156
Dispersion				Wald chi2 (47)		2445.31
Log pseudolikelihood				Prob > chi2		0.000
	mean					
	-358.13917					
Frequency	Coef.	Robust Std. Err.	z	P> z	95% Conf.	Interval
LogPower	-6.917295	2.266043	-3.05	0.002	-11.35866	-2.475932
finPowDif	-2.33441	2.036983	-1.15	0.252	-6.326822	1.658003
Democracy	-2.757888	1.483899	-1.86	0.063	-5.666277	.1505009
Stability	.1947255	.3652655	0.53	0.594	-.5211817	.9106327
Trade	.6911542	1.507896	0.46	0.647	-2.264268	3.646576
KOPPoGI	-.0374913	.0530506	-0.71	0.480	-1.414685	.066486

FIGURE 7: REGRESSION RESULTS FOR DATA PRE-2014 – INTENSITY

Negative binomial regression				Number of obs		156
Dispersion				Wald chi2 (47)		791.53
Log pseudolikelihood				mean		-458.95212
				Prob > chi2		0.0000
Intensity	Coef.	Robust Std. Err.	z	P> z	95% Conf.	Interval
LogPower	-.5523485	1.713144	-0.32	0.747	-3.910048	2.805351
finPowDif	-.4868202	1.279405	-0.38	0.704	-2.994408	2.020767
Democracy	-1.332474	1.012502	-1.32	0.188	-3.31694	.6519934
Stability	-.0346411	.1314188	-0.26	0.792	-.2922172	.222935
Trade	1.093093	1.643186	0.67	0.506	-2.127492	4.313678
KOFPoGI	.0437953	.0487775	0.90	0.369	-.0518068	.1393975

FIGURE 8: REGRESSION RESULTS FOR DATA POST-2014 – INTENSITY

Negative binomial regression				Number of obs		156
Dispersion				Wald chi2 (47)		1832.42
Log pseudolikelihood				mean		-508.7596
				Prob > chi2		0.0000
Intensity	Coef.	Robust Std. Err.	z	P> z	95% Conf.	Interval
LogPower	-10.14975	2.730029	-3.72	0.000	-15.50051	-4.798989
finPowDif	-4.792592	2.551438	-1.88	0.060	-9.793318	.208134
Democracy	-1.328267	2.042816	-0.65	0.516	-5.332112	2.675577
Stability	.332828	.4213763	0.79	0.430	-.4930544	1.15871
Trade	1.221811	2.005493	0.61	0.542	-2.708882	5.152505
KOFPoGI	-.0752517	.0591007	-1.27	0.203	-.191087	.0405835

FIGURE 9: SWEDISH INTERACTIONS 2011–2018

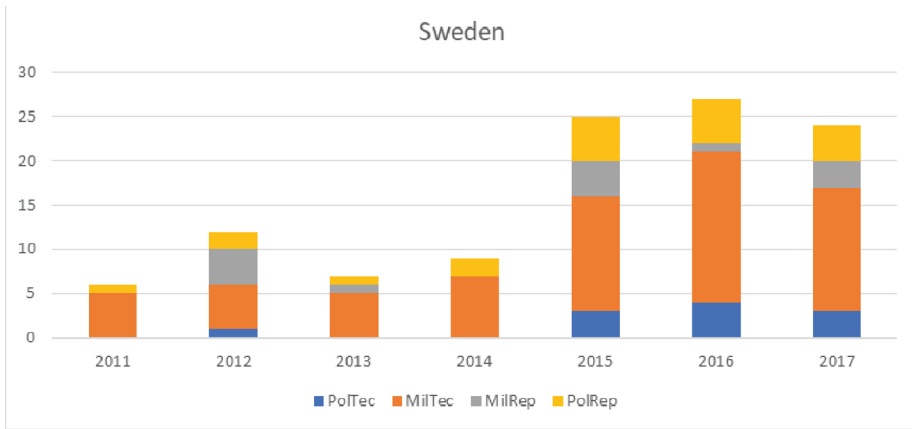


FIGURE 10: JAPANESE INTERACTIONS 2011–2018

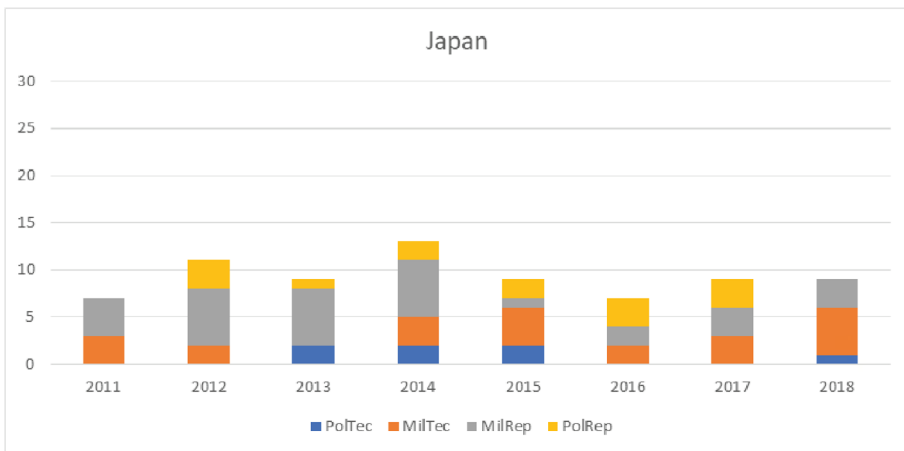


FIGURE 11: INTENSITY BOXPLOT BY COUNTRY

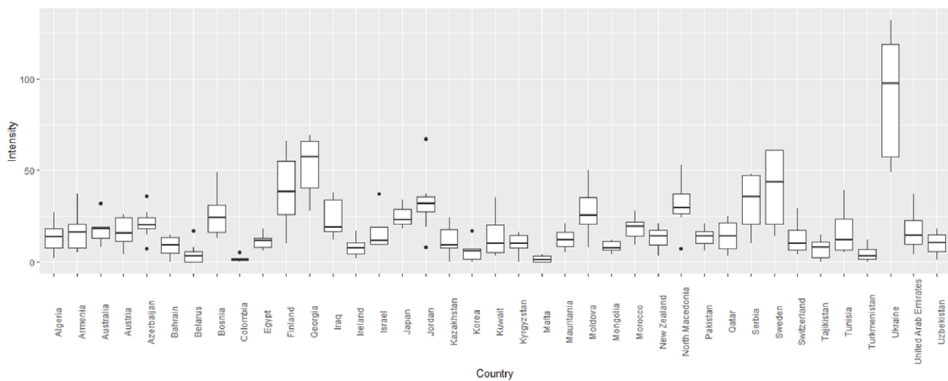


FIGURE 12: FREQUENCY BOXPLOT BY COUNTRY

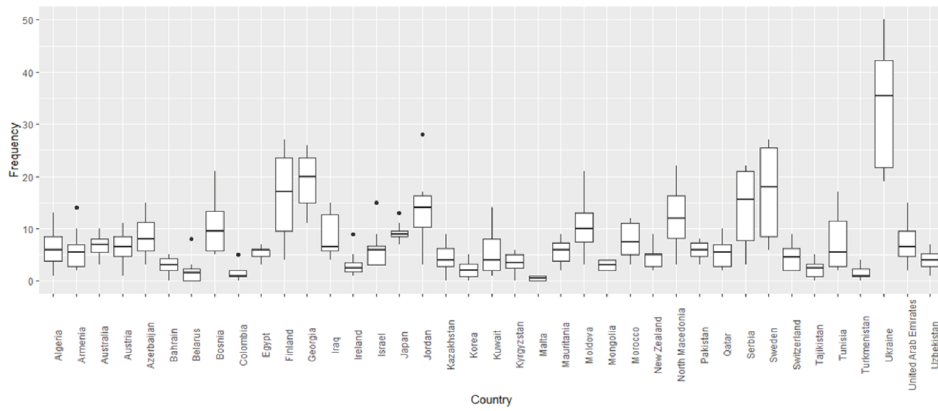


FIGURE 13: COUNT OF INTERACTION TYPES PER YEAR

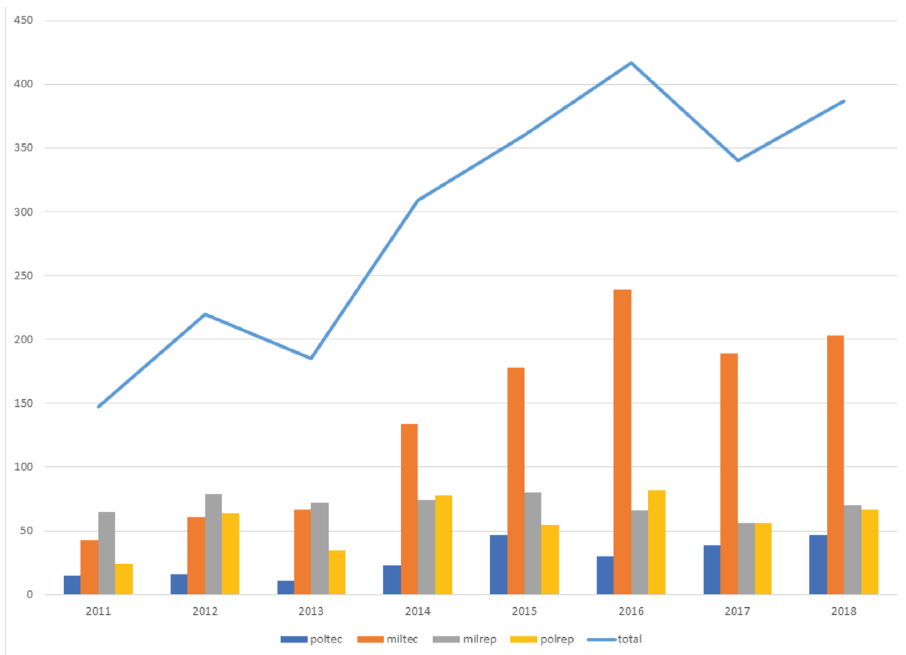


FIGURE 14: UKRAINE – POWER AND FREQUENCY

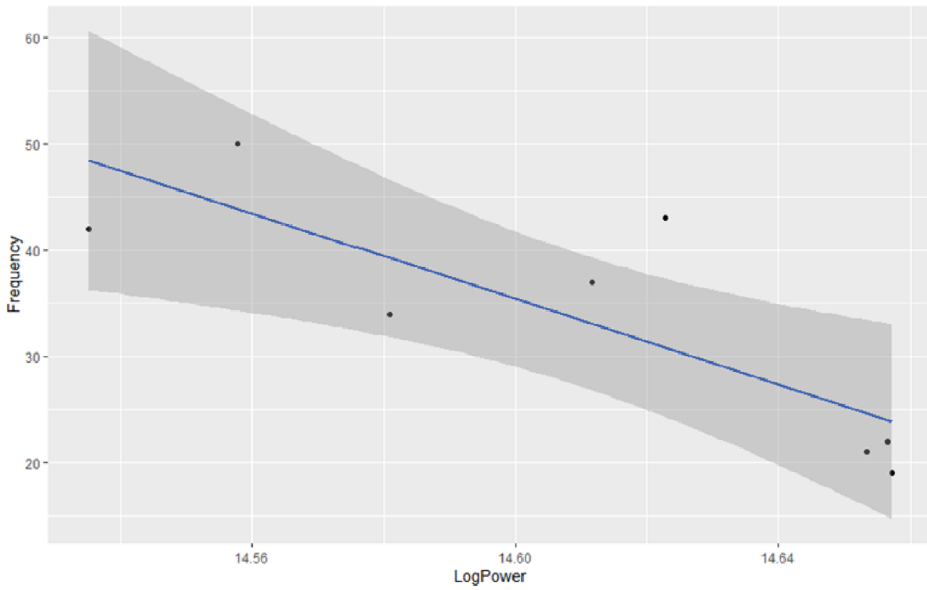


FIGURE 15: UKRAINE – POWER DIFFERENCE AND FREQUENCY

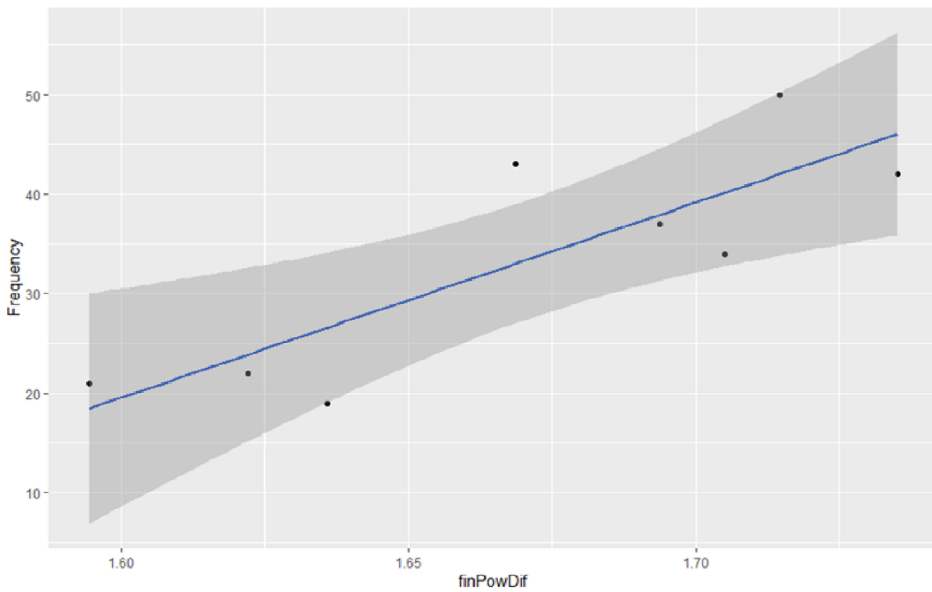


FIGURE 16: GEORGIA – POWER AND FREQUENCY

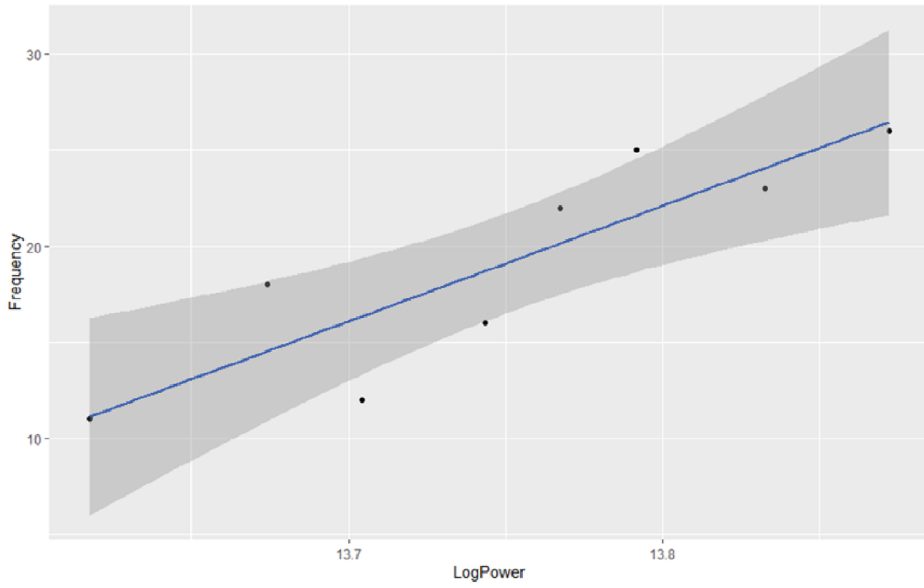


FIGURE 17: GEORGIA – POWER DIFFERENCE AND FREQUENCY

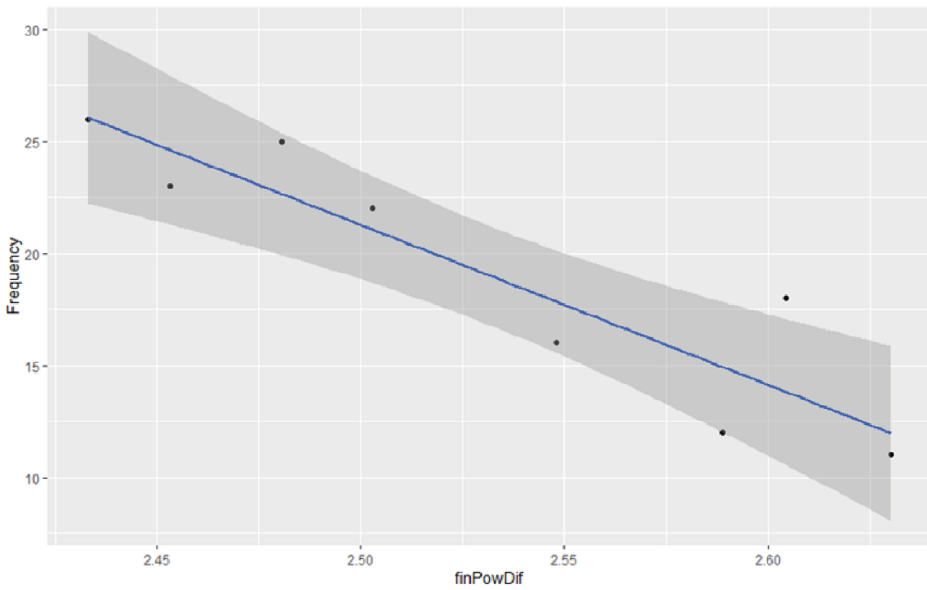


FIGURE 18: FREQUENCY REGRESSION RESULTS WITHOUT UKRAINE AND GEORGIA DATA

Negative binomial regression			Number of obs	296
Dispersion	mean		Wald chi2 (47)	1030.85
Log pseudolikelihood	-660.45242		Prob > chi2	0.0000

Frequency	Coef.	Robust Std. Err.	z	P> z	95% Conf. Interval
LogPower	-3.396266	.989593	-3.43	0.001	-5.335833 -1.456699
finPowDif	-1.937688	.7598899	-2.55	0.011	-3.427045 -0.4483314
Democracy	-.5075543	.8614144	0.59	0.556	-2.195895 1.180787
Stability	-.064897	.161927	-0.40	0.689	-.382268 .252474
Trade	.9167444	1.028755	0.89	0.373	-1.099579 2.933067
KOFPoGI	-.0248567	.0289864	-0.86	0.391	-.0816689 .0319556

FIGURE 19: INTENSITY REGRESSION RESULTS WITHOUT UKRAINE AND GEORGIA DATA

Negative binomial regression			Number of obs	296
Dispersion	mean		Wald chi2 (47)	709.66
Log pseudolikelihood	-955.17551		Prob > chi2	0.0000

Intensity	Coef.	Robust Std. Err.	z	P> z	95% Conf. Interval
LogPower	-4.285545	1.112715	-3.85	0.000	-6.466426 -2.104665
finPowDif	-2.464038	.8796666	-2.80	0.005	-4.188152 -0.7399228
Democracy	.0906585	1.028595	0.09	0.930	-1.925351 2.106668
Stability	-.0531	.1779178	-0.30	0.765	-.4018125 .2956125
Trade	.2666092	1.234979	0.22	0.829	-2.153905 2.687123
KOFPoGI	-.010147	.0335843	-0.30	0.763	-.075971 .055677

TABLE 5: GDP MARGINAL EFFECTS AT DIFFERENT GDPPC LEVELS

		GDP marginal effect			
		Model 1	Model 2	Model 5	Model 6
GDPPC at	1000	-1.19e-11***	-2.52e-11***	-1.19e-11***	-2.52e-11***
	5000	-1.41e-11 ***	-3.16e-11 ***	-1.41e-11 ***	-3.16e-11 ***
	10000	-1.74e-11***	-4.19e-11**	-1.74e-11***	-4.19e-11**
	15000	-2.15e-11**	-5.56e-11*	-2.15e-11**	-5.56e-11*
	20000	-2.67e-11**	-7.37e-11	-2.67e-11**	-7.37e-11
	25000	-3.30e-11	-9.77e-11	-3.30e-11	-9.77e-11
	30000	-4.08e-11	-1.30e-10	-4.08e-11	-1.30e-10
	35000	-5.04e-11	-1.72e-10	-5.04e-11	-1.72e-10
	40000	-6.23e-11	-2.28e-10	-6.23e-11	-2.28e-10

		GDP marginal effect			
		Model 7	Model 8	Model 9	Model 10
GDPPC at	1000	-9.91e-13*	-6.88e-12	-2.63e-12***	-9.34e-13
	5000	-1.83e-12	-7.06e-12*	-3.26e-12***	-1.12e-12
	10000	-3.92e-12	-7.30e-12*	-4.27e-12**	-1.41e-12
	15000	-8.43e-12	-7.54e-12	-5.58e-12*	-1.78e-12
	20000	-1.81e-11	-7.79e-12	-7.30e-12	-2.24e-12
	25000	-3.89e-11	-8.05e-12	-9.54e-12	-2.83e-12
	30000	-8.36e-11	-8.31e-12	-1.25e-11	-3.56e-12
	35000	-1.80e-10	-8.59e-12	-1.63e-11	-4.48e-12
	40000	-3.86e-10	-8.87e-12	-2.14e-11	-5.65e-12

TABLE 6: GDPPC MARGINAL EFFECTS AT DIFFERENT GDP LEVELS

		GDPPC marginal effect							
		Model 1	Model 2	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
GDP at	5.94e+09	23.78632	17.77856	23.78632	17.77856	2004.72	.1730648	11.10894	.0008781
	8.46e+09	23.64007	17.68114	23.64007	17.68114	1987.874	.1721365	11.04077	.0008759
	1.15e+10	23.46432	17.56398	23.46432	17.56398	1967.679	.1710201	10.95884	.0008733
	2.62e+10	22.63242	17.00813	22.63242	17.00813	1872.853	.1657207	10.57103	.0008606
	4.21e+10	21.7664	16.03389	21.7664	16.03389	1775.492	.1601774	10.1673	.0008471
	5.32e+10	21.18243	21.18243	21.18243	21.18243	1710.637	.1564235	9.895029	.0008378
	1.27e+11	17.66795	13.641	17.66795	13.641	1334.598	.1335357	8.256157	.0007783
	2.55e+11	12.93035	10.32912	12.93035	10.32912	870.6478	.1017127	6.045897	.0006858
	6.11e+11	5.398252	4.743504	5.398252	4.743504	263.4936	.0474871	2.528296	.0004812