

Online Appendix

“Worth the pain? Firms’ exporting behaviour to countries under sanctions”

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Uncorrected coefficients

Table 1: Baseline specification

(a) Coefficients from three-way fixed effects model				
	Dependent variable: $y_{\omega jt}$			
	Iran	Russia	Myanmar	Cuba
Active previous year	0.239*** (0.001)	0.196*** (0.001)	0.237*** (0.001)	0.193*** (0.001)
Fixed effects	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$
Sample size	27,396,537	27,785,280	27,640,157	27,499,973

(b) Coefficients from two-way fixed effects model				
	Dependent variable: $y_{\omega jt}$			
	Iran	Russia	Myanmar	Cuba
Active previous year	0.266*** (0.001)	0.203*** (0.001)	0.260*** (0.001)	0.199*** (0.001)
Sanctions _{jt}	-0.280*** (0.012)	-0.247*** (0.007)	0.001 (0.033)	0.014 (0.03)
Estimated Date-Partner FE _{jt}	0.248*** (0.002)	0.207*** (0.002)	0.224*** (0.002)	0.214*** (0.002)
Fixed effects	$\omega t, jt$	$\omega t, jt$	$\omega t, jt$	$\omega t, jt$
Sample size	27,410,538	27,851,032	27,671,986	27,555,391

Notes: Sanctions_{jt} = Sanctions Period_t × Sanctioned Country_j. Sample includes two years pre and post treatment periods, respectively. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

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Table 2: Previous experience**(a) Coefficients from three-way fixed effects model**

	Dependent variable: $y_{\omega jt}$			
	Iran	Russia	Myanmar	Cuba
Active previous year	0.387*** (0.002)	0.360*** (0.002)	0.090*** (0.002)	0.029*** (0.002)
— × Sanctions Period _t	-0.291*** (0.002)	-0.329*** (0.002)	0.296*** (0.002)	0.328*** (0.002)
— × Sanctioned Country _j	-0.110*** (0.023)	0.062*** (0.014)	-0.336*** (0.053)	-0.165*** (0.056)
— × Sanctions _{jt}	0.161*** (0.032)	0.060*** (0.018)	0.321*** (0.075)	-0.004 (0.07)
Fixed effects	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$
Sample size	27,396,537	27,785,280	27,640,157	27,499,973

(b) Coefficients from two-way fixed effects model

	Dependent variable: $y_{\omega jt}$			
	Iran	Russia	Myanmar	Cuba
Active previous year	0.416*** (0.002)	0.355*** (0.002)	0.110*** (0.002)	0.046*** (0.002)
— × Sanctions Period _t	-0.300*** (0.002)	-0.306*** (0.002)	0.298*** (0.002)	0.305*** (0.002)
— × Sanctioned Country _j	-0.132*** (0.023)	0.053*** (0.014)	-0.353*** (0.053)	-0.184*** (0.055)
— × Sanctions _{jt}	0.165*** (0.031)	0.061*** (0.018)	0.281*** (0.073)	0.017 (0.07)
Sanctions _{jt}	-0.430*** (0.027)	-0.300*** (0.016)	-0.132** (0.055)	0.035 (0.056)
Estimated Date-Partner FE _{jt}	0.242*** (0.002)	0.210*** (0.002)	0.219*** (0.002)	0.219*** (0.002)
Fixed effects	$\omega t, jt$	$\omega t, jt$	$\omega t, jt$	$\omega t, jt$
Sample size	27,410,538	27,851,032	27,671,986	27,555,391

Notes: Sanctions_{jt} = Sanctions Period_t × Sanctioned Country_j. Sample includes two years pre and post treatment periods, respectively. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 3: Total exports

(a) Coefficients from three-way fixed effects model

	Dependent variable: $y_{\omega jt}$			
	Iran	Russia	Myanmar	Cuba
Active previous year	0.248*** (0.001)	0.211*** (0.001)	0.247*** (0.001)	0.209*** (0.001)
Sanctions $_{jt}$ × log total exports $_{\omega}$	-0.070*** (0.006)	0.009*** (0.003)	-0.003 (0.014)	0.014 (0.012)
Fixed effects	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$
Sample size	26,826,432	26,304,830	26,618,756	24,423,850

(b) Coefficients from two-way fixed effects model

	Dependent variable: $y_{\omega jt}$			
	Iran	Russia	Myanmar	Cuba
Active previous year	0.275*** (0.001)	0.218*** (0.001)	0.270*** (0.001)	0.215*** (0.001)
Sanctions $_{jt}$	0.874*** (0.093)	-0.369*** (0.05)	0.022 (0.234)	-0.226 (0.2)
Sanctions $_{jt}$ × log total exports $_{\omega}$	-0.073*** (0.006)	0.008** (0.003)	-0.001 (0.014)	0.014 (0.012)
Estimated Date-Partner FE $_{jt}$	0.249*** (0.002)	0.206*** (0.002)	0.225*** (0.002)	0.214*** (0.002)
Fixed effects	$\omega t, jt$	$\omega t, jt$	$\omega t, jt$	$\omega t, jt$
Sample size	26,840,138	26,367,920	26,649,461	24,474,601

Notes: Sanctions $_{jt}$ = Sanctions Period $_t$ × Sanctioned Country $_j$. Sample includes two years pre and post treatment periods, respectively. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 4: Number of products

(a) Coefficients from three-way fixed effects model

	Dependent variable: $y_{\omega jt}$			
	Iran	Russia	Myanmar	Cuba
Active previous year	0.248*** (0.001)	0.211*** (0.001)	0.247*** (0.001)	0.209*** (0.001)
Sanctions $_{jt}$ × log number products $_{\omega}$	-0.092*** (0.012)	0.018*** (0.006)	0.021 (0.027)	-0.080*** (0.025)
Fixed effects	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$
Sample size	26,826,432	26,305,187	26,618,756	24,423,850

(b) Coefficients from two-way fixed effects model

	Dependent variable: $y_{\omega jt}$			
	Iran	Russia	Myanmar	Cuba
Active previous year	0.275*** (0.001)	0.218*** (0.001)	0.270*** (0.001)	0.215*** (0.001)
Sanctions $_{jt}$	-0.024 (0.032)	-0.288*** (0.017)	-0.078 (0.085)	0.246*** (0.078)
Sanctions $_{jt}$ × log number products $_{\omega}$	-0.098*** (0.012)	0.017*** (0.006)	0.027 (0.027)	-0.085*** (0.025)
Estimated Date-Partner FE $_{jt}$	0.249*** (0.002)	0.206*** (0.002)	0.225*** (0.002)	0.214*** (0.002)
Fixed effects	$\omega t, jt$	$\omega t, jt$	$\omega t, jt$	$\omega t, jt$
Sample size	26,840,138	26,368,277	26,649,461	24,474,601

Notes: Sanctions $_{jt}$ = Sanctions Period $_t$ × Sanctioned Country $_j$. Sample includes two years pre and post treatment periods, respectively. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 5: Trade finance intensity**(a) Coefficients from three-way fixed effects model**

	Dependent variable: $y_{\omega jt}$			
	Iran	Russia	Myanmar	Cuba
Active previous year	0.248*** (0.001)	0.211*** (0.001)	0.247*** (0.001)	0.209*** (0.001)
Sanctions $_{jt}$ × mean trade finance intensity $_{\omega}$	-0.440** (0.177)	-0.191* (0.102)	0.915* (0.531)	0.192 (0.37)
Fixed effects	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$
Sample size	26,826,432	26,305,187	26,618,756	24,423,850

(b) Coefficients from two-way fixed effects model

	Dependent variable: $y_{\omega jt}$			
	Iran	Russia	Myanmar	Cuba
Active previous year	0.275*** (0.001)	0.218*** (0.001)	0.270*** (0.001)	0.215*** (0.001)
Sanctions $_{jt}$	-0.314*** (0.021)	-0.263*** (0.011)	0.085 (0.06)	0.021 (0.044)
Sanctions $_{jt}$ × mean trade finance intensity $_{\omega}$	-0.420** (0.177)	-0.186* (0.102)	0.897* (0.528)	0.183 (0.369)
Estimated Date-Partner FE $_{jt}$	0.249*** (0.002)	0.206*** (0.002)	0.225*** (0.002)	0.214*** (0.002)
Fixed effects	$\omega t, jt$	$\omega t, jt$	$\omega t, jt$	$\omega t, jt$
Sample size	26,840,138	26,368,277	26,649,461	24,474,601

Notes: Sanctions $_{jt}$ = Sanctions Period $_t$ × Sanctioned Country $_j$. Sample includes two years pre and post treatment periods, respectively. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 6: Financial dependence**(a) Coefficients from three-way fixed effects model**

	Dependent variable: $y_{\omega jt}$			
	Iran	Russia	Myanmar	Cuba
Active previous year	0.248*** (0.001)	0.211*** (0.001)	0.247*** (0.001)	0.209*** (0.001)
Sanctions $_{jt}$ × mean external finance dependence $_{\omega}$	0.076* (0.039)	0.078*** (0.025)	-0.004 (0.12)	-0.142 (0.117)
Fixed effects	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$
Sample size	26,826,432	26,305,187	26,618,756	24,423,850

(b) Coefficients from two-way fixed effects model

	Dependent variable: $y_{\omega jt}$			
	Iran	Russia	Myanmar	Cuba
Active previous year	0.275*** (0.001)	0.218*** (0.001)	0.270*** (0.001)	0.215*** (0.001)
Sanctions $_{jt}$	-0.279*** (0.013)	-0.246*** (0.007)	0.001 (0.034)	0.011 (0.032)
Sanctions $_{jt}$ × mean external finance dependence $_{\omega}$	0.076* (0.039)	0.075*** (0.025)	-0.010 (0.119)	-0.143 (0.116)
Estimated Date-Partner FE $_{jt}$	0.249*** (0.002)	0.206*** (0.002)	0.225*** (0.002)	0.214*** (0.002)
Fixed effects	$\omega t, jt$	$\omega t, jt$	$\omega t, jt$	$\omega t, jt$
Sample size	26,840,138	26,368,277	26,649,461	24,474,601

Notes: Sanctions $_{jt}$ = Sanctions Period $_t$ × Sanctioned Country $_j$. Sample includes two years pre and post treatment periods, respectively. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 7: Consumer goods

(a) Coefficients from three-way fixed effects model

	Dependent variable: $y_{\omega jt}$			
	Iran	Russia	Myanmar	Cuba
Active previous year	0.248*** (0.001)	0.211*** (0.001)	0.247*** (0.001)	0.209*** (0.001)
Sanctions $_{jt}$ × share consumer goods $_{\omega}$	0.243*** (0.032)	-0.282*** (0.016)	-0.197** (0.09)	-0.009 (0.072)
Fixed effects	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$
Sample size	26,826,432	26,305,187	26,618,756	24,423,850

(b) Coefficients from two-way fixed effects model

	Dependent variable: $y_{\omega jt}$			
	Iran	Russia	Myanmar	Cuba
Active previous year	0.275*** (0.001)	0.218*** (0.001)	0.270*** (0.001)	0.215*** (0.001)
Sanctions $_{jt}$	-0.331*** (0.015)	-0.146*** (0.009)	0.047 (0.04)	0.007 (0.039)
Sanctions $_{jt}$ × share consumer goods $_{\omega}$	0.236*** (0.032)	-0.277*** (0.016)	-0.196** (0.09)	-0.002 (0.072)
Estimated Date-Partner FE $_{jt}$	0.249*** (0.002)	0.206*** (0.002)	0.225*** (0.002)	0.214*** (0.002)
Fixed effects	$\omega t, jt$	$\omega t, jt$	$\omega t, jt$	$\omega t, jt$
Sample size	26,840,138	26,368,277	26,649,461	24,474,601

Notes: Sanctions $_{jt}$ = Sanctions Period $_t$ × Sanctioned Country $_j$. Sample includes two years pre and post treatment periods, respectively. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 8: Intermediate goods

(a) Coefficients from three-way fixed effects model

	Dependent variable: $y_{\omega jt}$			
	Iran	Russia	Myanmar	Cuba
Active previous year	0.248*** (0.001)	0.211*** (0.001)	0.247*** (0.001)	0.209*** (0.001)
Sanctions $_{jt}$ × share intermediate goods $_{\omega}$	-0.092*** (0.029)	0.224*** (0.017)	-0.016 (0.083)	-0.038 (0.08)
Fixed effects	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$
Sample size	26,826,432	26,305,187	26,618,756	24,423,850

(b) Coefficients from two-way fixed effects model

	Dependent variable: $y_{\omega jt}$			
	Iran	Russia	Myanmar	Cuba
Active previous year	0.275*** (0.001)	0.218*** (0.001)	0.270*** (0.001)	0.215*** (0.001)
Sanctions $_{jt}$	-0.240*** (0.017)	-0.319*** (0.009)	0.006 (0.044)	0.017 (0.039)
Sanctions $_{jt}$ × share intermediate goods $_{\omega}$	-0.089*** (0.029)	0.219*** (0.017)	-0.016 (0.083)	-0.037 (0.079)
Estimated Date-Partner FE $_{jt}$	0.249*** (0.002)	0.206*** (0.002)	0.225*** (0.002)	0.214*** (0.002)
Fixed effects	$\omega t, jt$	$\omega t, jt$	$\omega t, jt$	$\omega t, jt$
Sample size	26,840,138	26,368,277	26,649,461	24,474,601

Notes: Sanctions $_{jt}$ = Sanctions Period $_t$ × Sanctioned Country $_j$. Sample includes two years pre and post treatment periods, respectively. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 9: Exposure crisis countries

(a) Coefficients from three-way fixed effects model

	Dependent variable: $y_{\omega jt}$			
	Iran	Russia	Myanmar	Cuba
Active previous year	0.239*** (0.001)	0.202*** (0.001)	0.237*** (0.001)	0.199*** (0.001)
Sanctions _{jt} × exposure crisis country _ω	0.005 (0.03)	0.071*** (0.014)	0.215* (0.127)	-0.156 (0.103)
Fixed effects	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$
Sample size	27,396,537	27,078,704	27,350,724	26,828,490

(b) Coefficients from two-way fixed effects model

	Dependent variable: $y_{\omega jt}$			
	Iran	Russia	Myanmar	Cuba
Active previous year	0.266*** (0.001)	0.209*** (0.001)	0.259*** (0.001)	0.205*** (0.001)
Sanctions _{jt}	-0.272*** (0.026)	-0.283*** (0.01)	-0.218* (0.121)	0.163* (0.097)
Sanctions _{jt} × exposure crisis country _ω	-0.011 (0.03)	0.073*** (0.014)	0.239* (0.126)	-0.163 (0.102)
Estimated Date-Partner FE _{jt}	0.248*** (0.002)	0.206*** (0.002)	0.224*** (0.002)	0.212*** (0.002)
Fixed effects	$\omega t, jt$	$\omega t, jt$	$\omega t, jt$	$\omega t, jt$
Sample size	27,410,538	27,142,141	27,382,481	26,881,506

Notes: Sanctions_{jt} = Sanctions Period_t × Sanctioned Country_j. Sample includes two years pre and post treatment periods, respectively. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 10: Exposure neighboring country

(a) Coefficients from three-way fixed effects model

	Dependent variable: $y_{\omega jt}$			
	Iran	Russia	Myanmar	Cuba
Active previous year	0.239*** (0.001)	0.202*** (0.001)	0.237*** (0.001)	0.199*** (0.001)
Sanctions _{jt} × exposure neighbor _ω	-0.037 (0.043)	-0.061*** (0.017)	-0.193* (0.111)	-0.176** (0.073)
Fixed effects	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$	$\omega t, jt, \omega j$
Sample size	27,396,537	27,078,704	27,350,724	26,828,490

(b) Coefficients from two-way fixed effects model

	Dependent variable: $y_{\omega jt}$			
	Iran	Russia	Myanmar	Cuba
Active previous year	0.266*** (0.001)	0.209*** (0.001)	0.259*** (0.001)	0.205*** (0.001)
Sanctions _{jt}	-0.226*** (0.041)	-0.195*** (0.015)	0.159 (0.104)	0.153** (0.064)
Sanctions _{jt} × exposure neighbor _ω	-0.060 (0.043)	-0.064*** (0.017)	-0.175 (0.11)	-0.177** (0.073)
Estimated Date-Partner FE _{jt}	0.248*** (0.002)	0.206*** (0.002)	0.224*** (0.002)	0.212*** (0.002)
Fixed effects	$\omega t, jt$	$\omega t, jt$	$\omega t, jt$	$\omega t, jt$
Sample size	27,410,538	27,142,141	27,382,481	26,881,506

Notes: Sanctions_{jt} = Sanctions Period_t × Sanctioned Country_j. Sample includes two years pre and post treatment periods, respectively. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.