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Exporters and shocks: impact of the Brexit vote shock on bilateral exports to the UK

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Appendix to

Exporters and shocks: impact of the Brexit vote shock on bilateral exports to the UK

(Not for publication)

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This appendix presents additional results that are referred to in the main text of the paper, but not reported.

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Table B.1: Top export destinations for Portugese firms

		2015	
country	rank	exports (billion euros)	export share
Spain	1	11.50	24.59
Germany	2	5.80	12.41
France	3	5.72	12.24
United Kingdom	4	3.31	7.09
USA	5	2.29	4.90
Angola	6	1.97	4.21
Netherlands	7	1.94	4.14
Italy	8	1.55	3.32
Belgium	9	1.09	2.33
China	10	0.80	1.71
		2016	
country	rank	exports (billion euros)	export share
Spain	1	11.90	25.34
France	2	6.00	12.78
Germany	3	5.74	12.22
United Kingdom	4	3.49	7.43
USA	5	2.20	4.69
Netherlands	6	1.82	3.88
Italy	7	1.69	3.60
Angola	8	1.45	3.08
Belgium	9	1.18	2.50
Morocco	10	0.66	1.41

Own calculations based on Portuguese firm-level international trade data, from the National Statistics Office.

Table B.2: Summary statistics, agreggate exports

	total exports (million euros)	number of exporters	exports per firm (million euros)	# CN8 prod. per firm		# countries per firm	
				mean	median	mean	median
2015	46730	22519	2.08	15	4	4	1
2016	46980	21206	2.22	14	4	4	1

Own calculations based on Portuguese firm-level international trade data, from the National Statistics Office.

Table B.3: Response of producer prices to exchange rates

	(1)	(2)
Dependent variable:	Δln(uv)	Δln(q)
$\Delta \ln e_{ct}$	-0.136***	-0.239***
	(0.0409)	(0.0802)
δ_{fpc} fixed effects	yes	yes
δ_t fixed effects	yes	yes
Observations	313526	313526
R-squared	.194	.178

Observations are by firm-product-country-month. A product is a CN 8-digit category. e_{ct} is the nominal exchange rate between the euro and the destination currency; an increase corresponds to an appreciation of the euro. A constant term and foreign country inflation, using the consumer price index, are always included. The estimation sample excludes eurozone countries, which use the same currency as Portugal, and Denmark because the exchange rate hardly moves relative to the euro. δ_{fpc} are firm-product-country fixed effects and δ_t are time dummies. Robust standard errors, clustered by country are reported in parenthesis. *p<0.1; ** p<0.05; ***p<0.01.

Table B.4: Unit prices, firm-country-product(CN8) level

	(1)	(2)
Dependent variable:	Δln(uv)	Δln(uv)
$Post_t \times GB_c$	-0.0431***	-0.0460***
	(0.00457)	(0.00566)
δ_{fpc} fixed effects	yes	
δ_t fixed effects	yes	
δ_{pt} fixed effects		yes
δ_{fc} fixed effects		yes
Observations	325415	331644
R-squared	.179	.188

Observations are by firm-product-country-month. A product is a CN 8-digit category. A constant term and foreign country inflation, using the consumer price index, are always included. δ_{fpc} are firm-product-country fixed effects and δ_t are time dummies; δ_{pt} and δ_{fc} are product-time and firm-country fixed effects, respectively. Robust standard errors, clustered by country are reported in parenthesis. *p<0.1; ** p<0.05; ***p<0.01.

Table B.5: Firm-country-product(CN8) level, eurozone and EU-non-eurozone samples

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable:	Δln(exp)	Δln(q)	Δln(uv)	Δln(exp)	Δln(q)	Δln(uv)
Sample:		Eurozone			EU-non-eurozone	
$Post_t \times GB_c$	-0.0492***	-0.0237**	-0.0254***	-0.0367**	-0.0220	-0.0146*
	(0.00780)	(0.0109)	(0.00471)	(0.0185)	(0.0198)	(0.00788)
δ_{fpc} fixed effects	yes	yes	yes	yes	yes	yes
δ_t fixed effects	yes	yes	yes	yes	yes	yes
Observations	705346	705346	705346	129338	129338	129338
R-squared	.157	.163	.185	.159	.164	.181
Sample:		Eurozone			EU-non-eurozone	
$Post_t \times GB_c$	-0.0451***	-0.0256**	-0.0195***	-0.0472**	-0.0249	-0.0222**
	(0.00886)	(0.0107)	(0.00480)	(0.0241)	(0.0256)	(0.00981)
δ_{pt} fixed effects	yes	yes	yes	yes	yes	yes
δ_{fc} fixed effects	yes	yes	yes	yes	yes	yes
Observations	692386	692386	692386	114661	114661	114661
R-squared	.167	.172	.198	.266	.27	.306

Observations are by firm-product-country-month. A product is a CN 8-digit category. A constant term and foreign country inflation, using the consumer price index, are always included. The EU-non-eurozone sample in columns (4)-(6) includes the EU member states that are not part of the eurozone: Bulgaria, Czech Republic, Denmark, Hungary, Poland, Romania, Sweden, and the UK. δ_{fpc} are firm-product-country fixed effects and δ_t are time dummies; δ_{pt} and δ_{fc} are product-time and firm-country fixed effects, respectively. Robust standard errors, clustered by country are reported in parenthesis. *p<0.1; ** p<0.05; ***p<0.01.

Table B.6: Firm-country-product(CN8) level, without entry or exit observations

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable:	Δln(exp)	Δln(q)	Δln(uv)	Δln(exp)	Δln(q)	Δln(uv)
$Post_t \times GB_c$	-0.0551***	-0.0300***	-0.0251***	-0.0565***	-0.0365***	-0.0199***
	(0.00800)	(0.0112)	(0.00475)	(0.00958)	(0.0115)	(0.00394)
δ_{fpc} fixed effects	yes	yes	yes			
δ_t fixed effects	yes	yes	yes			
δ_{pt} fixed effects				yes	yes	yes
δ_{fc} fixed effects				yes	yes	yes
Observations	965682	965682	965682	975071	975071	975071
R-squared	.164	.169	.188	.15	.154	.173

Observations are by firm-product-country-month. A product is a CN 8-digit category. A constant term and foreign country inflation, using the consumer price index, are always included. The estimation sample excludes observations in entry of exit periods for a firm. δ_{fpc} are firm-product-country fixed effects, which absorb trends by firm-product-country, and δ_t are time dummies; δ_{pt} and δ_{fc} are product-time and firm-country fixed effects, respectively. Robust standard errors, clustered by country are reported in parenthesis. *p<0.1; ** p<0.05; ***p<0.01.

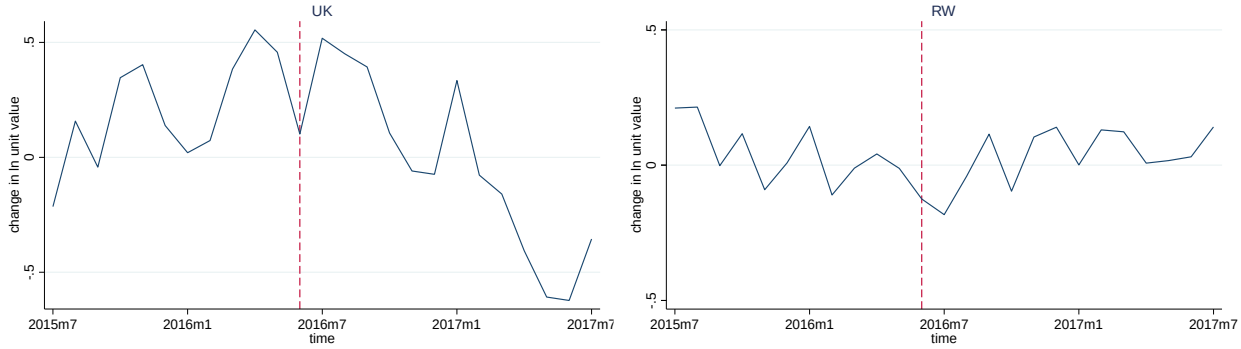

Figure B.1: Change in ln unit value, UK and rest of the world, 2015-2017

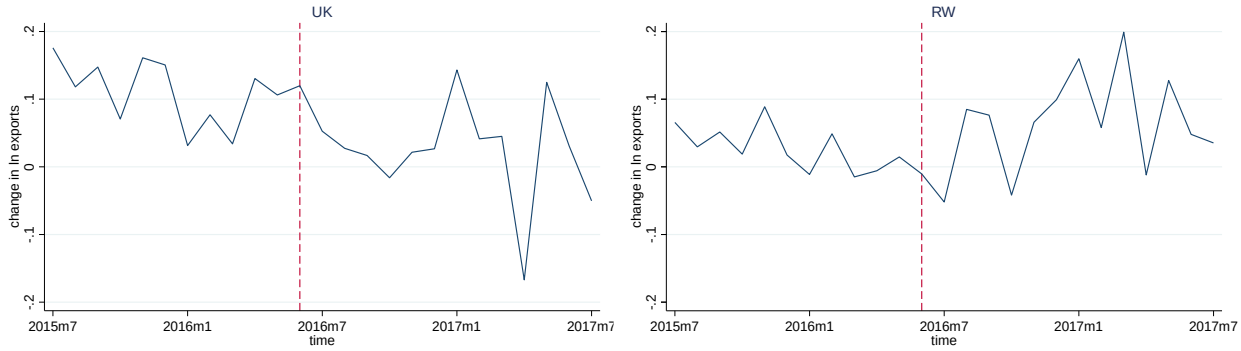

Figure B.2: Change in ln export value, UK and rest of the world, 2015-2017

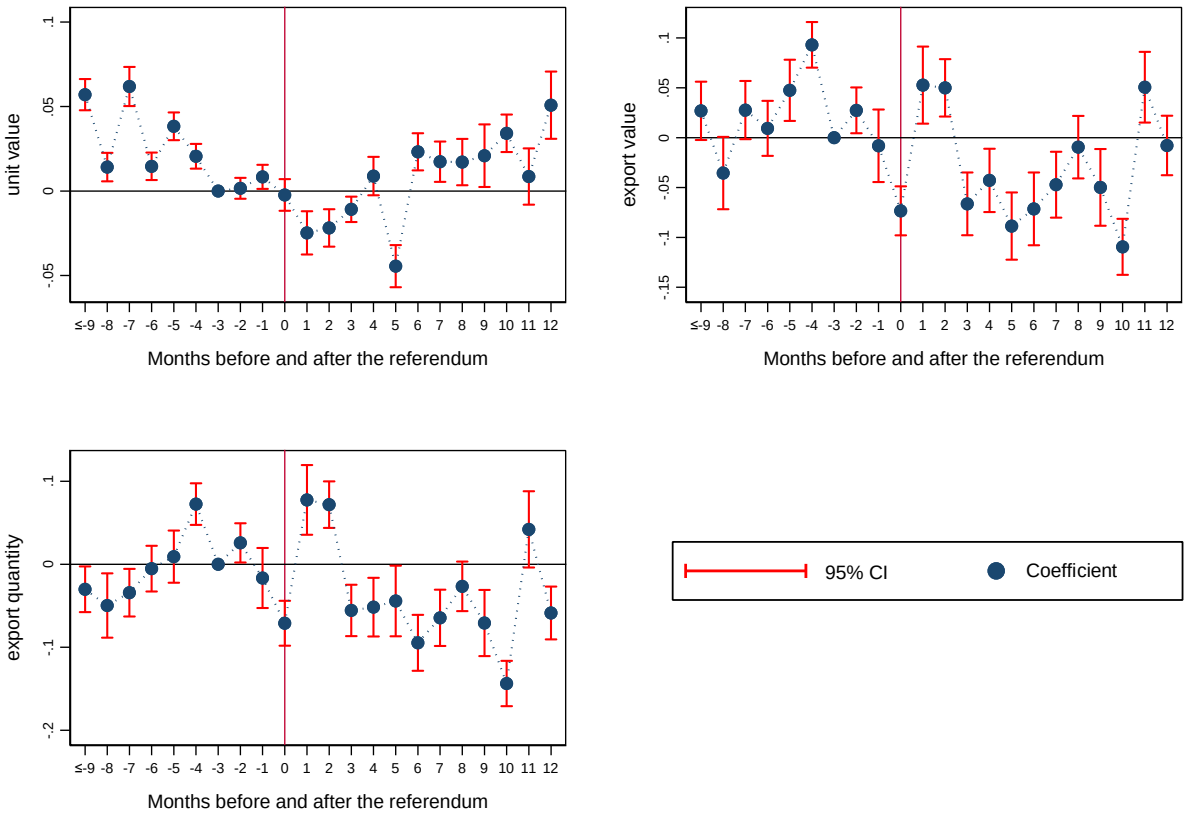

Figure B.3: Effect of the Brexit referendum over time