

The trade effects of the Rana Plaza collapse

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Understanding the microeconomics of globalization

Emergence of global value chains

- interest of trade economists in understanding 'global production arrangements' (Chor, 2018).
- measure GVCs, model determinants of firms' sourcing and organizational decisions...

International regulation of multinationals' activity

- consumers and states care about information regarding production processes
How best to achieve this goal ?
- State regulation / UN / Firms / **NGOs** ...

Activism and globalization

What do we know about the effects of campaigns / boycotts ?

To estimate impact we can look at outcomes such as

- firm's pricing behavior **Cottage cheese** (Hendel et al, 2017)
- wages paid by the firm (Harrison and Scorse, 2010)
- pollution
- damages to the environment ...
- sales **French auto industry in China** (Hong et al, 2011)

⇒ We focus on domestic sales of internationally manufactured clothing.

What we do

- Focus on the Rana Plaza collapse (April 2013)
... which generated large amount of activism against multinationals from different countries **campaigns**
- Did it affect **demand** ?
We study import flows from BGD in the clothing industry before and after the event.
- At hs4 level, investigate whether imports of **'guilty' firms and countries** evolve differently evolution after the shock.

What we know about the shock

- Building collapsed on April 24, 2013
- Activists did not call for companies' boycotts. They investigated which **brands** were **sourcing** in Rana Plaza.
- Rapidly pressure was put on firms to pay for compensations and to invest in building security.
 - 'Accord on building safety' signed by (some) firms on May 14, 2013. (voluntary and binding).
 - 'Alliance for Bangladesh Worker Safety' signed by firms reluctant to the Accord.
 - 'Fund for immediate repair' created in January 2014, following the Nov. 2013 Rana Plaza arrangement signed with ILO.

What we know about the effects of the shock

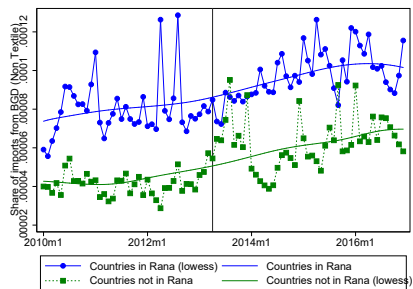
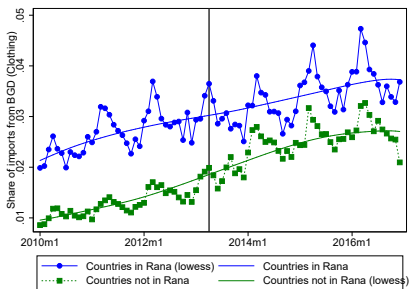
- Media and NGOs suggest **greenwashing** (signing for compensation, investing in building safety) is firms' main reaction [here](#) .
- They acknowledge a rise in minimum wage for textile in July 2013, an improvement in building safety, and however no significant changes in workers' social rights (better legislation on trade unions + more repression from the govt)
- Literature suggests that
 - Stock market reaction to retailers was **negative and short-lived** Jacobs et al. (2017 [here](#))
 - Signature of Accord and Alliance **are CSR practices**. Boudreau et al. (2015)
- ★ What should we expect on textile import flows from BGD?

Methodology

- ① The case of French firms' imports from BGD
 - List firms which were sourcing from the building. Find those which import directly from BGD to France.
 - Estimate whether their import flows from BGD (and from other origins) after the shock differ from those of the control group.
- ② Broader view: Comtrade import data
 - List countries whose firms were sourcing from the building.
 - Estimate whether their import flows from BGD (and from other origins) after the shock differ from those of the control group.

Anything visible to the naked eye ?

Figure: Evolution of apparel and clothing imports from Bangladesh : importers in or out of Rana Plaza



Firms involved in the building



Improving working conditions in the global garment industry

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You are here: Home / Safety / Rana Plaza / Who needs to pay up?

Who paid up and who failed to take responsibility?

In June 2015, more than 2 years since the devastating collapse of the Rana Plaza building, the Rana Plaza Donors Trust Fund finally reached the \$30 million needed to compensate all the survivors and affected families full and fairly. The Donor Trust Fund was open for voluntary donations and it was up to the donor to decide if they want to make their contribution public. This list is based on the information we have on public donations.

For more information about the Rana Plaza Donors Trust Fund - established by the ILO to collect donations for compensation - and detailed information about company contributions, please see this briefing: [Compensating the Victims of Rana Plaza: Resolving the Funding Crisis](#). An appraisal three years after can be found [here](#).

See here an [overview](#) of brands that were linked to the Rana building as well as brands that have a sourcing relationship with Bangladesh and are called upon to donate in that capacity.

For an [overview](#) also including payments regarding the Tazreen factory fire, transparency and adherence to the Bangladesh Accord please see this chart made by ILRF.



The table below lists those brands that have been linked with factories in the Rana Plaza building.

Other brands that have not been linked to Rana Plaza, including H&M, Gap and N Brown have also made donations to the Fund. See a full list on the website of the [Rana Plaza Arrangement](#).

May 2015 List of donations made by Brands linked to the Rana Plaza Building

Company	Country	X = not donated ? = donated but amount not disclosed	Estimated amount of undisclosed donations
Adler Modemarkte	Germany	x	
Auchan	France	1,5 million	
Ascena Retail		x	
Benetton	Italy	1,1 million	
Bonmarche	UK	?	Very small
C&A	Belgium	1 million (second donation of 310.000 in ...)	

Firms involved in the building, cont.

Table: List of 31 firms which were in Rana Plaza

Countries of origin	Brands
Belgium	C&A
Canada	Loblaw
Germany	Guldenpfennig, NKD, Kanz (Kids Fashion Group), Kik, Adler Modemarkte
Denmark	PWT (Texman), Mascot
Spain	Inditex, El Corte Ingles, Mango
France	Carrefour, Camaieu, Auchan
Great Britain	Bon Marche, Primark, Matalan, Grabalok Store 21
Italy	Manifatura Corona, YesZee, Benetton, Kappa
Poland	LPP
Turkey	L.C. Waikiki
United States	J.C Penney, The Children's Place, Cato Fashions, Walmart, Iconix Lee Cooper, Ascena Retail

List of firms is taken from <https://cleanclothes.org/safety/ranaplaza/rana-plaza-actual-and-potential-donors-listed-by-g7-country/view>.

⇒ These 6 firms are present in the French Customs data.

Firm-level double difference on BGD

- France has 1190 firms which were importing textile from BGD in 2013.
- Did imports of 'guilty' firms from BGD after the shock evolve differently from the rest of French importers ?

$$\begin{aligned} \ln \text{Imports}_{ipym} = & \gamma \ln \text{Rana}_i \times \text{Post}_{ym} & (1) \\ & + \mu_{ipm} + \nu_{pym} + \epsilon_{ipym} \end{aligned}$$

importer i , product p , year y , month m .

- French firms' imports, monthly 2010-2015, hs4 data importing hs4 clothing products directly from BGD to France.

Overview

96% of total French imports from BGD are textile products.

Table: Textile products hs2 61-64, (2013)

	Total French textile imports	1.520 million \$	Total number of importing firms
Sourcing from a retailer in the building	13.7%	207 mio \$	8 firms
Sourcing from BGD but not from the building	86.3%	1.308 mio \$	1182 firms

Source: French customs

Table: Main French textile importers from BGD

Firm name	imports	share	In Rana
Kiabi	124	0.082	
H&M	92.7	0.061	
Celio	88.7	0.058	
C&A	63.5	0.042	Yes
Auchan	46.4	0.031	Yes
Solo invest	42.0	0.028	
Leclercq	40.5	0.027	
Okaidi	38.2	0.025	
La halle	36.7	0.024	
Carrefour	35.3	0.023	Yes
La redoute	34.6	0.023	
Camaieu	32.6	0.022	Yes
Lidl	32.5	0.021	
Gemo	3.17	0.021	
Orchestra	30.6	0.02	
Zara	27.1	0.018	Yes
Decathlon	23.7	0.016	
Promod	23.5	0.016	
Jules	21.4	0.014	
Sadas	21.3	0.014	
Bestseller	18.4	0.012	
Gstar	17.9	0.012	
Mim	17.4	.011	
Agora distribution	16.8	0.011	
Les Complices	15.6	0.01	
Monoprix	14.9	0.009	

Source: French Customs, 2013. The sixth firm present in the Rana building (*Mango*) is ranked 125.

Estimation issues (double difference)

- Imports of textile from BGD are increasing over the period.
Need to control for the level of import by product:
product-year-month fixed-effect
- Imports of textile are by months: need to control for seasonality:
Firm-product-month fixed-effect

Table: Firm-level Double difference: baseline

Explained variable	Ln import value product k by Firm i from Bangladesh in month m of year y (2010-2015)		
Products	HS4 k Clothing and Apparel		
	1	2	3
In Rana firm \times Post	-0.244 ^c (0.140)		
In Rana firm \times 2010			-0.486 ^a (0.116)
In Rana firm \times 2011			-0.153 (0.109)
In Rana firm \times Jan-April 2013			-0.210 (0.150)
In Rana firm \times May-Dec 2013		-0.149 (0.134)	-0.337 ^b (0.136)
In Rana firm \times 2014		-0.297 ^b (0.145)	-0.493 ^a (0.165)
In Rana firm \times 2015		-0.258 (0.159)	-0.453 ^a (0.174)
Ln Firm imports $^i_{p,ym}$	0.816 ^a (0.013)	0.816 ^a (0.013)	0.817 ^a (0.013)
Ln Firm imports $^i_{ym}$	0.133 ^a (0.030)	0.132 ^a (0.030)	0.132 ^a (0.030)
Observations	100,547	100,547	100,547
R-squared	0.89	0.89	0.89
Product-period Fixed effects	Yes	Yes	Yes
Firm-product-month Fixed effects	Yes	Yes	Yes

Heteroskedasticity-robust standard errors clustered at the firm level appear in parentheses. ^a, ^b and ^c indicate significance at the 1%, 5% and 10% confidence levels. Period corresponds to a year-month combination. Clothing and Apparel is defined as products from HS2 between 61 and 64.

Roadmap: firm-level results

- DD on value imported from BGD.
- DD on volume and price
- DD on value from non-BGD origins
- DDD on value imported from BGD vs. other origins.

Table: Firm-level Double difference: volume and price

Explained variable	Ln import of product k by Firm i from Bangladesh in month m of year y (2010-2015)					
	HS4 k Clothing and Apparel					
Products Indicator	Quantity			Price		
	1	2	3	4	5	6
In Rana disclosed firm \times Post	-0.329 ^b (0.133)			0.020 (0.055)		
In Rana disclosed firm \times 2010			-0.165 (0.204)			-0.149 ^c (0.083)
In Rana disclosed firm \times 2011			-0.044 (0.103)			-0.121 ^b (0.058)
In Rana disclosed firm \times Jan-April 2013			-0.202 (0.140)			-0.023 (0.033)
In Rana disclosed firm \times May-Dec 2013		-0.231 ^c (0.123)	-0.287 ^a (0.098)		0.023 (0.048)	-0.046 (0.049)
In Rana disclosed firm \times 2014		-0.389 ^a (0.138)	-0.457 ^a (0.128)		0.025 (0.051)	-0.041 (0.049)
In Rana disclosed firm \times 2015		-0.336 ^b (0.153)	-0.404 ^a (0.136)		0.012 (0.070)	-0.054 (0.069)
In Firm imports _{p,ym} ^{i}	0.810 ^a (0.015)	0.810 ^a (0.015)	0.810 ^a (0.015)	0.018 ^b (0.008)	0.018 ^b (0.008)	0.018 ^b (0.008)
In Firm imports _{ym} ^{i}	0.106 ^a (0.036)	0.106 ^a (0.036)	0.106 ^a (0.036)	0.007 (0.023)	0.007 (0.023)	0.007 (0.023)
Observations	94,139	94,139	94,139	94,139	94,139	94,139
R-squared	0.91	0.91	0.91	0.79	0.79	0.79
Product-period Fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm-product-month Fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

Heteroskedasticity-robust standard errors clustered at the firm level appear in parentheses. ^a, ^b and ^c indicate significance at the 1%, 5% and 10% confidence levels. Period corresponds to a year-month combination. Clothing and Apparel is defined as products from HS2 between 61 and 64.

Table: Firm-level Double difference: non-Bangladesh origins

Explained variable	Ln import value product k by Firm i from country $j \neq$ Bangladesh in month m of year y (2010-2015)		
	HS4 k Clothing and Apparel		
Products	1	2	3
In Rana disclosed firm \times Post	-0.000 (0.049)		
In Rana disclosed firm \times 2010			-0.031 (0.053)
In Rana disclosed firm \times 2011			-0.002 (0.042)
In Rana disclosed firm \times Jan-April 2013			-0.095 ^b (0.042)
In Rana disclosed firm \times May-Dec 2013		0.004 (0.063)	-0.009 (0.060)
In Rana disclosed firm \times 2014		0.006 (0.058)	-0.015 (0.049)
In Rana disclosed firm \times 2015		-0.009 (0.045)	-0.029 (0.049)
Ln Firm imports $_{p,ym}^i$	0.766 ^a (0.009)	0.767 ^a (0.009)	0.767 ^a (0.009)
Ln Firm imports $_{ym}^i$	0.057 ^b (0.024)	0.057 ^b (0.024)	0.057 ^b (0.024)
Observations	1,504,242	1,504,242	1,504,242
R-squared	0.88	0.88	0.88
Product-period Fixed effects	Yes	Yes	Yes
Firm-product-month Fixed effects	Yes	Yes	Yes

Heteroskedasticity-robust standard errors clustered at the firm level appear in parentheses. ^a, ^b and ^c indicate significance at the 1%, 5% and 10% confidence levels. Period corresponds to a year-month combination. Clothing and Apparel is defined as products from HS2 between 61 and 64.

Table: Origin countries of French textile imports

Origin	imports	share
China	7.49	.317
Italy	2.64	.112
Bangladesh	1.52	.064
Turkey	1.25	.053
India	1.11	.047
Tunisia	1.01	.043
Portugal	0.91	.039
Morocco	0.905	.038
Vietnam	0.798	.034
Germany	0.663	.028
Romania	0.518	.022
Spain	0.481	.02
Belgium	0.414	.017
Pakistan	0.404	.017
Indonesia	0.375	.016
Netherlands	0.297	.013
Great-Britain	0.290	.012
Cambodia	0.240	.01

Source: French Customs, 2013.

Firm-level triple difference equation

- Estimated equation

$$\begin{aligned} \ln \text{Imports}_{ijpym} = & \beta \ln \text{Rana}_i \times \text{Post}_{ym} \times \text{Bangladesh}_j \quad (2) \\ & + \lambda_{ijp} + \mu_{ipym} + \nu_{jpy} + \epsilon_{ijpym} \end{aligned}$$

importer i , origin country j , product p , year y , month m .

- French firms' imports, monthly 2010-2015, hs4 data.

Table: Firm-level Triple difference: baseline

Explained variable	Ln import value product k by Firm i from country j in month m of year y (2010-2015)					
Products	HS4 k Clothing and Apparel					
Country of origin	All countries			non-OECD countries		
	1	2	3	4	5	6
In Rana firm \times Post \times BGD	-0.363 ^b (0.163)			-0.314 ^c (0.164)		
In Rana firm \times 2010 \times BGD			-0.399 ^a (0.153)			-0.447 ^a (0.150)
In Rana firm \times 2011 \times BGD			-0.198 (0.164)			-0.240 (0.157)
In Rana firm \times Jan-April 2013 \times BGD			-0.097 (0.192)			-0.108 (0.211)
In Rana firm \times May-Dec 2013 \times BGD		-0.195 (0.162)	-0.366 ^b (0.175)		-0.129 (0.154)	-0.327 ^c (0.172)
In Rana firm \times 2014 \times BGD		-0.426 ^b (0.166)	-0.598 ^a (0.192)		-0.386 ^b (0.167)	-0.583 ^a (0.196)
In Rana firm \times 2015 \times BGD		-0.416 ^b (0.185)	-0.588 ^a (0.220)		-0.370 ^b (0.187)	-0.568 ^b (0.221)
Observations	1,307,171	1,307,171	1,307,171	832,485	832,485	832,485
R-squared	0.89	0.89	0.89	0.90	0.90	0.90
Fixed effects						
Firm-Product-period	Yes	Yes	Yes	Yes	Yes	Yes
Origin country-Product-period	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Origin country-Product-month	Yes	Yes	Yes	Yes	Yes	Yes

Heteroskedasticity-robust standard errors clustered at the firm level appear in parentheses. ^a, ^b and ^c indicate significance at the 1%, 5% and 10% confidence levels. Period corresponds to a year-month combination. Clothing and Apparel is defined as products from HS2 between 61 and 64.

Firm-level: Take-away

- The Rana firms exhibit a lower level of imports after the shock, compared to others
- This is not present when importing from non-BGD countries.
- This is not present when artificially changing the group of 'guilty' firms.

Table: Firm-level Triple difference: Robustness check

Explained variable	Ln import value product k by Firm i from country j in month m of year y (2010-2015)					
Products	HS4 k Clothing and Apparel					
Country of origin	All countries			non-OECD countries		
Removed retailer	Auchan	Carrefour	C&A	Camaieu	Mango	Zara
	1	2	3	4	5	6
In Rana disclosed firm \times Post \times BGD	-0.393 ^b (0.181)	-0.365 ^c (0.201)	-0.207 ^c (0.121)	-0.405 ^b (0.169)	-0.421 ^a (0.155)	-0.366 ^c (0.220)
Observations	1,301,313	1,298,971	1,296,872	1,300,884	1,303,114	1,291,990
R-squared	0.89	0.89	0.89	0.89	0.89	0.89
Fixed effects						
Firm-Product-period	Yes	Yes	Yes	Yes	Yes	Yes
Origin country-Product-period	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Origin country-Product-month	Yes	Yes	Yes	Yes	Yes	Yes

Heteroskedasticity-robust standard errors clustered at the firm level appear in parentheses. ^a, ^b and ^c indicate significance at the 1%, 5% and 10% confidence levels. Period corresponds to a year-month combination. Clothing and Apparel is defined as products from HS2 between 61 and 64.

Table: Firm-level Triple difference: Placebo

Explained variable	Ln import value product k by Firm i from country j in month m of year y (2010-2015)			
Products	HS4 k Clothing and Apparel			
Placebo firms	6 largest exporters All firms, placebo incl. C&A & Auchan	8 largest exporters C&A & Auchan	4 largest exporters 6 in Rana firms are excluded	6 largest exporters
	1	2	3	
In Rana PLACEBO firm \times Post \times BGD	0.145 (0.283)	0.109 (0.233)	0.483 ^a (0.123)	0.333 ^b (0.160)
Observations	2,104,809	2,104,809	2,055,062	2,055,062
R-squared	0.90	0.90	0.90	0.90
Fixed effects				
Firm-Product-period	Yes	Yes	Yes	Yes
Origin country-Product-period	Yes	Yes	Yes	Yes
Firm-Origin country-Product-month	Yes	Yes	Yes	Yes

Heteroskedasticity-robust standard errors clustered at the firm level appear in parentheses. ^a, ^b and ^c indicate significance at the 1%, 5% and 10% confidence levels. Period corresponds to a year-month combination. Clothing and Apparel is defined as products from HS2 between 61 and 64.

Alternative exploration: Country-level imports from BGD

Dans les pays où des marques ont reconnu sous-traiter dans l'immeuble effondré, les réactions ont aussi été nombreuses. L'Union européenne y achète 60% de ses vêtements et les Etats-Unis un quart des vêtements produits au Bangladesh.

-Grande-Bretagne : En mars, l'enseigne britannique Primark a annoncé qu'elle allait «verser des indemnités» aux victimes de l'accident.

-Espagne : Les mains peintes rouge sang, des membres du syndicat espagnol UGT ont manifesté devant un magasin Mango à Barcelone pour fustiger la marque qui a reconnu avoir commandé des «échantillons» auprès

-Etats-Unis : Les Etats-Unis ont reconnu mercredi que des entreprises américaines de vêtements se fournissaient auprès des ateliers de confection textile effondrés. "Des sociétés qui travaillaient dans cet immeuble

Country-level: data

Table: List of countries whose firms were in Rana Plaza

Countries of origin	Brands
Belgium	C&A
Canada	Loblaw
Germany	Guldenpfennig, NKD, Kanz (Kids Fashion Group), Kik, Adler Modemarkte
Denmark	PWT (Texman), Mascot
Spain	Inditex, El Corte Ingles, Mango
France	Carrefour, Camaieu, Auchan
Great Britain	Bon Marche, Primark, Matalan, Grabalok Store 21
Italy	Manifatura Corona, YesZee, Benetton, Kappa
Poland	LPP
Turkey	L.C. Waikiki
United States	J.C Penney, The Children's Place, Cato Fashions, Walmart, Iconix Lee Cooper, Ascena Retail

List of firms is taken from <https://cleanclothes.org/safety/ranaplaza/rana-plaza-actual-and-potential-donors-listed-by-g7-country/view>.

Table: Main textile importers from Bangladesh in 2013

Country name	Imports value from Bangladesh (US billions)	Country's share in Bangladesh textile exports	Bangladesh share in country's textile imports	OECD	In Rana
USA	5 280	0.21	0.02	Yes	Yes
Germany	3 250	0.13	0.04	Yes	Yes
Great Britain	2 700	0.11	0.04	Yes	Yes
Spain	1 630	0.06	0.05	Yes	Yes
Netherlands	1 500	0.06	0.05	Yes	
France	1 360	0.05	0.02	Yes	Yes
Canada	1 110	0.04	0.04	Yes	Yes
Italy	1 060	0.04	0.02	Yes	Yes
Turkey	789	0.03	0.10	Yes	Yes
Japan	716	0.03	0.01	Yes	
Belgium	706	0.03	0.03	Yes	Yes
Russia	518	0.02	0.02		
Australia	456	0.02	0.03	Yes	
Poland	418	0.02	0.04	Yes	Yes
Denmark	408	0.02	0.04	Yes	Yes
Sweden	376	0.01	0.03	Yes	
Switzerland	329	0.01	0.02	Yes	
Czech republic	239	0.01	0.04	Yes	
Mexico	197	0.01	0.02	Yes	
Norway	191	0.01	0.03	Yes	
Brazil	185	0.01	0.03		
Korea	175	0.01	0.01	Yes	
Slovakia	164	0.01	0.03	Yes	
Indonesia	154	0.01	0.06		
Ireland	104	0.00	0.02	Yes	
Finland	96	0.00	0.02	Yes	
Hong Kong	92	0.00	0.00		
Austria	80	0.00	0.01	Yes	
Singapore	79	0.00	0.01		
Slovenia	68	0.00	0.04	Yes	

Source: Comtrade, 2013. Textile is defined as products with HS codes in HS2 61 to 64.

Countries

Table: Countries included in baseline regressions

Countries with national brands present in the Rana Plaza (11):

Belgium, Canada, Denmark, France, Germany, Italy,
Poland, Spain, Turkey, Great Britain, USA

Other OECD countries (24)

Australia, Austria, Chili, Czech republic, Estonia, Finland, Greece, Hungary, Iceland, Israel, Japan, Luxembourg, Latvia, Mexico, Netherlands, New Zealand, Norway, Portugal, Slovakia, Slovenia Slovenia, South Korea, Sweden and Switzerland.

List of countries with national brands sourcing from Rana Plaza is taken from <https://cleanclothes.org/safety/ranaplaza/rana-plaza-actual-and-potential-donors-listed-by-g7-country/view>.

Country-level: data

Difference-in-difference approach for countries importing textile from BGD:

- Before/after the shock, for countries whose national brands were inside the Rana Plaza.
- Triple-difference comparing BGD to other origins.

Data:

- Comtrade, 2010-2016, monthly, hs4 (50 products)
- Clothing and textile
- OECD importing countries

Table: Country-level Double difference: baseline

Explained variable	Ln import value of product k by OECD country i from Bangladesh in month m of year y (2010-2016)		
Products	HS4 k Clothing and Apparel		
	1	2	3
In Rana country \times Post	-0.256 ^c (0.138)		
In Rana country \times 2010			-0.039 (0.205)
In Rana country \times 2011			0.056 (0.076)
In Rana country \times Jan-April 2013			-0.147 (0.120)
In Rana country \times May-Dec 2013		-0.213 ^c (0.109)	-0.217 ^c (0.124)
In Rana country \times 2014		-0.246 (0.153)	-0.257 (0.156)
In Rana country \times 2015		-0.264 ^c (0.151)	-0.275 ^c (0.154)
In Rana country \times 2016		-0.284 (0.178)	-0.295 (0.181)
Ln Importer GDP ^{i} _{ym}	-0.342 (0.514)	-0.345 (0.515)	-0.331 (0.524)
Ln Importer Population ^{i} _{ym}	-3.535 (4.446)	-3.582 (4.487)	-3.610 (4.518)
Ln Importer total import ^{i} _{ym}	1.106 ^a (0.185)	1.107 ^a (0.185)	1.099 ^a (0.187)
Observations	89,097	89,097	89,097
R-squared	0.87	0.87	0.87
Product-period Fixed effects	Yes	Yes	Yes
Importer-product-month Fixed effects	Yes	Yes	Yes

Heteroskedasticity-robust standard errors clustered at the importing county level appear in parentheses. ^a, ^b and ^c indicate significance at the 1%, 5% and 10% confidence levels. Period corresponds to a year-month combination. Clothing and Apparel is defined as products from HS2 between 61 and 64.

Roadmap

- DD on textile, before/after the shock
- DD on non-textile products
- DD on textile, from non-BGD origins
- DDD on textile, BGD vs. other origins, before/after

Table: Main **non-textile** products imported from Bangladesh in 2013

Product code	Product name	Total imports from Bangladesh value (US billions)	Share in Bangladesh exports (in %)
0306	Crustaceans (in shell or not)	442.3	1.6
5307	Yarn of jute	219.7	0.8
4107	Leather further prepared after tanning or crusting	123.7	0.4
8712	Bicycles and other cycles	74.0	0.3
4104	Tanned or crust hides and skins of bovine	67.7	0.2
4202	Trunks; suit, camera, jewellery, cutlery cases or bags	67.2	0.2
6911	Household articles of China	50.0	0.2
2401	Tobacco, unmanufactured	48.3	0.2
7404	Copper	36.6	0.1
2710	Petroleum oils and oils from bituminous minerals	34.1	0.1
3923	Plastic articles for the conveyance or packing of good	33.0	0.1
5310	Woven fabrics of jute	26.4	0.1
9404	Furnishing articles	23.7	0.1
0303	Fish (frozen, excluding fish fillets)	21.0	0.1
6704	Wigs, false beards, eyebrows and eyelashes	15.8	0.1
1605	Crustaceans, molluscs and other aquatic invertebrate	15.3	0.1
5607	Twine, cordage, ropes and cables	13.9	0.1

Source: Comtrade, 2013. Non-Textile is defined as products outside of HS2 categories 61 to 66.

Table: Country-level Double difference: non textile products

Explained variable	Ln import value of product k by OECD country i from Bangladesh in month m of year y (2010-2016)		
Products	HS4 k non-textile		
	1	2	3
In Rana country \times after Collapse	0.055 (0.078)		
In Rana country \times 2010			-0.193 ^c (0.096)
In Rana country \times 2011			-0.060 (0.073)
In Rana country \times Jan-April 2013			-0.103 (0.074)
In Rana country \times May-Dec 2013		-0.079 (0.096)	-0.156 (0.094)
In Rana country \times 2014		0.084 (0.095)	0.006 (0.100)
In Rana country \times 2015		0.131 (0.098)	0.052 (0.100)
In Rana country \times 2016		0.034 (0.104)	-0.044 (0.110)
Ln Importer GDP _{y} ^{i}	0.063 (0.164)	0.035 (0.170)	0.059 (0.170)
Ln Importer Population _{y} ^{i}	-1.725 (1.497)	-1.644 (1.497)	-1.669 (1.537)
Ln Importer total import _{ym} ^{i}	0.164 (0.194)	0.165 (0.200)	0.163 (0.199)
Observations	51,126	51,126	51,126
R-squared	0.86	0.86	0.86
Product-period Fixed effects	Yes	Yes	Yes
Importer-product-month Fixed effects	Yes	Yes	Yes

Heteroskedasticity-robust standard errors clustered at the importing county level appear in parentheses. ^a, ^b and ^c indicate significance at the 1%, 5% and 10% confidence levels. Period corresponds to a year-month combination.

Table: Country-level Double difference: Clothing and Apparel from non-Bangladesh origins

Explained variable	Ln import value of product k by OECD country i from country $j \neq$ Bangladesh in month m of year y (2010-2016)			
	HS4 k Clothing and Apparel			
Products	1	2	3	4
In Rana country \times Post	0.024 (0.040)		0.024 (0.040)	
In Rana country \times 2010		-0.004 (0.043)		-0.001 (0.043)
In Rana country \times 2011		-0.018 (0.031)		-0.020 (0.032)
In Rana country \times Jan-April 2013		-0.031 (0.025)		-0.026 (0.024)
In Rana country \times May-Dec 2013		-0.039 (0.029)		-0.034 (0.027)
In Rana country \times 2014		0.033 (0.046)		0.031 (0.046)
In Rana country \times 2015		0.021 (0.047)		0.023 (0.047)
In Rana country \times 2016		0.021 (0.047)		0.020 (0.047)
Ln Importer GDP $_y^i$	-0.022 (0.190)	-0.023 (0.188)	-0.033 (0.182)	-0.035 (0.181)
Ln Importer Population $_y^i$	0.604 (0.833)	0.619 (0.839)	0.551 (0.847)	0.566 (0.854)
Ln Importer total import $_{ym}^i$	1.199 ^a (0.358)	1.193 ^a (0.356)	1.202 ^a (0.340)	1.197 ^a (0.338)
Observations	5,388,042	5,388,042	5,122,930	5,122,930
R-squared	0.84	0.84	0.87	0.87
Origin-Product-period Fixed effects	Yes	Yes	Yes	Yes
Importer-Origin-Product Fixed effects	Yes	Yes	-	-
Importer-Product-month Fixed effects	Yes	Yes	-	-
Importer-Origin-Product-month Fixed effects	No	No	Yes	Yes

Heteroskedasticity-robust standard errors clustered at the importing county level appear in parentheses. ^a, ^b and ^c

Country-level take-away

- Countries whose firms were pointed to be in the Rana Plaza exhibit a lower level of imports after the shock, compared to other OECD importers.
- No such evolution for non-textile imports
- No such evolution for other textile origins
- Results hold in triple-diff.
- Harder to identify whether effect originates in quantities/prices

Table: Country-level Triple difference: baseline

Explained variable	Ln import value of product k by OECD country i from country j in month m of year y (2010-2016)						
	HS4 k Clothing and Apparel						
Products	1	2	3	4	5	6	7
In Rana \times Post \times BGD	-0.276 ^c (0.150)			-0.317 ^c (0.173)			
Accord \times Post \times BGD				0.081 (0.252)	0.080 (0.253)		
In Rana \times 2010 \times BGD			-0.048 (0.211)		-0.048 (0.211)	-0.057 (0.214)	
In Rana \times 2011 \times BGD			0.088 (0.080)		0.087 (0.079)	0.037 (0.070)	
In Rana \times Jan-April 2013 \times BGD			-0.110 (0.120)		-0.108 (0.122)	-0.191 (0.115)	
In Rana \times May-Dec 2013 \times BGD		-0.188 (0.116)	-0.181 (0.131)		-0.222 (0.164)	-0.229 ^c (0.128)	-0.213 ^c (0.108)
In Rana \times 2014 \times BGD		-0.282 (0.167)	-0.282 ^c (0.166)		-0.323 ^c (0.188)	-0.265 (0.195)	-0.239 (0.185)
In Rana \times 2015 \times BGD		-0.296 ^c (0.162)	-0.296 ^c (0.160)		-0.337 ^c (0.182)	-0.350 ^c (0.194)	-0.325 ^c (0.187)
In Rana \times 2016 \times BGD		-0.300 (0.186)	-0.300 (0.186)		-0.340 ^c (0.201)	-0.471 ^b (0.218)	-0.445 ^b (0.213)
Accord \times 2010 \times BGD						0.017 (0.172)	
Accord \times 2011 \times BGD						0.098 (0.122)	
Accord \times Jan-April 2013 \times BGD						0.157 (0.226)	
Accord \times May-Dec 2013 \times BGD						0.096 (0.231)	0.051 (0.213)
Accord \times 2014 \times BGD						-0.019 (0.293)	-0.070 (0.266)
Accord \times 2015 \times BGD						0.107 (0.289)	0.056 (0.264)
Accord \times 2016 \times BGD						0.323 (0.331)	0.272 (0.312)
Observations	4,823,863	4,823,863	4,823,863	4,823,863	4,823,863	4,823,863	4,823,863
R-squared	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Fixed effects							
Importer-Product-period	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Exporter-Product-period	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Importer-Exporter-Product-month	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Heteroskedasticity-robust standard errors clustered at the importing county level appear in parentheses. ^a, ^b and ^c indicate significance at the 1%, 5% and 10% confidence levels. Period corresponds to a year month

Table: Country-level Triple difference: quantity and price

Explained variable	Ln imports of product k by OECD country i from country j in month m of year y (2010-2016)						
Products	HS4 k Clothing and Apparel						
	Quantity			Price			
	1	2	3	4	5	6	7
In Rana \times Post \times BGD	-0.164 (0.139)			0.056 (0.069)			
In Rana \times 2010 \times BGD			-0.191 (0.213)			-0.014 (0.040)	
In Rana \times 2011 \times BGD			-0.041 (0.100)			-0.021 (0.026)	
In Rana \times Jan-April 2013 \times BGD			-0.101 (0.128)			-0.099 (0.063)	
In Rana \times May-Dec 2013 \times BGD		-0.172 (0.119)	-0.244 (0.152)		-0.005 (0.060)	-0.021 (0.059)	
In Rana \times 2014 \times BGD		-0.142 (0.171)	-0.214 (0.183)		-0.018 (0.067)	-0.039 (0.068)	
In Rana \times 2015 \times BGD		-0.233 (0.156)	-0.306 ^c (0.161)		0.146 (0.108)	0.125 (0.107)	
In Rana \times 2016 \times BGD		-0.113 (0.167)	-0.185 (0.170)		0.072 (0.086)	0.051 (0.087)	
Observations	3,318,116	3,318,116	3,318,116	3,318,096	3,318,096	3,318,096	
R-squared	0.88	0.88	0.88	0.77	0.77	0.77	
Fixed effects							
Importer-Product-period	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Exporter-Product-period	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Importer-Exporter-Product-month	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Heteroskedasticity-robust standard errors clustered at the importing county level appear in parentheses. ^a, ^b and ^c indicate significance at the 1%, 5% and 10% confidence levels. Period corresponds to a year-month combination.

Conclusion, discussion

Activism and trade: any disruption in supply chains ?

- Exploratory analysis to understand what happened to **import flows** from BGD after an important **negative reputation shock**.
- Current work is digging into the mechanism
- and linking firm- and country-level outcomes

B. Jacobs and V. Singhal, *Journal of Operation Management*, 2017

“Do markets react negatively enough to such events to motivate firms to shift their sourcing strategy ?”

“Stock market reaction to retailers on the day of the Rana Plaza disaster is negative and significant, but its magnitude and significance dissipate the following day”.

“The insignificant negative economic impact from the Rana Plaza disaster suggests that retailers have little economic incentive to move sourcing out of Bangladesh” [back to effects of shock](#).

On April 24, 2018, *Liberation* published the report by Clean Clothes Campaigns listing the main changes to the textile industry in BGD since the collapse.

SOCIAL

Bangladesh : cinq ans après le drame du Rana Plaza, l'heure du bilan

Par Maud Margenet(<http://www.liberation.fr/auteur/18447-maud-margenet>) — 24
avril 2018 à 18:05



back to effects of shock

“Ethical promises by brands are in reality communication strategies to reassure consumers and continue the same sourcing behavior”.

“Some progress can be noted, however it looks more like greenwashing than to a real change”.

Hengel, Lach, Spiegel (2017, RAND)

→ on the cottage cheese boycott in Israel:

- When **boycotts** directly target **firm behavior**, it makes sense to study the consequences on variables such as pricing.

Indirect boycotts target a country: firms are punished as a proxy for their country of origin.

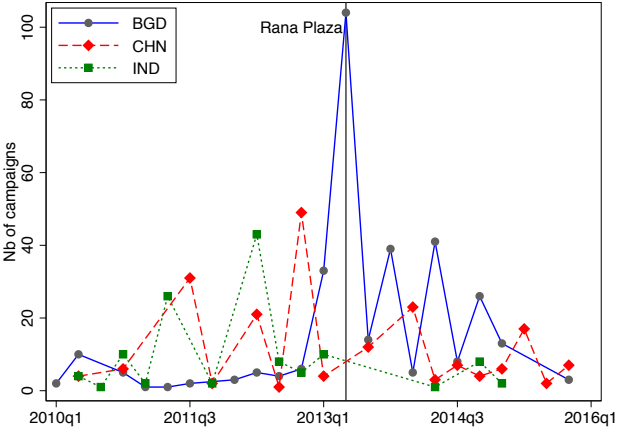
[back to the boycott literature](#)

Two examples of different boycotts:

- 1 Boycott on countries (no firm reaction expected):
“French Automobiles and the Chinese Boycotts of 2008: Politics Really Does Affect Commerce” (the B.E. JEA 2011)
- 2 Boycott on firms: “Consumer activism: the cottage cheese boycott”

[back to the boycott literature](#)

Number of campaigns, clothing industry



[back to what we do](#)