“Helping Differentiated-Goods Producers Succeed in Exports Markets through Good Exporting Practices: Experimental evidence from Argentina”

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Why do countries have export promotion policies?

- Aim: Export development and diversification $\Rightarrow$ key for economic development (Balassa, 1978; Hausmann and Rodrik, 2003; Hausmann and Klinger, 2006; Brenton et al., 2009)
- Market failure: Lack of information and knowledge about foreign markets (Easterly and Reshef, 2010; Artopoulos et al., 2013; Urmeneta, 2018)
- Need for public intervention: more than 100 countries have a national EPA (Lederman et al., 2010; Cruz et al., 2018)
- Type of intervention: increasingly, capability building services (Cruz et al., 2018)

GEP motivation: Building capability for exporting differentiated products from developing countries

- Artopoulos, Friel and Hallak (2013) study export emergence of **differentiated good** sectors in Argentina
  - Find that consistent exporters adopt business practices that depart from those prevailing in the domestic market
  - Practices mainly related to:
    1. Adapting products to foreign demand
    2. Improving production processes to upgrade quality
    3. Establishing long-term relationships with foreign distributors and adapting to their business practices
  - Domestic producers lack *foreign market knowledge* required to adopt those practices
- Consistent with evidence by Mion & Opromolla (2014), Mion et al. (2024) and Atkin et al. (2017)

Literature review: capability building services (CBS)

CBS can target three different stages in the "route to exporting":

Stage 1: Firms far from "export threshold"
Content: basic aspects of the export business
Format: training sessions

Evidence: weak (Breinlich et al., 2017; Kim et al., 2018; Carvalho et al., 2024)

Stage 2: Firms around "export threshold"
Content: good export practices
Format: individual consulting

Evidence: extensive margin (Volpe Martincus & Carballo, 2010; Cadot et al., 2015)

↳ Alternative: "Indirect route" → productivity approach
Evidence: mixed (Giorcelli, 2019; Bloom et al. 2021; Iacovone et al., 2023)

Stage 3: Firms with export experience
Content: connecting to new customers
Format: marketing training

Evidence: intensive margin (Cusolito et al., 2023; Buus et al., 2025; Ali et al., 2025)

What we do: RCT for a "stage-2" capability building program

- Implement as an RCT a capability building program aimed at training firms on the adoption of good exporting practices
  - Codify 20 "good exporting practices" (GEP)
  - Conduct an RCT involving a 72-hour tecnical assitance on GEP for 213 SMEs in the *food-and-beverages* sector in Argentina
  - First RCT for a stage-2 capability building program

What we find

- **Full sample**
  - Results: no impact

  Screening issues:
  1. Inclusion of producers of non-differentiated products
  2. Inclusion of firms not sufficiently committed

- **Good selection sample**
  - Sample: **differentiated** and **early enrollment** firms
  - Results: large and significant impact on the extensive margin (33 p.p. six years later)

- **GEP adoption**
  - Results: positive but not robustly significant across specifications

Good Exporting Practices

The good exporting practices (GEP)

- Based primarily on Artopoulos et al. (2013), but also drawing from other sources, we codify 20 good exporting practices (GEP)

- In contrast to Bloom et al.´s (2013) "management practices", GEP are:

  1. Not standardized
  2. Not internationally recognized
  3. Not globally widespread

- **20 GEP grouped into 7 areas of practices**

  1. *Strategy*
  2. *Market identification and segmentation*
  3. *Product design and adaptation*
  4. *Production*
  5. *Communication*
  6. *Distribution*
  7. *Administration*

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  4. *Production* $\longrightarrow$ Ensuring product quality
  5. *Communication*
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  4. *Production*
  5. *Communication*
  6. *Distribution* $\longrightarrow$ Building trust with the distribution channel
  7. *Administration*

Intervention

General features of the GEP program

- Implemented by Argentina´s EPA (AAICI) with the Secretary of Trade and the World Bank
- Between March 2017 and December 2019
- National reach and delivered at **no cost**
- Focus on *food-and-beverages* firms
  1. Facilitates setting common evaluation criteria
  2. Strategic relevance for the Argentine Government
  3. Not targeted by other export promotion program
- Features of the *food-and-beverages* sector:
  1. 14,000 producers of a diverse set of differentiated goods
  2. Low degree of internationalization (4% had exported continuously during the period 2011-2015 and 93% had never exported)

Enrollment process

- Various dissemination activities (dissemination events, radio interviews, telephone calls, and advertised through social media)
- Conditions to be eligible:
  1. Be legally constituted as a firm
  2. Produce food or beverages
  3. Have no less than twelve months of existence as of Dec 31st 2015
  4. Be a SMEs (between 3 and 250 employees) as of Dec 31st 2015
  5. Not be in a bankruptcy process
- Out of 279 registered firms, 213 (76%) firms were deemed eligible
- Stratified randomization: 107 firms assigned to the treatment group and 106 firms to the control group
- **Key feature:** AAICI´s hurry to reach the required number of participating firms in a short time span (45 days)

Structure, take up & attrition

- Three phases (analogous to Bloom et al., 2013):
  1. **Diagnostic (baseline survey):** all firms
  2. **Technical assistance (treatment):** treated firms
  3. **Follow-up (follow-up survey):** all firms

- Take up:
  1. **Baseline survey:** 85.9% (183 out of the 213 firms randomized)
  2. **Treatment:** 77.6% (83 out of the 107 firms randomly assigned to the treatment)
  3. **Follow-up survey:** 71,8% (153 out of the 213 firms randomized)

Baseline survey $\cap$ **Follow-up survey**: 69.5%

- Attrition of firms can be interpreted as random: no significant difference in pre-treatment characteristic ◂ Table Attrition

Diagnostic phase

Period: June 2017 to December 2017

1. Each consultant was required to undergo a 16-hour training in the GEP framework
2. 9-hour survey to assess the degree of adoption of the 20 good exporting practices (both treated and control firms)
3. Consultants **scored** each of the 20 GEP with an integer between 0 (no adoption) and 5 (full adoption). Max score: 100 points

Note: firms did not receive their score or diagnostic report

Technical assistance phase

Period: April 2018 to December 2018

- Treated firms received a 72-hour individual consulting over a 6 months period
- Alternative "assistance packages":
  1. Strategy (72 hours)
  2. Production (72 hours)
  3. Production (24 hours) and Product Design (48 hours)
  4. Communication (72 hours)
  5. Strategy (48 hours) and Communication (24 hours)
  6. Strategy (24 hours) and Product Design (48 hours)
  7. Strategy (24 hours) and Production (48 hours)
  8. Strategy (24 hours) and Communication (48 hours)

  } **only 10% firms**

- The consulting involved building and starting a **work plan**
  - For example, a typical plan would set as an objective entering a new export market and would define the strategy for doing it

Follow-up phase

Period: September 2019 to December 2019

- Both treated and control firms received the visit of a consultant to complete a new (follow-up) survey
- The survey was the same as the one used during the diagnostic phase

Note: firms did not receive their score or diagnostic report

Data sources

- Administrative records
  - Export outcomes: export value (FOB), country of destination, HS product code (Argentine Customs)
    - Coverage: 2012-2023 period
  - Employment: number of employees, average wages (Argentine social security agency - ANSES)
    - Coverage: 2016-2019 period

Variables of interest

- Main export performance indicators (annual):
  1. *IHS export value:* Inverse Hyperbolic Sine transformation of FOB exports (in USD)
     - Intensive + extensive margin
  2. *Exporter:* dummy variable for whether the firm exported
     - Extensive margin
  3. ln *export value:* natural logarithm of FOB exports (in USD)
     - Intensive margin
- Additional export performance indicators (annual):
  4. *Number of destinations:* number of countries to where a firm exported
  5. *Export quality:* average destination GDP per capita (2017) weighted by the share of FOB export value to each destination

Balancing Test

Panel A: Difference of means

	Treatment	Control	Difference	P-Value
Pre-treatment outcomes				
Export value (IHS)	8.5	8.4	0.1	0.96
	(7.1)	(7.1)	(1.0)	
Exporter	0.60	0.60	-0.01	0.93
	(0.49)	(0.49)	(0.07)	
ln export value	13.5	13.2	0.2	0.56
	(2.0)	(2.2)	(0.4)	
Number of destinations	7.7	8.1	-0.5	0.82
	(9.3)	(10.1)	(2.1)	
Export quality (1000 USD)	28.8	24.4	4.4	0.24
	(18.4)	(16.2)	(3.7)	
Practices total score	44.4	53.1	-8.7	0.01
	(21.3)	(19.4)	(3.4)	
Pre-treatment characteristics				
Number of employees	101	69	32	0.43
	(387)	(105)	(41)	
Average salary (1000 Pesos)	17.5	18.5	-1.0	0.45
	(8.7)	(9.0)	(1.3)	
Differentiated	0.76	0.69	0.07	0.27
	(0.43)	(0.47)	(0.06)	
Early enrollment	0.47	0.53	-0.06	0.38
	(0.50)	(0.50)	(0.07)	
Good Selection	0.37	0.35	0.02	0.71
	(0.49)	(0.48)	(0.07)	

Baseline Distribution

Panel A: Percentiles and mean

	P10	P25	P50	P75	P90	Mean
Pre-treatment outcomes						
Export value (IHS)	0	0	11.9	14.7	16.1	8.4
Exporter	0	0	1	1	1	0.6
ln export value	10.4	11.9	13.7	14.8	16.1	13.3
Number of destinations	0	0	1	4	11	4
Export quality (1000 USD)	6.6	11.3	17.0	42.0	50.8	25.4
Practices total score	19	32	51	65	75	48.5
Pre-treatment characteristics						
Number of employees	5	10	23	71	200	85
Average salary (1000 Pesos)	8.0	11.2	17.2	23.4	30.5	18.0
Differentiated	0	0	1	1	1	0.72
Early enrollment	0	0	0	1	1	0.50
Good Selection	0	0	0	1	1	0.36

Empirical Specification

- Given the random assignment, we identify the causal impact of the program using a standard ANCOVA linear model:

$$Y_i = \beta_0 + \beta_1 T_i + \beta_2 X_i + \epsilon_i$$

Partial compliance $\Rightarrow$ LATE estimator

$Y_i \equiv$ outcome of interest

$T_i \equiv$ dummy variable indicating whether firm i received the treatment

$X_i \equiv$ vector of pre-treatment controls:

1. Number of employees
2. Average salary
3. Pre-treatment outcome of interest

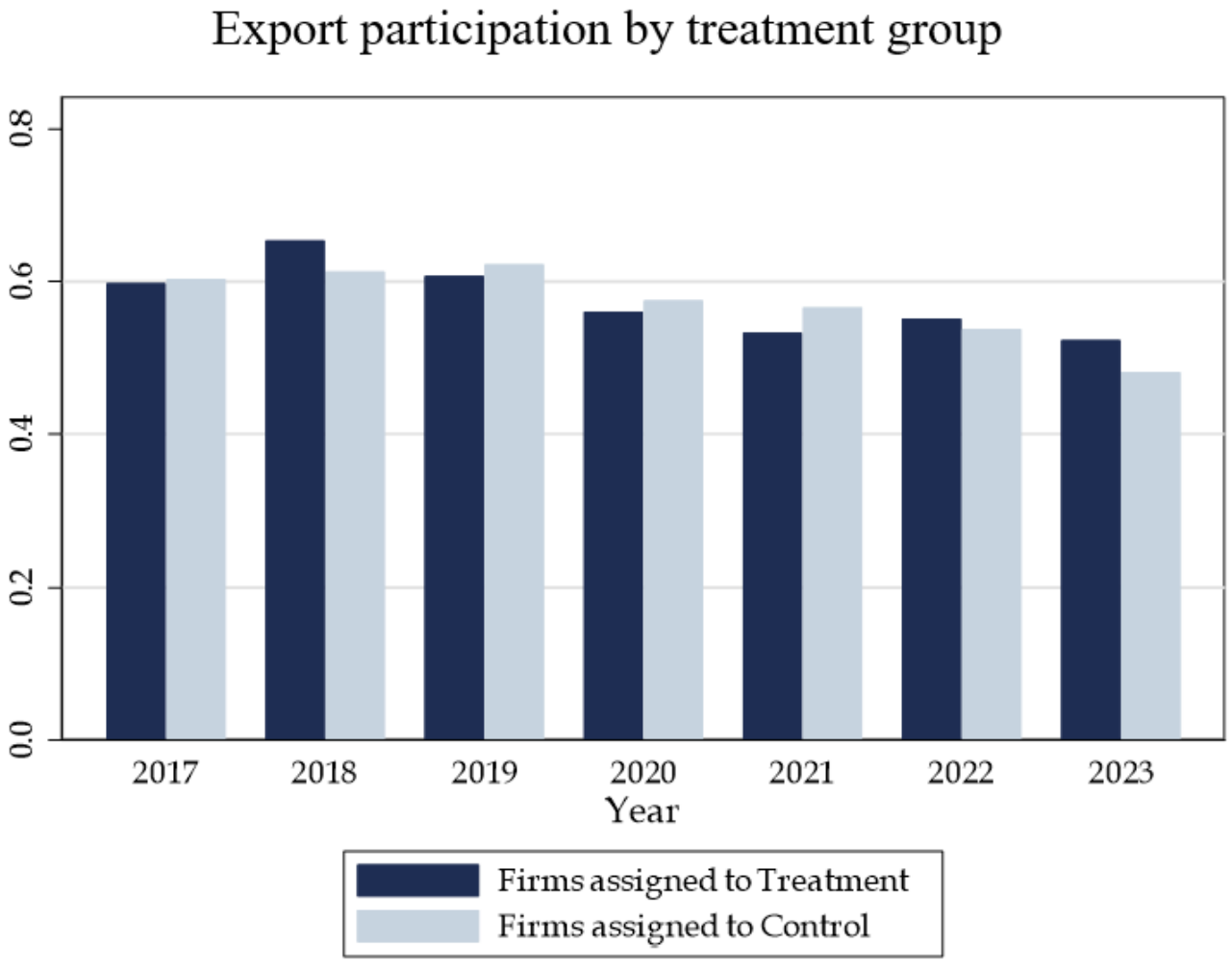
- For robustness, we alternatively use a Diff-in-Diff model:

$$Y_{im} = \alpha_i + \gamma_m + \beta_t T_{im} + \epsilon_{im} \qquad m = \{2017, t\}$$

Note: ANCOVA more efficient than Diff-in-Diff (McKenzie, 2012)

Results for the full sample

Result: no discernible impact on export participation



Impact of treatment on export performance - ANCOVA

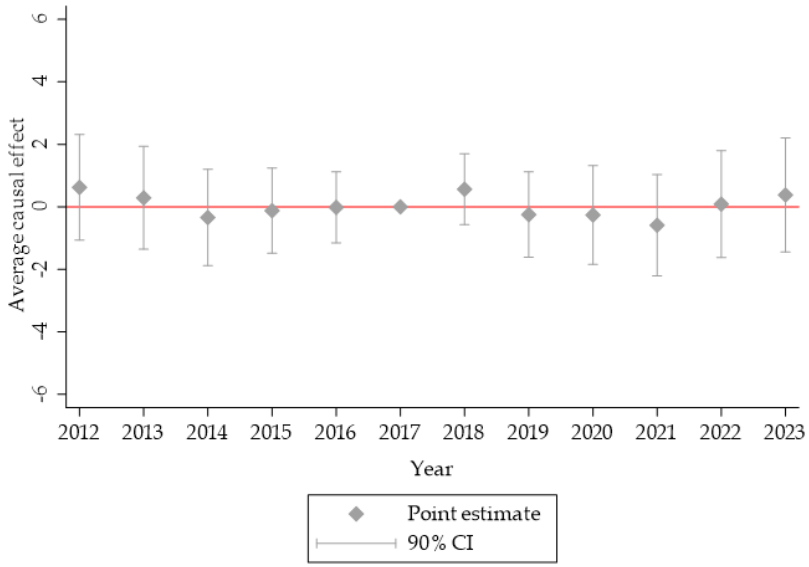
	2018	2019	2020	2021	2022	2023
			Panel A: Export value (IHS)			
Treatment	0.464	-0.346	0.149	-0.333	0.422	0.842
	(0.614)	(0.798)	(0.901)	(0.920)	(0.954)	(1.006)
			Panel B: Exporter			
Treatment	0.047	-0.030	0.010	-0.026	0.038	0.085
	(0.050)	(0.062)	(0.069)	(0.070)	(0.072)	(0.074)
			Panel C: ln export value			
Treatment	-0.085	-0.052	0.046	-0.003	-0.002	-0.367
	(0.218)	(0.276)	(0.314)	(0.326)	(0.406)	(0.438)
Observations	195/116	195/111	195/104	195/101	195/99	195/91
Strata FE and Covariates	yes	yes	yes	yes	yes	yes

- Diff-in-Diff specification: similar results (no impact)

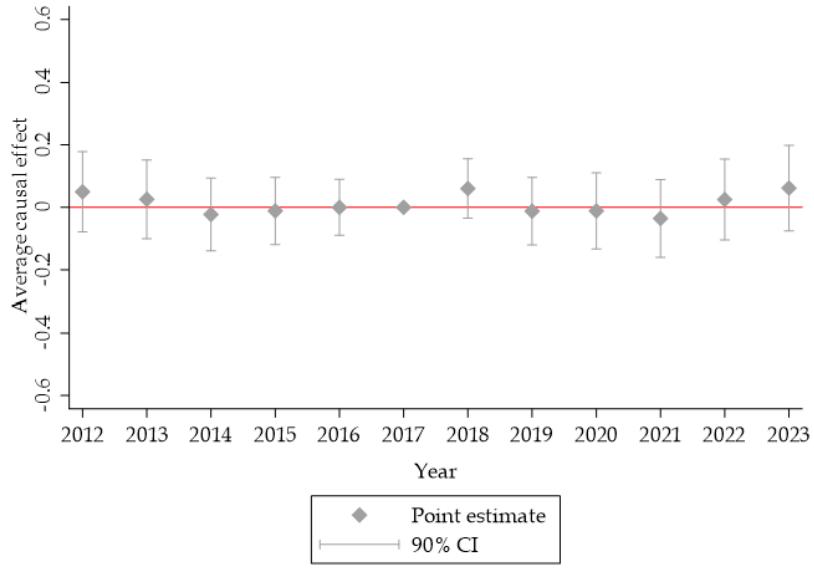
◂ Diff-in-Diff

Event Study

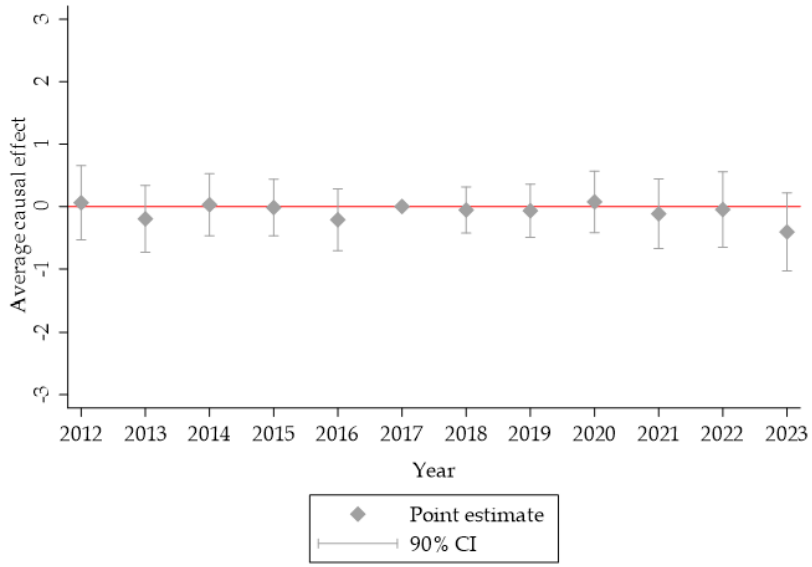
Panel A: Export value (IHS)



Panel B: Exporter



Panel C: ln export value



Heterogenous treatment effects

- We explore two alternative explanations for the lack of results dividing firms according to:
    1. *Heterogeneity by firm size:* above and below the median number of employees
    2. *Heterogeneity by GEP Score:* above and below the median score of GEP at baseline

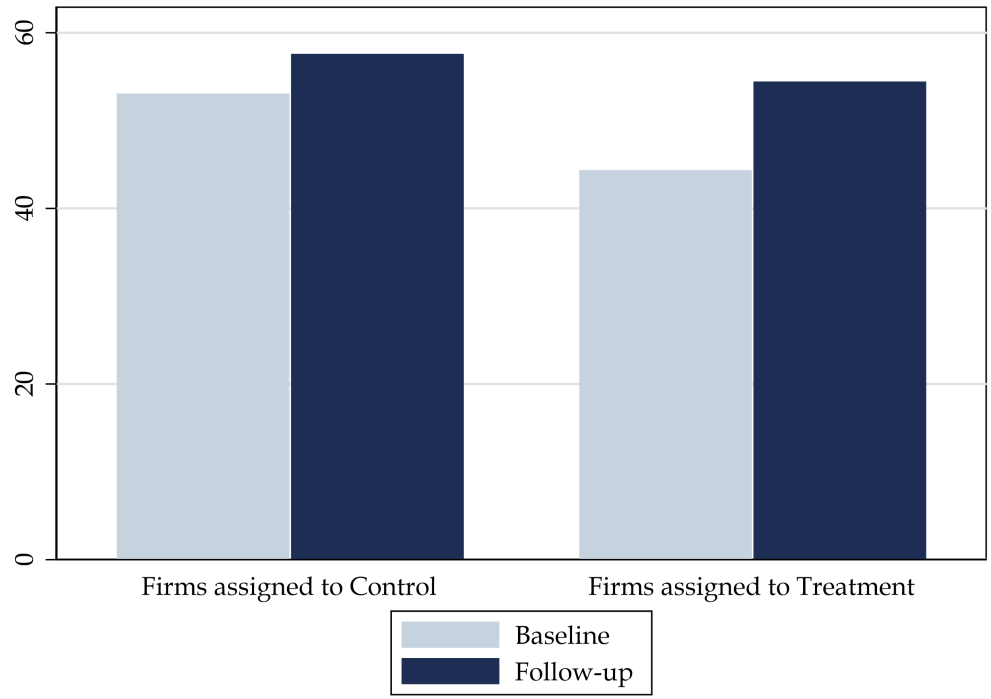
Result:

1. No heterogeneity by size
2. Better performance (lack of strength) for low GEP score firms

◂ Heterogeneous effects

Mechanism: Adoption of GEP

- GEP scores grew considerably more for the treatment group (23% versus 8%)



- Significance not robust across specifications:
  1. ANCOVA: positive but not statistically significant
  2. Diff-in-Diff: positive and statistically significant

◂ GEP adoptions

Results for Good Selection sample

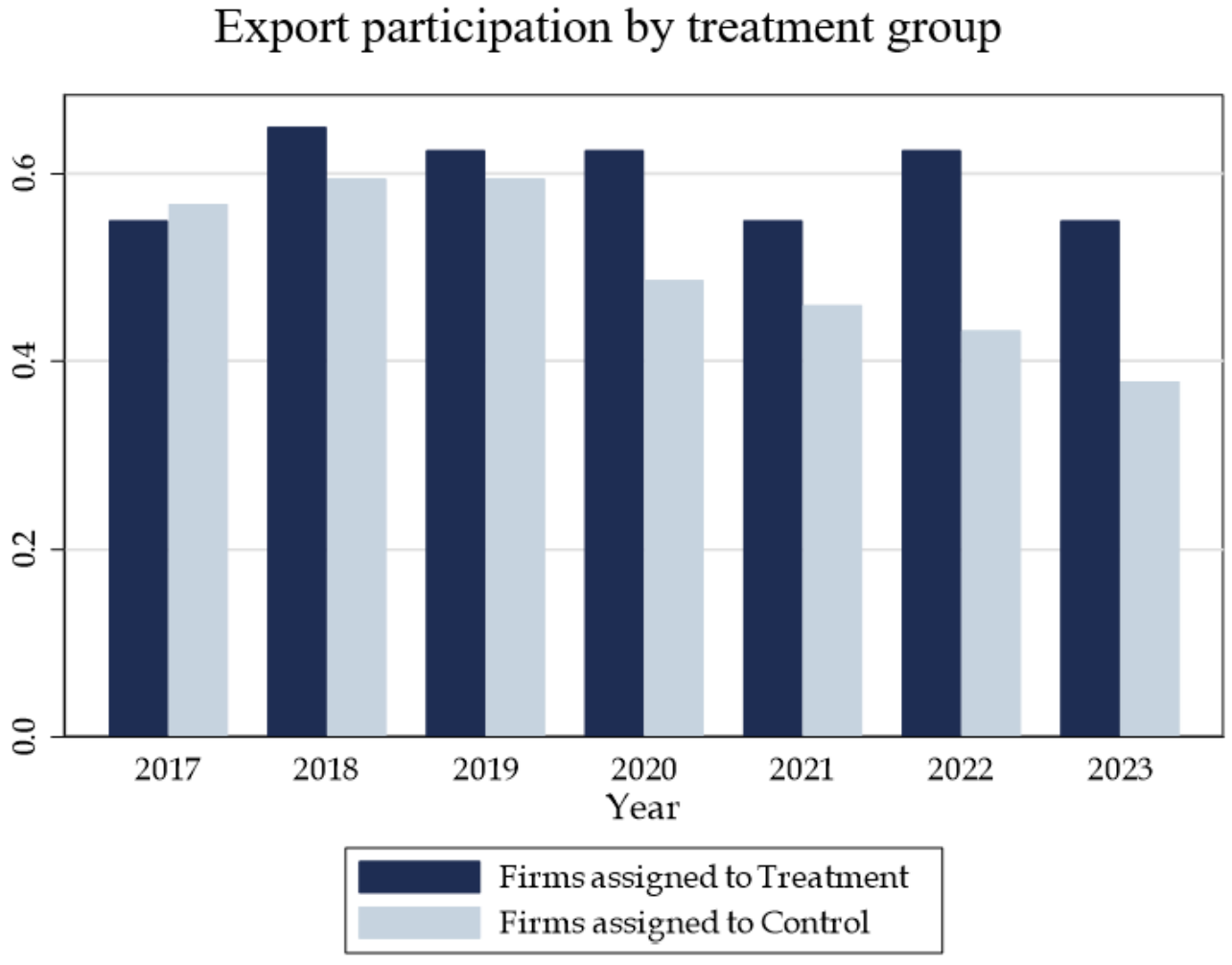
Good selection

- Screening issues associated with an initial low enrollment
  1. **Non-differentiated firms:** 59 out of the 213 participating firms
     - Political pressure by subnational export promotion agencies
     - Definition could have failed to be sufficiently explicit
  2. **Uncommitted firms:** many firms displayed lack of interest or complained that the program was not what they expected
     - No monetary or logistic cost (consultants visited the firms)
     - Call center: untrained staff
- We leverage two observable features
  1. Firms' main product: we classify firms as **differentiated** or **non-differentiated** using Micro-D classification (Bernini et al., 2018)
  2. Order of firms' enrollment: we classify firms as **early firms** or **late firms** based on whether their enrollment order is below or above the median

Differentiated	$\cap$	**Early enrollment**	$\rightarrow$	**Good Selection**
154		**106**		**77**

Result: large positive impact

For Good Selection sample



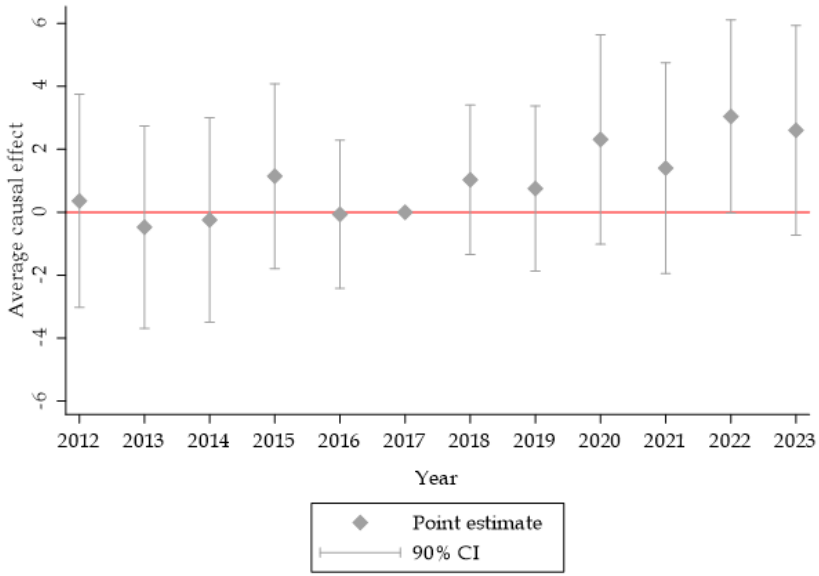
Impact of treatment on Good Selection firms - ANCOVA

	2018	2019	2020	2021	2022	2023
Panel A: Export value (IHS)						
Treatment × Good selection	1.331	1.100	3.585*	2.615	4.241**	3.767**
	(1.413)	(1.564)	(1.820)	(1.808)	(1.826)	(1.801)
Treatment × Bad selection	0.038	-1.055	-1.502	-1.738	-1.423	-0.558
	(0.656)	(0.942)	(1.034)	(1.064)	(1.147)	(1.216)
Good selection	-0.248	-0.454	-1.877*	-1.905	-1.868*	-1.761
	(0.824)	(1.012)	(1.127)	(1.180)	(1.110)	(1.201)
Panel B: Exporter						
Treatment × Good selection	0.110	0.060	0.305**	0.237*	0.377***	0.333**
	(0.117)	(0.124)	(0.143)	(0.138)	(0.141)	(0.136)
Treatment × Bad selection	0.016	-0.074	-0.132*	-0.150*	-0.125	-0.032
	(0.054)	(0.072)	(0.077)	(0.080)	(0.085)	(0.089)
Good selection	-0.020	-0.038	-0.154*	-0.181**	-0.189**	-0.174**
	(0.068)	(0.079)	(0.085)	(0.089)	(0.082)	(0.088)
Panel C: ln export value						
Treatment × Good selection	0.129	-0.144	-0.990	-1.030	-1.156	-0.898
	(0.443)	(0.572)	(0.702)	(0.726)	(0.790)	(0.882)
Treatment × Bad selection	-0.182	-0.057	0.460	0.351	0.336	-0.294
	(0.241)	(0.312)	(0.375)	(0.396)	(0.476)	(0.493)
Good selection	0.065	0.403	0.500	0.631	0.940**	0.513
	(0.264)	(0.331)	(0.391)	(0.385)	(0.424)	(0.484)
Observations	195/116	195/111	195/104	195/101	195/99	195/91
Strata FE and Covariates	yes	yes	yes	yes	yes	yes

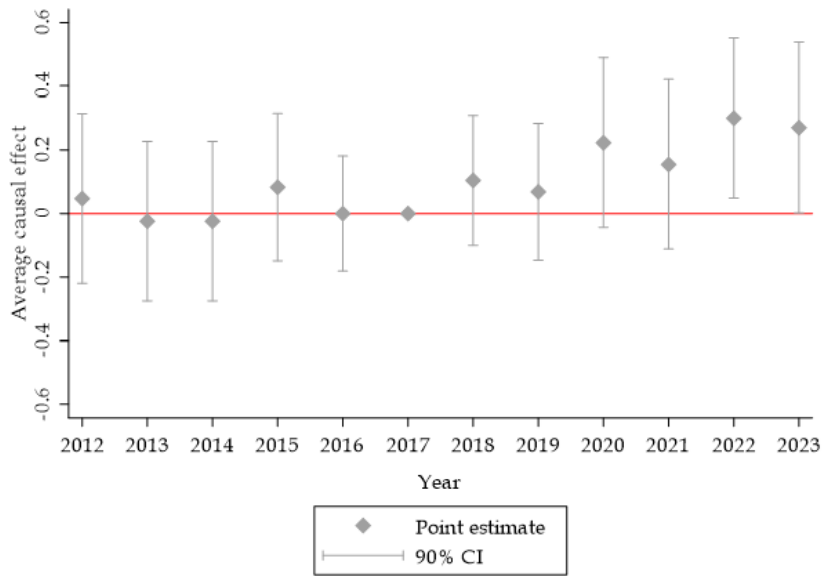
◂ Diff-in-Diff

Event Study - Good Selection firms

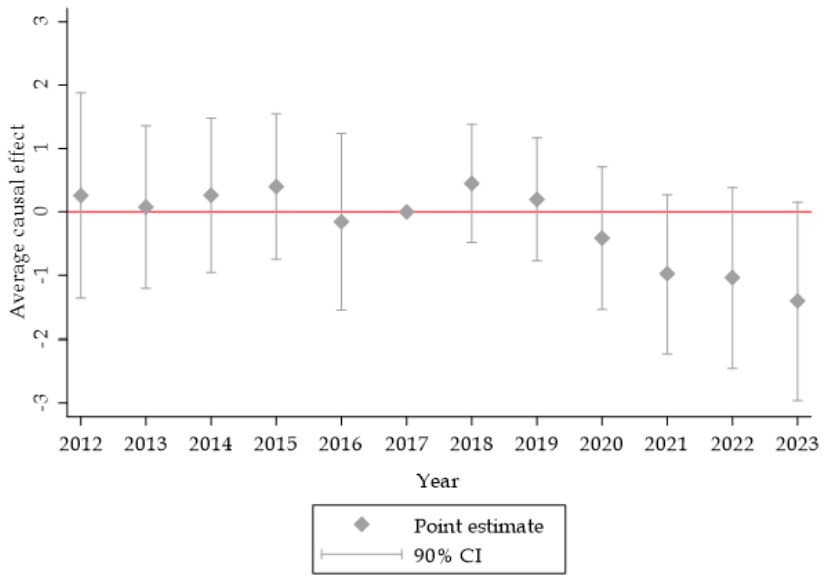
Panel A: Export value (IHS)



Panel B: Exporter



Panel C: ln export value



Is the impact greater on the probability of exporting to Developed Countries?

- Following Artopoulos et al. (2013), we want to determine whether the impact of the treatment is greater when informational barriers are higher, that is, when exporting to developed countries

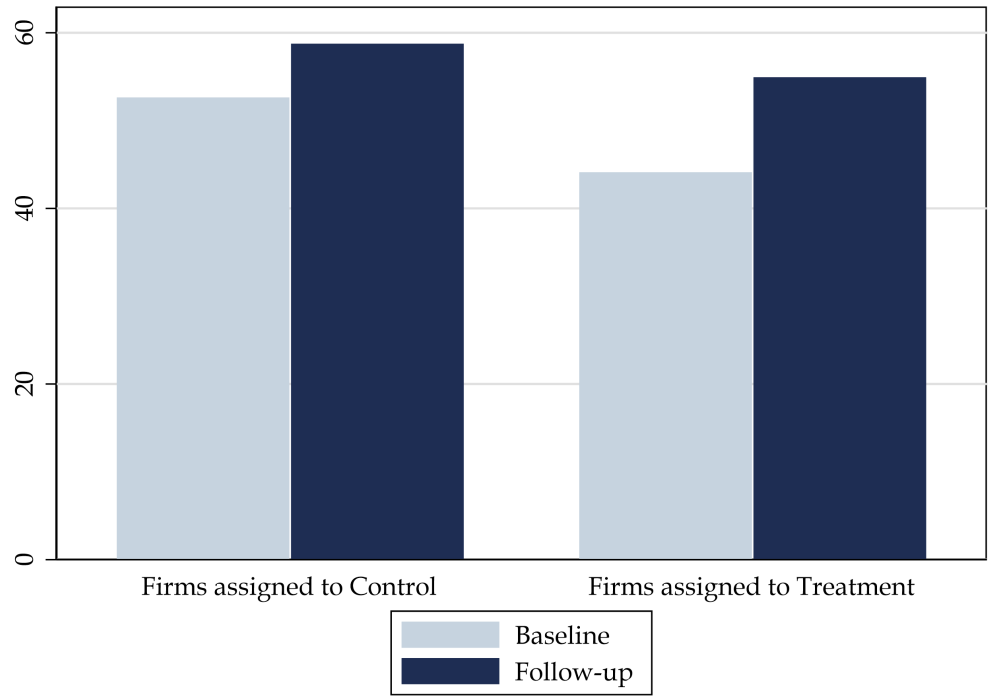
Result:

1. Positive and significant impact on the probability of becoming OECD and Non-OECD exporter
2. Better performance of the treatment for becoming OECD exporter

◂ OECD vs Non-OECD

Mechanism: Adoption of GEP on Good Selection firms

- GEP scores grew considerably more for the treatment group (25% versus 12%)



- However, the difference is not statistically significant

◂ GEP adoptions

Mechanism: Impact of GEP adoption on export outcomes

- We exploit random assignment to assess the impact of the change in practices on export outcomes

  Result: positive (not significant) causal effect of GEP adoption among Good Selection firms

  Caveat: very low F-stat value (ranging from 0.003 to 1.102)

◂ Regressions

Concluding remarks

Main takeaways

- Positive and significant impact once the right firms are targeted
- Impact is limited to the **extensive margin**
  - The export probability for a treated "good selection" firm is 33 percentage points higher
- Presumed mechanism: adoption of GEP

Lessons

1. **Accurate targeting is important**
   - Differentiaded versus non-differentiated
   - Stage in the “route to exporting”
2. **Good screening is critical**
   - Not all firms are ready to take advantage of the program
3. **Investment needed in standardizing and codifying good export practices**

Thank you!

Appendix

Attrition

Panel A: Within non attritors

	Treatment	Control	Difference	P-Value
Pre-treatment outcomes				
Export value (IHS)	7.93	8.31	-0.38	0.75
	(7.06)	(7.14)	(1.17)	
Probability of export	0.57	0.59	-0.02	0.81
	(0.50)	(0.50)	(0.08)	
Number of destinations	3.96	3.96	0.00	0.99
	(7.81)	(7.30)	(1.25)	
N	77	71	148	
ln export value	13.19	13.36	-0.17	0.69
	(1.90)	(2.09)	(0.43)	
Export quality	28,927	24,528	4,399	0.24
	(18,034)	(16,665)	(3,749)	
N	44	42	86	
Pre-treatment characteristics				
Number of employees	104.1	75.1	-29.0	0.61
	(445.0)	(117.9)	(56.5)	
Average salary	17,908.2	18,612.3	-704.1	0.63
	(8,188.4)	(8,998.5)	(1,468.4)	
N	71	66	137	
Differentiated	0.77	0.69	0.08	0.30
	(0.43)	(0.47)	(0.07)	
Early enrollment	0.47	0.49	-0.03	0.76
	(0.50)	(0.50)	(0.08)	
Good Selection	0.36	0.34	0.03	0.75
	(0.48)	(0.48)	(0.08)	
N	77	71	148	

Back

Panel B: Within total sample

	Treatment	Control	Difference	P-Value
Proportion of non attritors	0.72	0.67	0.05	0.43
	(0.45)	(0.47)	(0.06)	
N	107	106	213	

Panel C: Between non attritors and attritors

	Non attritors	Attritors	Difference	P-Value
Pre-treatment outcomes				
Export value (IHS)	8.11	9.17	-1.05	0.32
	(7.08)	(7.08)	(1.05)	
Probability of export	0.58	0.65	-0.07	0.37
	(0.50)	(0.48)	(0.07)	
Number of destinations	3.96	3.98	-0.03	0.98
	(7.55)	(7.50)	(1.12)	
N	148	65	213	
ln export value	13.27	13.49	-0.22	0.58
	(1.98)	(2.32)	(0.39)	
Export quality ($)	26,779	22,602	4,176	0.20
	(17,417)	(17,049)	(3,256)	
N	86	42	128	
Pre-treatment characteristics				
Number of employees	90.1	71.9	18.2	0.68
	(329.8)	(110.4)	(44.4)	
Average salary	18,247.4	17,375.2	872.2	0.53
	(8,563.6)	(9,461.2)	(1,384.5)	
N	137	58	195	
Differentiated	0.73	0.71	0.02	0.74
	(0.45)	(0.46)	(0.07)	
Early enrollment	0.48	0.54	-0.06	0.43
	(0.50)	(0.50)	(0.07)	
Good Selection	0.35	0.38	-0.03	0.64
	(0.48)	(0.49)	(0.07)	
N	148	65	213	

Back

Impact of treatment on export performance - Diff-in-Diff

	2018	2019	2020	2021	2022	2023
			Panel A: Export value (IHS)			
Treatment	0.563	-0.251	-0.263	-0.588	0.087	0.380
	(0.701)	(0.843)	(0.973)	(1.000)	(1.055)	(1.127)
			Panel B: Exporter			
Treatment	0.060	-0.012	-0.012	-0.036	0.025	0.062
	(0.059)	(0.067)	(0.075)	(0.077)	(0.080)	(0.085)
			Panel C: ln export value			
Treatment	-0.065	-0.035	0.083	-0.020	0.061	-0.208
	(0.196)	(0.249)	(0.310)	(0.350)	(0.383)	(0.388)
Observations	426/240	426/230	426/212	426/206	426/202	426/186
Strata, Firm, Year FE	yes	yes	yes	yes	yes	yes

Back

Heterogeneous effects - ANCOVA

	2018	2019	2020	2021	2022	2023
			Panel A: Export value (IHS)			
Treatment × Big firm	0.694	0.043	0.246	0.033	0.474	1.141
	(0.959)	(1.107)	(1.380)	(1.392)	(1.419)	(1.430)
Treatment × Small firm	0.044	-0.616	0.149	-0.589	0.579	0.646
	(0.806)	(1.183)	(1.218)	(1.245)	(1.319)	(1.435)
Big firm	-2.285*	0.405	0.744	0.363	1.933	0.423
	(1.252)	(1.811)	(1.873)	(1.970)	(1.963)	(2.056)
			Panel B: Exporter			
Treatment × Big firm	0.053	-0.021	0.006	-0.004	0.012	0.082
	(0.076)	(0.083)	(0.105)	(0.104)	(0.106)	(0.104)
Treatment × Small firm	0.026	-0.033	0.021	-0.039	0.082	0.098
	(0.068)	(0.094)	(0.093)	(0.096)	(0.099)	(0.106)
Big firm	-0.151	0.046	0.081	0.047	0.223	0.098
	(0.103)	(0.139)	(0.141)	(0.153)	(0.155)	(0.163)
			Panel C: ln export value			
Treatment × Big firm	0.263	0.253	0.122	0.076	0.599	0.363
	(0.341)	(0.397)	(0.435)	(0.386)	(0.562)	(0.564)
Treatment × Small firm	-0.671**	-0.485	-0.150	-0.184	-0.961	-1.632**
	(0.320)	(0.417)	(0.476)	(0.592)	(0.600)	(0.680)
Big firm	-0.855	-0.182	-0.650	-0.646	-1.216	-0.575
	(0.537)	(0.580)	(0.588)	(0.701)	(0.924)	(0.815)
Observations	195/116	195/111	195/104	195/101	195/99	195/91
Strata FE and Covariates	yes	yes	yes	yes	yes	yes

Back

Heterogeneous effects - ANCOVA

	2018	2019	2020	2021	2022	2023
			Panel A: Export value (IHS)			
Treatment×High GEP	0.974*	0.505	0.034	-0.652	-0.162	1.067
	(0.505)	(0.979)	(1.213)	(1.251)	(1.297)	(1.219)
Treatment×Low GEP	0.906	0.876	1.796	1.690	2.220	3.428**
	(0.993)	(1.194)	(1.348)	(1.395)	(1.386)	(1.414)
High GEP	-0.341	0.519	1.056	2.064	2.148	2.886**
	(0.866)	(1.065)	(1.214)	(1.308)	(1.346)	(1.451)
			Panel B: Exporter			
Treatment×High GEP	0.083**	0.057	0.019	-0.039	-0.013	0.125
	(0.042)	(0.079)	(0.097)	(0.100)	(0.100)	(0.093)
Treatment×Low GEP	0.090	0.048	0.111	0.123	0.170	0.272***
	(0.081)	(0.094)	(0.106)	(0.108)	(0.110)	(0.101)
High GEP	-0.014	0.040	0.064	0.173	0.169	0.228**
	(0.073)	(0.089)	(0.101)	(0.105)	(0.107)	(0.104)
			Panel C: ln export value			
Treatment×High GEP	0.202	-0.075	0.053	-0.033	0.075	-0.240
	(0.259)	(0.325)	(0.292)	(0.340)	(0.399)	(0.507)
Treatment×Low GEP	-0.078	0.284	0.419	-0.144	-0.323	-0.532
	(0.399)	(0.554)	(0.852)	(0.913)	(0.997)	(1.409)
High GEP	-0.058	0.109	0.135	0.032	-0.136	-0.300
	(0.352)	(0.405)	(0.720)	(0.815)	(0.914)	(1.365)
Observations	137/79	137/78	137/71	137/68	137/67	137/61
Strata FE and Covariates	yes	yes	yes	yes	yes	yes

Back

GEP Adoption

Panel A: ANCOVA

	Total score	S	MR	PD	P	C	D	A
Treatment	**2.194**	4.105	1.724	-6.113	-6.764	2.774	4.745	6.541*
	(3.261)	(3.622)	(4.419)	(21.647)	(6.909)	(5.782)	(4.363)	(3.340)
Observations	137	131	131	71	81	92	131	131
Strata FE	yes	yes	yes	yes	yes	yes	yes	yes
Covariates	yes	yes	yes	yes	yes	yes	yes	yes

Panel B: Diff-in-Diff

	Total score	S	MR	PD	P	C	D	A
Treatment	**5.630***	8.286**	6.286	7.923	-0.148	5.922	9.829**	8.143**
	(3.214)	(4.101)	(4.513)	(16.649)	(7.449)	(5.236)	(4.286)	(4.070)
Observations	296	284	284	152	172	202	284	284
Strata FE	yes	yes	yes	yes	yes	yes	yes	yes
Firm FE	yes	yes	yes	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes	yes	yes	yes

S ≡ Strategy
MR ≡ Market research and segmentation
PD ≡ Product design
P ≡ Production
C ≡ Communication
D ≡ Distribution
A ≡ Administration

Back

Impact of treatment on Good Selection firms - Diff-in-Diff

	2018	2019	2020	2021	2022	2023
			Panel A: Export value (IHS)			
Treatment × Good selection	1.032	0.752	2.313	1.402	3.043	2.604
	(1.442)	(1.595)	(2.023)	(2.033)	(1.866)	(2.022)
Treatment × Bad selection	0.305	-0.781	-1.542	-1.562	-1.384	-0.721
	(0.773)	(0.988)	(1.076)	(1.129)	(1.294)	(1.375)
Good selection	0.408	0.416	-0.692	-0.829	-0.701	-0.649
	(0.796)	(1.016)	(1.132)	(1.245)	(1.124)	(1.323)
			Panel B: Exporter			
Treatment × Good selection	0.104	0.069	0.223	0.154	0.300*	0.270*
	(0.124)	(0.131)	(0.162)	(0.162)	(0.153)	(0.163)
Treatment × Bad selection	0.036	-0.054	-0.127	-0.127	-0.110	-0.040
	(0.064)	(0.077)	(0.080)	(0.085)	(0.093)	(0.099)
Good selection	0.027	0.013	-0.081	-0.108	-0.106	-0.102
	(0.069)	(0.083)	(0.090)	(0.101)	(0.090)	(0.105)
			Panel C: ln export value			
Treatment × Good selection	0.063	-0.126	-0.863	-0.734	-0.602	-0.463
	(0.447)	(0.511)	(0.686)	(0.603)	(0.712)	(0.796)
Treatment × Bad selection	-0.126	-0.036	0.393	0.178	0.274	-0.178
	(0.207)	(0.284)	(0.359)	(0.437)	(0.450)	(0.443)
Good selection	0.072	0.387	0.585	0.505	0.518	0.303
	(0.222)	(0.263)	(0.367)	(0.354)	(0.401)	(0.458)
Observations	426/240	426/230	426/212	426/206	426/202	426/186
Strata, Firm and Year FE	yes	yes	yes	yes	yes	yes

Back

GEP Adoption by firm type: Good Selection

Panel A: ANCOVA

	Total score	S	MR	PD	P	C	D	A
Treatment×GS	**1.422**	7.093	-3.452	15.983	1.215	0.488	2.061	6.334
	(4.485)	(5.676)	(6.585)	(37.906)	(9.043)	(9.688)	(5.909)	(5.478)
Treatment×BS	**2.463**	2.658	4.387	-14.920	-11.168	3.171	6.031	6.673
	(4.525)	(4.859)	(6.005)	(27.765)	(9.200)	(7.676)	(6.121)	(4.468)
GS	**2.124**	-3.756	4.934	-6.351	0.089	6.652	3.445	-0.097
	(4.779)	(5.190)	(6.549)	(7.668)	(4.818)	(5.935)	(6.229)	(5.513)
Observations	137	131	131	71	81	92	131	131
Strata FE	yes	yes	yes	yes	yes	yes	yes	yes
Covariates	yes	yes	yes	yes	yes	yes	yes	yes

Panel B: Diff-in-Diff

	Total score	S	MR	PD	P	C	D	A
Treatment×GS	**4.870**	9.327*	0.288	40.833	7.333	4.848	6.635	5.865
	(4.567)	(5.165)	(6.415)	(62.809)	(13.641)	(8.813)	(6.253)	(7.013)
Treatment×BS	**5.951**	7.882	9.497	-2.411	-4.507	5.997	11.379**	9.323*
	(4.283)	(5.680)	(6.032)	(16.391)	(8.651)	(6.375)	(5.677)	(5.023)
GS	**2.423**	-3.103	4.876	-6.161	1.974	5.626	4.940	2.429
	(4.527)	(5.337)	(5.917)	(7.658)	(5.775)	(5.580)	(5.976)	(6.350)
Observations	296	284	284	152	172	202	284	284
Strata FE	yes	yes	yes	yes	yes	yes	yes	yes
Firm FE	yes	yes	yes	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes	yes	yes	yes

Back

Impact of GEP adoption on Good Selection firms - ANCOVA

	2018	2019	2020	2021	2022	2023
			Panel A: Export value (IHS)			
Diff practices × Good selection	0.682	0.632	1.063	0.853	1.008	0.929
	(0.724)	(0.680)	(1.165)	(0.976)	(1.137)	(1.112)
Diff practices × Bad selection	0.056	-0.029	-0.095	-0.172	-0.104	0.159
	(0.158)	(0.176)	(0.250)	(0.272)	(0.259)	(0.266)
Good selection	-5.048	-5.013	-8.980	-8.270	-8.409	-6.222
	(5.441)	(5.059)	(8.755)	(7.353)	(8.579)	(8.471)
			Panel B: Exporter			
Diff practices × Good selection	0.056	0.044	0.088	0.071	0.087	0.078
	(0.062)	(0.048)	(0.099)	(0.083)	(0.099)	(0.095)
Diff practices × Bad selection	0.006	-0.002	-0.011	-0.016	-0.012	0.015
	(0.013)	(0.014)	(0.022)	(0.023)	(0.022)	(0.022)
Good selection	-0.417	-0.365	-0.762	-0.707	-0.755	-0.520
	(0.476)	(0.369)	(0.762)	(0.645)	(0.774)	(0.741)
			Panel C: ln export value			
Diff practices × Good selection	0.177	0.114	0.361	0.071	0.220	0.283
	(0.782)	(0.462)	(2.285)	(0.292)	(0.424)	(5.102)
Diff practices × Bad selection	-0.019	0.058	0.190	-0.018	-0.007	-0.236
	(0.327)	(0.178)	(1.237)	(0.123)	(0.160)	(2.441)
Good selection	-1.183	0.316	-0.540	-0.765	-1.742	-4.494
	(8.971)	(4.746)	(7.057)	(2.565)	(5.127)	(62.790)
Observations	137/79	137/78	137/71	137/68	137/67	137/61
Strata FE and Covariates	yes	yes	yes	yes	yes	yes

Back

Impact of treatment on Good Selection firms - alternative outcomes

	2018	2019	2020	2021	2022	2023
			Panel A: Export destinations			
Treatment × Good selection	0.089	1.260**	0.714	1.050	1.739**	1.893**
	(0.547)	(0.613)	(0.641)	(0.753)	(0.861)	(0.866)
Treatment × Bad selection	0.002	-1.083*	-1.061	-0.911	-1.486	-1.150
	(0.339)	(0.594)	(0.728)	(0.899)	(1.206)	(1.184)
Good selection	0.023	-1.038**	-1.019**	-1.250**	-1.772**	-1.654**
	(0.304)	(0.446)	(0.475)	(0.521)	(0.709)	(0.760)
			Panel B: Export quality			
Treatment × Good selection	639	2,906	117	2,585	163	-1,577
	(3,678)	(5,927)	(5,567)	(6,961)	(6,775)	(7,030)
Treatment × Bad selection	-898	2,848	-2,022	-4,337	-3,818	-4,997
	(1,970)	(3,785)	(3,528)	(3,173)	(3,128)	(4,709)
Good selection	-1,353	-1,109	-194	-1,121	-961	-530
	(2,319)	(2,826)	(2,994)	(3,717)	(3,380)	(3,969)
Observations	195/116	195/111	195/104	195/101	195/99	195/91
Strata FE and Covariates	yes	yes	yes	yes	yes	yes

Back

Impact of treatment on Good Selection firms - heterogeneity by destination

	2018	2019	2020	2021	2022	2023
			Panel A: OECD exporter			
Treatment × Good selection	-0.028	0.085	0.088	0.171	0.320***	0.328***
	(0.094)	(0.090)	(0.119)	(0.117)	(0.120)	(0.121)
Treatment × Bad selection	-0.046	-0.014	-0.068	-0.064	-0.048	-0.031
	(0.066)	(0.075)	(0.076)	(0.074)	(0.076)	(0.091)
Good selection	-0.000	-0.036	-0.096	-0.105	-0.170**	-0.193**
	(0.061)	(0.065)	(0.073)	(0.081)	(0.070)	(0.079)
			Panel B: Non-OECD exporter			
Treatment × Good selection	0.127	0.036	0.189	0.203	0.263*	0.258*
	(0.146)	(0.145)	(0.150)	(0.132)	(0.136)	(0.134)
Treatment × Bad selection	0.033	-0.064	-0.074	-0.118	-0.055	-0.022
	(0.066)	(0.081)	(0.085)	(0.090)	(0.094)	(0.094)
Good selection	-0.000	0.021	-0.124	-0.201**	-0.122	-0.101
	(0.086)	(0.094)	(0.089)	(0.086)	(0.083)	(0.087)
Observations	195	195	195	195	195	195
Strata FE and Covariates	yes	yes	yes	yes	yes	yes

GEP Adoption by firm type: Differentiated and early enrollment

	GEP Score
Panel A: Differentiated (ANCOVA)	
Treatment × Differentiated	1.090
	(3.729)
Treatment × Non differentiated	4.617
	(6.229)
Differentiated	2.632
	(5.145)
Panel B: Early enrollment (ANCOVA)	
Treatment × Early enrollment	3.690
	(4.100)
Treatment × Late enrollment	0.855
	(4.922)
Early enrollment	-1.492
	(4.855)
Observations	137
Strata FE and Covariates	yes