

Navigating the Amazon

Pass-Through of Digital Service Tax

Dominika Langenmayr & Rohit Reddy Muddasani

August 26, 2024



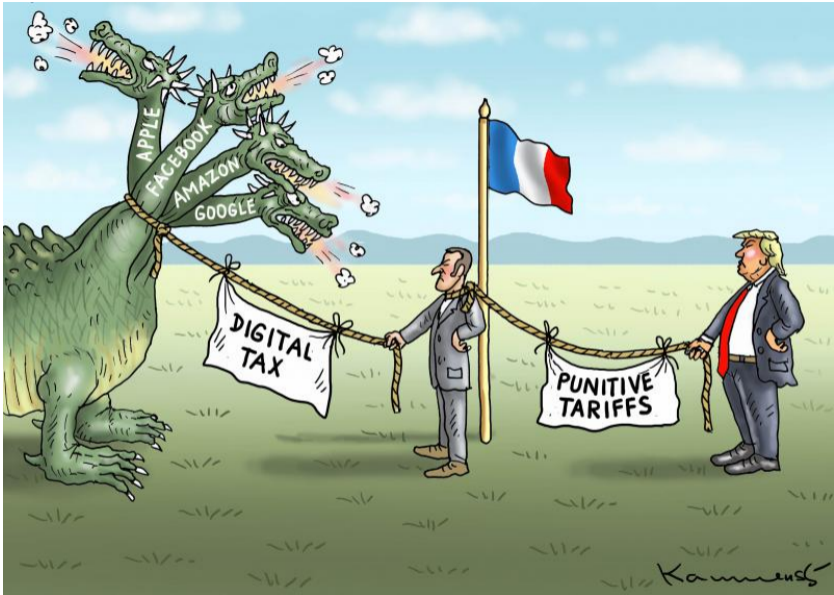
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- Digital services firms can often capture revenues from a country without attributing any profits to the country.
- Through a digital service tax, the idea of the governments might be to impose taxes on large corporates.
- But does this translate into reality?
- Research Question: **Are DSTs effective in taxing large corporations in the digital economy or do they pass through the tax to other market participants?**



- There is theoretical literature on the incidence of taxes on two-sided market platforms.

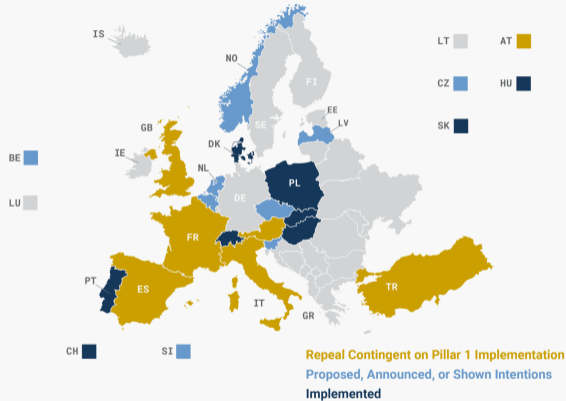
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- The results may considerably differ from standard incidence literature (e.g., Kind et al., 2010; D'Annunzio et al., 2020).
- No study looks at pass-through on multiple sides of the multi-sided market platform.
- Probably the first study to do this. (To the best of our knowledge!)

Digital Services Taxes in Europe

Legislative Status of Digital Services Taxes (DSTs) in European OECD Countries, as of February 21, 2024



Source: KPMG, "Taxation of the digitalized economy: Developments summary"

Canadian Parliament Approves Controversial Digital Services Tax

POSTED ON JUNE 24, 2024

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By



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The Canadian Parliament has passed a highly controversial 3 percent digital services tax on large businesses, sparking calls from U.S. trade groups for Canada to reconsider.

[Bill C-59](#) was officially passed following a third reading in the Senate on June 19, according to Canada's [parliamentary legislative tracker](#). The bill, which implements a DST, is now awaiting royal assent. The DST imposes a [3 percent tax](#) on businesses with global revenue of at least [€750 million](#) and Canadian digital services revenue of over C \$20 [million](#) annually.

Canada's parliamentary [budget officer estimated](#) that the DST would increase revenue by C \$7.2 billion over five years. The DST targets revenue from social media services, online advertising, user data services, and online marketplaces. [The DST will apply retroactively from January 1, 2022.](#)

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- Study regarding the pass-through of Digital Service Taxes introduced in European countries.
- Study analyzes the pass-through of taxes on multiple sides of the digital platform.
- Two tier analysis using Amazon data to assess the pass-through of taxes.
- Results in both tiers show pass-through of the tax in most marketplaces.
- Considerable heterogeneity in the results indicating that pass-through is not uniform in all countries.

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- Special focus on one service called Fulfillment by Amazon(FBA).
- We consider the FBA fee especially for this study because Amazon has a special fee structure which it publishes and are available for public visibility.

Country	DST Date	DST Rate	GT	CT	DST Impl. Date
France	24/07/2019	3%	€750 mil	€25 mil	01/12/2020
UK	16/07/2020	2%	£500 mil	£25 mil	01/04/2020
Spain	07/10/2020	3%	€750 mil	€3 mil	16/01/2021
Italy	19/12/2019	3%	€750 mil	€5.5 mil	01/01/2020

Notes: The data is sourced from the latest report 'Taxation of the Digital Economy' of KPMG, dated 22nd January 2024. The DST date represents the date of implementation in the legislature. 'GT' refers to the global threshold that qualifies a firm for DST in that jurisdiction. 'CT' refers to the country threshold, which indicates the amount of revenue that a firm has to make in that particular country for falling under the DST. The DST implementation date refers to the date when the country started collecting DSTs from firms. The dates of signing into the law have been taken from various Section 301 reports of the United States.

Pass-Through to Sellers (Data)



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- Rate cards from Dec 2017 to Feb 2022 considered for the study.
- Rate cards have storage, shipping and other costs. FBA prices calculated based on given prices.
- All fees are pre-VAT fees.

Calculating your fees

Simply add together your fulfillment and storage fees and any optional services you require to calculate your total FBA fee.

- 1. **Fulfillment fee** – A fee for each unit, based on dimensions and unit weight
- 2. **Storage fees** (in volume) – Charged per cubic volume per month
- 3. **Optional services fee** (in volume) – Includes:
 - inbound
 - returns
 - insured
 - labeling
 - aging
 - building wrap
 - hogging
 - tempering

1. Fulfillment fee per fulfilled unit¹

	Local Fulfillment (Domestic, FBA, MLI, Pan-EU) within										Cross Border Fulfillment (FBA) within EU	
	US ²	DE ³	FR ⁴	IT ⁵	ES ⁶	UK ⁷	NL ⁸	SE ⁹	PL ¹⁰	PT ¹¹	US ¹²	EU ¹³
Small Inventory <i>Minimum 10 units (US, EU)</i>												
Standard Rate	\$ 2.99	€ 1.10	€ 1.20	€ 1.20	€ 1.20	€ 1.20	€ 1.20	€ 1.20	€ 1.20	€ 1.20	€ 1.20	€ 1.20
Weighted Inventory <i>Minimum 10 units (US, EU)</i>												
Standard Rate	\$ 2.19	€ 0.81	€ 0.92	€ 0.92	€ 0.92	€ 0.92	€ 0.92	€ 0.92	€ 0.92	€ 0.92	€ 0.92	€ 0.92
Large Inventory <i>Minimum 10 units (US, EU)</i>												
Standard Rate	\$ 1.99	€ 0.70	€ 0.80	€ 0.80	€ 0.80	€ 0.80	€ 0.80	€ 0.80	€ 0.80	€ 0.80	€ 0.80	€ 0.80
Standard Pan-EU <i>Minimum 10 units (EU)</i>												
Standard Rate	\$ 2.79	€ 1.00	€ 1.10	€ 1.10	€ 1.10	€ 1.10	€ 1.10	€ 1.10	€ 1.10	€ 1.10	€ 1.10	€ 1.10
Weighted Pan-EU <i>Minimum 10 units (EU)</i>												
Standard Rate	\$ 1.99	€ 0.70	€ 0.80	€ 0.80	€ 0.80	€ 0.80	€ 0.80	€ 0.80	€ 0.80	€ 0.80	€ 0.80	€ 0.80
Large Pan-EU <i>Minimum 10 units (EU)</i>												
Standard Rate	\$ 1.79	€ 0.60	€ 0.70	€ 0.70	€ 0.70	€ 0.70	€ 0.70	€ 0.70	€ 0.70	€ 0.70	€ 0.70	€ 0.70
Small Inventory <i>Minimum 10 units (EU)</i>												
Standard Rate	\$ 2.79	€ 1.00	€ 1.10	€ 1.10	€ 1.10	€ 1.10	€ 1.10	€ 1.10	€ 1.10	€ 1.10	€ 1.10	€ 1.10
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Pan-European Surcharges Overview
A surcharge per unit (above fulfillment) is added to the Local fulfillment rates for Fulfilling on inventory sold on the Pan-European program.

Pan-European Surcharges Overview		Pan-European Surcharges Overview										
Country	Domestic	DE	FR	IT	ES	UK	NL	SE	PL	PT	EU	US
Standard Rate	\$ 0.00	€ 0.10	€ 0.10	€ 0.10	€ 0.10	€ 0.10	€ 0.10	€ 0.10	€ 0.10	€ 0.10	€ 0.10	€ 0.10
Weighted Rate	\$ 0.00	€ 0.05	€ 0.05	€ 0.05	€ 0.05	€ 0.05	€ 0.05	€ 0.05	€ 0.05	€ 0.05	€ 0.05	€ 0.05
Large Rate	\$ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00

Storage Fees

Monthly Storage Fees
Storage fees are charged for all items stored on an Amazon fulfillment center based on fulfillment center location, classified storage, and your daily average volume of inventory.

Long-term Storage Fees
Apply to Inventory stored for more than 365 days.

2. Monthly storage fee

	Standard Size		Oversize (Domestic)		Oversize (Pan-European)	
Unit	Standard Size	Oversize	Standard Size	Oversize	Standard Size	Oversize
US (per cu ft/Month)	\$ 0.47	\$ 0.76	\$ 0.75	\$ 1.05	\$ 0.85	\$ 1.05
EU (per cu ft/Month)	€ 0.16	€ 0.26	€ 0.26	€ 0.36	€ 0.26	€ 0.36

Optional Service Fees

Includes local inventory, cross-border returns handling, inbound operations, labeling, building wrap, aging, hogging, and tempering. Services are charged per unit.

3.1 Optional Services: Removal

	Standard Size		Oversize	
	Weight	Cost per unit (€ / ft ³)	Weight	Cost per unit (€ / ft ³)
Local Return	100kg+	€ 0.02	100kg+	€ 0.02
Cross-Border Return	100kg+	€ 0.02	100kg+	€ 0.02
Disposal	100kg+	€ 0.02	100kg+	€ 0.02

Not all removal options are available for all products. If you wish to use the local removal option, it is only available for Standard Size, Pan-European, and Oversize. Please refer to the Amazon Seller Central help page for more information.

3.2 Optional Services: Other


	Standard Size	Oversize	Oversize
	Weight	Cost per unit (€ / ft ³)	Weight
Label Storage	€ 0.00	€ 0.10	€ 0.10
Inventory	€ 0.00	€ 0.10	€ 0.10
Building wrap	€ 0.04	€ 0.04	€ 0.04
Hogging	€ 0.02	€ 0.02	€ 0.02
Tempering	€ 0.02	€ 0.02	€ 0.02

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All tools E-Sign Find text or tools

Calculating your fees


Simply add together your fulfilment and storage fees and any optional services you require to calculate your total FBA Fee.



1. Fulfilment Fee


A flat fee per unit, based on

- Dimensions
- Unit weight



2. Storage Fee (see page 4)

Charged per cubic metre per month or cubic foot per month



3. Optional Services Fee (see page 4)

Includes:

- Returns
- Disposal
- Labeling
- Bagging
- Bubble wrap
- Taping
- Opaque bagging

1. Fulfilment Fee per fulfilled unit¹

	Local fulfilment (domestic FBA, MCI, PanEU) within:									Cross-border fulfilment (EFN) sold on ² :			
	UK ²	DE ¹ /PL/CZ	DE Only	FR	IT	ES	NL	SE	PL	UK ²	DE ¹ /FR/IT/ES/NL	SE	PL
Small Envelope: Dimensions: ≤ 20 X 15 X 1 cm													
≤ 80g	€ 1.46	€ 1.73	€ 2.08	€ 2.37	€ 2.74	€ 2.26	€ 1.62	17.14 kr	4.48 zł	€ 3.99	€ 4.38	45.94 kr	18.61 zł
Standard Envelope: Dimensions: ≤ 33 X 23 X 2.5 cm													
≤ 60g	€ 1.56	€ 1.88	€ 2.23	€ 2.52	€ 2.88	€ 2.51	€ 1.76	18.81 kr	4.53 zł	€ 4.16	€ 4.55	47.82 kr	19.38 zł
≤ 210g	€ 1.66	€ 2.01	€ 2.36	€ 3.01	€ 3.03	€ 2.81	€ 1.93	20.13 kr	4.66 zł	€ 4.45	€ 4.88	51.21 kr	20.74 zł
≤ 460g	€ 1.77	€ 2.16	€ 2.51	€ 3.38	€ 3.27	€ 3.02	€ 2.05	21.42 kr	4.91 zł	€ 4.52	€ 4.95	51.96 kr	21.05 zł
Large Envelope: Dimensions: ≤ 33 X 23 X 5 cm													
≤ 960g	€ 2.21	€ 2.52	€ 2.87	€ 3.96	€ 3.53	€ 3.15	€ 2.48	25.24 kr	5.64 zł	€ 4.84	€ 5.30	55.65 kr	22.55 zł
Standard Parcel: Dimensions: ≤ 45 X 34 X 26 cm													
≤ 150g	€ 2.19	€ 2.66	€ 3.01	€ 3.95	€ 3.62	€ 2.99	€ 2.53	26.60 kr	5.35 zł	€ 4.86	€ 5.32	55.88kr	22.64 zł
≤ 400g	€ 2.33	€ 2.95	€ 3.30	€ 4.72	€ 4.04	€ 3.50	€ 2.81	29.49 kr	5.66 zł	€ 5.94	€ 6.50	68.25 kr	27.66 zł
≤ 900g	€ 2.50	€ 3.38	€ 3.73	€ 5.46	€ 4.66	€ 3.78	€ 3.26	33.80 kr	6.48 zł	€ 7.00	€ 7.66	80.46 kr	32.60 zł
≤ 1.4kg	€ 2.66	€ 3.99	€ 4.34	€ 5.68	€ 5.24	€ 4.25	€ 3.84	39.50 kr	6.75 zł	€ 7.68	€ 8.42	88.37 kr	35.81 zł
≤ 1.9kg	€ 2.91	€ 4.30	€ 4.65	€ 5.74	€ 5.47	€ 4.32	€ 4.11	40.99 kr	6.75 zł	€ 8.80	€ 9.64	101.17 kr	40.99 zł
≤ 2.9kg	€ 4.14	€ 4.77	€ 5.12	€ 7.45	€ 6.10	€ 4.91	€ 4.69	41.94 kr	6.83 zł	€ 9.79	€ 10.73	112.64 kr	45.63 zł
≤ 3.9kg	€ 4.53	€ 5.35	€ 5.70	€ 7.92	€ 6.82	€ 6.02	€ 4.71	43.21 kr	6.86 zł	€ 11.52	€ 12.68	133.19 kr	53.96 zł
≤ 4.9kg	€ 4.62	€ 5.52	€ 5.87	€ 7.95	€ 7.24	€ 6.20	€ 4.72	45.39 kr	6.96 zł	€ 12.10	€ 13.32	139.83 kr	56.65 zł
≤ 5.9kg	€ 5.12	€ 5.95	€ 6.30	€ 8.63	€ 8.07	€ 6.52	€ 4.99	46.86 kr	7.01 zł	€ 12.10	€ 13.32	139.83 kr	56.65 zł
≤ 6.9kg	€ 5.28	€ 5.95	€ 6.30	€ 8.63	€ 8.08	€ 6.64	€ 5.05	47.31 kr	7.06 zł	€ 12.10	€ 13.32	139.83 kr	56.65 zł
≤ 7.9kg	€ 5.42	€ 6.11	€ 6.46	€ 9.42	€ 8.34	€ 7.12	€ 5.10	51.76 kr	7.36 zł	€ 12.79	€ 14.09	147.92 kr	59.93 zł
≤ 8.9kg	€ 5.47	€ 6.11	€ 6.46	€ 9.42	€ 8.37	€ 7.12	€ 5.16	52.8 kr	7.39 zł	€ 13.12	€ 14.44	151.66 kr	61.44 zł

Pass-Through to Consumers(Data)

The screenshot shows the Keepa website interface. At the top, there's a navigation bar with the Keepa logo and various icons for Deals, Track, Apps, Data, Information, Comment, and Search. The main content area features a large heading "Price History Charts" and a sub-heading "Detailed Price History charts for over 3 billion Amazon products." Below this, there's a promotional message: "You can use all our features right on Amazon with the help of our browser extensions. Nifty!" followed by icons for Firefox, Chrome, Opera, Edge, and Safari. A small note states: "* On mobile devices only available for Firefox on mobile for Android." To the right, there's a "Price History Chart" for an Amazon product, showing price fluctuations over time from Sep 28 to Sep 14. The chart includes a legend with various price points and a "Final related Deals" section. Below the chart, there are three promotional cards: 1. "Improved Price Alerts: Prime Exclusive and Coupon Deals" dated Nov 23, 2022, with a "READ FULL ANNOUNCEMENT" link. 2. "Mobile App for Android and iPhone" dated Mar 03, 2021, with "GET IT ON Google Play" and "Download on the App Store" buttons, and a "READ FULL ANNOUNCEMENT" link. 3. "Monitoring 3,793,060,474 products:" with a grid of product counts for various countries: USA (1,127,162,116), Canada (351,131,177), Mexico (410,827,318), UK (418,107,411), Germany (432,306,767), France (209,220,342), India (208,316,730), Brazil (424,163,801), Japan (134,878,216), Australia (59,192,953), and others (8,591,648 and 3,161,995). At the bottom left, there's a small inset image showing a browser extension interface.

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- **Amazon Price:** Price of the product offered by Amazon.
- **FBA Price:** Lowest price of the product offered by a seller on Amazon availing FBA service.

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- **Amazon Price:** Price of the product offered by Amazon.
- **FBA Price:** Lowest price of the product offered by a seller on Amazon availing FBA service.
- We also download the supplier count of every product.

Pass-Through to Consumers(Example)



Pass-Through to Consumers(Example)



Pass-Through to Sellers (Methodology)

Identification

- Differences-in-differences methodology using standard TWFE model and Callaway/Sant'anna estimator.
- UK, France, Spain and Italy get treated at different time periods. Germany is the only country not treated.

Regression TWFE

$$\ln(FBAFees)_{jt} = \beta_0 + \beta_1 DST_{jt} + \theta_j + \gamma_t + \epsilon_{jt} \quad (1)$$

Regression CSDID

$$\ln FBAfee^{g,t} = \alpha_1^{g,t} + \alpha_2^{g,t} \cdot G_g + \alpha_3^{g,t} \cdot 1\{T = t\} + \beta^{g,t} \cdot (G_g * 1\{T = t\}) + \epsilon^{g,t} \quad (2)$$

Pass-Through to Consumers (Methodology)

Identification

- Differences-in-differences methodology comparing the FBA price to the Amazon price in the treated countries.
- The Amazon price is the price when Amazon is the seller. This price is not affected by the DST. Serves as the control.
- The FBA price is the price which is affected by DST. This is the treated price.

Regression Model

$$\ln(\text{Price})_{jt} = \beta_0 + \beta_1 \text{Treat}_{jt} \times \text{Post}_t + \theta_j + \gamma_t + \epsilon_{jt} \quad (3)$$

$$\log(\text{Price})_{it} = \sum_{k=-12}^{11} \alpha_k D_t^k * \text{Treat}_{it} + \theta_i + \gamma_t + \epsilon_{jt} \quad (4)$$

Pass-Through to Sellers (Results)

VARIABLES	TWFE using DST rate		
	(1) ln(FBA fee)	(2) ln(FBA fee)	(3) ln(FBA fee)
DST	0.011*** (0.002)	0.008*** (0.002)	0.014*** (0.002)
Observations	45,900	20,400	25,500
R-squared	0.992	0.986	0.981
Cross-section FE	YES	YES	YES
Time FE	YES	YES	YES
Size		Standard	Oversize

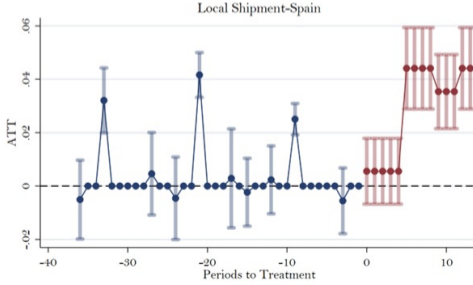
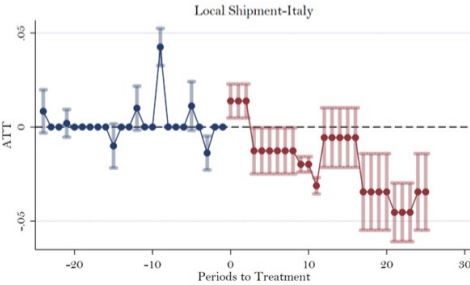
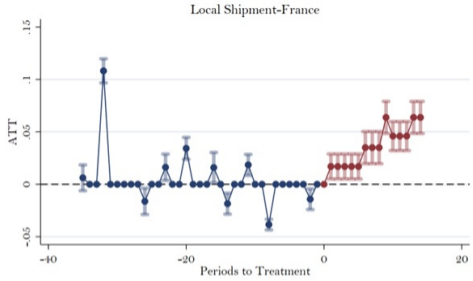
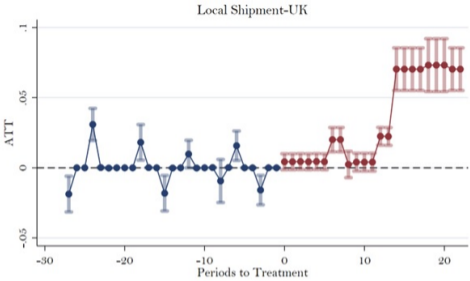
Notes: ***, **, * indicate significance at the 1%, 5%, 10% levels.

Pass-Through to Sellers (Results)

Callaway-Sant'anna estimator			
VARIABLES	(1) ln(FBA fee)	(2) ln(FBA fee)	(3) ln(FBA fee)
GAverage	0.020*** (0.004)	0.023*** (0.004)	0.018** (0.004)
Italy	-0.018*** (0.006)	-0.012*** (0.004)	-0.023*** (0.005)
UK	0.033*** (0.004)	0.052*** (0.007)	0.018*** (0.004)
France	0.037*** (0.006)	0.030*** (0.004)	0.043*** (0.007)
Spain	0.028*** (0.006)	0.023*** (0.004)	0.033*** (0.007)
Observations	45,900	20,400	25,500
Cross-section FE	YES	YES	YES
Time FE	YES	YES	YES
Size		Standard	Oversize

Notes: In panel C, the standard errors are clustered at the cross-sectional level, as the Callaway-Sant'Anna allows only for clustering at a level nesting the cross-sectional identifier, and four clusters are too few. The dependent variable is the natural logarithm of the FBA fee which is the sum of the shipping fee, the storage fee, the labeling fee, the baggage fee and the taping fee. ***, **, * indicate significance at the 1%, 5%, 10% levels.

Pass-Through to Sellers (Results)

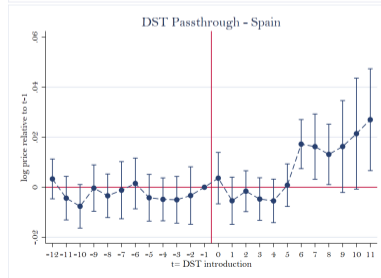
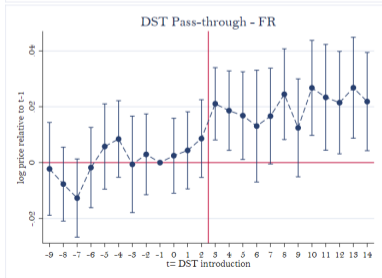
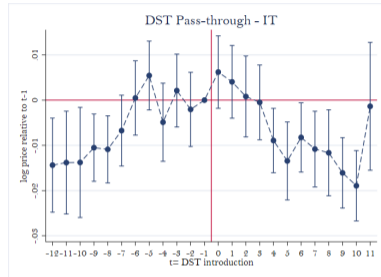
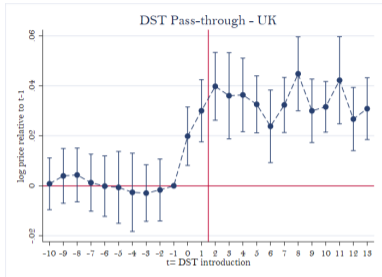


Pass-Through to Consumers (Results weekly data - 24 weeks)

	UK	FR	IT	ES
	(1)	(2)	(3)	(4)
VARIABLES	log(price)	log(price)	log(price)	log(price)
Treat x Post	0.032*** (0.002)	0.017*** (0.003)	0.001 (0.002)	0.010*** (0.002)
Observations	1,108,871	344,008	821,117	613,694
R-squared	0.974	0.977	0.977	0.981
Cross-Section FE	YES	YES	YES	YES
Time FE	YES	YES	YES	YES

Notes: ***, **, * indicate significance at the 1%, 5%, 10% levels.

Pass-Through to Consumers (Event Study - Weekly)



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- In Italy, where we do not observe a pass-through of the tax, we observe Amazon to be considerably inelastic as a seller.
- Introduction of DSTs only beneficial in cases where platform is inelastic to supplier entry/exit?

Appendix

- Current empirical research mostly dedicated to VAT pass-through. (Benzarti and Carloni, 2019; Benzarti et al., 2020 etc.,)

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- Bibler et al. (2021) using AirBnB data and Lassmann et al. (2020) using Facebook data.

Pass-Through to Sellers (Descriptives)

Panel A: All products						
	p25	p50	p75	Mean	SD	Observations
Germany	7.88	15.91	19.26	13.93	6.41	14,280
Spain	7.87	16.98	21.09	15.19	7.68	14,280
France	9.74	19.25	22.81	17.42	8.37	14,280
Italy	9.79	19.25	22.36	16.58	7.46	14,280
United Kingdom	6.59	13.75	16.89	12.18	6.24	14,280

Panel B: Standard Size						
	p25	p50	p75	Mean	SD	Observations
Germany	4.07	6.42	7.16	5.88	1.80	4,080
Spain	3.96	6.24	7.21	5.90	1.83	4,080
France	5.05	7.34	9.20	7.28	2.50	4,080
Italy	4.61	7.03	8.94	6.97	2.35	4,080
United Kingdom	3.01	4.67	5.92	4.49	1.73	4,080

Panel C: Oversize						
	p25	p50	p75	Mean	SD	Observations
Germany	15.45	17.73	19.95	17.16	4.45	10,200
Spain	15.84	19.52	22.82	18.91	5.73	10,200
France	18.25	21.42	24.52	21.48	6.16	10,200
Italy	17.66	21.20	23.72	20.42	4.88	10,200
United Kingdom	13.03	15.50	18.38	15.25	4.51	10,200

Notes: FBA fees for Germany, Spain, Italy and France are in €(Euro). Prices for the United Kingdom are in £(Great Britain Pound). Data Source: Fulfilment by Amazon rate cards downloaded from <https://sell.amazon.co.uk/>.

Pass-Through to Consumers Pre-Treatment(Descriptives)

Panel A: Average Amazon Price						
	p25	p50	p75	Mean	SD	Observations
Spain	13.18	20.74	36.45	34.18	42.06	218,140
France	13.32	20.77	36.15	33.73	41.12	277,841
Italy	13.39	20.99	37.08	34.64	42.87	320,187
United Kingdom	7.05	12.30	22.08	21.65	39.41	400,987

Panel B: Average FBA Price						
	p25	p50	p75	Mean	SD	Observations
Spain	13.88	21.63	37.99	35.33	44.69	93,197
France	13.66	22.05	39.14	36.56	47.35	73,331
Italy	13.69	21.21	36.25	33.77	40.64	204,034
United Kingdom	6.10	11.63	21.49	20.90	38.70	266,254

Panel C: Average New Count						
	p25	p50	p75	Mean	SD	Observations
Spain	5.00	9.00	15.00	11.77	10.72	288,902
France	5.00	9.00	14.00	11.18	9.68	391,693
Italy	7.00	11.00	20.00	16.09	15.52	463,100
United Kingdom	8.00	12.00	19.00	14.62	10.17	596,568

Notes: All prices for Spain, Italy and France are in €(Euro). Prices for the United Kingdom are in £(Great Britain Pound). The count of suppliers is in absolute numbers. Data Source: Keepa.com.

Pass-Through to Consumers Post-Treatment(Descriptives)

Panel A: Average Amazon Price						
	p25	p50	p75	Mean	SD	Observations
Spain	12.91	20.18	35.25	33.33	41.68	229,619
France	13.44	21.03	36.83	34.05	41.12	288,278
Italy	13.47	21.08	37.70	35.20	43.71	310,601
United Kingdom	7.31	12.97	23.33	22.64	39.88	409,860

Panel B: Average FBA Price						
	p25	p50	p75	Mean	SD	Observations
Spain	13.64	21.99	39.90	36.84	47.17	74,684
France	14.02	22.82	39.93	37.61	48.41	77,225
Italy	14.10	21.99	37.99	34.86	40.66	183,037
United Kingdom	6.97	12.92	23.12	22.33	40.92	237,398

Panel C: Average New Count						
	p25	p50	p75	Mean	SD	Observations
Spain	4.00	8.00	13.00	10.45	9.89	312,462
France	4.00	7.00	11.00	8.82	7.99	406,644
Italy	6.00	10.00	18.00	14.21	13.39	468,306
United Kingdom	5.00	8.00	13.00	9.91	7.51	592,362

Notes: All prices for Spain, Italy and France are in €(Euro). Prices for the United Kingdom are in £(Great Britain Pound). The count of suppliers is in absolute numbers. Data Source: Keepa.com.

FBA Price movement by supplier count

VARIABLES	(1) log(FBA Price)	(2) log(FBA Price)	(3) log(FBA Price)	(4) log(FBA Price)
Supplier_Count	-0.011*** (0.000)	-0.010*** (0.000)	-0.005*** (0.000)	-0.008*** (0.000)
Observations	805,573	289,083	568,699	221,410
R-squared	0.969	0.973	0.968	0.976
Cross-section FE	YES	YES	YES	YES
Time FE	YES	YES	YES	YES
Country	UK	France	Italy	Spain

Robust standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Amazon Price movement by supplier count

VARIABLES	(1) log(Amazon Price)	(2) log(Amazon Price)	(3) log(Amazon Price)	(4) log(Amazon Price)
Supplier_Count	-0.005*** (0.000)	-0.006*** (0.000)	-0.002*** (0.000)	-0.004*** (0.000)
Observations	1,360,281	779,168	935,231	619,863
R-squared	0.973	0.972	0.974	0.975
Cross-section FE	YES	YES	YES	YES
Time FE	YES	YES	YES	YES
Country	UK	France	Italy	Spain

Robust standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

FBM Price movement by supplier count

VARIABLES	(1) log(FBM Price)	(2) log(FBM Price)	(3) log(FBM Price)	(4) log(FBM Price)
Supplier_Count	-0.013*** (0.000)	-0.013*** (0.000)	-0.006*** (0.000)	-0.009*** (0.000)
Observations	1,113,680	389,503	703,590	268,449
R-squared	0.969	0.972	0.966	0.977
Cross-section FE	YES	YES	YES	YES
Time FE	YES	YES	YES	YES
Country	UK	France	Italy	Spain

Robust standard errors in parentheses

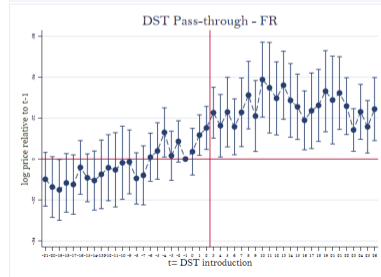
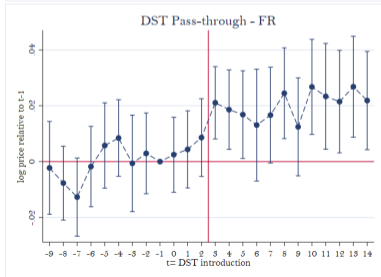
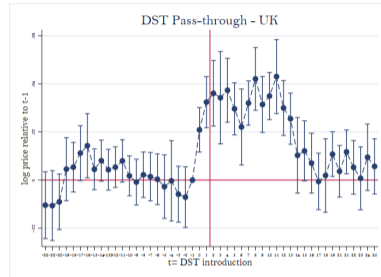
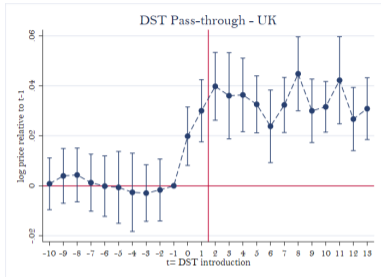
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Pass-Through to Consumers (Results weekly data - 48 weeks)

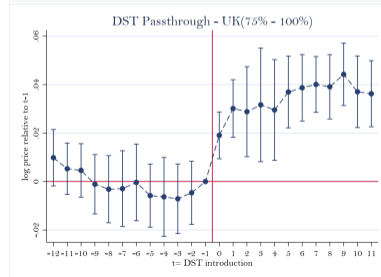
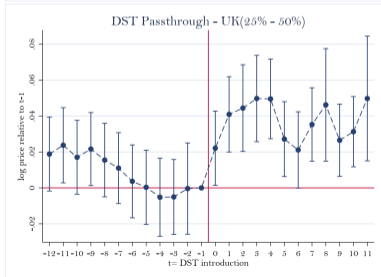
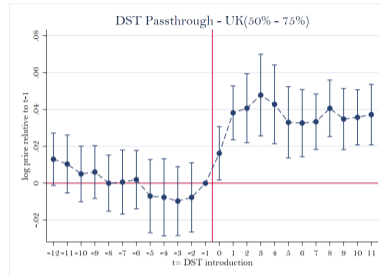
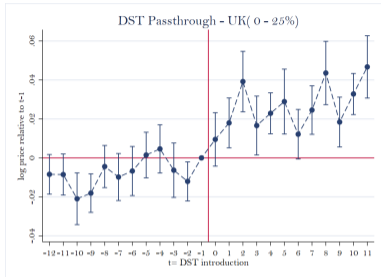
VARIABLES	UK		FR		IT		ES					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Treat x Post	0.020*** (0.002)	0.020*** (0.002)	0.040*** (0.004)	0.028*** (0.002)	0.027*** (0.002)	0.043*** (0.004)	0.013*** (0.002)	0.013*** (0.002)	0.015*** (0.004)	0.015*** (0.002)	0.015*** (0.002)	0.020*** (0.006)
Observations	1,367,785	1,330,418	37,367	735,786	705,615	30,171	974,082	930,219	43,863	630,230	602,611	27,619
R-squared	0.968	0.966	0.979	0.970	0.967	0.981	0.969	0.965	0.980	0.972	0.969	0.979
Cross-Section FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Time FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Size		Standard	Oversize		Standard	Oversize		Standard	Oversize		Standard	Oversize

Notes: ***, **, * indicate significance at the 1%, 5%, 10% levels.

Pass-Through to Consumers (Event Study - Longer Period)



Pass-Through to Consumers (Event Study - Price variation)



Pass-Through to Consumers (Event Study - Supplier variation)

