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EU Trade Regulations on Hygienic Poultry Imports – A Quality Assessment

FIW Workshop

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Agenda

- Introduction:
  - Qualitative NTMs
  - Trade disputes

- EU Poultry Imports
  - Descriptive Statistics
  - Gravity Framework

- Bilateral ad-valorem equivalents (AVE)

- Quality assessment of EU NTMs

- Concluding remarks

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Introduction, Qualitative NTMs

- ■ NTM Broad Categories:

    - **Unilateral standards, and qualitative regulations**: Technical Barrier to Trade (TBT), Sanitary and Phytosanitary Measures (SPS)

    - **Bilateral quantitative and counter measures**: Anti Dumping (AD), quantitative restrictions (QR), safeguard measures (SG), and special safeguards (SSG)

        Some quality issues: (e.g. national legal bases, national security, health and environment issues, market adjustments, etc.)

    - **Reverse notifications**: Specific Trade Concerns (STCs) on TBT and SPS

Introduction, **Trade Disputes**

- **DS26 & DS48** (DS321): EU Hormones Treated Meat

- **Complainant**: the USA, Canada, and third parties

- **Date of request**: Since January 1996

- **Results**: No scientific evidence, violation of SPS agreement

- **Remedies**: USD 116.8 million to the US and CAD 11.3 million to Canada

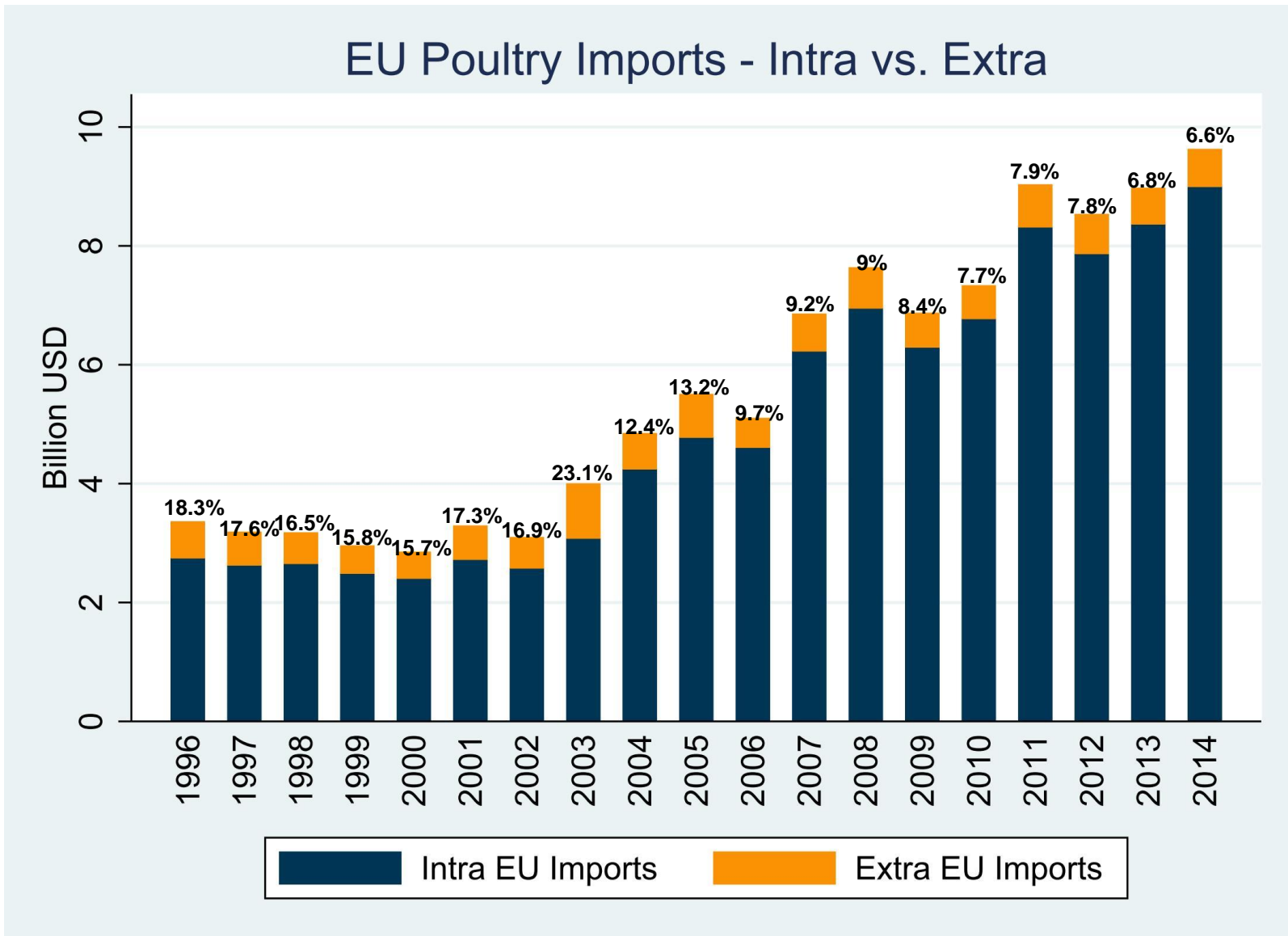- **Date of Resolution**: 2009 with the US and 2011 with Canada

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Introduction, **Trade Disputes**

- **DS291-292-293**: Approval and marketing of biotech products

- **Complainant**: the USA, Canada, Argentina, and third parties

- **Date of request**: May 2003

- **Results**: No scientific evidence, violation of SPS agreement

- **Retaliation**: suspending concessions and other obligations by the US

- **Date of Resolution**: January 2008 with the US; Mutually agreed with Canada and Argentina on July 2009 and March 2010, Respectively
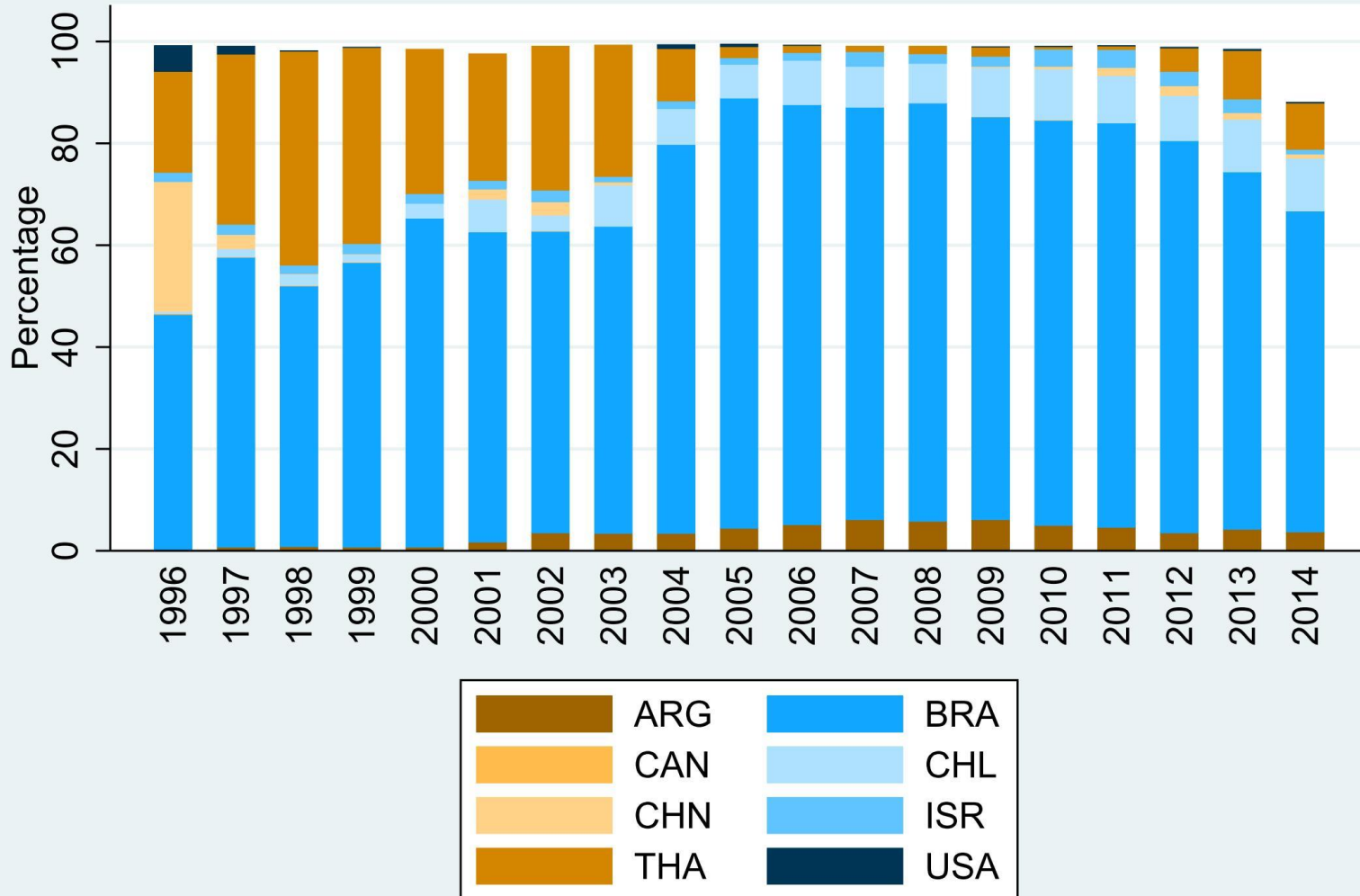
Introduction, Trade Disputes

- **DS389**: Poultry (chlorinated chicken)

- **Complainant**: the USA and third parties

- **Date of request**: January 2009

- **Relevant STC in 2006:** prohibition of poultry processed with pathogen reduction treatments (PRT) or antimicrobial treatments (AMT)

- **EU Reasoning**: Chemicals might be abused to compensate the low hygienic quality of production

- **Results**: Panel body not yet composed

EU Poultry Imports, Descriptive Statistics

EU Poultry Imports - Intra vs. Extra

Legend: Intra EU Imports, Extra EU Imports

EU Poultry Imports, Descriptive Statistics
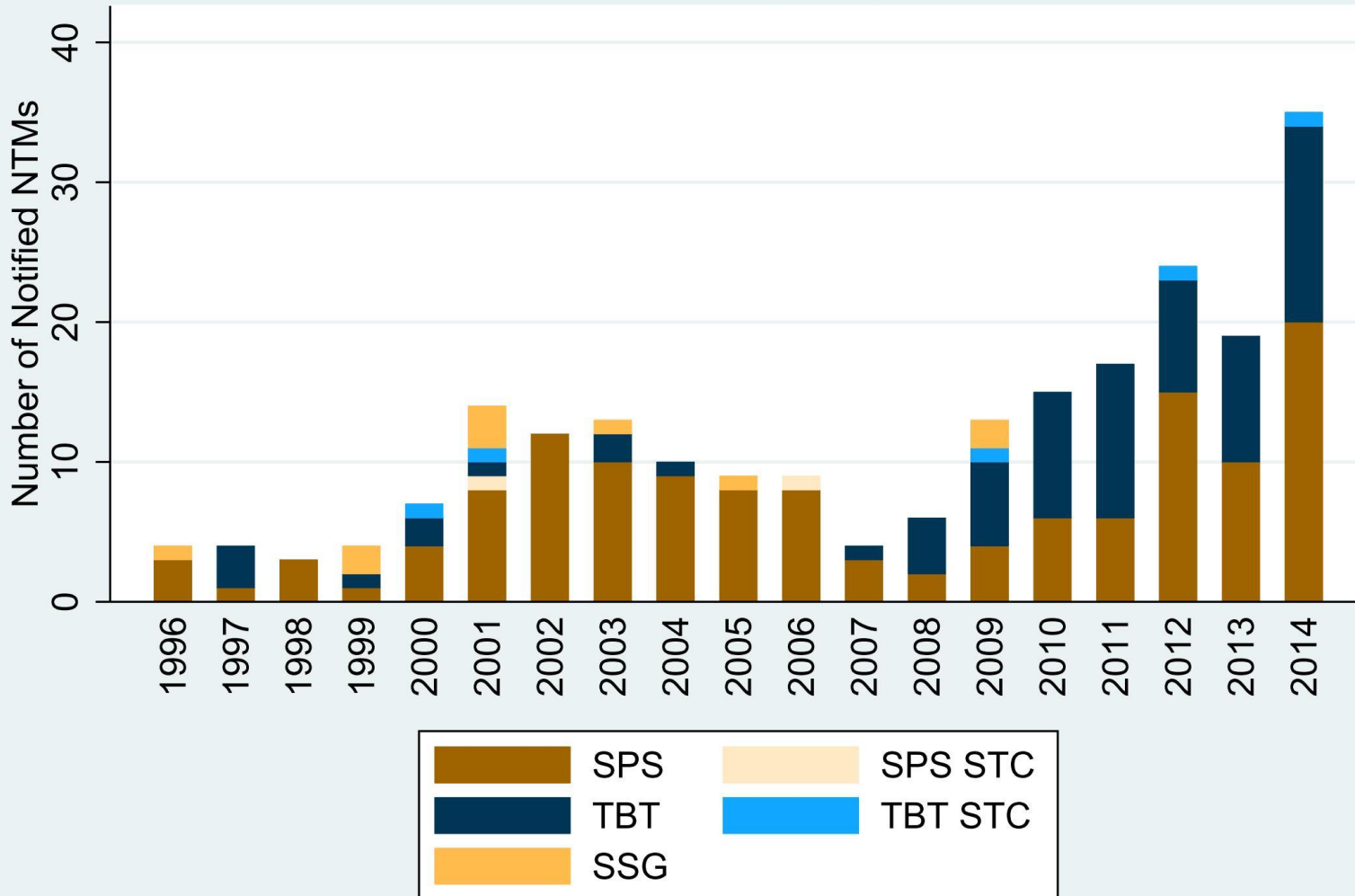

Parters' Share in Extra-EU Imports
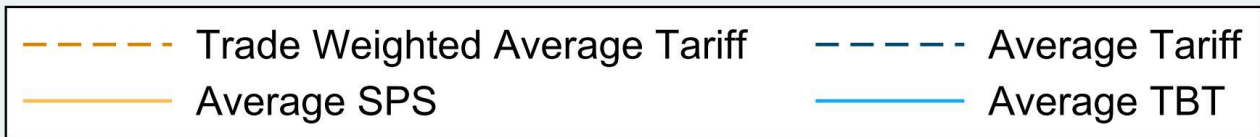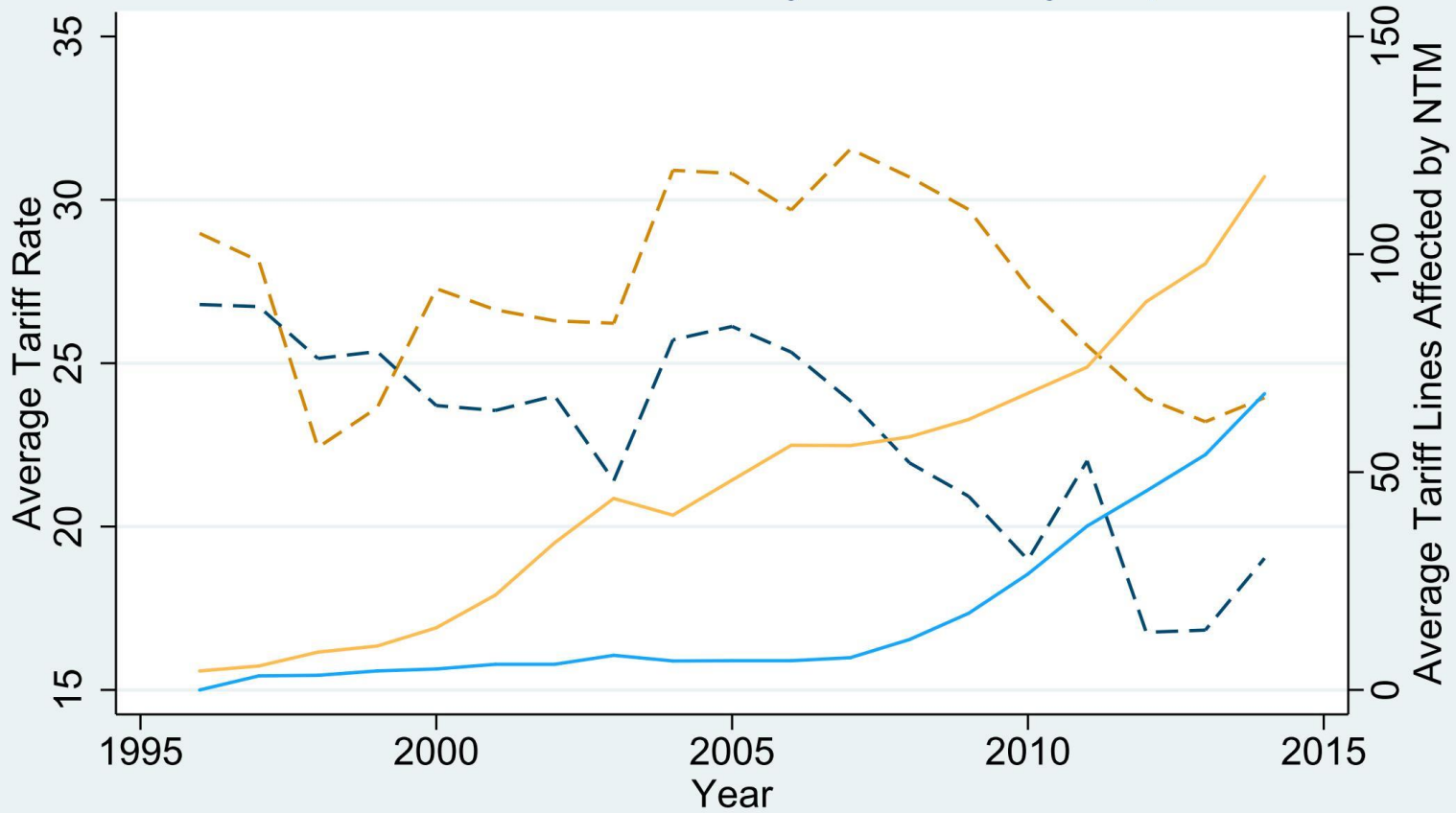
EU Poultry Imports, Descriptive Statistics

Notified NTMs on Poultry Imposed by the EU

EU Poultry Imports, Descriptive Statistics

EU Effective Trade Policy on Poultry Imports

EU Poultry Imports, Gravity Framework

- $ln(m_{ijht+1}) = \alpha_0 + \alpha_T \, ln(1 + T_{ijht}) + \sum_{n=1}^{N} \alpha_n \, ln(1 + NTM_{nijht}) + \beta_1 G_{ijt} + \beta_2 EU_{it} + \omega_{ijh} + \omega_{it} + \omega_{jt} + \mu_{ijht}$,

- $n \in \{TBT, SPS, TBT\ STC, SPS\ STC, SSG, ADP\}$
- $ln(m_{ijht+1})$ is the log of either traded value, or quantity, or unit value of product h from country j, to EU 28 member j, at time t+1
- $ln(1 + T_{ijht})$ effective AVE of bilateral tariffs
- G_{ijt} contains summation of GDP of two trade partners, differences in GDP per capita, and factor endowments ratio to GDP, bilateral exchange rate, PTA, intra EU dummy, WTO membership dummy
- EU_{it} is the dummy becoming one after EU accession
- $\omega_{ijh}, \omega_{it}$, and ω_{jt} are fixed effects
- Period 1995-2014, estimation by OLS and PPML

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Gravity Estimations on the EU Poultry Import – 1995-2014 – OLS

Dep. Var.	Value	Quantity	Price
α_T	-1.43***	-1.34***	0.083
	(0.34)	(0.36)	(0.10)
α_{SPS}	-0.0019	0.015	0.017
	(0.072)	(0.076)	(0.019)
α_{SPSSTC}	-0.23	-0.0081	0.23***
	(0.27)	(0.27)	(0.073)
α_{TBT}	-0.29***	-0.30***	-0.0035
	(0.065)	(0.067)	(0.015)
α_{TBTSTC}	-0.066	0.13	0.20***
	(0.25)	(0.26)	(0.058)
α_{SSG}	0.19*	0.12	-0.071***
	(0.11)	(0.11)	(0.027)
ω_{ijh}	Yes	Yes	Yes
ω_t	Yes	Yes	Yes
ω_{it}	No	No	No
ω_{jt}	No	No	No
N	31283	31283	31283
R-sq	0.070	0.020	0.168
adj. R-sq	0.069	0.019	0.167

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

Robust standard errors in parentheses (clustered by country-pair-products)

Gravity Estimations on the EU Poultry Import – 1995-2014 – OLS

Dep. Var.	Value	Quantity	Price
α_T	-1.26**	-1.53**	-0.27
	(0.60)	(0.63)	(0.17)
α_{SPS}	0.43*	0.47*	0.043
	(0.23)	(0.24)	(0.082)
α_{SPSSTC}	-0.43	-0.50	-0.073
	(0.60)	(0.67)	(0.18)
α_{TBT}	-0.34	-0.44*	-0.11*
	(0.23)	(0.24)	(0.062)
α_{TBTSTC}	0.51	0.37	-0.14
	(0.95)	(0.85)	(0.28)
α_{SSG}	0.11	0.045	-0.061*
	(0.14)	(0.14)	(0.035)
ω_{ijh}	Yes	Yes	Yes
ω_t	No	No	No
ω_{it}	Yes	Yes	Yes
ω_{jt}	Yes	Yes	Yes
N	31283	31283	31283
R-sq	0.070	0.020	0.168
adj. R-sq	0.069	0.019	0.167

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

Robust standard errors in parentheses (clustered by country-pair-products)

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Gravity Estimations on the EU Poultry Import – 1995-2014 – PPML

Dep. Var.	Value	Quantity	Price
α_T	-0.23	-1.12***	-0.40**
	(0.44)	(0.42)	(0.20)
α_{SPS}	0.23**	0.17*	0.046
	(0.10)	(0.095)	(0.058)
α_{SPSSTC}	-1.37*	-2.09**	-0.22
	(0.77)	(0.82)	(0.14)
α_{TBT}	-0.33***	-0.38***	0.097**
	(0.075)	(0.085)	(0.041)
α_{TBTSTC}	0.45	0.58	0.19
	(0.42)	(0.41)	(0.20)
α_{SSG}	-0.35**	-0.27	-0.41***
	(0.15)	(0.17)	(0.078)
α_{ADP}	-6.65***	-10.0***	-4.49***
	(1.54)	(1.38)	(1.21)
ω_{ijh}	Yes	Yes	Yes
ω_t	Yes	Yes	Yes
ω_{it}	No	No	No
ω_{jt}	No	No	No
N	93910	93910	93910
R-sq	0.070	0.020	0.168
adj. R-sq	0.069	0.019	0.167

Possible zero-price bias

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

Robust standard errors in parentheses (clustered by country-pair-products)

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Bilateral ad-valorem equivalents (AVE)

- Diverse NTM impact on heterogenous exporters
- Impact through 2 channels:

  Quality

  Price

- $\ln(q_{ijht+1}) = \alpha_0 + \alpha_T \ln(1 + T_{ijht}) + \sum_{n=1}^{N} \alpha_n \omega_{ijh} NTM_{nijht} + \beta_1 G_{ijt} + \beta_2 EU_{it} + \omega_{ijh} + \omega_t + \mu_{ijht}$,

- $n \in \{TBT, SPS, TBT\ STC, SPS\ STC, SSG, ADP\}$

- $ave_{nijh} = \frac{1}{\varepsilon_{ijh}} \frac{\partial \ln(q_{ijh})}{\partial NTM_{ijh}} = \frac{e^{\alpha_n \omega_{ijh}} - 1}{\varepsilon_{ijh}}$

- Borrowing elasticities ε_{ijh} from earlier work: Ghodsi, Gruebler, Stehrer (2016)

Bilateral AVEs of NTMs Imposed by the EU during 1995-2014 – EU28 Average

EU28	SPS	SPSSTC	TBT	TBTSTC	ADP	SSG
AVE (s.a.)	0.39%	-0.05%	0.19%	0.43%	0.04%	-0.40%
α_n (s.a.)	-0.0015	-0.009	-0.013	-0.026	-0.003	-0.007
AVE (w.a.)	-10.63%	27.74%	6.00%	99.67%	99.87%	-11.34%
α_n (w.a.)	0.018	-0.073	-0.079	0.672	-6.608	-0.088
Positive α_n	799	113	412	45	0	372
Negative α_n	703	130	600	91	3	273
Positive AVE	788	98	572	100	3	322
Negative AVE	714	145	440	36	0	323

Source: author's estimations

Only trade flows with statistically significant estimates at 10% level are used

s.a refers to simple averages and w.a. refers to import-weighted averages

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Bilateral AVEs of SPS Imposed by the EU during 1995-2014 – Selected Exporters

Exporter	AVE (s.a.)	α_n (s.a.)	AVE (w.a.)	α_n (w.a.)	Positive AVE	Negative AVE
ARG	-0.57%	0.013	-2.47%	0.024	40	27
BEL	2.65%	0.001	1.39%	0.099	16	15
BRA	9.22%	0.001	-9.93%	0.026	80	25
CAN	-1.89%	0.024	-33.31%	0.272	11	10
CHL	-0.18%	-0.015	-1.35%	0.026	5	15
CHN	-28.03%	0.064	-2330.84%	2.911	4	18
ISR	-0.17%	0.004	-0.07%	0.021	12	60
POL	1.14%	-0.016	5.66%	-0.072	32	30
THA	-2.69%	0.024	-1.04%	-0.015	66	31
USA	-0.12%	-0.016	-0.99%	-0.036	20	19

Source: author's estimations

Only trade flows with statistically significant estimates at 10% level are used

s.a refers to simple averages and w.a. refers to import-weighted averages

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Quality assessment of EU NTMs

- Feenstra and Romalis (QJE, 2014)

    Demand and supply side

    Trade values in quantities, quality, and quality-adjusted price

- $\ln(q_{ijht+1}) = \alpha_0 + \alpha_T \ln(1 + T_{ijht}) + \sum_{n=1}^{N} \alpha_n \omega_{ijh} \ln(1 + NTM_{nijht}) + \beta_1 G_{ijt} + \beta_2 EU_{it} + \omega_{ijh} + \omega_t + \mu_{ijht},$

- $n \in \{TBT, SPS, TBT\ STC, SPS\ STC, SSG\}$

- OLS FE regressions, period 1995-2011, SITC 0114
- Sample of EU28 as importers

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Bilateral Quality and Price Impact of SPS imposed by the EU – Selected Countries

EU28	SPS		SPSSTC	
	Quality	Price	Quality	Price
ARG	-9.576%	-11.381%	-9.272%	.
BEL	0.003%	0.081%	.	.
BRA	-0.286%	-0.290%	.	.
CAN	-4.392%	-6.282%	.	.
CHL	.	11.003%	.	.
CHN	4.107%	5.985%	.	.
POL	4.802%	7.784%	.	.
THA	6.737%	9.910%	.	.
USA	-0.165%	-0.161%	0.016%	0.036%

Source: author's estimations

Only trade flows with statistically significant estimates at 10% level are used

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Summary

- Quality is the only legitimate motive behind standard-type NTMs

- EU food and poultry market is well protected

- Exporters respond differently to NTMs

- Where scientific evidence is missing, quality improvement can be analyzed econometrically

Mega Trade Deals

- **Harmonization**

  - Symmetric framework of standards

  - Establishing good faith → no protectionism

- **Mutual Recognition**

  - Asymmetric framework of standards

  - Inclusive labeling requirements → market efficiency

  - Varieties with price diff. → higher consumer surplus

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