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# Protection des indications géographiques dans les accords commerciaux : le jeu en vaut-il la chandelle?

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"Moins-disant ou mieux-disant normatif dans les échanges internationaux"  
Bordeaux 28-29 septembre 2023



## Les indications géographiques

- Des labels européens qui certifient :
  - les caractéristiques d'un produit alimentaire
  - que ce produit a bien été produit/transformé dans une région spécifique ...
  - ... selon des méthodes traditionnelles
- Font partie de la politique Européenne sur la qualité (regulation 1151/2012)
- Deux labels principaux: AOP, IGP



## Des IG pour quels objectifs?

- Donner de l'information aux **consommateurs** à propos de l'origine et de la qualité des produits
- Eviter les contrefaçons et l'usage abusif des noms de produits
- Protéger les petits **producteurs** de la concurrence de produits de moindre qualité
- Améliorer la **compétitivité** des filières agricoles européennes
- Favoriser le **développement rural**
- Préserver les cultures **traditionnelles**

⇒ Une **protection légale**... sur le marché européen

## IG vs marques

- **les IG** - le système *sui generis* :
  - Appartient à l'état / groupes de producteurs
  - Marque collective / bien public
  - Contrôlé par des organismes public
  - Lien avec le "terroir" (sol, climat...)
  - Entrée de nouveaux producteurs possible
  - Protection against modifiers or translations
  
- **Trademarks** - the anglo-saxon system:
  - Owned by one producer
  - No public intervention, protected by firms with help of courts
  - Expensive for small producers
  - No protection against modifiers or translations

## GIs versus trademarks



## Geographical indications at the international level

- A **contentious issue** in European trade relationship ("War on Terroir" *Joslin 2006*)
  - seen as unfair NTM / export promotion / discrimination
  - Conflicts between existing trademarks and EU GIs
  - WTO Disputes in 1999 with the US and in 2003 with Canada
  - In 2005, WTO panel report led the EU to allow foreign producers to apply for GI registration in the EU
- Article 22 of the **TRIPS Agreement** of WTO in 1994
  - Prevent misuse of information on products' origin
  - Weakly prescriptive: compatible with both systems
  - Less stringent for food products than for wine (article 23)

## GIs in European trade agreements

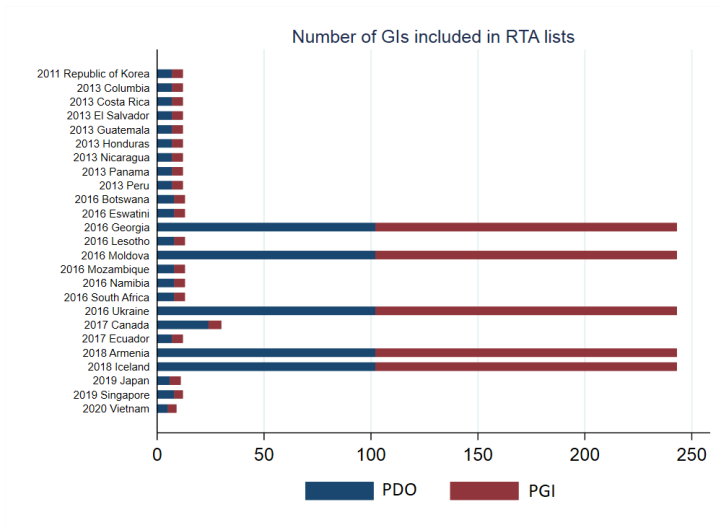
- Since 2011 **external recognition of list of GIs** in EU trade agreements to avoid abuse of reputation
- Coexistence if pre-existing trademarks
- *Ex officio* protection in some agreements (*Engelhart 2015*)
- An offensive red line in the ratification of some agreements



## POurquoi de telles clauses?

- Quality products as offensive interests
- Concentration of GIs in Southern EU countries (*Huysmans and Swinnen 2019*)
- Compensation for the liberalization of agricultural markets
- "gastronationalism" (*Huysmans 2020*)

# European GIs in trade agreements



## Travaux antérieurs sur ce sujet

- *Curzi and Huysmans (2022)* assess the impact of GI protection within European RTA using country level data and find no significant effect of legal protection of GI in trade agreements on trade, except for GI of high quality

## Des données de firme pour mesurer l'impact des IG

- *Duvaleix, Emlinger, Gagné et Latouche (2021)* use firm level data and find price and quality effect of GI on exports in the French cheese industry, and a positive effect of GI on the European market access

## Data sources

- **INAO** dataset : authorized plants for a given GI product 2012-2019
- **French customs dataset** : export in value and quality, by firm, destination and NC8 product
- **FARE Dataset** from INSEE : characteristics by firm and year (size, productivity)
- list of GIs products included in RTA

## Correspondance issues

### 1 Correspondence **GI products** $\Rightarrow$ **NC8 codes**

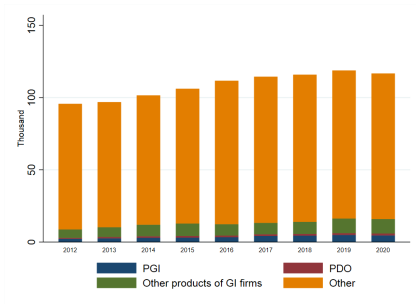
- A GI product may correspond to several NC8
- A NC8 may correspond both to GI and non-GI product
  - $\Rightarrow$  All exports of a authorized firm of a NC8 code concerned by a GI are considered labelled in our dataset
  - $\Rightarrow$  GI firms may export both labelled and non-labelled products

### 2 Correspondence **plant** (SIRET) $\Rightarrow$ **firms** (SIREN)

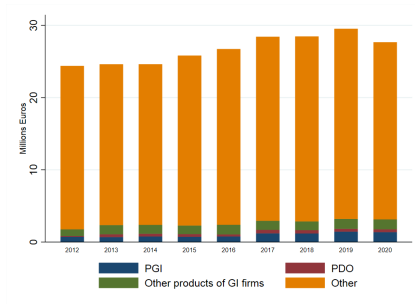
## Descriptive statistics

- 225 French **Geographical Indications** (99 AOP and 126 IGP)
- 313 **NC8 codes** (over a total of 2,313), mainly in the dairy and meat sectors
- 337 **authorized firms** (over 5,046)
- GIs exported to 160 **destinations** (over 226)
- 25 countries have RTAs with the EU which include **lists of GIs**

# Descriptive statistics



Number of observations



Value



# Specification

$$Exp_{fjkt} = \alpha GI_{fkt} + \beta GI_{fkt} \times Agreement_{jkt} + \Pi_{ft} + \xi_{jkt} + \varepsilon_{fjkt}$$

- $GI_{ft}$  is a dummy indicating whether firm  $f$  is authorized to handle GIs for  $k$  in  $t$
- $Agreement_{jkt}$  is a dummy indicating whether country  $j$  recognizes a GI for product  $k$  in  $t$
- $\Pi_{ft}$  time variant firm characteristics (productivity) or fixed effects
- $\xi_{jkt}$  fixed effects controls for characteristics of the market of country  $j$  and good  $k$  the year  $t$
- $Exp_{fjkt} =$ 
  - $lq_{fjkt}$  log of export quantity of  $f$  to  $j$  for the  $k$  at  $t$
  - $X_{fjkt}$  dummy=0 if  $f$  exports  $k$  to  $j$  at  $t$
  - $luv_{fjkt}$  log of export unit values of  $f$  to  $j$  for the  $k$  at  $t$

## Intensive margin

|  | (1)                   | $lq_{fjkt}$<br>(2) | (3)                | (4)                 | $luv_{fjkt}$<br>(5)   | (6)                   |
|--|-----------------------|--------------------|--------------------|---------------------|-----------------------|-----------------------|
| productivity <sub>ft</sub>               | 0.0624***<br>(0.0125) |                    |                    | 0.0009<br>(0.0051)  |                       |                       |
| $GI_{fkt}$                               | 0.7413***<br>(0.0491) | 0.1981<br>(0.6479) |                    | 0.0127<br>(0.0115)  | 0.1669<br>(0.1619)    |                       |
| $GI_{fkt} \times \text{Agreement}_{jkt}$ | 0.2529*<br>(0.1480)   | 0.1396<br>(0.1682) | 0.3816<br>(0.2618) | 0.0770*<br>(0.0437) | 0.1918***<br>(0.0605) | 0.2381**<br>(0.1017)  |
| $GI_{fkt} \times EU_j$                   | 0.0253<br>(0.0534)    | 0.0481<br>(0.0744) | 0.0040<br>(0.0944) | -0.0113<br>(0.0120) | 0.0558***<br>(0.0176) | 0.0884***<br>(0.0212) |
| size 2 <sub>ft</sub>                     | 0.0705**<br>(0.0291)  |                    |                    | -0.0132<br>(0.0108) |                       |                       |
| size 3 <sub>ft</sub>                     | 0.1555***<br>(0.0407) |                    |                    | -0.0037<br>(0.0149) |                       |                       |
| size 4 <sub>ft</sub>                     | 0.2628***<br>(0.0527) |                    |                    | -0.0058<br>(0.0193) |                       |                       |
| N  | 769,443               | 637,767            | 502,451            | 769,443             | 637,767               | 502,451               |
| r2                                       | 0.59                  | 0.86               | 0.88               | 0.76                | 0.89                  | 0.92                  |
| destination-product-time                 | yes                   | yes                | yes                | yes                 | yes                   | yes                   |
| Firm                                     | yes                   | -                  | -                  | yes                 | -                     | -                     |
| firm-time                                | no                    | yes                | -                  | no                  | yes                   | -                     |
| Firm-destination                         | no                    | yes                | -                  | no                  | yes                   | -                     |
| Firm-product                             | no                    | yes                | -                  | no                  | yes                   | -                     |
| firm-product-time                        | no                    | no                 | yes                | no                  | no                    | yes                   |
| firm-destination-time                    | no                    | no                 | yes                | no                  | no                    | yes                   |

Notes: All continuous variables are in logarithm.

Firm-time clustered standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Extensive margin

|  | (1)                   | $X_{fjkt}$<br>(2)     | (3)                   |
|--|-----------------------|-----------------------|-----------------------|
| productivity <sub>ft</sub>                   | 0.0025***<br>(0.0007) |                       |                       |
| GI <sub>fkt</sub>                            | 0.0452***<br>(0.0031) | 0.0147<br>(0.0294)    |                       |
| GI <sub>fkt</sub> × Agreement <sub>jkt</sub> | 0.0185***<br>(0.0048) | 0.0085*<br>(0.0043)   | 0.0125**<br>(0.0051)  |
| GI <sub>fkt</sub> × EU <sub>j</sub>          | 0.0607***<br>(0.0045) | 0.0704***<br>(0.0034) | 0.0775***<br>(0.0037) |
| size 2 <sub>ft</sub>                         | 0.0052***<br>(0.0011) |                       |                       |
| size 3 <sub>ft</sub>                         | 0.0105***<br>(0.0018) |                       |                       |
| size 4 <sub>ft</sub>                         | 0.0117***<br>(0.0028) |                       |                       |
| N  | 13,373,267            | 13,559,707            | 12,243,139            |
| r2   | 0.18                  | 0.50                  | 0.56                  |
| destination-product-time                     | yes                   | yes                   | yes                   |
| Firm   | yes                   | -                     | -                     |
| firm-time                                    | no                    | yes                   | -                     |
| Firm-destination                             | no                    | yes                   | -                     |
| Firm-product                                 | no                    | yes                   | -                     |
| firm-product-time                            | no                    | no                    | yes                   |
| firm-destination-time                        | no                    | no                    | yes                   |

Notes: All continuous variables are in logarithm.

Firm-time clustered standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Effect within time

|  | $lq_{fjkt}$        |                    | $luv_{fjkt}$          |                       | $X_{fjkt}$            |                       |
|--|--------------------|--------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|  | (1)                | (2)                | (3)                   | (4)                   | (5)                   | (6)                   |
| $Gl_{fkt}$                                 | 0.1980<br>(0.6479) |                    | 0.1667<br>(0.1619)    |                       | 0.0147<br>(0.0294)    |                       |
| $Gl_{fkt} \times \text{Agreement}_{jkt0}$  | 0.1636<br>(0.2676) | 0.1715<br>(0.5931) | 0.1125<br>(0.0836)    | 0.2321<br>(0.1784)    | 0.0155*<br>(0.0086)   | 0.0220*<br>(0.0117)   |
| $Gl_{fkt} \times \text{Agreement}_{jkt1}$  | 0.0972<br>(0.2980) | 0.3469<br>(0.5646) | 0.1863**<br>(0.0832)  | 0.0949<br>(0.1549)    | 0.0169**<br>(0.0085)  | 0.0332***<br>(0.0119) |
| $Gl_{fkt} \times \text{Agreement}_{jkt2}$  | 0.3489<br>(0.4137) | 0.5857<br>(0.5430) | 0.3763**<br>(0.1615)  | 0.4523***<br>(0.1728) | 0.0192**<br>(0.0084)  | 0.0285**<br>(0.0119)  |
| $Gl_{fkt} \times \text{Agreement}_{jkt3+}$ | 0.0067<br>(0.2955) | 0.3681<br>(0.4118) | 0.1536<br>(0.1364)    | 0.1613<br>(0.2051)    | -0.0041<br>(0.0059)   | -0.0079<br>(0.0072)   |
| $Gl_{fkt} \times EU_j$                     | 0.0483<br>(0.0746) | 0.0042<br>(0.0943) | 0.0565***<br>(0.0176) | 0.0888***<br>(0.0212) | 0.0704***<br>(0.0034) | 0.0775***<br>(0.0037) |
| N  | 637,767            | 502,451            | 637,767               | 502,451               | 13,559,707            | 12,243,139            |
| r2   | 0.86               | 0.88               | 0.89                  | 0.92                  | 0.50                  | 0.56                  |
| destination-product-time                   | yes                | yes                | yes                   | yes                   | yes                   | yes                   |
| firm-time                                  | yes                | -                  | yes                   | -                     | yes                   | -                     |
| Firm-destination                           | yes                | -                  | yes                   | -                     | yes                   | -                     |
| Firm-product                               | yes                | -                  | yes                   | -                     | yes                   | -                     |
| firm-product-time                          | no                 | yes                | no                    | yes                   | no                    | yes                   |
| firm-destination-time                      | no                 | yes                | no                    | yes                   | no                    | yes                   |

Notes: All continuous variables are in logarithm.

Firm-time clustered standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Effect by sectors

|   | $lq_{fjkt}$          |                       | $luv_{fjkt}$          |                       | $X_{fjkt}$            |                       |
|---|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|   | (1)                  | (2)                   | (3)                   | (4)                   | (5)                   | (6)                   |
| $GI_{fkt}$                                  | 0.1908<br>(0.6674)   |                       | 0.1187<br>(0.1549)    |                       | 0.0053<br>(0.0288)    |                       |
| $GI_{fkt} \times Agr_{jkt} \times Cheese_k$ | 0.3848*<br>(0.2016)  | 0.4799*<br>(0.2741)   | 0.2339***<br>(0.0790) | 0.2269**<br>(0.1059)  | 0.0381***<br>(0.0074) | 0.0474***<br>(0.0086) |
| $GI_{fkt} \times Agr_{jkt} \times Meat_k$   | -0.2215<br>(0.3285)  | 0.4204<br>(0.9984)    | 0.0204<br>(0.0923)    | -0.2146<br>(0.4386)   | -0.0063<br>(0.0055)   | -0.0055<br>(0.0064)   |
| $GI_{fkt} \times Agr_{jkt} \times Other_k$  | -1.2625*<br>(0.7035) | 1.1903<br>(1.6109)    | 0.2791<br>(0.1958)    | -0.1518<br>(0.5599)   | 0.0089<br>(0.0139)    | 0.0010<br>(0.0190)    |
| $GI_{fkt} \times EU_j \times Cheese_k$      | 0.1969<br>(0.1273)   | 0.2309*<br>(0.1387)   | -0.0014<br>(0.0230)   | -0.0011<br>(0.0249)   | 0.1067***<br>(0.0081) | 0.1123***<br>(0.0085) |
| $GI_{fkt} \times EU_j \times Meat_k$        | -0.0906<br>(0.0958)  | -0.3227**<br>(0.1284) | 0.0809***<br>(0.0282) | 0.1563***<br>(0.0332) | 0.0527***<br>(0.0038) | 0.0578***<br>(0.0040) |
| $GI_{fkt} \times EU_j \times Other_k$       | 0.0689<br>(0.1895)   | 0.0071<br>(0.2617)    | 0.1888***<br>(0.0570) | 0.3443***<br>(0.0940) | 0.1013***<br>(0.0112) | 0.1164***<br>(0.0122) |
| N   | 637,767              | 502,451               | 637,767               | 502,451               | 13,559,707            | 12,243,139            |
| r2  | 0.86                 | 0.88                  | 0.89                  | 0.92                  | 0.50                  | 0.56                  |
| destination-product-time                    | yes                  | yes                   | yes                   | yes                   | yes                   | yes                   |
| firm-time                                   | yes                  | -                     | yes                   | -                     | yes                   | -                     |
| Firm-destination                            | yes                  | -                     | yes                   | -                     | yes                   | -                     |
| Firm-product                                | yes                  | -                     | yes                   | -                     | yes                   | -                     |
| firm-product-time                           | no                   | yes                   | no                    | yes                   | no                    | yes                   |
| firm-destination-time                       | no                   | yes                   | no                    | yes                   | no                    | yes                   |

Notes: All continuous variables are in logarithm.

Firm-time clustered standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Effect by kind of GI

|                                    | $lq_{fjkt}$        |                     | $luv_{fjkt}$          |                       | $X_{fjkt}$            |                       |
|------------------------------------|--------------------|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                                    | (1)                | (2)                 | (3)                   | (4)                   | (5)                   | (6)                   |
| $PGI_{fkt}$                        | 0.1933<br>(0.6494) |                     | 0.1584<br>(0.1606)    |                       | 0.0171<br>(0.0294)    |                       |
| $PDO_{fkt} \times Agreement_{jkt}$ | 0.1802<br>(0.2053) | 0.3990<br>(0.2967)  | 0.2034**<br>(0.0826)  | 0.1589<br>(0.1212)    | 0.0305***<br>(0.0070) | 0.0402***<br>(0.0086) |
| $PGI_{fkt} \times Agreement_{jkt}$ | 0.0550<br>(0.3001) | 0.4332<br>(0.6170)  | 0.1525*<br>(0.0843)   | 0.4523**<br>(0.2017)  | -0.0026<br>(0.0053)   | -0.0019<br>(0.0062)   |
| $PDO_{fkt} \times EU_j$            | 0.0287<br>(0.1312) | 0.0890<br>(0.1457)  | 0.0202<br>(0.0238)    | 0.0220<br>(0.0261)    | 0.0875***<br>(0.0070) | 0.0968***<br>(0.0076) |
| $PGI_{fkt} \times EU_j$            | 0.0613<br>(0.0805) | -0.0752<br>(0.1084) | 0.0792***<br>(0.0229) | 0.1507***<br>(0.0294) | 0.0629***<br>(0.0037) | 0.0683***<br>(0.0039) |
| N                                  | 637,767            | 502,451             | 637,767               | 502,451               | 13,559,707            | 12,243,139            |
| r2                                 | 0.86               | 0.88                | 0.89                  | 0.92                  | 0.50                  | 0.56                  |
| destination-product-time           | yes                | yes                 | yes                   | yes                   | yes                   | yes                   |
| firm-time                          | yes                | -                   | yes                   | -                     | yes                   | -                     |
| Firm-destination                   | yes                | -                   | yes                   | -                     | yes                   | -                     |
| Firm-product                       | yes                | -                   | yes                   | -                     | yes                   | -                     |
| firm-product-time                  | no                 | yes                 | no                    | yes                   | no                    | yes                   |
| firm-destination-time              | no                 | yes                 | no                    | yes                   | no                    | yes                   |

Notes: All continuous variables are in logarithm.

Firm-time clustered standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Effect by agreement (1)

|   | $lq_{fjkt}$          |                        | $luv_{fjkt}$          |                       | $X_{fjkt}$             |                        |
|---|----------------------|------------------------|-----------------------|-----------------------|------------------------|------------------------|
|   | (1)                  | (2)                    | (3)                   | (4)                   | (5)                    | (6)                    |
| $Gl_{fkt}$                                    | 0.1967<br>(0.6480)   |                        | 0.1667<br>(0.1619)    |                       | 0.0148<br>(0.0294)     |                        |
| $Gl_{fkt} \times \text{Latin Am. agr.}_{jkt}$ | 0.3712<br>(1.0541)   | -3.0243**<br>(1.2386)  | 0.6046***<br>(0.1447) | 0.5822***<br>(0.1900) | -0.0336***<br>(0.0069) | -0.0432***<br>(0.0088) |
| $Gl_{fkt} \times \text{Canada agr.}_{jkt}$    | 0.4019<br>(0.2812)   | 0.7447**<br>(0.3761)   | 0.3407***<br>(0.1151) | 0.3322**<br>(0.1558)  | 0.0716***<br>(0.0126)  | 0.0926***<br>(0.0138)  |
| $Gl_{fkt} \times \text{SACU agr.}_{jkt}$      | 0.9006<br>(0.5641)   | 13.5401***<br>(2.9454) | -0.3989<br>(0.2606)   | -2.0354<br>(1.8638)   | -0.0207**<br>(0.0084)  | -0.0234**<br>(0.0104)  |
| $Gl_{fkt} \times \text{Japan agr.}_{jkt}$     | -0.2701<br>(0.3771)  | -0.4442<br>(0.6846)    | 0.1195<br>(0.1038)    | -0.0280<br>(0.2374)   | 0.0884***<br>(0.0206)  | 0.1146***<br>(0.0246)  |
| $Gl_{fkt} \times \text{Singapore agr.}_{jkt}$ | 1.4212**<br>(0.6638) | 2.0158***<br>(0.5503)  | 0.0149<br>(0.2237)    | -0.1428<br>(0.2659)   | 0.0124<br>(0.0261)     | 0.0256<br>(0.0334)     |
| $Gl_{fkt} \times \text{European agr.}_{jkt}$  | 0.1515<br>(0.3742)   | -0.1359<br>(0.4304)    | 0.0278<br>(0.0641)    | 0.0423<br>(0.0712)    | 0.0004<br>(0.0065)     | -0.0023<br>(0.0082)    |
| $Gl_{fkt} \times \text{EU}_j$                 | 0.0518<br>(0.0748)   | 0.0031<br>(0.0948)     | 0.0564***<br>(0.0176) | 0.0873***<br>(0.0212) | 0.0705***<br>(0.0034)  | 0.0777***<br>(0.0037)  |
| N   | 637,767              | 502,451                | 637,767               | 502,451               | 13,559,707             | 12,243,139             |
| r2  | 0.86                 | 0.88                   | 0.89                  | 0.92                  | 0.50                   | 0.56                   |
| destination-product-time                      | yes                  | yes                    | yes                   | yes                   | yes                    | yes                    |
| firm-time                                     | yes                  | -                      | yes                   | -                     | yes                    | -                      |
| Firm-destination                              | yes                  | -                      | yes                   | -                     | yes                    | -                      |
| Firm-product                                  | yes                  | -                      | yes                   | -                     | yes                    | -                      |
| firm-product-time                             | no                   | yes                    | no                    | yes                   | no                     | yes                    |
| firm-destination-time                         | no                   | yes                    | no                    | yes                   | no                     | yes                    |

Notes: All continuous variables are in logarithm. Firm-time clustered standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Effects by agreement (2)

- The heterogeneous impact of agreements may be due to :
    - The list of GIs protected within the agreement
    - The protection/monitoring of GIs in the destination market after the agreement
    - The knowledge/taste of consumers for GIs and quality in general
- ⇒ Distinguish agreements with *ex officio* protection of GIs from the others
- ⇒ Compute the quality ladder and the average quality for each market  $jk$  following *Khandelwal (2013)* to account for prior product differentiation and consumer taste for quality



# ex officio protection of GIs

|  | ln $q_{fjkt}$      |                    | ln $v_{fjkt}$         |                       | X $_{fjkt}$           |                       |
|--|--------------------|--------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|  | (1)                | (2)                | (3)                   | (4)                   | (5)                   | (6)                   |
| GI $_{fkt}$                            | 0.1981<br>(0.6479) |                    | 0.1670<br>(0.1619)    |                       |                       |                       |
| GI $_{fkt} \times$ Ex Officio $_{jkt}$ | 0.1602<br>(0.2255) | 0.4898<br>(0.3413) | 0.2424***<br>(0.0778) | 0.2612*<br>(0.1333)   | 0.0285***<br>(0.0066) | 0.0423***<br>(0.0078) |
| GI $_{fkt} \times$ Other $_{jkt}$      | 0.0813<br>(0.2359) | 0.0979<br>(0.3930) | 0.0482<br>(0.0708)    | 0.1774**<br>(0.0843)  | -0.0059<br>(0.0044)   | -0.0079<br>(0.0053)   |
| GI $_{fkt} \times$ EU $_j$             | 0.0480<br>(0.0745) | 0.0049<br>(0.0943) | 0.0556***<br>(0.0176) | 0.0886***<br>(0.0212) | 0.0704***<br>(0.0034) | 0.0775***<br>(0.0037) |
| N                                      | 637,767            | 502,451            | 637,767               | 502,451               | 13,559,707            | 12,243,139            |
| r <sup>2</sup>                         | 0.86               | 0.88               | 0.89                  | 0.92                  | 0.50                  | 0.56                  |
| destination-product-time               | yes                | yes                | yes                   | yes                   | yes                   | yes                   |
| firm-time                              | yes                | -                  | yes                   | -                     | yes                   | -                     |
| Firm-destination                       | yes                | -                  | yes                   | -                     | yes                   | -                     |
| Firm-product                           | yes                | -                  | yes                   | -                     | yes                   | -                     |
| firm-product-time                      | no                 | yes                | no                    | yes                   | no                    | yes                   |
| firm-destination-time                  | no                 | yes                | no                    | yes                   | no                    | yes                   |

Notes: All continuous variables are in logarithm. Firm-time clustered standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## By quality ladder of markets

|   | Iq <sub>fjkt</sub>    |                      | Iuv <sub>fjkt</sub>   |                       | X <sub>fjkt</sub>     |                       |
|---|-----------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|   | (1)                   | (2)                  | (3)                   | (4)                   | (5)                   | (6)                   |
| GI <sub>fkt</sub> × Low ladder <sub>jk</sub>                      | 0.2212<br>(0.6392)    |                      | 0.1485<br>(0.1656)    |                       | 0.0221<br>(0.0290)    |                       |
| GI <sub>fkt</sub> × Med ladder <sub>jk</sub>                      | 0.7086<br>(0.6392)    |                      | 0.1323<br>(0.1645)    |                       | 0.0381<br>(0.0291)    |                       |
| GI <sub>fkt</sub> × High ladder <sub>jk</sub>                     | 0.0579<br>(0.6391)    |                      | 0.1760<br>(0.1627)    |                       | -0.0041<br>(0.0290)   |                       |
| GI <sub>fkt</sub> × Agr. <sub>jkt</sub> × Low ladd <sub>jk</sub>  | 0.0571<br>(0.3337)    | -0.0194<br>(0.5269)  | 0.0101<br>(0.1413)    | 0.0497<br>(0.1840)    | -0.0123<br>(0.0081)   | 0.0014<br>(0.0089)    |
| GI <sub>fkt</sub> × Agr. <sub>jkt</sub> × Med ladd <sub>jk</sub>  | 0.1790<br>(0.2956)    | 0.9492**<br>(0.4125) | 0.3405***<br>(0.1199) | 0.3172*<br>(0.1778)   | 0.0106<br>(0.0111)    | 0.0511***<br>(0.0132) |
| GI <sub>fkt</sub> × Agr. <sub>jkt</sub> × High ladd <sub>jk</sub> | 0.0251<br>(0.2343)    | -0.0072<br>(0.3063)  | 0.1290*<br>(0.0676)   | 0.2320**<br>(0.1146)  | 0.0096**<br>(0.0046)  | 0.0065<br>(0.0054)    |
| GI <sub>fkt</sub> × EU <sub>j</sub> × Low ladd <sub>jk</sub>      | 0.1746*<br>(0.1036)   | 0.1007<br>(0.1066)   | 0.0413<br>(0.0301)    | 0.0542**<br>(0.0239)  | 0.0682***<br>(0.0047) | 0.0954***<br>(0.0048) |
| GI <sub>fkt</sub> × EU <sub>j</sub> × Med ladd <sub>jk</sub>      | -0.2818**<br>(0.1107) | 0.0906<br>(0.1009)   | 0.0783***<br>(0.0251) | 0.0839***<br>(0.0226) | 0.0693***<br>(0.0052) | 0.1089***<br>(0.0051) |
| GI <sub>fkt</sub> × EU <sub>j</sub> × High ladd <sub>jk</sub>     | 0.1348<br>(0.0992)    | -0.1653<br>(0.1091)  | 0.0514**<br>(0.0247)  | 0.1113***<br>(0.0231) | 0.0523***<br>(0.0033) | 0.0518***<br>(0.0034) |
| N   | 637,767               | 502,451              | 637,767               | 502,451               | 13,559,707            | 12,243,139            |
| r2  | 0.86                  | 0.88                 | 0.89                  | 0.92                  | 0.50                  | 0.56                  |

Notes: All continuous variables are in logarithm. Same structure of fixed effects than previous tables.

Firm-time clustered standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## By average quality of markets

|   | $lv_{fjkt}$            |                     | $luv_{fjkt}$          |                       | $X_{fjkt}$            |                       |
|---|------------------------|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|   | (1)                    | (2)                 | (3)                   | (4)                   | (5)                   | (6)                   |
| $GI_{fkt} \times \text{Low quality}_{jkt}$                        | -0.0165<br>(0.6250)    |                     | 0.1609<br>(0.1631)    |                       | 0.0218<br>(0.0289)    |                       |
| $GI_{fkt} \times \text{Med quality}_{jkt}$                        | 0.3685<br>(0.6227)     |                     | 0.1547<br>(0.1606)    |                       | 0.0340<br>(0.0289)    |                       |
| $GI_{fkt} \times \text{High quality}_{jkt}$                       | -0.1455<br>(0.6268)    |                     | 0.1870<br>(0.1620)    |                       | -0.0099<br>(0.0289)   |                       |
| $GI_{fkt} \times \text{Agr.}_{jkt} \times \text{Low qual}_{jkt}$  | 0.0756<br>(0.3464)     | -0.1587<br>(0.5032) | 0.0121<br>(0.1510)    | 0.0622<br>(0.2132)    | -0.0175**<br>(0.0082) | 0.0016<br>(0.0090)    |
| $GI_{fkt} \times \text{Agr.}_{jkt} \times \text{Med qual}_{jkt}$  | 0.0677<br>(0.2957)     | 0.7628*<br>(0.4001) | 0.2987***<br>(0.1135) | 0.2569<br>(0.1643)    | 0.0270**<br>(0.0130)  | 0.0727***<br>(0.0151) |
| $GI_{fkt} \times \text{Agr.}_{jkt} \times \text{high qual}_{jkt}$ | 0.1000<br>(0.2349)     | 0.0870<br>(0.3155)  | 0.1529**<br>(0.0670)  | 0.2950**<br>(0.1159)  | 0.0084*<br>(0.0046)   | 0.0041<br>(0.0053)    |
| $GI_{fkt} \times \text{EU}_j \times \text{Low qual}_{jkt}$        | 0.2478**<br>(0.1004)   | 0.1892*<br>(0.1034) | 0.0389<br>(0.0289)    | 0.0448*<br>(0.0247)   | 0.0757***<br>(0.0048) | 0.1080***<br>(0.0049) |
| $GI_{fkt} \times \text{EU}_j \times \text{Med qual}_{jkt}$        | -0.3418***<br>(0.1122) | -0.0677<br>(0.1049) | 0.0858***<br>(0.0271) | 0.1045***<br>(0.0228) | 0.0604***<br>(0.0053) | 0.1006***<br>(0.0052) |
| $GI_{fkt} \times \text{EU}_j \times \text{High qual}_{jkt}$       | 0.1994*<br>(0.1021)    | -0.0324<br>(0.1098) | 0.0423*<br>(0.0244)   | 0.0962***<br>(0.0234) | 0.0505***<br>(0.0032) | 0.0499***<br>(0.0034) |
| N   | 637,767                | 502,451             | 637,767               | 502,451               | 13,559,707            | 12,243,139            |
| r2  | 0.86                   | 0.88                | 0.89                  | 0.92                  | 0.50                  | 0.56                  |

Notes: All continuous variables are in logarithm. Same structure of fixed effects than previous tables.

Firm-time clustered standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Robustness checks

- The inclusion of GIs in RTA lists is not exogeneous
    - Large companies can lobby the European Commission to have their GIs protected (*Huysmans 2020*)
    - The European Union may want to protect GIs which have export potential to specific destination
- ⇒ We found no pre-trend in export probability, quantities or unit values
- ⇒ Our results are robust to the exclusion of big firms (more than 1000 employees)
- ⇒ Other robustness checks include restriction to core products and alternative definition of products

## Robustness checks

|  | (1)                   | $lq_{fjkt}$<br>(2)  | (3)                 | (4)                 | $luv_{fjkt}$<br>(5)   | (6)                   |
|--|-----------------------|---------------------|---------------------|---------------------|-----------------------|-----------------------|
| productivity <sub>ft</sub>                 | 0.0625***<br>(0.0125) |                     |                     | 0.0009<br>(0.0051)  |                       |                       |
| $Gl_{fkt}$                                 | 0.7510***<br>(0.0492) | 0.2005<br>(0.6477)  |                     | 0.0152<br>(0.0113)  | 0.1693<br>(0.1623)    |                       |
| $Gl_{fkt} \times \text{Agreement}_{jkt+1}$ | 0.0546<br>(0.2644)    | -0.1364<br>(0.2530) | -0.2835<br>(0.4823) | 0.0574<br>(0.0684)  | 0.0745<br>(0.0786)    | -0.0153<br>(0.0907)   |
| $Gl_{fkt} \times EU_j$                     | 0.0156<br>(0.0534)    | 0.0416<br>(0.0748)  | -0.0144<br>(0.0941) | -0.0138<br>(0.0119) | 0.0491***<br>(0.0174) | 0.0784***<br>(0.0211) |
| size 2 <sub>ft</sub>                       | 0.0705**<br>(0.0291)  |                     |                     | -0.0131<br>(0.0108) |                       |                       |
| size 3 <sub>ft</sub>                       | 0.1557***<br>(0.0407) |                     |                     | -0.0036<br>(0.0149) |                       |                       |
| size 4 <sub>ft</sub>                       | 0.2631***<br>(0.0527) |                     |                     | -0.0057<br>(0.0193) |                       |                       |
| N  | 769,443               | 637,767             | 502,451             | 769,443             | 637,767               | 502,451               |
| r2   | 0.59                  | 0.86                | 0.88                | 0.76                | 0.89                  | 0.92                  |
| destination-product-time                   | yes                   | yes                 | yes                 | yes                 | yes                   | yes                   |
| Firm                                       | yes                   | -                   | -                   | yes                 | -                     | -                     |
| firm-time                                  | no                    | yes                 | -                   | no                  | yes                   | -                     |
| Firm-destination                           | no                    | yes                 | -                   | no                  | yes                   | -                     |
| Firm-product                               | no                    | yes                 | -                   | no                  | yes                   | -                     |
| firm-product-time                          | no                    | no                  | yes                 | no                  | no                    | yes                   |
| firm-destination-time                      | no                    | no                  | yes                 | no                  | no                    | yes                   |

Notes: All continuous variables are in logarithm.

Firm-time clustered standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Conclusion (1)

- The recognition of GIs in trade agreements allows firms to reach **new markets** and to sell at **higher prices** on average
- This outcome is driven by **cheese** products (the **quantity** of which is also affected by agreements)
- **Heterogeneous** effects according to the agreements :
  - at the extensive margin only on markets with GI monitoring
  - only on markets with higher quality differentiation
  - higher effect on markets with high quality in average
  - higher effect in Canada and Japan

## Conclusion (2)

- Potential mechanisms :
    - Reduced competition for French GIs
    - Enhanced valuation of GIs by consumers
    - Entry of new firms on the markets
  - In favor of the inclusion of lists of GIs in trade agreements, but :
    - Need of controls / monitoring
    - Only when consumers value GIs in partners' countries
    - Differences according to GIs and products
- ⇒ Issue of diffusion of European norms through preferential trade agreements
- ⇒ On going negotiations with Australia and New Zealand