

INFRINGEMENT OF PROTECTED GEOGRAPHICAL INDICATIONS FOR WINE, SPIRITS, AGRICULTURAL PRODUCTS AND FOODSTUFFS IN THE EUROPEAN UNION





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Contents

AB	BREVIATION LIST	
EXI	ECUTIVE SUMMARY	
MA		
1.	SCOPE AND DEFINITION OF GI	
2.	ECONOMIC FUNCTIONS OF GIS	
3.	DATA	
4.	PREMIUM DATA	21
5.	METHODOLOGY	23
6.	GI PRODUCT MARKET	
7.	INFRINGEMENT ESTIMATION RESULTS	
8.	CONCLUSIONS AND DIRECTIONS FOR FURTHER RESEARCH	
9.	REFERENCES	



ABBREVIATION LIST

INFRINGEMENT OF PROTECTED GEOGRAPHICAL INDICATIONS FOR WINE, SPIRITS, AGRICULTURAL PRODUCTS AND FOODSTUFFS IN THE EUROPEAN UNION

DG AGRI	European Commission's Directorate-General for Agriculture and Rural Development
DG SANTE	European Commission's Directorate-General for Health and Food Safety
DG TAXUD	European Commission's Directorate-General for Taxation and Customs Union
EU	European Union
EU 28	All 28 Member States of the European Union
EUIPO	European Union Intellectual Property Office (formerly OHIM, Office for Harmonization in the Internal Market)
FEVS	FEVS: Fédération des Exportateurs de Vins & Spiritueux de France
FVO	Food and Veterinary Office, European Commission ¹
GI	Geographical Indication
IP	Intellectual Property
OECD	Organization for Economic Cooperation and Development
PDO	Protected Designation of Origin
PGI	Protected Geographical Indication
TSG	Traditional Specialty Guaranteed
TRIPS	TRIPS: Trade-Related Aspects of Intellectual Property Rights
WTO	WTO: World Trade Organization

- As from 2016, this name is no longer in use. The relevant activities are carried out by DG SANTE.



Executive Summary

INFRINGEMENT OF PROTECTED GEOGRAPHICAL INDICATIONS FOR WINE, SPIRITS, AGRICULTURAL PRODUCTS AND FOODSTUFFS IN THE EUROPEAN UNION

In the European Union (EU), Geographical Indications (GIs) for wine, spirits, agricultural products and foodstuffs are protected as *sui generis* intellectual property rights that act as certification that certain products possess particular qualities, characteristics or reputation essentially attributable to their geographical origin and method of production.

The main objective of this study is to assess the size and value of the EU GI product market and the proportion of products in that market that infringe GIs protected in the EU. The impact of these infringements on EU consumers is also estimated.

To achieve these objectives, estimates of Member States GI product consumption are first produced, through the identification of domestic sales and imports. Next, the size and the extent of infringement of GIs in each Member State are estimated, through the use of Member State consumption shares and infringement sampling data and lastly, examination of the impact on consumers, through the calculation of premiums paid for GI products over and above that of equivalent non-GI products, is assessed.

Nearly 32% of EU GI products are sold in France and more than 20% of EU GI products are exported to third countries.



Figure 1: Consumption of GI products per Member State (by value)

Source: AND International report for DG AGRI (2012).

Consumption of GI products per capita varies significantly across the EU. For instance consumption per capita in France and the Netherlands, countries with similar purchasing power, stood at 234€² and 34€ respectively in 2010, whilst in Portugal the level stood at 137€, more than half of which is imported.

Consumption activity depends on GI "culture" and attachment to regional products in different countries and, for producer countries, consumption tends to be concentrated on their own products. Little evidence of infringing sales in countries with low GI product consumption was found.

- These amounts are expressed at producer prices, i.e. they do not include the wholesale and retail trade margins.



Main Findings

INFRINGEMENT OF PROTECTED GEOGRAPHICAL INDICATIONS FOR WINE, SPIRITS, AGRICULTURAL PRODUCTS AND FOODSTUFFS IN THE EUROPEAN UNION

The value of GI infringing products in the EU was approximately € 4.3 billion in 2014, which is approximately 9.0% of the EU GI product market. Consumer loss, defined as the price premium unjustly paid by consumers in the belief that they are buying a genuine GI product, is estimated at up to €2.3 billion, representing approximately 4.8% of total GI product purchases.

Infringement rates vary considerably by GI product:

12.7%	SPIRITS
11.5%	FRUITS, VEGETABLES AND CEREALS
11.0%	FRESH MEAT AND MEAT PRODUCTS
10.6%	CHEESES
8.6%	WINES
0.1%	BEERS

These estimates are constructed using data from 17 Member States, representing approximately 82% of the EU GI product market. Approximately 100,000 products were checked for GI compliance in shops, markets, vending machines, bars, restaurants, food sold on trains, ships and other transportation, and products sold on the Internet.



www.euipo.europa.eu |7

1. Scope and Definition of GI

INFRINGEMENT OF PROTECTED GEOGRAPHICAL INDICATIONS FOR WINE, SPIRITS, AGRICULTURAL PRODUCTS AND FOODSTUFFS IN THE EUROPEAN UNION

The main objective of this study is to assess the size and value of the EU GI product³ market (for wine, spirits, agricultural products and foodstuffs) and the proportion of products that infringe GIs protected in the EU as *sui generis* intellectual property rights. The associated impact of these infringements on EU consumers is also estimated. Impacts arising from the lack of protection of GIs in third countries are out of scope.

A GI is an indication (usually a name) used on products that have a specific geographical origin and possess a given quality, reputation or other characteristic that is essentially attributable to that origin.

For example, "Bordeaux" is a GI for wine originating from the region of Bordeaux where it has been produced since the eighth century. Other examples of GIs include "Champagne", "Scotch Whisky", "Parmigiano Reggiano", "Prosciutto di Parma" or "Bayerisches Bier".

Article 22 of the World Trade Organization's (WTO's) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement⁴) (1994) requires its signatory parties to protect ^{4-https://www.} Gls. For wine, spirits, most agricultural products and foodstuffs, EU legislation has created sui generis IP rights as follows:

Protected Designation of Origin (PDO) and Protected Geographical Indication (PGI) quality schemes defined in:

Regulation (EU) No 1151/2012 (agricultural products and foodstuffs); Regulation (EU) No 1308/2013 (wines).

Geographical Indication (GI) schemes protected by:

■ Regulation (EC) No 110/2008 (spirit drinks); Regulation (EU) No 251/2014 (aromatised wines).

The categories of products covered by the EU GI schemes are:

Wines and aromatised wines - Regulations (EU) No 1308/2013 and 251/2014 Spirits - Regulation (EC) No 110/2008 Agricultural products and foodstuffs - Regulation (EU) No 1151/2012

3 - "GI product" should be understood in this paper as referring to the product (wine spirits, agricultural products and foodstuffs) using a GI protected in the EU as sui generis intellectual property right.

wto.org/english/ docs_e/legal_e/27trips_04b_e.htm



- 1.1 Fresh meat (and offal)
- 1.2 Meat products (cooked, salted, smoked, etc.)
- 1.3 Cheeses
- 1.4 Other products of animal origin (eggs, honey, various dairy products except butter, etc.)
- 1.5 Oils and fats (butter, margarine, etc.)
- 1.6 Fruit, vegetables and cereals fresh or processed
- 1.7 Fresh fish, molluscs, and crustaceans and products derived therefrom
- 1.8 other products of Annex I of the Treaty (spices etc.)
- 2.1 Beer
- 2.2 Chocolate and derived products
- 2.3 Bread, pastry, cakes, confectionery, biscuits and other baker's wares
- 2.4 Beverages made from plant extracts
- 2.5 Pasta
- 2.6 Salt
- 2.7 Natural gums and resins
- 2.8 Mustard paste
- 2.9 Hay
- 2.10 Essential oils
- 2.11 Cork
- 2.12 Cochineal
- 2.13 Flowers and ornamental plants
- 2.14 Cotton
- 2.15 Wool
- 2.16 Wicker
- 2.17 Scutched flax
- 2.18 Leather
- 2.19 Fur
- 2.20 Feather.

Protection of GIs as a *sui generis* IP right can be granted at EU level for GI products (wine, spirits, agricultural products and foodstuffs) originating from third countries. The above mentioned Regulations provide a structure for such a registration procedure, although some third country names become protected within the EU as a consequence of bilateral or multilateral agreements with the EU. Some well-known third country GI names that successfully followed the EU registration procedures include, Café de Colombia, Napa Valley (USA), Vale dos Vinhedos (Brazil), Darjeeling [tea] (India) and Pisco (Peru). Other third country GIs are protected in some EU Member States through bilateral or multilateral agreements with third countries (e.g. Lisbon Agreement).

The list of nearly 3,400 EU **registered** GI names can be accessed via four databases maintained by the European Commission: DOOR for foodstuffs, E BACCHUS for wines, E SPIRITS DRINKS for spirits, and the file of Aromatised Wines. The European Union Intellectual Property Office (EUIPO) consolidates this information in its "Current trademark practice" page⁵ which also includes GIs protected in accordance with bilateral agreements between the EU and third countries. The EUIPO database contains more than 4,800 **protected** GIs.

These names can be protected in the EU as *sui generis* IP rights via one of two routes. The first, PDO, is more demanding and covers products which are produced, processed and prepared in a given geographical area whose quality or characteristics are essentially or exclusively due to a particular geographical environment with its inherent natural and human factors. The second route is via PGI⁶, which covers products in which at least one of the stages of production, processing or preparation takes place in the area and whose quality, reputation or other characteristics are essentially attributable to its geographical origin.

Protected GIs in the EU usually carry one of the following symbols⁷:

Figure 2: EU GI logos





Protected Designation of Origin (PDO)

Protected Geographical Indication (PGI)

PDO and PGI are defined in EU legislation as quality schemes together with other non-GI quality schemes, such as Traditional Specialty Guaranteed (TSG) and quality terms such as Mountain Product and Island Farming.

- 5 See "Tools & documents" in https:// euipo.europa.eu/ ohimportal/en/trademark-guidelines
- 6 In the case of wines conditions are stricter: at least 85 % of the grapes used for production of PGI wine must come exclusively from this geographical area and its production must take place in this geographical area.
- 7 These labels are mandatory for foodstuffs but voluntary for wines.



8 - At the same time, their purpose is different. See for instance, with regard to EU collective trademarks, a recent decision by the EU General Court: "[..] However, while it is true — as the applicant rightly argues — that the essential function of a geographical indication is to guarantee to consumers the geographical origin of goods and the special qualities inherent in them (see, to that effect, judgment of 29 March 2011 in Anheuser-Busch v Budějovický Budvar, C 96/09 P, ECR, EU:C:2011:189, paragraph 147), the same cannot be said of the essential function of a Community collective mark. The fact that the latter consists of an indication which may serve to designate the geographical origin of the goods covered does not affect the essential function of all collective marks as stated in Article 66(1) of Regulation No 207/2009, which is to distinguish the goods or services of the members of the association which is the proprietor of that mark from those of other associations or undertakings..."

Only PDO and PGI are EU GI schemes and therefore within the scope of this study. In the case of spirit drinks and aromatised wines, the legislation does not provide for protected designation of origin (PDO); only the second route is available to those products. Protected GIs for spirit drinks and aromatised wines are also within the scope of this study.

There are three main approaches to protect a GI:

- Gls as *sui generis* IP rights;
- EU or national collective marks or national certification/guarantee marks;
- By relying on the enforcement of unfair competition laws.

These approaches are designed to address different questions, including for example, conditions for protection versus the scope of protection.

GIs, *as sui generis* IP rights, and collective or certification marks share some common features⁸. However, there are important differences, including the proof of an essential quality link to a geographical area required for protecting a GI as a *as sui generis* IP right, and the scope of protection which is wider for EU GI schemes as these protect against imitation, evocation or translation⁹. GIs also protect a name against becoming generic.

Approaches for protection can be used in combination (for example, a GI wine can also be protected by a trade mark). Different protection strategies are followed in different countries so that comparable quality and traditional products, for example, beer, may rely on EU GI schemes in Germany but not in Belgium (although a small number of Belgian beers use the TSG scheme).

Type of infringements

This study considers the scope of protection of GIs as defined in EU law, and therefore includes not only the false or misleading use of a protected GI but also the marketing of GI products that do not actually originate in the place indicated by the GI in question.

In legal terms infringement is considered as any unauthorised use under Article 13 "Protection" of Regulation (EU) No 1151/2012 (and similar provisions in the other Regulations). Specifically, infringements, as defined in Article 13(1) of the Regulation, include:

(a) any direct or indirect commercial use of a registered name in respect of products ⁹-This is provided for in not covered by the registration where those products are comparable to the products registered under that name or where using the name exploits the reputation of the protected name, including when those products are used as an ingredient;

(b) any misuse, imitation or evocation, even if the true origin of the products or services is indicated or if the protected name is translated or accompanied by an expression such as 'style', 'type', 'method', 'as produced in', 'imitation' or similar, including when those products are used as an ingredient;

(c) any other false or misleading indication as to the provenance, origin, nature or essential qualities of the product that is used on the inner or outer packaging, advertising material or documents relating to the product concerned, and the packing of the product in a container liable to convey a false impression as to its origin;

(d) any other practice liable to mislead the consumer as to the true origin of the product.

These infringements are also relevant when the products are used as ingredients. Infringements committed either by non-certified or certified producers or retailers are included in the scope.

Market and country of origin of the GI

This study examines infringements in the EU market of any protected GI as a sui generis IP right for wine, spirits, agricultural products and foodstuffs, whether coming from an EU Member State or a third country. In the case of third countries, both GIs protected in the EU through direct registration and those protected as a consequence of international agreements, either bilateral or multilateral, are included.

the TRIPS Agreement for GI wines and in the EU legislation for all GIs



2. Economic functions of Gls

INFRINGEMENT OF PROTECTED GEOGRAPHICAL INDICATIONS FOR WINE, SPIRITS, AGRICULTURAL PRODUCTS AND FOODSTUFFS IN THE EUROPEAN UNION

Trade marks act as signalling devices and through their use, consumers are helped to deal with issues of information asymmetry . In a similar way, GIs can act as signalling devices linking a product, its unique characteristics and its area of geographical origin with associated characteristics (geological, cultural and or historically established handicraft skills). Agricultural and mineral based GI products are "land-based" and reflect strong historical and symbolic links between place and product (Tregear et al., 1998; Bérard and Marchenay, 1996; Moran, 1993a). It is this collective reputation that is represented through the indication. The economic rationale for protecting GIs is based on the economics of information and reputation.

As pointed out in OECD (2000), the market for agricultural products features three categories of goods: search goods, experience goods and credence goods. For search goods, the consumer can ascertain the quality of an item before buying it and information asymmetry is therefore not a problem. For experience goods, the consumer can ascertain quality only after buying the item. With credence goods, quality cannot be fully determined, even after the item has been used. In the latter two cases, asymmetric information places the consumer in a position of weakness so that he cannot always optimise his choices. Akerlof (1970) showed that in such a market, where only producers know the quality differences, all goods sell at the same price and as a consequence, high-quality goods are driven out of the marketplace.

One solution is to enable the consumer to obtain more information. This can be done in various ways. For example, a private producer, by investing in building brands (and protecting them with IP rights such as trade marks) signals to buyers that its products are of high quality.

Information provision can also be facilitated by the government, for example through labelling requirements, certification schemes and through protection of IP rights. Gls are one of the mechanisms through which quality of a product can be signalled to the consumer. As a result, consumers are prepared to pay a premium price for such products, compared to similar products of a generic nature.

There are important differences between trade marks and GIs. Trade marks are distinctive signs identifying goods of an enterprise and thus not limited by any territorial link. In contrast, GIs are distinctive signs identifying goods with a particular quality as originating from a specific geographical area with quality or characteristics (inherent natural and human factors) that are essentially due to a particular geographical environment.

GIs are not limited to any particular enterprise within the demarcated geographical area that qualifies for use of the indication. From an economic perspective GIs are seen as a form of collective exclusive right.

One of the guiding principles and objectives of Regulation (EU) No 1151/2012 (that covers agricultural GIs) is the promotion of rural development, defining GI and quality schemes that can "[...] contribute to and complement rural development policy as well as market and income support policies of the common agricultural policy (CAP). In particular, they may contribute to areas in which the farming sector is of greater economic importance and, especially, to disadvantaged areas [...]".

A number of research studies have revealed that agricultural GI products have contributed to rural development, although it has to be acknowledged that these impacts have not been uniform across products and regions. Studies include:

- Arfini F. & Zanetti C. M. (1997) studied the presence of reciprocal synergies between typical products and local development in the province of Parma (Italy) focusing on Parmiggiano Reggiano cheese and Parma raw ham. It was found that the presence and intensification of relations between the primary and secondary sector were, in the first fifty years of the century, the deciding factors of the economic development of the area.
- V. Hristos (2010) contributes to the debate over the impact of PDOs and PGIs by focusing on Ladotyri Mytilinis PDO, a cheese produced exclusively on Lesvos Island, Greece. According to the findings the impact of Ladotyri Mytilinis PDO cheese, on the various actors that construct its supply chain, is on the one hand very important for Lesvos island but on the other hand not radically different when compared to the impact of Graviera, a close substitute and non-PDO cheese, which is also produced in the area by the same actors.

Gls can also be a means for small local producers to enhance their reputations, thus enabling them to compete more effectively with larger corporations and to protect themselves against unfair competition or "copy-catting".



As discussed above, in a world of asymmetric information, reputation plays an important economic role of signalling a certain level of quality that consumers come to expect. As reputation standards are met and are communicated through distinctive signs, so the willingness of consumers to pay a premium increases. Akerlof, (1970). R. Vecchio & A. Annunziata (2011) investigated the ability of Italian consumers to recognize and distinguish food products protected by PDO and PGI. Their analysis showed that PDO and PGI logos are commonly the main purchasing motivation for shoppers with excellent knowledge of EU certification labels, while consumers with no such knowledge tended to base their decision to buy on the product's price, appearance and Italian origin.

A. Vakrou & D. Skuras (2002) employed a dichotomous choice model to identify the socioeconomic characteristics that influence Greek consumers' willingness to pay for an origin labelled wine.

The results indicated that wine consumers' willingness to pay varies according to social and demographic characteristics. It was found that non-quality wine consumers are willing to pay double the price of a bottle of normal table wine if the alternative provides for a guarantee of the place of origin of the wine. However, their decision is found to be mostly dependent upon education and affiliation with the place of origin.

From a variety of theoretical perspectives it has been suggested that GIs and the reputation embedded in them, are a "club good" (see Moran, 1993a; Arfini, 2000; Belletti, 2000; Benavente, 2010). To be qualified as a club good, a product must satisfy two conditions:

- Excludability (the specifications defining the GIs are the conditions that must be satisfied to allow a producer to use the indication);
- Non-rivalry (the enjoyment of the indication by one does not diminish the same for another).

Club goods share some features with public goods and consequently the same collective action problems:

• *Free-riding:* it occurs when those who benefit from resources, goods, or services do not pay for them. Free riding in GIs may occur when a producer does not invest in reputation, but benefits from the reputation of the others.

Prisoner's dilemma: This describes a situation where the lack of information or other factors impedes cooperative action between different agents. Consequently, each agent makes decisions that are suboptimal when compared to an outcome based on cooperative action. An example of the prisoner dilemma is the deviation from standard quality: a producer, trying to take advantage of the price premium, selling a cheaper product of inferior quality. This can lead to a situation where a suboptimal level of quality is produced in the industry and the consumers' willingness to pay a premium price decreases.

Gls face collective action problems. For example, the requirement for coherence and authenticity with respect to the product specifications which requires all firms in the supply chain, irrespective of their position, to behave in accordance with regulated codes. Opportunistic behaviour on the part of a single firm (i.e. the Prisoner's dilemma) can jeopardise the collective reputation of the indication. A variety of organisational and governance issues have to be resolved to achieve coherence within and across the supply chain. Effective enforcement with strong incentives is therefore key. Some commentators recommend the introduction of quasi-public institutions, representing the interest of firms at different stages of the supply chain, as a solution to these collective action problems (e.g. Barjolle and Sylvander, 2000; Albisu, 2002; Sylvander, 2002) but the administrative burden of such systems may offset their benefits.

GIs are understood by consumers to denote the origin and the quality of products and they have potentially positive implications for the protection of indigenous knowledge and as a means for generating livelihood and income. This potential, however, is constrained by a number of factors related to the limitations of GIs. For example, there is no protection against the misappropriation of knowledge embedded in an indication. Teuber (2009) investigated producers' motivations to establish a GI and consumers' expectations towards GI products by examining results from a German case study, of Hessian apple wine. The results indicate that the most important motivation to apply for a PGI is to protect the established reputation against misuse by competing producers in order to ensure the quality level of Hessian apple wine. However, in this particular case, it was found that the quality dimension is less important for consumers than the local economy support dimension and perceived authenticity of the product.



3. Data

INFRINGEMENT OF PROTECTED GEOGRAPHICAL INDICATIONS FOR WINE, SPIRITS, AGRICULTURAL PRODUCTS AND FOODSTUFFS IN THE EUROPEAN UNION

Data sources

A. Value of products using EU protected/registered Gls.

In 2012, the consulting firm AND International conducted a study for the European Commission's Directorate-General for Agriculture and Rural Development (DG AGRI) on the wholesale value of all GI products of EU origin. The study included detailed information on GI product volumes and prices, as well as equivalent generic product prices.

For the purposes of the present study, this data is useful for prioritising analytical efforts and for helping in the monetisation and weighting of results.

11 - The term "price premium" as used in this report refers to the higher price paid by consumers for a GI product (compared with the equivalent generic product). The AND International database covers a large majority of EU protected/registered GIs detailed by name (2,723) and includes values, volumes, prices and price premiums¹¹. The study further provides data on domestic consumption and extra-EU commerce. With these data, 78.7% of European GI production destinations by country can be identified.

The database contains all the domestic sales values (sales in the country of production) for 18 product classes and 27 Member States (Croatia had not yet acceded to the EU at the time), in total €32.6 billion.

Using intra-EU trade statistics the destination of €9.2 billion of intra-EU trade flows is identified, which when added to domestic totals gives an aggregate consumption value of €41.8 billion, representing nearly 90% of the EU GI product market. The rates of the identified commerce by product (18 classes) and Member State are then calculated using this total and applied to national infringement data (from the inspections carried out by the authorities) to produce estimates of the percentage and value of GI-infringing products in the EU marketplace.

Estimation of shares from Member States with small consumption in absolute term may lack precision because of re-exports. This issue has no perceptible influence on the final results as the consumption shares are only used to weight the EU28 estimates.

B. Reports of Member States controls in the market

The data on value of European GI products is combined with reports from Member States on GI market controls to construct GI infringement estimates in the EU.

Member States are responsible for the protection of GIs. Regulations governing EU GI schemes foresee that authorities control for unauthorised practices at both levels and report the results to the Commission. The controls carried out are:

Production level

This refers to verification that products comply with corresponding product specifications before they are placed on the market (control of compliance with the product specification) and that every GI producer is covered by a system of controls. EU GI schemes are voluntary but once a producer use them, being under controls becomes compulsory. These controls consist of organoleptic¹² and/or analytical testing for products covered by the designation of origin ^{12-Organoleptic} and check the conditions set out in the product specification.

Market level

These controls are designed to verify that products comply with the approved product specification after they are placed on the market¹³. In addition, the use of registered names is ^{13-If the product} monitored to assure protection against any misuse, imitation or evocation or against any other practice liable to mislead the consumer.

Member States are responsible for controlling all GI products produced and marketed in their territory (independent of the territory of production). According to the Regulations, Member States shall take appropriate measures, in particular administrative and judicial steps, to prevent or stop unauthorised use of protected names that are produced or marketed in that Member State ("ex officio" protection). Thus, the enforcement system in the EU does not require (but neither does it prevent) judicial action by the rights-holders to act against infringements of GIs protected as sui generis IP rights for wine, spirits, agricultural products and foodstuffs.

Controls are carried out systematically, through random checks based on risk analysis and sampling. The number of authorities in charge of these controls (both on production and 14- Control plans are market stages) varies among the Member States. In most countries the authorities for foodstuffs and wine controls are the same. Member States are required to report annually to the Commission¹⁴. Summaries of Member State control activities are required to be sent 15 - The Commission to the Commission with an annex containing the GI specific control and details of the market controls. These market control reports can serve as a source to assist with the quantification of infringement in EU GI product markets¹⁵ and they constitute the basis of this study.

However, only a limited number of Member States have provided such detailed reports to the Commission in the past. Therefore, considerable effort was required to obtain the data

- properties are the aspects of food as perceived by the senses.
- bearing a GI does not comply with the approved product specification, the protected name is used incorrectly

- multiannual and reported on annually.
- (DG SANTE) is competent for all official controls for food and animal health under Regulation 882/2004; DG AGRI assesses the annual reports' data related to GI controls.



directly from the authorities in the Member States, a task further complicated by the fact that in some countries these authorities operate on a regional rather than national level (e.g. Germany). Contact was taken with various national (and sometimes regional) authorities (usually Agriculture, Health or Finance authorities) in order to obtain and clarify data.

The quality of the statistical national control reports varies as to the coverage, degree of harmonisation and completeness of these reports across the Member States.

For instance, the quality of the Italian and French reports made them particularly valuable for verifying assumptions or obtaining detailed data. The reports from some Member States, often those with low GI product production and consumption, contain less data and details. Finally, some Member States do not control the market in a way that can be exploited in this study.

Finally, usable data was obtained from 17 Member States representing 82% of the EU GI product market, with nearly 23,000 inspections and more than 51,000 GI products controlled from 2011 to 2015. The data on controls is summarised in Table 1.

	Controlled GI products	Inspections	Year	Comments
BE	602	582	2015	
BG	409		2011-13	0 irregularities
CY	38		2010-14	0 irregularities
CZ	684		2012-15	Foodstuffs
DE	1,762		2012-15	Foodstuffs, 5 Länder
EE	28		2012	Foodstuffs
EL	505	157	2012-15	
ES	577	503	2012-15	
FI	194		2012-15	Foodstuffs
FR	10,880	9,079	2012-15	
HU	6,783		2012-15	Wine and Spirits
IT	18,834	3,220	2012-15	
LT	500		2015	
LU	94		2013	Foodstuffs
PL	1,214	304	2012-15	
SI	6,891	1,632	2012-15	
SK	5,000		2013	
Total	51,627	≈ 23,000		

Table 1: Data available on market controls

All reporting Member States carry out market controls on GI products from other Member States and third country GI products (for which the GI is recognised in the EU through registration or bilateral agreement).

Data was not available for the remaining 11 Member States, for a variety of reasons; in some cases, controls are carried out but the data is not centrally collected and it was not possible to obtain it despite considerable time and effort expended on this task. In other Member States, controls are carried out only in response to specific complaints, and therefore the resulting data cannot be used for a statistical analysis. In some Member States no systematic market controls are carried out, or at least they are not reported to the relevant authority. Finally data was simply not available for a few Member States.

C. Producer trade statistics

In order to assess intra-EU GI trade commerce, the following data sources were also used:

Spanish exports (both to other EU Member States and to third countries) are covered by the statistics of the "Ministerio de Agricultura, Alimentación y Medio Ambiente", for France Fédération des Exportateurs de Vins et Spiritueux de France (FEVS), for UK the Scotch Whisky Association, for Germany the association of Bavarian Bier Bayerischer Brauerbund eV, for Ireland the Alcohol Beverage Federation of Ireland, Italian data from CLAL (an advisory company for Dairy and Food Products) and "I numeri di vini" and from Mexico, "Consejo regulador de Tequila."

The volumes of identified GI commerce by product (18 classes) and country were used as an input in the estimation of consumption in each Member State, which was in turn used to weight infringement results when calculating the overall EU average.

Period of data

Annual data from the most recent national control market reports, covering the period 2012 to 2015, was used. Analysis of how Member States discriminate by type of GI scheme and product, their sampling methods for planning the controls, and their degree of completeness was undertaken. Based on this review, it was decided which of these reports provided sufficient detail to be used in the analysis.

Consumption data from 2010, representing the most recent authoritative information, were used for weighting different product infringement rates. Stability in consumption shares is assumed (by country and product) in order to weight the more recent data on infringement. Evolution in consumption shares is unlikely to have a perceptible influence on the final result.



4. Premium data

INFRINGEMENT OF PROTECTED GEOGRAPHICAL INDICATIONS FOR WINE, SPIRITS, AGRICULTURAL PRODUCTS AND FOODSTUFFS IN THE EUROPEAN UNION

As mentioned above, some consumers are willing to pay extra for GI products. For the purpose of this study the additional "premium" is defined as the ratio between the price of a GI product and the price of the corresponding non-GI product. The definition of "value premium rate" of the study "Value of European GI" is adopted :

Premium = $\frac{\sum(GI \text{ volume} \times GI \text{ price})}{\sum(GI \text{ volume} \times \text{ non } GI \text{ price})}$

This premium is calculated in that study for every product class and for every country. The estimated overall premium rate of GI products was calculated at 2.23, which means that on average EU GI products were sold at a price 2.23 times higher than that of a similar quantity non GI product.

17 - This means that French GI spirit drinks are 4.22 times more expensive that French non-GI spirits. Premiums vary greatly, from 2.75 for wines to 1.16 for fresh meat. These variations are even higher when we consider national premiums, varying from 4.22 for French spirits¹⁷ and 4.06 for Spanish wines, through to premiums close to 1 for several other products. All premium rates for foodstuffs at national level were below 2, except for Spanish meat products.

The average premiums calculated in the AND International study are weighted using the volumes produced in the EU but for this study volumes sold in the EU are used, resulting in slightly different average premium. The average premium of products sold in EU is 2.21 instead of 2.23 due to the fact that on average products that are exported exhibit higher premiums than products consumed domestically. The EU premiums weighted by EU consumption for the various product classes are shown below.

Table 2: Average premiums by product class

Wines	2.71
Spirit drinks	2.57
Beers	1.62
Cheeses	1.59
Fresh meat and meat products	1.56
Other	1.50

The highest premiums are found for wines, closely followed by spirits. For both product categories, consumers pay about $2\frac{1}{2}$ times as much for the GI products as for non-GI products in the same category. In the case of beers, cheeses, meat products and other products, the ratio is about 1.5.



5. Methodology

INFRINGEMENT OF PROTECTED GEOGRAPHICAL INDICATIONS FOR WINE, SPIRITS, AGRICULTURAL PRODUCTS AND FOODSTUFFS IN THE EUROPEAN UNION

Estimation of infringement

In the assessment of IP rights infringement different approaches can be taken to quantifying the infringing market or the impact on producers. The choice of approach will often depend on the nature of the IP right and on available data.

In the case of protected/registered GIs, sampling for assessing the proportion of infringing products is preferable to other methodologies that use enforcement data or econometric models:

"Sampling is theoretically one of the most effective ways to develop information on the magnitude of counterfeiting and piracy. The cost and logistics involved, however, seem to greatly limit its practicality. The method is useful especially when measuring magnitudes of counterfeiting in product areas where infringements are deceptive; that is, not easily distinguished from genuine products."¹⁸

 18 - Counterfeiting and Piracy: Measurement Issues. Background report for the WIPO/ OECD Expert Meeting on Measurement and Statistical Issues. Geneva, 17-18 October 2005.

Fortunately, a control infrastructure exists, covering almost the entire market of the EU, based on sophisticated methods and conducted by trained personnel. Between 2012 and 2015 nearly 50,000 GI products were controlled in the EU by trained inspectors who are able to detect the infringement in scope; nearly 10,000 samples were taken (in some cases as mystery shopping) and analysed in laboratories to determine if the products comply with the functional specifications, and in particular if the product originated from the claimed geographical area.

In conclusion, the sampling method is the only practicable approach which can be expected to produce unbiased results with fewer and less restrictive assumptions than any other conceivable approach. In particular, relying on seizure or detention data from customs and police (the methodology used in the joint OECD-EUIPO study of trade in counterfeit goods) is not feasible in the case of GIs, because the number of seizures identified as being motivated by suspected GI infringement is extremely low, according to data from the European Commission (DG TAXUD). Therefore, no conclusions could be drawn from data on seizures.

Impact on consumers

Based on market estimation the impact of GI infringement on consumers, given the information on product premiums is examined. The value premium is the price of GI products compared to corresponding non-GI products.

In other words, the main output of this study is the *proportion of sales of GI products in the EU that infringe protected/registered GIs,* broken down by the main GI product classes and by type of EU GI scheme. Additionally, the *amount of price premium (unjustly) paid by EU consumers for products that infringe protected/registered GIs is calculated.*

Infringement estimations

The proportions of irregularities in marketplace controls provide the first approximation of country and product-level infringement rates.

National authorities implement multi-annual plans for the control of particular GIs. These plans are embodied in "inspections", that is visits to establishments where they control, usually, a single GI. They report both the number of inspections and the number of controlled products; on average they control 2.24 products per inspection.

During the inspections, controllers examine the products bearing the particular GI and also the non-GI products susceptible of infringing the rights of the inspected GI.

"Inspections", "controlled products" and "irregular products" are reported. "Controlled products" refers to products bearing a GI label and "irregular products" to either GI or non-GI products infringing the rights of the inspected GI.

Irregularities may originate from the GI products themselves (non-conformity with product specifications) or from other products that have misleading GI labels, or that imitate or evoke the inspected GI.

The number of items and prices for the particular products in the establishment are not reported.

The ratio between the number of "irregular products" and number of "controlled products" is the basis of the estimation of infringement, when combined with consumption data.

By using the number of irregular products divided by number of controlled products in the establishment as an estimator for the proportion of GI infringement as measured by value, it is assumed that the ratio of the total value of infringing products in the establishment to the total value of GI products in the same establishment is the same as the corresponding ratio of the physical items.



19 - The total number of observed infringements cannot be used for this purpose because the result will be biased by the fact that the authorities tend to perform more inspections for products with higher perceived risk.

20 - It could be argued that the impact on consumers is the total price paid for the infringing products and not only the premium. On the other hand it could be argued that there is no consumer impact if they were not deceived; this could be the case for some consumers in case of imitation or evocation. In order to obtain the total infringement in a country the particular product class infringement rate¹⁹ is weighted by the share of that product class of total GI product consumption in that country. Similarly, to obtain the total EU-level infringement rate for a particular product class, the country-level infringement rates are weighed by the consumption share of that product class in total EU consumption of the product in question.

Consumer impact estimations

As stated above, consumers pay a premium for GI products. If they purchase an infringing product, they are misled and the premium they pay can be considered a loss due to deception²⁰. The consumer loss is calculated by weighting the product-level premiums by product consumption shares, similarly to the way done for estimating the value of infringement.

The consumer loss is given by the following formula:

$$CL = PGI - PNonGI = PGI - \frac{PGI}{Premium} = PGI \cdot (1 - \frac{1}{Premium})$$

where:

CL is the consumer loss for a particular product PGI is the price of the GI product PNonGI is the price of the corresponding non-GI product Premium is the particular premium for that product

6. GI product market

INFRINGEMENT OF PROTECTED GEOGRAPHICAL INDICATIONS FOR WINE, SPIRITS, AGRICULTURAL PRODUCTS AND FOODSTUFFS IN THE EUROPEAN UNION

The value of production of agricultural products protected by EU GI schemes in 2010 was €. 54,346 million, based on data from the AND International (2012) study. As part of its 2013 IP Contribution study, the EUIPO identified GI related external trade volumes for the EU (that is, imports from third countries of products such as Tequila, and exports of EU GI products to third countries). These two sets of data are the most recent available information to underpin the analysis in this study by sizing the overall market for GI products in the EU. Stability in shares is assumed in order to weigh the more recent data on infringement, from 2012-2015 in most countries.

Table 3. GI product market in the EU, 2010

	€ million
EU GI product consumption	45,038
EU production	54,346
Non-EU GI product imports	1,836
EU GI product exports	11,144
EU GI product consumption 2014 (est.)	48,000

Wholesale food and drink consumption increased 6.6% between 2010 and 2014 in the EU²¹, ^{21-At producer prices.} It is assumed that the consumption of GI products grew at the same rate, implying an EU GI 22-It is possible that product consumption of €48 billion for 2014²², as shown in Table 3 above.

GI production represented 5.7% of the total of the food and drink industry in 2010²³. The figures below illustrate the production and consumption shares of the Member States that are the main producers of GI products in the EU. France is the largest producer and consumer of GI products, followed by Italy and Germany.

- the import share of GI products has risen recently as the number of third country recognised GI names with exports to EU has risen significantly since 2010 from five to about 25 in 2015.
- 23 "Value of production of agricultural products and foodstuffs, wines, aromatised wines and spirits protected by a geographical indication (GI)", study for the European Commission by AND International (2012),





Figure 3: GI production and consumption shares by country

24 - In this report, "sales" refers to sales revenue, i.e., measured in Euro. As shown in the figures below, actual GI sales are concentrated on relatively few GIs. Out if the 3,400 registered GI names, the top 1000 account for virtually all sales revenue²⁴.

Figure 4: Cumulative distribution of top GI

Top Gls	Cumulative sales
8	25%
41	50%
161	75%
403	90%
633	95%
1105	99%

Figure 5: Cumulative distribution of top GI



Table 4: Top 10 GIs (alphabetical order)²⁵

GI name GI type Product Country **Bayerisches Bier** PGI beer Germany Cava PDO wine Spain Champagne PDO wine France Cognac PGI spirit drink France Grana Padano PDO cheese Italy Parmigiano Reggiano PDO cheese Italy •••••• Pays d'Oc PGI wine France Prosciutto di Parma PDO cured ham Italy Rioja PDO wine Spain Scotch Whisky PGI spirit drink United Kingdom

The top 10 GIs represent 28% of the sales in EU. Third country GI product sales in the EU are dominated by a few products, such as Café de Colombia (coffee, Colombia) and Tequila (spirit drink, Mexico).

25 - The sales data for individual GIs and the ranking by sales revenue are commercially sensitive and therefore not made public.



EU GI product exports are very much concentrated on products from a limited number of Member States;

"Exported GI products came mainly from France, the United Kingdom and Italy, Products originating from these three MS represented 86% of total extra-EU exports of GI products with 40%, 25% and 21% respectively. In the three cases, exports were pulled up by a very small number of designations: Champagne and Cognac in France; Scotch Whisky in the UK; Grana Padano and Parmigiano Reggiano in Italy."

"The United States was by far the leading destination country, with €3.4 billion of imports of EU GI products (GIs accounted for 30% of total food and beverages imports from the EU). Switzerland, Singapore and Canada came next, with €839 million, €829 million and €729 million respectively."²⁶

The table below shows production and consumption in each EU Member State. GI products are different from other products, in that consumption depends on national GI "culture" and attachment to regional products. Even if GI products are premium products, consumption per capita is not correlated with purchasing power (for example, per capita consumption in Portugal is almost 4 times as high as in the Netherlands). Such differences among Member States reflect tradition and consumer tastes. For instance, a country with a high per capita wine consumption will, other things being equal, have a higher per capita expenditure on GI products than a country where consumers tend to drink beer, which in many Member States is not protected by GIs.

Based on the production, trade and consumption data, it can be calculated that 68% of GI products consumed in EU Member States are produced in the same country; for the EU as a whole, 96% of consumed GI products come from within the Union.

26 - "Value of production of agricultural products and foodstuffs, wines, aromatised wines and spirits protected by a geographical indication (GI)", study for the European Commission by AND International, 2012.

Country	Production share	Consumption share	Consumption per capita		Domestic consumption
			Producer price €	EU28=100	
AT	1.54%	2.08%	118.62	124	77.7%
BE	0.07%	1.91%	83.39	87	3.7%
BG	0.14%	0.22%	14.08	15	66.6%
CY	0.03%	0.11%	61.84	65	27.6%
CZ	0.37%	0.35%	16.23	17	70.5%
DE	10.87%	16.71%	100.03	105	60.2%
DK	0.08%	0.49%	42.31	44	11.6%
EE	(c)	0.22%	81.28	85	2% (a)
EL	1.57%	2.23%	99.11	104	70.8%
ES	8.82%	9.79%	100.36	105	66.1%
FI	0.00%	0.26%	23.61	25	1.6%
FR	40.18%	31.65%	234.03	245	86.6%
HR	0.00%	0.02%	2.22	2	0.0%
HU	0.75%	0.97%	47.08	49	94.1%
IE	0.80%	0.25%	26.06	27	27.0%
IT	20.94%	16.20%	130.88	137	86.3%
LT	0.04%	0.16%	25.19	26	28.6%
LU	0.05%	0.19%	176.71	185	22.3%
LV	0.00%	0.28%	64.05	67	0.1%
MT	0.01%	0.05%	57.86	61	30.2%
NL	0.15%	1.17%	33.77	35	14.1%
PL	(C)	0.59%	7.38	8	60% (a)
PT	1.47%	3.01%	136.70	143	42.1%
RO	0.51%	0.64%	15.38	16	83.9%
SE	0.08%	0.85%	43.01	45	9.6%
SI	(C)	0.27%	63.80	67	80% (a)
SK	(c)	0.35%	30.70	32	95% (a)
UK	10.61%	8.98%	68.26	71	25.4%
EU28	100%	100%	95.48	100	68.0% (country) 96% (EU)

Table 5: GI product market by country

(c): these data are classified as confidential by DG AGRI

(a): approximate data are rounded for confidentiality of production data



27 - Calculation based on data in AND International (2012). Looking across products, consumption is concentrated in wine which represents 54% of the total GI product spend in the EU market. Spirit drinks and cheeses each represent 13%. These three product classes represent 80% of the total market²⁷. More than 64% (measured by value) of the products sold in EU are covered by a PDO, the rest are PGI.

Table 6: Consumption share of GI products by class of product

Class of product	Share of total GI EU consumption
Wine	54.3%
Spirits	13.3%
Cheeses	12.7%
Fresh meat and meat products	7.6%
Beers	4.6%
Fruits, vegetables and cereals	1.7%
Other	5.8%
Total	100%

The figure below shows the per capita consumption of GI products by country. "Domestic" means produced and consumed in the same country.





The chart shows that in the big producer countries such as France, Italy, Spain or Greece, most of consumption is of domestically produced GIs. Conversely, in the Benelux, in the Nordic countries, and in the Baltics virtually all GI products consumed are imported.

This disparate pattern of consumption impacts GI infringement rates and differentiates them from other types of IP rights infringement. Indeed, in some countries GIs are little known and appreciated and they are consumed by a minority of consumers, making infringement activity less profitable.



7. Infringement estimation results

INFRINGEMENT OF PROTECTED GEOGRAPHICAL INDICATIONS FOR WINE, SPIRITS, AGRICULTURAL PRODUCTS AND FOODSTUFFS IN THE EUROPEAN UNION

Based on the data presented in the previous section and the methodology explained above, the EU GI infringement market totalled approximately $\notin 4.3$ billion in 2014, corresponding to 9.0% of the total EU GI product market (8.0% of EU GI production)²⁸.

28 - Specifically, first the overall 9% infringement rate was calculated as the weighted average of country-level infringement rates. It was then applied to total sales of €48 billion to arrive at the €4.3 billion estimate.

The **consumer loss is estimated at up to €2.3 billion**, which is about 4.8% of total GI purchases.

The table below shows the infringement rates and monetary value by Member State. The value for the 11 Member States for which inspection data is unavailable is estimated by applying the 9.0% infringement rate to their market value.

Table 7: Gl infringement by Member State

Member State	Infringement rate	Infringement value (€ million)	
BE	9.6%	88.0	
BG	no infringements found	0	
CY	no infringements found	0	
CZ	2.1%	3.6	
DE	7.5%	598.2	
EE	no infringements found	0	
EL	21.9%	234.5	
ES	5.7% ²⁹	266.1 0	
FI	no infringements found		
FR	10.3%	1,572.8	
HU	10.8%	50.7	
IT	8.8%	682.4	
LT	no infringements found	0	
LU	25.4%	23.0	
PL	9.9%	27.8	
SI	6.9%	9.0	
SK	no infringements found	0	
EU17	9.0%	3,556	
Other MS (extrapolation):		770	
EU28: Estimation	9.0%	4,326	

29 - Estimation of infringement from Spain for wine is only 0.4% compared to 14.4% for other GI products on the Spanish market. This has a significant influence on the overall Spanish figure because consumption of GI wine accounts for 61% of all GI product consumption in Spain.

Table 8 shows the infringement rates and consumer losses by product class. Infringement rates tend to be higher for spirits and for products often sold in bulk (such as fruits and vegetables).

Class	Infringement Rate	Infringing market (€ million	Consumer loss value (€ million)	Consumer loss (%)
Wine	8.4%	2,182.0	1,349.0	5.3%
Spirits	12.7%	811.6	485.5	7.8%
Cheeses	10.6%	644.7	235.1	3.9%
Fresh meat and meat products	11.0%	402.3	141.3	4.0%
Beers	0.1%	1.2	0.4	0.02%
Fruits, vegetables and cereals	11.5%	94.0	23.3	2.9%
Other	10.0%	277.1	90.5	3.3%
Total	9.0%	4,327.2	2,325.1	4.8%

Table 8: Infringement by class of product

The highest consumer loss in absolute terms is in wine (≤ 1.3 billion) even though the infringement rate, at 8.4% is lower than for most of the other product classes. This is due to the fact that wine has the highest premium among the product classes (2.71) and accounts for more than half of consumption of GI products (54% of the total). Spirits have the second-highest absolute consumer loss at ≤ 486 million; in this case this is due to a high premium (2.57) combined with a high rate of infringement at 12.7%. Together, wines and spirit drinks account for nearly 80% of total consumer loss.

Finally, Table 9 shows infringement by type and product class, based on data from four countries for which sufficient detail was provided.

Table 9: Infringement by type and class of product (data from 8 Member States)

Share of infringements	lmitation or evocation	Misleading GI labels	Deception in product specifications
Total	42%	38%	21%
Wine	38%	41%	22%
Spirits	5%	68%	27%
Cheeses	41%	33%	25%
Fresh meat and meat products	85%	4%	12%
Fruits, vegetables and cereals	79%	20%	2%

Source: national control reports from Czech Republic, Finland, Greece, Hungary, Italy, Poland, Slovenia and Spain.



The highest share of infringements (42%) is due to imitation or evocation of GI products; while a further 38% is due to misleading information about the origin of non-GI products.

The remaining 21% of GI infringements consists of GI products themselves (that is, products originating from producers in the relevant GI area) which exhibit non-conformities with their functional specifications. Infringement in functional specifications is not only the responsibility of producers, as some functional specifications also impose requirements on retailers (who may be responsible for packaging, labelling, slicing and other aspects of the treatment and presentation of the product). This type of infringement is somewhat more prevalent for spirits and cheeses than for the other product categories. On the other hand, fresh meat and meat products are particularly susceptible to imitation or evocation.

GI retail outlets include shops, supermarkets, vending machines, food sold on trains, ships and other transportation, and products sold on the Internet. Data from French controls covering infractions per type of retailer indicate that infringement in restaurants is 15% higher than the average infringement rate and infringement via the Internet is double that average.

8. Conclusions and directions for further research

INFRINGEMENT OF PROTECTED GEOGRAPHICAL INDICATIONS FOR WINE, SPIRITS, AGRICULTURAL PRODUCTS AND FOODSTUFFS IN THE EUROPEAN UNION

This is the first study attempting to assess the dimension of GI infringements in the EU as a whole. It clearly indicates that the issue has a relevant dimension in terms of negative impact, corresponding to 9% of the total GI product market and valued at \in 4.3 billion. EU consumers lose \in 2.3 billion annually by paying a premium price for what they believe to be a genuine GI product while in fact they are victims of deception.

Given the very low number of GI-infringing products recorded by EU customs referred to above, it may be assumed that most of the infringements of GIs identified in this study originate primarily within the EU. There is, however, no concrete evidence or reliable data allowing one to identify precisely the origin of these infringing products. Compiling and analysing such data would shed further light on this issue.

The focus of this study was infringements of GIs (for wine, spirits, agricultural products and foodstuffs) protected as sui generis intellectual property rights in the EU marketplace. In the future, the study could to be extended to include the international aspect of EU GIs infringements in third countries. As the protection of GIs is expanded through, inter alia, bilateral trade agreements, it should become possible to expand the scope of this research by studying infringements at a more global level.





INFRINGEMENT OF PROTECTED GEOGRAPHICAL INDICATIONS FOR WINE, SPIRITS, AGRICULTURAL PRODUCTS AND FOODSTUFFS IN THE EUROPEAN UNION

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INFRINGEMENT OF PROTECTED GEOGRAPHICAL INDICATIONS FOR WINE, SPIRITS, AGRICULTURAL PRODUCTS AND FOODSTUFFS IN THE EUROPEAN UNION