STUDY ON ASSESSING THE ADDED VALUE OF PDO/PGI PRODUCTS

Final Report

Written by

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This study was conducted by Areté srl with the contribution of internal and external experts as listed below.

Prof. Maurizio Aragrande	*University of Bologna*	*Project Leader*
Dr. Enrica Gentile	*Areté srl*	*Project Manager*
Dr. Mauro Bruni	*Areté srl*	
Dr. Alberico Loi	*Areté srl*	
Dr. Francesca Amore	*Areté srl*	
Dr. Tommaso Micalella	*Areté srl*	
Dr. Marcello Chemin Palma	*Areté srl*	
Dylan Bradley	*AgraCEAS Consulting Ltd (UK)*	
John Nganga	*AgraCEAS Consulting Ltd (UK)*	
Anne Marechal	*AgraCEAS Consulting Ltd (UK)*	
Silvia Zucconi	*Nomisma SpA (IT)*	
Bertrand Oudin	*Blezat Consulting (FR)*	
Géraldine Woerner	*Blezat Consulting (FR)*	
Rita Robles Robles	*Universidad de Leon (ES)*	
Karen Thorsted Hamann	*IFAU (DK)*	

TABLE OF CONTENTS

LIST OF ACRONYMS USED IN THE REPORT

ACI: additional cost indicator (measures the advantage/disadvantage of GI products vs. the corresponding standard products)

AGMI: additional gross margin indicator (measures the advantage/disadvantage of GI products vs. the corresponding standard products)

EFOW: European Federation of Origin Wines

EU: European Union

FADN: Farm Accountancy Data Network

GI: Geographical Indication

MS: Member State

OJ: Official Journal of the European Union

OriGIN: Organization for an International Geographical Indications Network

PDO: Protected Designations of Origin

PGI: Protected Geographical Indication

PPI: price premium indicator (measures the advantage/disadvantage of GI products vs. the corresponding standard products)

QAS: Quality Assurance Schemes

QC: quality checks

RDP: Rural Development Programme

WTO: World Trade Organisation

1 INTRODUCTION

1.1 Objectives and context of the study

The use of registered *geographical indications* (GI henceforth) is commonly considered by researchers a *product differentiation technique*, usually aimed at obtaining better selling prices for the products, generally in terms of achieving a *price premium* over similar products lacking such geographical differentiation[1]. The economic rationale behind this goal is based on the assumption (which has been empirically verified in a number of real-life situations) that some consumers are willing to pay higher prices for products of "certified" origin from a particular geographical area, as such consumers attach specific distinctive (and of course positive) features to products coming from that area. Such features can be of both material (e.g. special organoleptic qualities due to particular terrain and/or climatic conditions, to particular production techniques typical of the area, etc.) and immaterial (e.g. "traditional", "genuine" nature of the products) character.

In the operational reality, the achievement of such a "price premium" – which constitutes one of the main economic incentives for producers to bear the possible additional cost of switching from "standard"[2] to GI production – cannot be taken for granted; where such a premium is present, its extent may vary according to the specific market situation, and also over time. Indeed some empirical studies recently carried out on the issue[3] revealed that the price premium over "standard" products can range from substantial (even 2-300%) to being extremely limited or even zero. Considering also that additional costs to switch from "standard" to GI production can be different, the extent of the gross margin[4] for GI products – also in comparison with "standard" products – is likely to be quite variable.

This study is aimed at assessing from an economic standpoint the added value of producing a GI product. The assessment has been carried out along the whole supply chain[5] – but with a special focus on producers (especially farmers) – via a comparison with the corresponding "standard products". The study is also aimed at investigating elements of added value other than higher gross margins, and at identifying the promoting and hindering factors for the generation of higher gross margins for GI products (in comparison with the corresponding "standard" products).

The specific **objectives** of the study are as follows:

1. To select and compare GI products with their corresponding standard products (methods of production and characteristics), and provide an overview of the supply chain for each product.
2. To obtain, analyse and compare the prices of the GI products with the corresponding standard products, at different stages of the supply chain.
3. To examine whether there are additional costs for the production of a GI product compared to the production of its corresponding standard product; assessing whether and to what extent the

[1] See for instance Arfini F., Belletti G., Marescotti A. (2010), *Prodotti Tipici e Denominazioni Geografiche – Strumenti di tutela e valorizzazione*, Edizioni Tellus, Roma, and London Economics (2008), *Evaluation of the CAP policy on protected designations of origin (PDO) and protected geographical indications (PGI)*, carried out for the European Commission (also for an up-to-date review of the main literature on the economic rationale of product differentiation through geographical indications).

[2] According to the Tender Specifications, the term *standard product* should be understood as a product of the same class – according to the classification in Annex II of Commission Regulation (EC) No 1898/2006 – whose name is not registered.

[3] See for instance: London Economics (2008) and Arfini F., Belletti G., Marescotti A. (2010), previously cited.

[4] The *gross margin* is defined in the Tender Specifications (available on http://ec.europa.eu/agriculture/calls-for-tender/tender-documents/2012/231657/specs_en.pdf) as "the difference between the revenue and the direct costs associated with producing the product in question (normally expressed as a percentage of total sales revenue)".

[5] According to the Tender Specifications, "*supply chain*" should be understood as all intermediate steps taking place from the production stage until the product is sold to the final consumer.

producer of a GI product receives a higher gross margin in comparison with the producer of the standard product.

4. To identify other possible elements of added value existing at the level of the producer of a GI product; and to study and describe the other incentives for producing a GI product.
5. To make comparisons and draw conclusions on enabling and disabling factors for the generation of higher prices and higher gross margins at the level of producers of GI products (compared to standard products).

1.2 Economic rationale of GI protection in the EU

The focus on quality production was already present in the recital of ***Reg. No. 24/1962*** on the progressive establishment of a common organisation of the market in wine[6] ("the common organisation must aim at stabilising markets and prices by adjusting supply to requirements, such adjustment being directed in particular towards quality production"). Reg. No. 24/1962 featured specific provisions (Art. 4) concerning the need to "adopt Community rules regarding quality wines produced in specified regions".

In the recital of ***Reg. No. 817/1970*** laying down special provisions relating to quality wines produced in specified regions[7], three main reasons which justified the introduction of Community rules in this field were highlighted:

1. Encouraging quality production in agriculture and especially in wine growing, as a way to "contribute to the improvement of conditions on the market and, as a result, to an increase in outlets"
2. Protecting producers from unfair competition
3. Protecting consumers from error and fraud

Similar objectives were identified in ***Reg. No. 2081/1992*** on the protection of geographical indications and designations of origin for agricultural products and foodstuffs[8], which introduced the "Protected Designations of Origin" (PDOs) and "Protected Geographical Indications" (PGIs); in the recital of the regulation, however, such objectives are declined in a more detailed and articulated way.

Encouraging the diversification of agricultural production was seen as a means to achieve a better balance between supply and demand on the markets, while the promotion of products with specific characteristics was seen as being "of considerable benefit to the rural economy, in particular to less-favoured or remote areas, by improving the incomes of farmers and by retaining the rural population in these areas".

The growing demand by consumers for agricultural products or foodstuffs with an identifiable geographical origin was recognised as one of the main drivers behind introduction of "registered designations of origin" at Member State level. Protection granted to the concerned products was acknowledged:

- As having proved successful in securing higher incomes to producers in return for a genuine effort to improve quality
- As having allowed consumers to purchase high-quality products with guarantees as to the method of production and origin

In line with the rationale of regulations on quality wines produced in specified regions, the need for a regulatory framework at Community level also for the protection of geographical indications and designations of origin for agricultural products and foodstuffs was deemed essential to:

- "Ensure fair competition between the producers of products bearing such indications"

[6] OJ N. 30, 20/04/1962, p. 989/62.
[7] OJ N. L 99, 05/05/1970, p. 20.
[8] OJ N. L 208, 24/07/1992, p. 1.

- "Enhance the credibility of the products in the consumers' eyes"

Such protection could be granted only for agricultural products and foodstuffs for which a link between product or foodstuff characteristics and geographical origin existed.

Successive amendatory legislation to the original regulatory framework, and in particular ***Reg. No. 510/2006*** on the protection of geographical indications and designations of origin for agricultural products and foodstuffs[9], have confirmed the original rationale behind GI protection in the EU.

It is finally worth noting that the recent reform introduced by ***Reg. No. 1151/2012*** on quality schemes for agricultural products and foodstuffs[10], even though it came into force after the relevant period for the study, has maintained the original rationale, introducing additional and more specific elements, such as:

- "Ensuring uniform respect throughout the Union for the intellectual property rights related to names protected in the Union"
- Extending protection of designations of origin and geographical indications "to the misuse, imitation and evocation of the registered names on goods as well as on services in order to ensure a high level of protection and to align that protection with that which applies to the wine sector"

Summarising, the ***three main elements of the rationale for GI protection in the EU*** can be identified as the following:

1. ***Securing higher incomes to producers*** in return for their efforts to improve quality
2. ***Protecting producers from unfair competition***
3. ***Ensuring that consumers can make informed choices***

1.3 Main findings of previous studies

The study *Economics of food quality assurance and certification schemes managed within an integrated supply chain*, carried out by ETEPSnet for DG JRC/IPTS of the EU Commission (Final Report: December 2006) investigated – among other aspects – the performance of Quality Assurance Schemes (QAS), including some centred on GI production.

Four case studies carried out for the project concerned GI products (more specifically, four PDOs: Parmigiano-Reggiano cheese; Comté cheese; Dehesa de Extremadura ham; Baena olive oil). The study defined GI products as "QAS that explicitly aim to segment the market by protecting an existing product, with specific characteristics and effectively creating a differentiated product in the market". The study tried to assess the performance of QAS in terms of the associated costs and benefits. On the cost side, ***direct costs stemming from certification, membership fees, and controls were found to account for a limited share of the total production cost***, whereas ***indirect costs stemming from restrictions on agricultural practices*** (herd density, animal feed, plant variety, etc.) ***and processing practices*** (minimum maturing time, technique used etc.). were usually found to ***account for a much greater share of the total production cost***. On the benefits side, focusing on the aspects which are also relevant for this study, the study found that the ***benefits to producers were mainly in the form of attracting a higher price on the market than the regular product***, which should at least pay for the higher production costs per unit produced: the study found that ***this was, however, not always the case***, and that ***QAS aiming at product differentiation*** (like PDOs) ***often seemed to struggle in the market***.

The *Evaluation of the CAP policy on protected designations of origin (PDO) and protected geographical indications (PGI)* carried out by London Economics for DG Agriculture (Final Report: November 2008) also dealt with a number of the aspects which are relevant for this study.

[9] OJ L 93, 31/03/2006, p. 12.
[10] OJ L 343, 14/12/2012, p. 1.

Through the analysis of findings from 18 case studies, the evaluation concluded that GI schemes were perceived by producers as ***having significant benefits in terms of reputation***, but a ***lower impact on their profitability***. The evaluation also highlighted that the ***importance attached by supply chain actors to the different main reasons behind the uptake of the schemes*** (profitability, business stability, reputation and access to markets) ***could vary significantly in different sub-groups*** (farmers vs. processors; Southern European vs. Northern European producers; PDO vs. PGI producers).

In most cases, the price of a PDO/PGI product was found to be higher than the price of its comparator product ("standard product", in this study's terminology); however, most of the studied PDO/PGI products were also found to be more costly to produce than their comparators, due to higher production costs, certification costs and producers' group costs. The evaluation concluded that ***a higher price did not necessarily translate into a higher margin***; however, the evidence collected in the case studies revealed that ***PDO/PGI products were generally more profitable than their comparators***.

With specific reference to the ***role played by GI schemes in increasing market shares in domestic and export markets***, the evaluation concluded that:

1. Registration as a ***PDO/PGI did not in itself guarantee that market shares would increase***
2. ***GI schemes were more effective in doing so in combination with a number of additional factors***, including: intention and effort to increase market shares; interest from consumers; combination with a trademark; niche markets (directed to a narrow group of potential customers); available means producers have for increasing their market share (collective trademarks, good collective organisations)

The study *Value of production of agricultural products and foodstuffs, wines, aromatised wines and spirits protected by a geographical indication (GI)*, carried out by AND International for DG Agriculture (Final Report – October 2012) made an assessment of the "value premium for GI products"[11].

As clearly stated in the report, "value premium does not reflect value added and profitability of the GI schemes because it does not take into account the economic impacts of compliance with GI specifications. For instance, if prices of GI products are higher than non-GI products, producers involved in GI schemes also have additional costs and foregone earnings; for instance: limited yields in wine production, specific and less productive species or varieties at agricultural stage, longer ripening in cheese production, longer curing for meat products and so on". Moreover, production volume and value figures presented in the study often include estimated data. It is nevertheless interesting to highlight here that the study ***detected extremely wide differences in "Value premium rate" across different product categories and Member States***.

[11] The study measured the "Value premium rate" as *∑ (GI volume x GI price) / ∑ (GI volume x non GI price)*.

2 METHODOLOGY

2.1 Overall approach to the study

The overall approach to the study is centred on the following *essential elements*:

1. A data collection phase: given the situation of the available information sources, and considering the need to avoid data estimations as much as possible, *the data collection strategy for the study was based on a combination of:*
    a. *Direct sourcing of primary data from relevant stakeholders* (especially national/local institutions dealing with GI products; GI producer organisations; individual producers of GI products and standard products)
    b. *Collection of secondary data (where available) through desk research*
2. *The calculation of gross margins* for GI products and for the corresponding standard products, *applying a rigorous methodology* to ensure the highest possible reliability of the comparisons to be made (see § 2.5.2)
3. *The investigation of all the other elements of added value for GI producers*

2.2 Criteria for the selection of case studies

A final selection of 13 case studies (see table 2.1 was made as the result of a process which involved Areté and the Commission (DG AGRI) Steering Group. This final selection was defined in such a way that:

1. Each case study covered at least 1 GI product and the corresponding standard product
2. A balance was ensured between GIs from EU Member States with a long tradition (before 1992) in the use of GIs, and Member States with more recent experiences in GI production
3. There were GIs from at least 4 Member States, including at least one Member State that joined the EU after 01 May 2004
4. At least 5 of the following product sectors were covered: fresh meat; meat products; cheeses; honey; oils and fats; fruit, vegetables and cereals, fresh or processed; and wines
5. At least 5 GIs with raw materials coming from the delimited GI geographical area were included in the list

The corresponding standard products were identified as non-GI products from the same class which were the most direct competitor with the GI concerned and preferably produced in the same region. Identification of the standard products was based on a combination of elements from preliminary desk research and inputs from the GI producers.

In five cases (Scotch Beef PGI, Jambon d'Ardenne PGI, Emmental de Savoie PGI, Pomme du Limousin PDO, Lammefjordsgulerod PGI) the corresponding standard products had to be identified with non-GI products from the same class produced in areas other than the GI area (bordering the latter or not, but anyway always within the boundaries of the concerned Member States). This solution was applied whenever non-GI production within the GI area was negligible and/or mostly constituted by products intended for the GI chain which did not meet the requirements for certification ("residual" nature of non-GI production within the GI area).

In the case of non-processed products (Pomme du Limousin PDO, Lammefjordsgulerod PGI), *"agricultural raw materials"* were identified as the harvested agricultural products (fresh apples / carrots) in the conditions required for forwarding to packing stations; *"final products"* were identified as the same products (fresh

apples / carrots) after sorting, washing and packing, i.e. in the conditions required for marketing to final consumers.

It is worth underlining that fieldwork activities and analyses were also carried out for 4 other case studies included in previous selections (Schwarzwälder Schinken PGI; Szegedi szalámi / Szegedi téliszalámi PDO; Allgäuer Emmentaler PDO; Fromage de Herve PDO). For various reasons (lack of adequate primary data, impossibility to identify an adequate standard product, etc.), these case studies were excluded from the final selection; this notwithstanding, some of the (tentative, and mostly qualitative) findings from such case studies have been taken into account for the purposes of this assessment.

Table 2.1 – Final selection of case studies

Product	Short description	Member State	Status	Product class	Definition of corresponding standard product
Montepulciano d'Abruzzo	Wine	Italy	PDO	Wines	Red table wine produced in Abruzzo region mostly from grapes of the Montepulciano variety
La Mancha	Wine	Spain	PDO	Wines	Varietal and table wine produced in La Mancha region from the same grape varieties of GI product
Scotch Beef	Fresh beef meat	United Kingdom	PGI	Fresh meat (and offal)	Non-GI beef produced according to the UK-wide Red Tractor quality assurance scheme
Jambon d'Ardenne	Ham	Belgium	PGI	Meat products (cooked, salted, smoked, etc.)	Jambon de Cobourg (non-GI Belgian ham similar to GI product)
Soprèssa Vicentina	Salami	Italy	PDO	Meat products (cooked, salted, smoked, etc.)	Non-GI Soprèssa from Vicenza province (GI area) - can be produced also from different pig cuts than the ones for GI production
Emmental de Savoie	Cow's milk mountain cheese	France	PGI	Cheeses	Non-GI Emmental produced in Brittany (region of France different from the GI area)
Pecorino Sardo	Semi-cooked sheep cheese	Italy	PDO	Cheeses	Non-GI semi-cooked sheep cheese produced in Sardinia region (GI area) from raw materials similar to the ones for GI production
Vorarlberger Bergkäse	Cow's milk mountain cheese	Austria	PDO	Cheeses	Non-GI Bergkäse produced in Vorarlberg region (GI area)
Dauno	Extra-virgin olive oil	Italy	PDO	Oils and fats (butter, margarine, oil, etc.)	Non-GI extra-virgin olive oil produced in Foggia province (GI area) from the same olive varieties used in GI production, but in different mixes
Ekstra deviško oljčno olje Slovenske Istre	Extra-virgin olive oil	Slovenia	PDO	Oils and fats (butter, margarine, oil, etc.)	Non-GI extra-virgin olive oil produced in Istria region (GI area) from the same olive varieties used in GI production, but in different mixes
Pomme du Limousin	Fresh apples	France	PDO	Fruit, vegetables and cereals fresh or processed	Non-GI Golden apples produced in Limousin area (GI area) and in Tarn-et-Garonne (region of France different from the GI area)
Lammefjordsgulerod	Fresh carrots	Denmark	PGI	Fruit, vegetables and cereals fresh or processed	Non-GI fresh carrots produced in Denmark regions different from the GI area
Pimiento Asado del Bierzo	Roasted pepper	Spain	PGI	Fruit, vegetables and cereals fresh or processed	Non-GI roasted pepper (pimiento asado) produced in the GI area, not necessarily from fresh pepper of El Bierzo ecotype

2.3 Data-collection strategy

The data-collection strategy for the study was based on a combination of different methods and tools, aimed at collecting the necessary evidence base made up of both primary and secondary data.

Desk research *by core team experts and by local experts in the framework of the case studies* (including keyword-based internet search, mining of available databases and literature review) was aimed at retrieving the widest possible base of quantitative and qualitative information concerning supply chain organisation, production techniques, prices, production costs, margins, and other elements of added value for GI producers.

***Interviews** with selected stakeholders*, carried out *by core team experts* (as far as EU-level institutions dealing with GI and EU-level GI producer organisations were concerned) and *by local experts in the framework of case studies* (as far as national and local institutions dealing with GI and national and local GI producer organisations were concerned), performed two basic functions:

1. ***Preliminary** interviews* were mainly aimed at achieving a clear overview of the relevant topics, at checking the completeness of the relevant sources and at fine-tuning methods and tools for data collection and analysis.
2. ***In-depth structured interviews*** were mainly aimed at filling – *in combination with the questionnaire-based survey* - the gaps left by desk research in the required base of data and information. In-depth questionnaire-based interviews to all the organisations of GI producers concerned by the case studies played an important role especially in collecting data on prices and costs, and also in finding out the views of organisations on the other elements of added value for GI producers (Study Theme 5).

The ***questionnaire-based survey** among **individual producers** of GI products and of the corresponding standard products* was aimed at sourcing primary data on the critical aspects (especially production methods, marketing channels, production costs and selling prices) of GI and standard production. Indeed, part of the required information proved impossible to source via desk research and through direct contacts (interviews) with producers' organisations of both GI and standard products: relevant information was hence systematically sourced also directly from individual producers of both final products and agricultural raw materials, via a questionnaire-based survey carried out in the framework of each case study.

For the purpose of collecting important elements concerning study theme 5 "Other elements of added value for GI producers", a ***structured consultation of stakeholders*** – both via in-depth interviews and specific questions in the survey questionnaire – was also carried out *in the framework of each case study*.

2.4 Methods and tools for the analysis

2.4.1 Methods for the overall analysis of the techno-economic and institutional framework for GI production vs. standard production

The techno-economic and institutional framework for GI and standard production was investigated under study theme 2. The aspects being studied were the following:

1. Production methods.
2. Supply-chain organisation.
3. Marketing channels.
4. Market power and price formation mechanisms.

It is worth clarifying that in the case of non-processed products (Pomme du Limousin PDO, Lammefjordsgulerod PGI), *"agricultural raw materials"* were identified as the harvested agricultural products (fresh apples / carrots) in the conditions required for forwarding to packing stations; *"final products"* were identified as the same products (fresh apples / carrots) after sorting, washing and packing, i.e. in the conditions required for marketing to final consumers.

The study methodology is outlined in table 2.2 below.

Table 2.2 - Study theme 2: Comparison of methods of production and characteristics of GIs and standard products and overview of the supply chains

Methods of production	
Operational steps and relevant aspects	***Methods and tools***
a) Analysis of methods of production of standard products and GI products Investigated aspects: 1. Raw materials needed 2. Phases and operations in the production process 3. Capital intensive / labour intensive nature 4. Importance of immaterial factors (skilled workforce, tradition vs. innovation, etc.) 5. Other relevant aspects (if any)	Data collection: • Desk research and literature review • Interviews with key stakeholders • Questionnaire-based survey
b) Identification of the relevant differences between standard products and GI products, with special focus on the ones which could generate additional costs	Data analysis: • Critical factors analysis
Organisation of the supply chain	
Operational steps and relevant aspects	***Methods and tools***
a) Study of the overall organisation of the supply chain for standard products and GI products Investigated aspects: 1. Stages / levels 2. Types of actors involved and related functions 3. Importance of vertical coordination/integration 4. Geographical aspects 5. Other relevant aspects (if any)	Data collection: • Desk research and literature review • Interviews with key stakeholders • Questionnaire-based survey Data analysis: • Organisational analysis
b) Identification of the relevant differences between standard products and GI products, with special focus on the ones which could generate: • additional costs • additional revenues	Data analysis: • Organisational analysis • Critical factors analysis
Marketing channels	
Operational steps and relevant aspects	***Methods and tools***
a) Identification and study of marketing channels for standard products and GI products Investigated aspects for each channel identified: 1. Economic importance on total sales 2. Organisation and types of actors involved 3. Length of the channel	Data collection: • Desk research and literature review • Interviews with key stakeholders • Questionnaire-based survey
b) Identification of the relevant differences between standard products and GI products, with special focus on the ones which could generate: • additional costs • additional revenues	Data analysis: • Critical factors analysis

(continued)

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Market power and price formation mechanisms	
Operational steps and relevant aspects	***Methods and tools***
a) Standard products 1. study of price formation mechanisms in the relevant supply chains 2. identification of actors which can influence price formation mechanisms (i.e. exert market power) 3. study of the effects of market power on prices	Data collection: • Desk research and literature review. • Interviews with key stakeholders. Data analysis: • Analysis of competition according to Porter scheme
b) GI products (special focus on differences vs. standard products) 1. study of price formation mechanisms in the relevant supply chains 2. identification of actors which can influence price formation mechanisms (i.e. exert market power) 3. study of market power deriving from the institutional structure of GI production (conditions for the use of GI; horizontal coordination via formation of consortia; regulation of supply, sales, prices etc.) 4. study of the effects of market power on prices	Data collection: • Desk research and literature review. • Interviews with key stakeholders. Data analysis: • Analysis of competition according to Porter scheme
c) Identification of the relevant differences between standard products and GI products, with special focus on the ones which could generate additional revenues	Data analysis: • Analysis of competition according to Porter scheme • Critical factors analysis

2.4.2 Methods for the comparative analysis of prices, production costs and gross margins

The comparative analysis of prices, production costs and gross margins of GI products vs. standard products in the framework of study themes 3 and 4 formed the core of the quantitative assessment of the added value of PDO/PGI products. The related methodology is outlined in tables 2.3 (prices), 2.4 (costs) and 2.5 (gross margins). Details on the selection of producers interviewed in the survey carried out for the study (collection of primary data on prices, costs and gross margins) are provided in Box 1, whereas additional details on the calculation of gross margins are provided in Box 2.

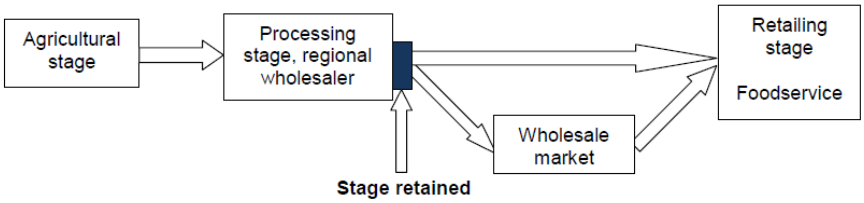
Table 2.3 – Study theme 3: methodology for analysing prices at different stages in the supply chain

Identification of relevant prices along the supply chains	
Operational steps and relevant aspects	***Methods and tools***
a) Identification of the relevant prices on the basis: 1. of the organisation of the supply chain 2. of the features of the marketing channels 3. of the possible presence of institutional price regulation mechanisms. Theoretically speaking, the relevant prices were identified in the following: farm price of agricultural raw materials; ex-factory price, wholesale price, retail price of products	Data collection: • Desk research and literature review. • Interviews with key stakeholders.
Comparative analysis of the evolution of relevant prices over time	
Operational steps and relevant aspects	***Methods and tools***
a) Creation of time series for the relevant prices of GI products and of standard products	Data collection: • Desk research and literature review. • Questionnaire-based survey
b) Comparative analysis (GI product vs. corresponding standard product) of the time series of prices built at step a), in terms of: • General trend over the relevant period for the investigation (increase / decrease) • Average, maximum and minimum levels • Variability	Data analysis: • Descriptive statistics
c) Identification of the relevant differences between standard products and GI products concerning the relevant aspects in the analysis (see step b)	Data analysis: • Descriptive statistics
Explanation of possible differences concerning the prices of GI products and of the corresponding "standard products"	
Operational steps and relevant aspects	***Methods and tools***
a) Investigation of the possible reasons behind the differences, on the grounds of the findings of the investigations at theme 2 (see table 2.2) concerning: • Production methods • Organisation of the supply chains • Features of the marketing channels • Market power and price formation mechanisms	Data analysis: • Critical factors analysis

To ensure comparability with the data from the study by AND International (2012), the *selling price of relevant products* was identified as being:

- For cheese: ex-dairy stage
- For meat: ex-slaughterhouse or ex-cutting plant stage
- For fruits and vegetables: ex-co-operative stage or ex-regional wholesaler stage
- For processed products: ex-factory stage
- For wines or spirits: ex-winery/distillery stage or regional wholesaler.

Figure 2.1 – Identification of relevant prices along the supply chain



Source: AND International (2012)

Table 2.4 – Study theme 4: methodology for determining production costs

Analysis of the factors generating possible differences in production cost of each GI product and of each corresponding "standard product"	
Operational steps and relevant aspects	***Methods and tools***
a) Identification of the relevant cost items in standard and GI production, on the basis of the results of the investigations at theme 2 (see table 2.2) concerning the features of production methods	Data collection: • Desk research and literature review. • Interviews with key stakeholders. • Questionnaire-based survey
b) Identification and quantification (wherever allowed by the available information) of differential costs stemming from: • technical aspects of the production processes; • organisational and regulatory aspects (e.g. fees for membership to organisations of GI producers, additional costs for controls and certification, etc.) • different prices of raw materials => identification of cost-related critical factors for the creation of differences in gross margins *For GI products, differential costs included fixed costs stemming from investment in specific assets for GI production (see Box 2)*	Data collection: • Desk research and literature review. • Questionnaire-based survey Data analysis: • Critical factors analysis
Determination of production cost of each GI product and of each corresponding "standard product"	
Operational steps and relevant aspects	***Methods and tools***
Case A "Ready to use" production cost data (possibly broken down into their individual items, and/or possibly also describing cost dynamics over time) were available => no need *ad hoc* elaborations	Data collection: • Desk research and literature review. • Questionnaire-based survey
Case B No "ready to use" production cost data (see case A above) were available => production costs were calculated by combining available information concerning the relevant cost items	Data collection: • Desk research and literature review. • Questionnaire-based survey
Case C ("worst case scenario") No "ready to use" production cost data (see case A above) and incomplete information on specific cost items (see case B above) => an *ad hoc* method ("last resort solution") was applied, based on the following steps: 1. Estimation of the missing cost items on the basis of available information on production methods (see table 2.2) 2. Calculation of production costs by combining: • available information concerning specific cost items • estimated cost items (see step 1) ***Before recourse to this "last resort solution", inclusion of additional respondents in the questionnaire-based survey to fall under case B was always attempted***	Data collection: • Desk research and literature review. • Questionnaire-based survey

Table 2.5 - Study theme 4: methodology for the calculation of gross margins

Calculation of gross margins for each GI product and for each corresponding "standard product"	
Operational steps and relevant aspects	***Methods and tools***
a) Calculation of unit gross margin of each GI and standard product, as a difference between: 1. Selling price (see table 2.3) 2. Unit production cost (see table 2.4)	Calculation on the basis of data collected for theme 3 (table 2.3) and theme 4 (table 2.4)
Comparative analysis of gross margins of GI products and of "standard products"	
Operational steps and relevant aspects	***Methods and tools***
a) For each "GI product / standard product" pair, comparison between the unit gross margins => calculation of the spread between the two values	
b) Comparative analysis across the various case studies of all the spreads calculated at step a), in terms of average, maximum and minimum levels	Data analysis: • Descriptive statistics
Comparative analysis of gross margins of raw materials for GI products and for "standard products"	
Operational steps and relevant aspects	***Methods and tools***
a) Analysis of unit production cost of the main raw materials for GI products and for standard products, in order to determine their extent Whenever "ready to use" cost data were unavailable, the extent of unit production cost was determined: • through calculation, where adequate information on individual cost items was available • through estimation ("last resort solution") starting from available information on production methods of raw materials	Data collection: • Desk research and literature review. • Questionnaire-based survey
b) Calculation of unit gross margins of the main raw materials for GI products and for standard products, as a difference between: 1. Selling price of raw material (see table 2.3) 2. Unit production cost of raw material, as determined at step a)	Calculations
c) For each "GI product / standard product" pair, comparison between the unit gross margins of the main raw materials calculated at step b => => calculation of the spread between the two values	Comparison between data
Investigation and explanation of the possible differences in gross margins	
Operational steps and relevant aspects	***Methods and tools***
a) Investigation of the reasons behind: 1. the spreads between GI and standard products; 2. the spreads between raw materials for GI and standard products; on the basis of the findings of the investigations carried out: • at theme 2 (production methods, organisation of the supply chain, marketing channels, price formation & market power; see § 2.4.1, table 2.2) • at theme 3 (prices at different stages in the supply chain; see table 2.3) • at theme 4 (production costs; see table 2.4)	Data analysis: • Critical factors analysis

Box 1 ***– Selection of producers interviewed in the survey***

For each case study - identified by the combination of a GI product with the corresponding standard product – the study team carried out a survey on:

- *4-6 individual producers of the GI product concerned* (2-3 involved in production of agricultural raw materials; 2-3 involved in GI production).

- *4-6 individual producers of the standard product concerned* (2-3 involved in production of agricultural raw materials; 2-3 involved in production of the standard product).

The final number of respondents for each category depended on the extent of the universe (total number of subjects in each category).

The selection of potential respondents to be contacted was performed according to the following *criteria*:

1) For producers in the *GI product supply chain*, the selection was made mainly on the basis of inputs from organisations of GI producers, trying to take into account the variability in size, organisation and specialisation of firms (firms which are specialised in GI production vs. firms which are involved in both GI production and standard production). If such variability was significant, potential respondents were selected to represent it in the best way possible, within the limits of maximum sample size. If variability was limited, all potential respondents were selected in such a way as to represent the "typical / average" producer.

2) For producers in the *standard product supply chain*, the selection was made also on the basis of input from independent experts, trying to take into account the variability in size, organisation and specialisation of firms (by applying the same criteria illustrated in point 1 above for the GI product supply chain).

Box 2 ***– Details on the methodology for the calculation of gross margins***

A core aspect of the methodology was the calculation of the *unit gross margins for final products and raw materials in the GI and in the standard supply chains*, which were calculated as follows:

Gross margin = selling price – production cost

Primary data on prices and costs sourced from the survey of GI and standard producers carried out for the study (see Box 1) were used and unit gross margins were calculated as *weighted averages of figures for individual producers* in each sample, assuming production volumes as weights.

Selling prices were considered at ex-factory level (for final products) and at farm gate level (for agricultural raw materials).

Unit production cost for GI final products / raw materials included only specific expenses for GI production, according to the following formula: *cost of inputs + cost of labour + administrative costs for GI production + indirect costs specific to GI production*[12] *+ depreciation of fixed assets specific to GI production* (i.e. excluding depreciation of non-specific fixed assets and general expenses).

Unit production cost for standard final products / raw materials included only direct expenses, i.e. *cost of inputs + cost of labour*; depreciation of fixed assets and general expenses were not included.

Wherever permitted by the information available on prices and costs, the calculation of unit gross margins was carried out for each relevant marketing channel, in order to take into account possible differences in selling prices and/or in production costs (e.g. for sales of bottled wines or oils vs. sales in bulk)

The *marketing channels* which were considered *for final products* were the following:

1) Direct sale on the spot market (which refers to spot sales made at list prices, irrespective of the type of customer, with no additional conditions such as discounts, continuative supply over a certain period, etc.)
2) Direct sale to retailers (including discount stores) via supply contracts / other marketing agreements
3) Direct sale to downstream food processors (including packers, bottling companies etc.) via supply contracts / other marketing agreements
4) Sale to wholesalers / other intermediaries

[12] Due to – among others - lower yields for certain varieties, lower planting density (for vineyards, olive groves etc.), lower milk production for certain breeds etc.

5) Direct sale to final consumers
6) Any other channel not falling under definitions 1 to 5 above

The *marketing channels* which were considered *for agricultural raw materials* were the following:

1) Direct sale on the spot market (see above for definition)
2) Sale on the spot market via intermediaries (see above for definition)
3) Direct sale to processors via supply contracts / other marketing agreements
4) Sale to processors via intermediaries (supply contracts / other marketing agreements)
5) Any other channel not falling under definitions 1 to 4 above

2.4.3 Methods for the analysis of theme 5: other elements of added value for GI producers

Study theme 5 aimed to answer two specific questions:

a. "To what extent does the possibility to use a GI name give access to new markets or results in an increased market penetration?"
b. "What other elements of added value exist for producers to produce a GI product (such as: protection of intellectual property rights, better access to promotion funds, visibility, investment aid, better support under rural development, participation in fairs etc.)?"

The operational methodology for answering the two study questions is described in tables 2.6 and 2.7.

Table 2.6 - Study theme 5: GIs, access to new markets and increased market penetration

Analysis	
Operational steps and relevant aspects	***Methods and tools***
a) Preliminary analysis – mainly focused on theoretical aspects, and carried out on the basis of the available literature - of the possible linkages between the use of GIs and: 1. scope for accessing new markets 2. scope for increasing market penetration Relevant aspects for the investigation: a. Domestic markets: • consumers' awareness about GIs and willingness to pay for GI products • use of GIs and large-scale retailing b. International markets: use of GIs and barriers to trade (tariff and non-tariff ones) c. Other relevant aspects (if any)	<u>Data collection</u>: • Desk research and literature review. • Interviews <u>Data analysis</u>: • Regulatory analysis
b) Empirical analysis – mainly focused on operational aspects, and carried out mainly through stakeholders' consultation in the framework of case studies - of the actual linkages between the use of GIs and the relevant topics and aspects listed at a) above	<u>Data collection</u>: • Interviews with key stakeholders (structured consultation)
Answer to the study question	
Operational steps and relevant aspects	***Methods and tools***
a) Critical review of the findings of the analyses developed on theoretical aspects and operational aspects	<u>Data analysis</u>: • Critical factors analysis
b) Drawing of reasoned conclusions on the findings in order to provide an answer to the study question	

Table 2.7 - Study theme 5: other elements of added value for GI producers

Analysis	
Steps	***Methods and tools***
a) Preliminary analysis – mainly focused on theoretical aspects, and carried out on the basis of the available literature - of the possible linkages between GIs and: 1. protection of intellectual property rights; 2. better access to promotion funds and investment aid; 3. better support under rural development; 4. improved visibility; 5. better access to participation in fairs; 6. other possible elements of added value for GI producers Relevant aspects for the investigation: a. GIs and international regulation on intellectual property rights (including WTO) b. Linkages between the regulation on GIs and other EU/national/regional policies c. Other relevant aspects (if any)	Data collection: • Desk research and literature review. • Interviews Data analysis: • Regulatory analysis
b) Empirical analysis – mainly focused on operational aspects, and carried out mainly through stakeholders' consultation in the framework of case studies - of the actual linkages between GIs and the relevant topics and aspects listed at a) above	Data collection: • Interviews with key stakeholders
Answer to the study question	
Steps	***Methods and tools***
a) Critical review of the findings of the analyses developed on theoretical aspects and on operational aspects	Data analysis: • Critical factors analysis
b) Drawing of reasoned conclusions on the findings in order to provide an answer to the study question	

2.4.4 Theme 6: Comparisons and conclusions

To allow *comparative analysis of the findings of study themes 1, 2, 3, 4, and 5*, the results of the investigations carried out were organised in a ***logical framework*** which was structured according to:

1. The different case studies (each identified by a "GI product / standard product" pair)
2. The different sectors concerned
3. The type of GI involved (PDO / PGI)

To provide an "at a glance" overview of the results of this comparative analysis, a number of *synoptic tables* were prepared. The comparative analysis focused on:

a. Identifying the *most significant differences across different case studies, sectors and GI types*
b. Highlighting the *reasons behind such differences*, as investigated in the framework of study themes 2, 3, 4 and 5

Starting from the results of the comparative analysis and – in general –- from the findings of the investigations carried out, *reasoned conclusions were drawn at the level of individual case studies* as well as (to the extent this was possible) *for the sectors concerned and the PDO/PGI schemes*. To this end, an *answer to the following five specific questions* was provided:

1. To what extent have GI products a higher price in comparison with their corresponding standard products?

2. Does a potential higher price for a GI product compared with a 'standard' product, translate into a higher gross margin for the producers (and farmers in particular)?
3. What are the key factors for obtaining a gross margin that is higher/lower?
4. What other added value is there for producers of GI products?
5. What are the enabling and disabling factors for the generation of added value?

2.5 Quality checks, limitations and validity of results

A *specific quality control system* was implemented for the purposes of the study, aimed at checking the quality and reliability of all primary and secondary data and information to be used in the required analyses, with special attention to *data and information provided by the respondents in the questionnaire-based survey*.

The quality-control system, designed to check the *completeness, reliability and accuracy of primary data obtained by means of the questionnaire-based survey*, was based on a pre-test and various types of checks:

1. The questionnaire (previously approved by the Steering Group) was *pre-tested* in 2 case studies, on a sample of at least three respondents per category (producers of GI products; producers of standard products), in order to ensure the absence of any ambiguity and to make sure that it was fully understandable for respondents.
2. The completed questionnaires were first *checked to detect any missing data and information*.
3. In every completed questionnaire, quantitative data concerning:
   - Technical aspects of production methods
   - Selling prices
   - Production costs

   were *checked to detect the possible presence of "outlier" data due to typing errors*. In the case such "outlier" data were present, the respondents concerned were contacted by study team experts in order to validate the "outlier" data or, alternatively, correct it.
4. The *overall accuracy and reliability of the quantitative data* per point 3 above was ensured via the following *cross-checks*:
   a. *Checks for the presence of "outlier" data* among those provided by all producers of a GI product or by all producers of the corresponding standard product.
   b. *Checks on the consistency* between figures concerning each GI product and the corresponding figures concerning the related standard product.

The *completeness, reliability and accuracy of primary data obtained by interview* was ensured by asking the interviewees to check the minutes of the interview drafted by the study team experts who performed it.

As for the *completeness, reliability and accuracy of secondary quantitative and qualitative information sourced by study team experts via desk research*, this was ensured mainly through the proper selection of sources, which were validated by the Steering Group for the study. Quantitative information sourced via desk research was also used to check the reliability and consistency of analogous information sourced through the questionnaire-based survey (see point 4.b above).

The overall reliability of basic data, of the related elaborations and of the findings which are derived from them can be deemed good. The main limitations in the validity of the results of the study stem from the following elements:

1. The number of case studies carried out is limited if compared to the overall number of GI products in the EU. This implies that the selection of case studies cannot be considered representative of the

wide variety of situations which characterise the universe of GI production in the EU, and hence that the conclusions of the study cannot be generalised to said universe.

2. Even if the overall number of producers interviewed in the survey was considerable (193 between farmers and processors involved in GI and/or standard production: see table 2.8 for a detailed overview), in some cases the number of survey respondents was rather limited if compared to the total number of GI and/or standard producers. This implies that - especially in the cases where the universe of GI and/or standard producers was very heterogeneous for what concerns firm size, specialisation, production and marketing techniques etc. – there is a risk that case-study results might not always represent adequately the extreme variety of situations which can be found in reality
3. In a very limited number of cases (Emmental de Savoie PGI and Vorarlberger Bergkäse PDO), primary data on costs and prices could not permit, alone, reliable quantification of the gross margins of GI and/or standard products being studied. In such cases, two "second-best" solutions to quantify the gross margins were adopted, namely:
    a. Validation by producers of calculations made by the study experts, on the basis of primary data concerning the techno-economic aspects of the production process
    b. Estimation of production costs on the basis of plausible assumptions concerning certain cost items
4. The level of detail of primary data on costs and prices varied across survey respondents. Not all producers agreed to provide price data differentiated by marketing channel, and only few producers were available to disclose detailed production cost data, broken down into individual cost items. Some respondents could provide detailed figures for every specific year of the relevant period (2007-2011), whereas other respondents could only provide indicative figures for the entire period considered

Table 2.8 – Survey of producers: details on coverage

Case studies	GI supply chain						Standard supply chain					
	Producers of agricultural raw materials			*Processors*			*Producers of agricultural raw materials*			*Processors*		
	Contacted	Interviewed	Providing quantitative primary data	Contacted	Interviewed	Providing quantitative primary data	Contacted	Interviewed	Providing quantitative primary data	Contacted	Interviewed	Providing quantitative primary data
Montepulciano d'Abruzzo (IT)	4	4	3	9	7	6	4	4	3	6	4	4
La Mancha (ES)	3	3	3	5	4	4	2	2	2	5	4	4
Scotch Beef (UK)	Producers of agricultural raw materials were contacted through their reference organisation	3	3	2	2	2	Producers of agricultural raw materials were contacted through their reference organisation	2	2	2	2	2
Jambon d'Ardenne (BE)	3	3	3	4	3	3	3	3	3	4	3	3
Soprèssa Vicentina (IT)	2	2	2	4	3	3	2	2	2	5	4	4
Emmental de Savoie (FR)	7	4	4	3	2	1	6	2	2	7	4	3
Pecorino Sardo (IT)*	10	4	4	21	8	6	13	3	3	34	11	10
Vorarlberger Bergkäse (AT)	Producers of agricultural raw materials were contacted through their reference organisation	5	5	Processors were contacted through their reference organisation	4	4	Producers of agricultural raw materials were contacted through their reference organisation	1**	1**	Processors were contacted through their reference organisation	2	2
Dauno (IT)***	6	6	2	7	7	7	10	6	5	10	10	10
Ekstra deviško oljčno olje Slovenske Istre (SI)****	No market for olives. GI and standard processors produce olives in-house but do not sell them.			12	7	7	No market for olives. GI and standard processors produce olives in-house but do not sell them.			12	7	7
Pomme du Limousin (FR)	7	6	5	Structured interviews with 4 packers, including quantitative primary data			9	6	3	1 questionnaire and 4 structured interviews with 4 packers, including quantitative primary data.		
Lammefjord carrots (DK)	3	3	3	3	2	2	5	3	3	2	2	1
Pimiento Asado del Bierzo (ES)	4	3	3	8	5	5	7	3	3	3	3	3

* some vertically integrated producers also supply agricultural raw materials to other processors

** no separated market between GI and standard milk. Dairy farmers supplying co-operative plants involved in both GI and standard production do not know if the milk they have supplied will be used to obtain products marketed as GIs, or not

*** except for one producer, GI and/or standard olive oil producers produce olives in-house. The function refers to the role under which the subjects filled in the questionnaire (processors vs. producers of agricultural raw materials)

**** All producers are vertically integrated (production of raw materials => production of final product)

Source: case study reports

3 RESULTS

This chapter illustrates the main results of the investigations made in the 13 case studies which were carried out for the purposes of the study. Due to the very high number and the great variety of GI products in the EU, ***the findings presented in this chapter should be referred to the selection of case studies in itself, rather than extended to the entire universe of GI products in the EU***.

The findings of previous research on the subject, and the main objectives of GI protection in the EU, i.e. securing higher incomes for producers in return for their efforts to improve quality, and protecting producers from unfair competition (see § 1.2), suggested a ***distinction of GI products in two broad groups***. The results of case-study work have basically confirmed the existence of such distinction, albeit in a wide variety of situations, and with some peculiarities and exceptions.

The first group includes ***GI products which are significantly different from the corresponding standard products due to a number of intrinsic features*** (quality parameters, organoleptic characters etc.), some of them deriving from the geographical area where such products and/or the agricultural raw materials concerned are produced. In these cases, the intrinsic differences between the GI products and the corresponding standard products constitute the main elements on which GI producers build their strategies of product differentiation.

The second group includes ***GI products which have relatively limited intrinsic differences from the corresponding standard products***: in such cases, product differentiation was instead found to be based for the most part on immaterial factors (e.g. know-how of producers, cultural values, traditions, appealing image of the production area etc.).

The above distinction was found to constitute a very useful interpretation key, and has therefore been applied systematically in the analysis of the results of the study.

Other relevant distinctions which could be used in the interpretation of results were found to be the following:

1. The distinction based on the economic importance (in both volume and value terms) of GI products, with ***high volume GI products*** vs. ***small volume / "niche" GI products***.
2. The distinction between ***long-standing GI products*** (often deriving from pre-existing forms of GI protection at national or regional level) and ***more recent protected GI products***, which were registered only in relatively recent times.

The sections which follow (3.1 to 3.3) illustrate the results of the investigations carried out on themes 1, 2, 3, 4 and 5 in the framework of case-study work.

3.1 Overview of main results from themes 1 and 2

Study theme 1 concerned development and explanation of the overall approach to the study (methodology and tools for data collection; methodology and tools for the analysis of costs of productions, prices and gross margins of GIs and standard products; selection of the GI products and corresponding standard products for the case studies). The illustration of the study methodology (also for the aspects concerning case-study work) has been provided at § 2.

Study theme 2 concerned the comparison of methods of production and characteristics of GIs and standard products, as well as providing an overview of their supply chains. The aspects to be considered were the economic importance of the products concerned (see § 3.1.1 for an overview of the main results), the methods of production and characteristics of the products themselves (§ 3.1.2), the organisation of their

supply chains (§ 3.1.3), the relevant marketing channels (§ 3.1.4) as well as market power and price formation mechanisms in the supply chains (§ 3.1.5).

3.1.1 Economic importance

The economic importance of the studied GI products varies greatly, both in absolute volume and value terms, and if compared with the economic importance of the related standard products. Table 3.1 provides an overview of the above aspects, and also highlights graphically the evolution of both volume and value of production of the studied GI products over the period 2007-2010 (small graphs in the "4-year trend" column).

In ***volume terms***, the selection of case studies features:

- 3 high-volume GI products (the two GI wines and Scotch Beef PGI)
- 4 small-volume GI products (Soprèssa Vicentina PDO, Dauno PDO, Ekstra deviško oljčno olje Slovenske Istre PDO and Pimiento Asado del Bierzo PGI)

The 6 other GI products studied are positioned between the two above extremes.

If compared with the volume of the related standard product, the volume of each GI product is always lower, with the sole exception of Vorarlberger Bergkäse (even though the volumes of GI and standard production are comparable in this case). While in a few cases (Montepulciano d'Abruzzo PDO, Scotch Beef PGI, Lammefjordsgulerod PGI) the volume of GI production is comparable with, or at least of the same order of magnitude of, standard production, in the remaining ones it is always much lower (even by 2-3 orders of magnitude).

Coming to trends in volume, Scotch Beef PGI, Emmental de Savoie PGI, Ekstra deviško oljčno olje Slovenske Istre PDO and (at least for the last part of the period), Jambon d'Ardenne PGI and Pomme du Limousin PDO show clearly expansive trends, especially if compared against the stable or declining trends of the corresponding standard products. On the contrary, the trend of Lammefjordsgulerod PGI is clearly a declining one, also when compared with the expansion of production of standard carrots in Denmark, and equally declining is the trend for Soprèssa Vicentina PDO. The other GI products show no clear trends.

Reasoning in ***value terms***, the picture of the relative economic importance of the studied GI products is the following:

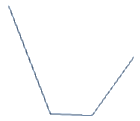
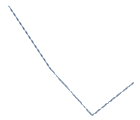
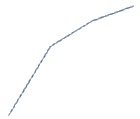
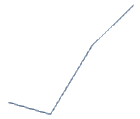
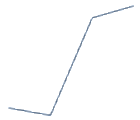
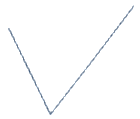
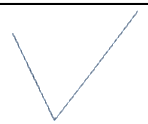
- 3 high volume GI products (again, the two GI wines and Scotch Beef PGI), with an average value of production greater than 100 million Euros in all cases.
- 4 niche GI products (Soprèssa Vicentina PDO, Dauno PDO, Ekstra deviško oljčno olje Slovenske Istre PDO and Pimiento Asado del Bierzo PGI), with an average value of production lower than 1 million Euros.

The other GI products have an average value of production ranging between 4 million and 18 million Euros.

Among the products which clearly show expanding trends in volume, some are characterised by equally evident expanding trends also in terms of value (and also if compared to the corresponding standard products): this is the case of Scotch Beef PGI, Emmental de Savoie PGI and Ekstra deviško oljčno olje Slovenske Istre PDO. La Mancha PDO and Pecorino Sardo PDO clearly show expanding trends in value, but not in volume. Declining trends in value can be observed for Soprèssa Vicentina PDO and Lammefjordsgulerod PGI, which show equally declining trends also in terms of volume.

The selected case studies provide a ***wide variety of situations concerning the economic importance of the concerned GI products*** (in both absolute and relative terms), and the evolution of production volumes and values over the relevant period for the study also reveals significant differences. In a number of a cases, the ***emerging trends are related to the profitability of GI production*** (i.e. the existence and extent of a differential gross margin vs. standard production), which will be dealt with in § 3.2.3.

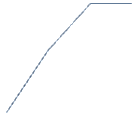
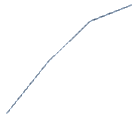
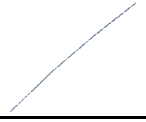
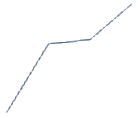
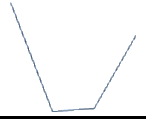
Table 3.1 – Economic importance of the studied GI products, in volume and value terms

Product	Status	Product class	Dimension	Unit	2007	2008	2009	2010	Average 2007-2010	4-year trend (2007-2010)	Comparison with standard product
Montepulciano d'Abruzzo	PDO	Wines	Volume	hl	891.940	781.158	779.569	839.141	822.952		Production of non-GI wines in Abruzzo varied between 1,35 and 1,68 million hl over the same period
			Value	1.000 €	163.778	152.875	118.667	111.430	136.688		Due to decreasing prices, the value of non-GI wine production in Abruzzo declined over the same period
La Mancha	PDO	Wines	Volume	hl	752.384	672.520	615.609	655.547	674.015		Production of non-GI wines in Castilla-La Mancha in 2012 was around 11 million hl
			Value	1.000 €	102.301	147.954	165.890	175.937	148.020		No information available
Scotch Beef	PGI	1.1. Fresh meat	Volume	T	35.931	34.980	40.912	44.503	39.082		Production of non-GI beef in Scotland was fairly stable over the same period (130-140.000 T)
			Value	1.000 €	159.615	150.803	273.472	289.680	218.392		The value of non-GI beef production in Scotland was fairly stable over the same period
Jambon d'Ardenne	PGI	1.2. Meat products	Volume	T	1.498	1.429	1.472	1.516	1.479		No specific information available for Cobourg ham (standard product); the volume of the product category to which it belongs declined over the same period
			Value	1.000 €	13.478	12.863	13.248	13.646	13.309		No specific information available for Cobourg ham (standard product); the value of the product category to which it belongs declined over the same period

Source: Areté elaboration on data from study on the value of production of agricultural products and foodstuffs, wines, aromatised wines and spirits protected by a GI, carried out by AND International for DG Agriculture (2012), Consortia of GI producers, National Statistical Offices

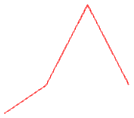
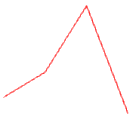
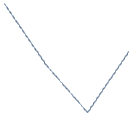
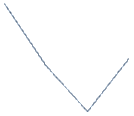
(continued)

(continued)

Product	Status	Product class	Dimension	Unit	2007	2008	2009	2010	Average 2007-2010	4-year trend (2007-2010)	Comparison with standard product
Soprèssa Vicentina	PDO	1.2. Meat products	Volume	T	104	92	97	57	87		No information available
			Value	1.000 €	751	573	606	359	572		No information available
Emmental de Savoie	PGI	1.3. Cheeses	Volume	T	2.300	2.700	3.000	3.000	2.750		Production of non-GI Emmental cheese in Brittany was fairly stable over the same period
			Value	1.000 €	10.239	14.446	17.790	19.125	15.400		Due to decreasing prices, the value of non-GI Emmental production declined over the same period
Pecorino Sardo	PDO	1.3. Cheeses	Volume	T	1.801	2.045	2.135	1.923	1.976		No information available
			Value	1.000 €	9.223	11.410	13.386	15.184	12.301		No information available
Vorarlberger Bergkäse	PDO	1.3. Cheeses	Volume	T	4.101	4.195	4.200	4.250	4.187		No information available
			Value	1.000 €	18.464	17.837	17.850	18.275	18.106		No information available

Source: Areté elaboration on data from the study on the value of production of agricultural products and foodstuffs, wines, aromatised wines and spirits protected by a GI, carried out by AND International for DG Agriculture (2012), Consortia of GI producers, National Statistical Offices *(continued)*

(continued)

Product	Status	Product class	Dimension	Unit	2007	2008	2009	2010	Average 2007-2010	4-year trend (2007-2010)	Comparison with standard product
Dauno	PDO	1.5. Oils and fats	Volume	T	90	110	168	110	120		Production of non-GI olive oil in Foggia province varied between 23.000 T and 19.000 T over the same period
			Value	1.000 €	363	406	513	338	405		Due to oscillations of both volumes and price of non-GI olive oil in Foggia province, no clear trend can be observed over the same period
Ekstra deviško oljčno olje Slovenske Istre	PDO	1.5. Oils and fats	Volume	T		32	37	43	37		Production of non-GI olive oil in Slovenia varied between 350 T and 650 T over the same period
			Value	1.000 €		446	578	670	565		No information available
Pomme du Limousin	PDO	1.6. Fruit, vegetables and cereals fresh or processed	Volume	T	9.233	7.497	6.159	7.887	7.694		Non-GI Golden apple production in Tarne-et-Garonne declined drastically over the same period
			Value	1.000 €	9.233	6.372	4.311	6.704	6.655		The decrease in volume of production of non-GI Golden apples in Tarne-et-Garonne was partly compensated by an increase in prices
Lammefjordsgulerod	PGI	1.6. Fruit, vegetables and cereals fresh or processed	Volume	T	22.000	20.500	19.500	17.000	19.750		Production of non-GI carrots in Denmark increased by around 70% over the same period (from 53.000 to 90.000 T)
			Value	1.000 €	4.725	4.100	3.750	3.195	3.942		Value of production of non-GI carrots in Denmark increased by around 50% over the same period

Source: Areté elaboration on data from AND International (2012), Consortia of GI producers, National Statistical Offices

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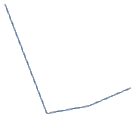
Product	Status	Product class	Dimension	Unit	2007	2008	2009	2010	Average 2007-2010	4-year trend (2007-2010)	Comparison with standard product
Pimiento Asado del Bierzo	PGI	1.6. Fruit, vegetables and cereals fresh or processed	Volume	T	53	43	43	45	46		Production of non-GI canned and bottled peppers in Castilla y León varied between 1.000 and 1.200 T over the same period
			Value	1.000 €	362	341	325	338	341		Value of production of non-GI canned and bottled peppers in Castilla y León declined by around 15% over the same period

Source: Areté elaboration on data from AND International (2012), Consortia of GI producers, National Statistical Offices

3.1.2 Methods of production

The methods of production of both raw materials for GI production and final GI products can differ more or less significantly from the ones applying to standard production, and the intrinsic features of raw materials and final products also show a varying degree of difference between GI and standard production (see tables 3.2 and 3.3).

In the case of ***agricultural raw materials***, production methods which differ in a number of aspects can, in any case, result in raw materials which have limited differences in their intrinsic features (technical parameters): this is the case of grapes for the two GI wines, of olives for producing Dauno PDO and Ekstra deviško oljčno olje Slovenske Istre PDO, as well as – to a lesser degree – live cattle for producing Scotch Beef PGI, fresh Limousin PDO apples for packing, fresh Lammefjordsgulerod PGI carrots for packing, and fresh peppers processed into Pimiento Asado del Bierzo PGI. In the case of live pigs destined for production of Jambon d'Ardenne PGI, and of liquid milk for producing Pecorino Sardo PDO and Vorarlberger Bergkäse PDO, production methods are virtually identical, and this results in raw materials with basically the same intrinsic features.

Only two GI products require raw materials with intrinsic features differing significantly from standard ones, obtained through production methods which differ for a number of aspects: Soprèssa Vicentina PDO and Emmental de Savoie PGI.

The most common differences in production methods of agricultural raw materials concern:

- Geographical limitations (12 out of 13 cases)
- Specific features / minimum quality requirements in raw materials (10 out of 13 cases): these usually concern technical parameters which are relevant for the quality of the final product (e.g. minimum live weight of pigs, use of unpasteurised milk only, etc.)
- Use of specific varieties, species, etc. (8 out of 13 cases)

Coming to ***final products***, there is one case (Pomme du Limousin PDO) where significantly different production methods result in quite limited differences in intrinsic product features. This outcome is, however, more often the result of the use of rather similar production methods, like in the cases of Pecorino Sardo PDO, Vorarlberger Bergkäse PDO, Dauno PDO, Ekstra deviško oljčno olje Slovenske Istre PDO, and Lammefjordsgulerod PGI.

In 7 case studies the final GI products are significantly different in their intrinsic features from the corresponding standard products, as a result of the application of significantly different production methods.

The most common differences in production methods of the final products concern:

- Geographical limitations (13 out of 13 cases)
- Specific features / minimum requirements in final products (13 out of 13 cases)
- Use of raw materials with specific features (10 out of 13 cases)

Soprèssa Vicentina PDO and Emmental de Savoie PGI can be highlighted as the GI products with the deepest differences in production methods vs. standard production.

Different production methods often result in additional production costs for GI raw materials and/or final products: this aspect will be discussed in § 3.2.2, keeping in mind the differences highlighted here.

Table 3.2 – Agricultural raw materials: overview of main differences between GI and standard production

Product	Status	Product class	Agricultural raw material concerned	Main differences vs standard production						Intrinsic features of GI agricultural raw materials (as compared with the standard ones)
				Use of specific varieties, species, etc.	Additional or specific phases / operations	Geographical limitations	Limitations in productivity	Specific features / minimum requirements in raw material	Other / notes	
Montepulciano d'Abruzzo	PDO	Wines	Grapes	YES(0)	YES(1)	YES	YES(1)	YES	(0) the mix of varieties can be different in standard production (1) specific operations may be needed to stay below the maximum allowed grape yield	Basically the same
La Mancha	PDO	Wines	Grapes	YES(0)		YES	YES(2)	YES	(0) the mix of varieties can be different in standard production (2) grape selection may be needed to stay below the maximum allowed grape yield	Basically the same
Scotch Beef	PGI	1.1. Fresh meat (and offal)	Live cattle	YES(3)		YES		YES	(3) restriction to heifers and steers only	Slightly different
Jambon d'Ardenne	PGI	1.2. Meat products (cooked, salted, smoked, etc.)	Pig rear legs						Minimum requirements concerning final product (ham weight) have implications on the required features of pig rear legs	Basically the same
Soprèssa Vicentina	PDO	1.2. Meat products (cooked, salted, smoked, etc.)	Live pigs	YES	YES(4)	YES		YES	(4) additional fattening and finishing Specific requirements for pig feeding	Significantly different (live pigs for GI production are heavier)
Emmental de Savoie	PGI	1.3. Cheeses	Liquid milk	YES(5)		YES		YES	(5) local dairy cow breeds Specific requirements for cow feeding	Significantly different (due to specific dairy farming techniques in GI production)
Pecorino Sardo	PDO	1.3. Cheeses	Liquid milk			YES				Basically the same
Vorarlberger Bergkäse	PDO	1.3. Cheeses	Liquid milk			YES		YES	Specific requirements for cow feeding Storage of milk not allowed => to be delivered daily to dairies	Basically the same

(continued)

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Product	Status	Product class	Agricultural raw material concerned	Main differences vs standard production						Intrinsic features of GI agricultural raw materials (as compared with the standard ones)
				Use of specific varieties, species, etc.	Additional or specific phases / operations	Geographical limitations	Limitations in productivity	Specific features / minimum requirements in raw material	Other / notes	
Dauno	PDO	1.5. Oils and fats (butter, margarine, oil, etc.)	Olives	YES(0)	YES(6)	YES	YES(6)	YES	(0) the mix of varieties can be different in standard production (6) specific operations may be needed to stay below the maximum allowed olive yield	Basically the same
Ekstra deviško oljčno olje Slovenske Istre	PDO	1.5. Oils and fats (butter, margarine, oil, etc.)	Olives	YES(0)	YES(6)	YES	YES(6)	YES	(0) the mix of varieties can be different in standard production (6) specific operations may be needed to stay below the maximum allowed olive yield	Basically the same
Pomme du Limousin	PDO	1.6. Fruit, vegetables and cereals fresh or processed	Fresh apples*	(7)	YES(8)	YES	YES	YES	(7) Golden Delicious for both GI and standard production (8) micro-irrigation and localised irrigation only; compliance with Integrated Fruit Protection	Slightly different
Lammefjordsgulerod	PGI	1.6. Fruit, vegetables and cereals fresh or processed	Fresh carrots*		YES(9)	YES			(9) carrots harvested entirely in autumn and stored in cooling house during winter	Slightly different
Pimiento Asado del Bierzo	PGI	1.6. Fruit, vegetables and cereals fresh or processed	Fresh peppers	YES		YES		YES		Slightly different

* Non-processed products: *"agricultural raw materials"* = harvested agricultural products (fresh apples / carrots) in the conditions required for forwarding to packing stations
Source: case study reports

Table 3.3 – Final products: overview of main differences between GI and standard production

Product	Status	Product class	Main raw material used	Main differences vs standard production						Intrinsic features of the final GI products (as compared with the standard ones)
				Use of raw materials with specific features	Additional or specific phases / operations	Geographical limitations	Limitations in productivity	Specific features / minimum requirements in final product	Other / notes	
Montepulciano d'Abruzzo	PDO	Wines	Grapes	YES		YES	YES	YES		Significantly different (due to limitations in grape and wine yield and more restrictive quality parameters)
La Mancha	PDO	Wines	Grapes	YES	YES(1)	YES	YES	YES	(1) for certain typologies of DO wine	Significantly different (due to limitations in grape and wine yield and more restrictive quality parameters)
Scotch Beef	PGI	1.1. Fresh meat (and offal)	Live cattle	YES		YES		YES		Significantly different (due to use of heifers and steers only and more restrictive quality parameters)
Jambon d'Ardenne	PGI	1.2. Meat products (cooked, salted, smoked, etc.)	Pig rear legs		YES	YES		YES	Longer maturation than standard product Smoking (optional but frequently applied) must employ wood or sawdust (excluding coniferous trees and recycled wood)	Significantly different (due to longer maturation and often also smoking)
Soprèssa Vicentina	PDO	1.2. Meat products (cooked, salted, smoked, etc.)	Half carcasses of pigs	YES	YES(2)	YES		YES	(2) sectioning of half-carcasses in the required cuts (use of pre-cut pig meat is not allowed)	Significantly different (due to use of selected cuts and more restrictive quality parameters)
Emmental de Savoie	PGI	1.3. Cheeses	Liquid milk	YES(3)	YES(4)	YES	YES(4)	YES	(3) unpasteurised milk from local dairy cow breeds (4) prohibition to use plastic film during the ageing period (limits cheese yield)	Significantly different (due to use of unpasteurised milk, different maturation techniques and more restrictive quality parameters)
Pecorino Sardo	PDO	1.3. Cheeses	Liquid milk			YES		YES	Only native starter cultures are allowed	Slightly different
Vorarlberger Bergkäse	PDO	1.3. Cheeses	Liquid milk	YES		YES		YES	Length of maturation period: at least 3 months Cheese yields tend to be higher in standard production	Slightly different (if length of maturation period is the same)

(continued)

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Product	Status	Product class	Main raw material used	Main differences vs standard production						Intrinsic features of the final GI products (as compared with the standard ones)
				Use of raw materials with specific features	Additional or specific phases / operations	Geographical limitations	Limitations in productivity	Specific features / minimum requirements in final product	Other / notes	
Dauno	PDO	1.5. Oils and fats (butter, margarine, oil, etc.)	Olives	YES		YES	YES	YES		Slightly different
Ekstra deviško oljčno olje Slovenske Istre	PDO	1.5. Oils and fats (butter, margarine, oil, etc.)	Olives	YES		YES	YES	YES	Pressing of olives at maximum temperature of 27°C Only water can be added during processing Oil can only be sold bottled	Slightly different
Pomme du Limousin	PDO	1.6. Fruit, vegetables and cereals fresh or processed	Fresh apples	YES	YES(5)	YES	YES	YES	(5) specific packaging practices	Slightly different
Lammefjordsgulerod	PGI	1.6. Fruit, vegetables and cereals fresh or processed	Fresh carrots			YES		YES		Slightly different
Pimiento Asado del Bierzo	PGI	1.6. Fruit, vegetables and cereals fresh or processed	Fresh peppers	YES	YES(6)	YES		YES	(6) fresh peppers are peeled without submerging them in water or using chemical solutions	Significantly different (due to use of fresh peppers with specific features and to different peeling and roasting techniques)

Source: case study reports

3.1.3 Organisation of the supply chain

The studied GI products present remarkable differences in various aspects of the organisation of their supply chains, which are described in table 3.4. Furthermore, the organisation of the GI supply chain can differ more or less significantly from the one of the standard supply chain.

The ***role played by vertical integration or co-ordination along the supply chain*** (to be understood as the importance of the share of total GI production taking place within vertically integrated/co-ordinated systems) varies greatly. It is important or very important for some GI products, where the bulk or the near totality of production comes from vertically integrated producers and/or co-operative processing/packing plants: Pomme du Limousin PDO, Lammefjordsgulerod PGI, Emmental de Savoie PGI, Vorarlberger Bergkäse PDO, and the two GI wines. At the other end of the spectrum, there are GI production systems where independent producers prevail in both the agricultural and industrial stages of the supply chain, and where vertical co-ordination forms are relatively less common: this is the case of Scotch Beef PGI, Jambon d'Ardenne PGI and – especially – Soprèssa Vicentina PDO (where the number of actors is very limited anyway). The other GI production systems usually feature the presence of both vertically integrated/co-ordinated organisational patterns and less structured ones. The importance of co-operative firms is particularly important in the supply chains of the two GI wines and of Emmental de Savoie PGI, Pecorino Sardo PDO, Vorarlberger Bergkäse PDO and Pomme du Limousin PDO.

Remarkable differences also concern the ***number of operators at the two main stages of the supply chain*** (production of agricultural raw materials; production of final products).

The number of farmers involved in production of raw materials for the GI supply chain[13] can range from several thousands (like in the cases of the two GI wines, Scotch Beef PGI, Jambon d'Ardenne PGI and Pecorino Sardo PDO) to very few (less than 100 in the cases of Dauno PDO, Ekstra deviško oljčno olje Slovenske Istre PDO, Lammefjords PGI carrots, Pimiento Asado del Bierzo PGI and above all Soprèssa Vicentina PDO). Production of raw materials for Pomme du Limousin PDO, Vorarlberger Bergkäse PDO and Emmental de Savoie PGI involves some hundreds of farmers.

The number of producers of final products can also differ greatly: from a couple of hundred for the two GI wines to less than 10 producers for Soprèssa Vicentina PDO, Emmental de Savoie PGI, Pomme du Limousin PDO, Pimiento Asado del Bierzo PGI and Lammefjordsgulerod PGI.

In a number of cases there are ***significant differences in the organisation of the two supply chains*** (GI vs. standard). The following ones are the most noteworthy:

1. For wines and oils, GI producers integrating bottling operations are more common, consistent with the focus on sales of bottled products (see § 3.1.4).
2. In many cases, the entire GI supply chain (from production of agricultural raw materials to the final product) must be located within a specific geographic area, which can also be of limited extent.
3. The importance of vertical integration is usually higher in the GI supply chain than in the standard one (this is the case of both GI wines, Emmental de Savoie PGI, Pomme du Limousin PDO, Pimiento Asado del Bierzo PGI), but there are exceptions (Lammefjordsgulerod PGI above all).

The features of the supply chain organisation for the studied GI products can have an impact on the ability to operate in specific marketing channels (see § 3.1.4), on the degree of market power and pricing mechanisms (see § 3.1.5), and on the economics of GI production (prices, costs and gross margins of both raw materials and final products: see § 3.2).

[13] It is worth reminding that in the case of non-processed products (Pomme du Limousin PDO, Lammefjordsgulerod PGI), *"agricultural raw materials"* are harvested agricultural products (fresh apples / carrots) in the conditions required for forwarding to packing stations (see § 2.4.1).

Table 3.4 – Organisation of the supply chain of the studied GI products

Product	Status	Product class	Role of vertical integration/ coordination along the supply chain	Number of operators in the supply chain			Prevailing organisational pattern(s) in the supply chain	Main differences with the standard supply chain
				Producers of agricultural raw materials	Producers of final products	Notes		
Montepulciano d'Abruzzo	PDO	Wines	Important	6-7.000	around 200 (1)	(1) most wineries producing standard wines also produce GI wines	1) Vertically integrated firms controlling the whole production process, from production of grapes to sale of final product 2) Coordination between vineyard farming and wine-making in the form of cooperative wineries	The organisation of the standard supply chain is similar, but: 1) bottling companies (especially those located outside Abruzzo region) have greater importance in standard production 2) producers integrating bottling operations are much more common in GI production
La Mancha	PDO	Wines	Important	60-70.000	around 200 (1)	(1) most wineries producing standard wines also produce GI wines	1) Vertically integrated firms controlling the whole production process, from production of grapes to sale of final product 2) Coordination between vineyard farming and wine-making in the form of cooperative wineries	The organisation of the standard supply chain is similar, but: 1) vertical integration between vineyard farming and wine-making has greater importance in GI production 2) producers integrating bottling operations are much more common in GI production
Scotch Beef	PGI	1.1. Fresh meat	Rather limited	around 7.500 (2)	around 20 (2)	(2) most actors are involved in both GI and standard production	1) Independent cattle farmers supplying slaughterhouses (long-standing but informal relationships) 2) Vertically coordinated "Producer Clubs" supplying large-scale retailers	No notable differences, except that the entire supply chain for the GI product - from farm to slaughterhouse - must be located in Scotland
Jambon d'Ardenne	PGI	1.2. Meat products	Limited	Several thousands (3)	around 20	(3) pig legs can be sourced from all over the EU (the bulk is sourced in Flanders)	1) Large firms (some producing also Cobourg ham) 2) Family firms 3) Smaller operations integrating charcuterie shops	GI producers tend to have smaller operations than standard ones, and must be located within the GI area
Soprèssa Vicentina	PDO	1.2. Meat products	Limited	5 (4)	5 (4)	(4) all actors are involved in both GI and standard production	Independent pig farmers (one of them integrating also slaughtering) supplying producers	No notable differences, except that: 1) the entire supply chain for the GI product must be located in Vicenza province 2) the number of standard producers is significantly higher

Source: case study reports

(continued)

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Product	Status	Product class	Role of vertical integration/ coordination along the supply chain	Number of operators in the supply chain			Prevailing organisational pattern(s) in the supply chain	Main differences with the standard supply chain
				Producers of agricultural raw materials	Producers of final products	Notes		
Emmental de Savoie	PGI	1.3. Cheeses	Important	750-850	3		Dairy farmers (mostly organised in cooperatives) supplying producers in the framework of inter-branch agreements	1) The entire supply chain for the GI product must be located in Savoie 2) Level of vertical integration between dairy farming and cheese making is higher in the GI supply chain 3) Size of firms is remarkably greater in standard production
Pecorino Sardo	PDO	1.3. Cheeses	Quite important	around 6.300 (5)	27 (5)	(5) most actors are involved in both GI and standard production	1) Independent sheep farmers or cooperatives of sheep farmers supplying producers (annual contracts) 2) Coordination between sheep farming and cheese-making in the form of cooperative	No notable differences, except that the number of standard producers is higher
Vorarlberger Bergkäse	PDO	1.3. Cheeses	Very important	around 800 (6)	28 (6)	(6) most actors are involved in both GI and standard production	1) Dairy farmers supplying cooperative dairies 2) Independent dairy farmers processing their own milk into cheese	No notable differences
Dauno	PDO	1.5. Oils and fats	Quite important	60-80 (7)	around 30 (7)	(7) most actors are involved in both GI and standard production	1) Producers of olives "hiring" excess milling capacity from the vertically integrated firms, and marketing the resulting oil production 2) Vertically integrated firms controlling the whole production process, from production of olives to sale of final product	No notable differences, except that: 1) the entire supply chain for the GI product must be located in Foggia province 2) the number of standard producers is significantly higher
Ekstra deviško oljčno olje Slovenske Istre	PDO	1.5. Oils and fats	Quite important	around 70 (8)	around 70 (8)	(8) most actors are involved in both GI and standard production	1) Producers of olives "hiring" excess milling capacity from the vertically integrated firms, and marketing the resulting oil production 2) Vertically integrated firms controlling the whole production process, from production of olives to sale of final product	No notable differences, except that: 1) the entire supply chain for the GI product (including bottling) must be located in the DO area 2) the number of standard producers is significantly higher

Source: case study reports

(continued)

(continued)

Product	Status	Product class	Role of vertical integration/ coordination along the supply chain	Number of operators in the supply chain			Prevailing organisational pattern(s) in the supply chain	Main differences with the standard supply chain
				Producers of agricultural raw materials	Producers of final products	Notes		
Pomme du Limousin	PDO	1.6. Fruit, vegetables and cereals fresh or processed	Very important	around 350 (9)	3 (packers) (9)	(9) most actors are involved in both GI and standard production	Apple growers (mostly organised in 5 cooperatives) supplying packers (all of them controlled by the cooperatives)	1) Level of vertical integration between apple farming and packing is higher in GI production, where cooperatives play a more important role 2) The structure of the packing sector is more concentrated in GI production
Lammefjordsgulerod	PGI	1.6. Fruit, vegetables and cereals fresh or processed	Very important	around 35 (10)	2 (packers) (10)	(10) all production is compliant with GI specifications, but is not marketed as GI	1) One vertically integrated firm (owned by carrot growers) controlling the whole production process, from carrot cultivation to sale of final product (packed carrots) 2) Independent carrot growers supplying the other packer	1) The entire supply chain for the GI product must be located in Lammefjords area 2) Vertical integration between carrot farming and packing has even greater importance in standard production 3) Size of firms is greater in standard production
Pimiento Asado del Bierzo	PGI	1.6. Fruit, vegetables and cereals fresh or processed	Quite important	around 20	8		1) Independent pepper growers supplying producers 2) Vertically integrated firms controlling the whole production process, from pepper cultivation to sale of final product (Pimiento Asado)	1) Vertical integration between pepper cultivation and processing has greater importance in GI production 2) Size of firms is greater in standard production

Source: case study reports

3.1.4 Marketing channels

The most significant differences concerning the marketing of the studied GI products concern two aspects, which are highlighted in table 3.5 together with the most notable differences from the situation applying in the standard supply chain.

The ***orientation towards export markets or towards the domestic market*** differs greatly depending on the GI product considered: the marketing of the two GI wines has a strong orientation towards export markets (which account on average for over 40% of total sales), and exports account for at least 70% of total sales for Jambon d'Ardenne PGI and Vorarlberger Bergkäse PDO. In the case of Dauno PDO and Scotch Beef PGI, exports are significant but relatively limited (10-20% of total sales); for all the other studied GI products, exports are extremely limited or negligible (less than 5% of sales).

As for the ***main marketing channels***, in some GI supply chains final producers are strongly focused on direct sales to retailers (this is the case of Pecorino Sardo PDO, Lammefjordsgulerod PGI, Pomme du Limousin PDO, Jambon d'Ardenne PDO, and Soprèssa Vicentina PDO, where this channel accounts for at least 55% of total sales).

In the case of Montepulciano d'Abruzzo PDO, sale to downstream processors (bottling companies) is the most important channel.

Vorarlberger Bergkäse PDO is the only product which sees a clear prevalence of sales via wholesalers, mostly due to the presence of a very important trader which handles substantial volumes of GI product destined for both the domestic and export markets.

In the cases of Dauno PDO and Ekstra deviško oljčno olje Slovenske Istre PDO, there is a rather strong focus on direct sales to final consumers, although with two different approaches: for Dauno PDO, the approach is business-oriented, whereas for the Slovenian PDO oil direct sales mostly concern final consumers who have family or social ties with producers, and hence selling prices are kept close to production costs.

For "niche" products, the focus tends to be more on direct sales to independent specialised retailers, to operators in the HoReCa sector and to final consumers; direct sales to wholesalers and large-scale retailers tend to have more importance for "high volume" GI products, with a few exceptions (for instance, large-scale retailers are the most important customers of producers of Soprèssa Vicentina PDO, in spite of it being a typical "niche" GI product).

There are some notable ***differences in the marketing of GI products vs. standard products***. Of particular relevance is the fact that for both GI wines and for Dauno PDO extra-virgin olive oil, the focus in GI production is towards sales of bottled products in the (at least theoretically) most remunerative channels, whereas standard production is more focused towards bulk sales to bottling companies and/or wholesalers. In the case of Ekstra deviško oljčno olje Slovenske Istre PDO, sales in bulk are not allowed, and direct sales to retailers are often made in small-format bottles (even of 0,50 or 0,25 litres).

The different possibilities that the different marketing channels offer to GI producers in terms of valorisation of their production (i.e. obtaining better selling prices and achieving additional gross margins in comparison with standard products) will be highlighted in § 3.2.

Table 3.5 – Marketing channels of the studied GI products

Product	Status	Product class	Export sales vs. domestic sales (avg. % share on total)		Main marketing channels for final product (avg. % share on total)						Main differences with the standard supply chain
			Export	Domestic	Direct sale to retailers	Direct sale to downstream food processors	Sale to wholesalers / other intermed.	Direct sale to final consumers	Other channels	Additional information	
Montepulciano d'Abruzzo	PDO	Wines	48%	52%	22%	52%	19%	5%	2%		1) Sales of wine in bulk (to bottling companies and to wholesalers) account for a larger share in standard production
La Mancha	PDO	Wines	59%	41%	n.a.	n.a.	n.a.	n.a.	n.a.	Export sales: 62% in bulk, 38% in bottle Domestic sales: 49% consumed at home (87% of which bought through large-scale retailers), 51% in foodservice	1) Sales of wine in bulk (to bottling companies and to wholesalers) account for a larger share in standard production
Scotch Beef	PGI	1.1. Fresh meat (and offal)	11%	89%	n.a.	n.a.	n.a.	n.a.	n.a.	Domestic sales: 75% via retailers, 16% via independent butchers, 9% via other channels	1) Sales via retailers account for a larger share in GI production
Jambon d'Ardenne	PGI	1.2. Meat products (cooked, salted, smoked, etc.)	70%	30%	61%		34%	5%		Direct sale to specialist shops: 16% of domestic sales	1) Export sales have smaller importance in standard production 2) Sales to local and/or specialised retailers have smaller importance in standard production
Soprèssa Vicentina	PDO	1.2. Meat products (cooked, salted, smoked, etc.)	2%	98%	56%		41%	3%			No notable differences

Source: case study reports

(continued)

Notes: direct sale to retailers includes direct sale to discount stores; large-scale retailers = super and hypermarket chains; traditional retailers = small scale retail shops

(continued)

Product	Status	Product class	Export sales vs. domestic sales (avg. % share on total)		Main marketing channels for final product (avg. % share on total)						Main differences with the standard supply chain
			Export	Domestic	Direct sale to retailers	Direct sale to downstream food processors	Sale to wholesalers / other intermed.	Direct sale to final consumers	Other channels	Additional information	
Emmental de Savoie	PGI	1.3. Cheeses	3%	97%	n.a.	n.a.	n.a.	n.a.	n.a.	Domestic sales: 60% via large-scale retailers (97% of which sold at the counter), 40% via traditional retail	1) Large-scale retailers account for a larger share of domestic sales in standard production 2) Sales of pre-packed cheese (including grated cheese) are negligible in GI production, whereas they have prominent importance in standard production
Pecorino Sardo	PDO	1.3. Cheeses	5%	95%	85%		10%	5%			1) The share of exports in standard production is negligible 2) Large-scale retailers account for a larger share of domestic sales in GI production, whereas sale to wholesalers has more importance in standard production
Vorarlberger Bergkäse	PDO	1.3. Cheeses	73%	27%	22%		64%	14%		Presence of a large-scale operator at wholesale stage	1) Direct sales to retailers are more important in standard production
Dauno	PDO	1.5. Oils and fats (butter, margarine, oil, etc.)	20%	80%	20%		10%	40%	30%	Other channels: HoReCa sector	1) Sales of oil in bulk (to bottling companies and to wholesalers) account for a larger share in standard production, whereas sales of bottled oil are more common in GI production
Ekstra deviško oljčno olje Slovenske Istre	PDO	1.5. Oils and fats (butter, margarine, oil, etc.)	2%	98%	13%			75%	12%	Other channels: HoReCa sector	1) Sales of oil in bulk (to bottling companies and to wholesalers) are allowed only for standard oil

Source: case study reports *(continued)*

Notes: direct sale to retailers includes direct sale to discount stores; large-scale retailers = super and hypermarket chains; traditional retailers = small scale retail shops

(continued)

Product	Status	Product class	Export sales vs. domestic sales (avg. % share on total)		Main marketing channels for final product (avg. % share on total)						Main differences with the standard supply chain
			Export	Domestic	Direct sale to retailers	Direct sale to downstream food processors	Sale to wholesalers / other intermed.	Direct sale to final consumers	Other channels	Additional information	
Pomme du Limousin	PDO	1.6. Fruit, vegetables and cereals fresh or processed	1%	99%	70%		30%				1) Export sales have much greater importance in standard production (> 60% of total volume is exported)
Lammefjordsgulerod	PGI	1.6. Fruit, vegetables and cereals fresh or processed		100%	70%	25%		5%		All production is compliant with GI specifications, but is not marketed as GI	No notable differences
Pimiento Asado del Bierzo	PGI	1.6. Fruit, vegetables and cereals fresh or processed	3%	97%	n.a.	n.a.	n.a.	n.a.	n.a.	Marketing channels (in decreasing order of importance): 1) specialist food shops 2) large-scale retailers 3) HoReCa sector	1) Sales via large-scale retailers are more important in standard production 2) GI producers are more focused towards specialised retailers and short channels in general

Source: case study reports

Notes: direct sale to retailers includes direct sale to discount stores; large-scale retailers = super and hypermarket chains; traditional retailers = small scale retail shops

3.1.5 Market power and price formation mechanisms

The presence of situations where GI producers can be considered as "price makers", exerting a certain market power over their customers, has been highlighted in a number of case studies. In general, such situations have been detected where:

- GI producers and their customers had comparable economic size (e.g. in the case of direct sales to independent specialised retailers, or small-medium operators in the HoReCa sector). This situation was found to exist, for instance, for producers of the two GI wines, Jambon d'Ardenne PGI, Emmental de Savoie PGI, Dauno PDO and Ekstra deviško oljčno olje Slovenske Istre PDO.
- Marketing channels were short (absence or limited presence of intermediaries), and/or GI producers were selling their products directly to final consumers (the latter situation has particular relevance for producers of Dauno PDO and Ekstra deviško oljčno olje Slovenske Istre PDO).

On the opposite side, a number of situations were also detected where GI producers had to be considered as "price takers", as their customers were clearly exerting a superior market power. This regularly occurred with direct sales of GI products to large-scale retail chains (which often required substantial price discounts as an access condition: the case of Soprèssa Vicentina PDO is particularly significant in this respect), with bulk sales of GI wines or olive oils to large bottling companies. The case study on Vorarlberger Bergkäse PDO revealed the presence of a market intermediary (wholesaler/exporter) capable of exerting market power on producers by virtue of the substantial volumes of GI products it handled.

It is nevertheless essential to underline that the case studies revealed that the status of "price maker" and the presence of superior market power on the GI producers' side had little or no relation with the PGI or PDO status of the product. It was instead usually the result of specific conditions concerning market structure, competitive environment, and the firms' individual marketing strategies.

3.2 Results of in-depth economic analysis of themes 3 and 4: prices and gross margins

3.2.1 GI production vs. standard production: differences in prices

The comparative analysis between the prices of GI products and of the corresponding standard products (tables 3.6 and 3.7) was carried out by means of an *ad-hoc* ***"price premium indicator"*** (PPI) given by the formula (Price GI production / Price standard production) (in % terms). If the value of the indicator is > 100%, there is a price premium for the GI product / raw material over the corresponding standard product / raw material.

The results of the comparative analysis carried out for ***final products*** show that in most cases GI products achieve a price premium over the corresponding standard products: the only exceptions are Vorarlberger Bergkäse PDO (for all the three relevant market channels), Pecorino Sardo PDO (in the case of direct sales to final consumers and of sale to wholesalers) and Lammefjordsgulerod PGI (in the case of sale to wholesalers). In all these cases, however, the price disadvantage vs. standard production is in any case rather limited.

This said, the extent of the price premium can vary remarkably[14], from close to double the price of standard products (La Mancha PDO, PPI equal to 175-180%) to a negligible advantage (direct sales of Pecorino Sardo PDO to retailers and of Dauno PDO to wholesalers, PPI equal to 102-103%).

GI products with only slight differences in intrinsic features from the corresponding standard products (Pecorino Sardo PDO; Dauno PDO; Ekstra deviško oljčno olje Slovenske Istre PDO; Pomme du Limousin PDO;

[14] Especially in the case of top-quality bottled GI wines and oils, the ex-factory price can even be several times higher than the ex-factory price of standard products; however, the "outlier" prices of these top-quality bottles, usually targeted at an "élite" of consumers, were not considered in the elaborations made for the assessment.

Lammefjordsgulerod PGI; see § 3.1.2) tend to achieve lower price premiums (PPI equal to 100-140%) than GI products which are significantly different (PPI equal to 140-180%). Soprèssa Vicentina PDO (PPI equal to 113-115%) constitutes the only partial exception to this trend.

Price premiums achieved by the two unprocessed GI products (Pomme du Limousin PDO; Lammefjordsgulerod PGI) were lower than the ones achieved by some processed products (especially wines and oils), but comparable to or higher than the ones achieved by other processed products.

The extent of any price premium also varies according to marketing channels and practices (especially sale of bottled wine or oil vs. sale in bulk of such products). Price premiums applying in shorter channels (direct sales to final consumers and retailers) tend to be higher than the ones applying in longer channels (i.e. sale to wholesalers): in the case of Lammefjordsgulerod PGI the difference is significant, in other cases (La Mancha PDO, Soprèssa Vicentina PDO, Pecorino Sardo PDO) it is instead more limited. As a rule, sales of bottled wine or oil achieve remarkably higher price premiums than sales in bulk of the same products, also because the former tend to be targeted at shorter, more rewarding channels (direct sale to final consumers or to retailers), whereas the latter tend to be made via intermediaries, or directly to processors (bottling companies).

On the basis of their experience, some interviewed experts suggested that – at least in the case of GI wines – the very fact of creating an association between a geographical area and a wine should usually allow *per se* to achieve a premium price over generic wines. Another interviewed expert suggested that also creating a strong association between a GI product and a region which is widely renowned (also for aspects which have little to do with food quality) can help that product in achieving a price premium (thanks to the additional visibility and reputation coming from such an association).

As for the evolution of price premiums over time, in most cases the rather limited length of the observed period (five years) does not allow clear trends to be identified; however there are some exceptions to this. Price premiums show a clear increasing trend in the case of La Mancha PDO (for direct sales on the spot market and to retailers and processors) and, at least for the second half of the observed period, also for Pomme du Limousin PDO and Pimiento Asado del Bierzo PGI. In the remaining cases, the extent of price premiums tends to remain stable, or varies (sometimes substantially) without showing a clear trend.

Intra-class differences are remarkable in the case of wines, meat products and cheeses, less substantial but nevertheless significant for oils, whereas for fresh fruit and vegetable products (i.e. Pomme du Limousin PDO and Lammefjordsgulerod PGI) the extent of the price premium is comparable.

The extent of the price premium over standard products for PDOs varies remarkably: the indicator ranges from 102% for Pecorino Sardo PDO sold directly to retailers, to 180% for La Mancha PDO sold to bottling companies. The range of variation of price premium levels for PGIs is narrower than for PDOs: PPI ranges from 109% for Scotch Beef PGI to 164% for Jambon d'Ardenne PGI[15].

In the case of ***raw materials***, the presence of a remarkable price premium over standard production is limited to fresh Limousin PDO apples for packing (PPI equal to 152%); significant price premiums (PPI equal to 116-127%) are achieved by grapes for Montepulciano d'Abruzzo PDO, liquid milk for Emmental de Savoie PGI, and live pigs for Soprèssa Vicentina PDO; in the other cases, price premiums are limited or absent, and in the case of fresh peppers for Pimiento Asado del Bierzo PGI, there is even a price disadvantage versus standard production (which does, however, have the advantage of possible recourse to better priced sales of fresh peppers for direct consumption).

[15] In the case of Jambon d'Ardenne PGI, the interviewed experts observed that ex-factory prices collected through the survey were above the upper limit of what they deemed to be the indicative price range (€7-9 per kg) for sale to wholesalers and for direct sale to retailers, and that the extent of price premium for Jambon d'Ardenne tends to be smaller in the case of sale to wholesalers (around €2 per kg), whereas it can be much bigger in the (relatively rare) case of direct sale to final consumers.

As for the variation of price premiums over the observed period, clear trends emerge only for few raw materials, whereas for the others the extent of the price premium tends to remain rather stable, or varies (also very significantly) without revealing a clear trend. The prices of liquid milk for Emmental de Savoie PDO and of fresh Limousin PDO apples for packing show a clear declining trend. Intra-class differences in price premiums for raw materials are very significant for fresh vegetables (different from what emerged for final products), and significant for wines, meat products and cheeses. Similarly for what observed for price premiums for final products, raw materials for production of PDOs achieve very significant different price premiums (PPI ranges between 105% and 152%), whereas differences in price premiums for raw materials for production of PGIs are less substantial (PPI ranges between 109 and 127%).

Table 3.6 – Price premium indicator for the studied GI products: final products (2007-2011)*

Product	Status	Product class	Marketing channel	Max	Min	5-year avg.	Order of magnitude (absolute value €/kg or €/l)
Montepulciano d'Abruzzo	PDO	Wines	Sale to wholesalers (bottled)	176,7%	147,5%	163,2%	GI: 2,25 / 2,80 Std.: 1,40 / 1,90
			Sale to wholesalers (in bulk)	131,1%	89,2%	116,5%	GI: 0,30 / 1,00 Std.: 0,35 / 0,75
			Direct sale to downstream processors (in bulk)	188,2%	111,9%	146,2%	GI: 0,40 / 0,85 Std.: 0,25 / 0,55
La Mancha	PDO	Wines	Sale to wholesalers	178,6%	168,9%	175,8%	GI: 1,00 / 1,15 Std.: 0,55 / 0,65
			Direct sale on the spot market	181,6%	169,4%	174,3%	GI: 3,05 / 3,45 Std.: 1,80 / 1,90
			Direct sale to retailers and downstream processors	208,0%	152,0%	180,0%	GI: 2,25 / 2,60 Std.: 1,25 / 1,50
Scotch Beef	PGI	1.1. Fresh meat		110,2%	107,7%	108,9%	GI: 4,30 / 6,20 Std.: 3,90 / 5,70
Jambon d'Ardenne	PGI	1.2. Meat products		166,6%	161,9%	164,2%	GI: 9,60 / 9,70 Std.: 5,80 / 6,00
Soprèssa Vicentina	PDO	1.2. Meat products	Direct sale to retailers	119,9%	112,2%	115,2%	GI: 10,25 / 11,30 Std.: 9,15 / 9,40
			Sale to wholesalers	113,3%	113,1%	113,2%	GI: 9,50 / 9,80 Std.: 8,40 / 8,65
Emmental de Savoie	PGI	1.3. Cheeses		170,6%	131,8%	154,5%	GI: 6,40 / 7,30 Std.: 4,20 / 4,95
Pecorino Sardo	PDO	1.3. Cheeses	Direct sale to retailers	102,8%	100,4%	101,7%	GI: 6,85 / 7,30 Std.: 6,80 / 7,25
			Sale to wholesalers	100,7%	94,9%	97,4%	GI: 6,85 / 7,30 Std.: 7,15 / 7,25
			Direct sale to final consumers	101,9%	94,0%	96,4%	GI: 7,65 / 8,65 Std.: 8,15 / 8,50
Vorarlberger Bergkäse	PDO	1.3. Cheeses	Direct sale to retailers	98,0%	95,1%	95,9%	GI: 7,25 / 7,85 Std.: 7,60 / 8,00
			Sale to wholesalers	105,7%	91,5%	98,4%	GI: 5,35 / 5,95 Std.: 5,40 / 5,90
			Direct sale to final consumers	95,9%	90,2%	93,3%	GI: 9,80 / 10,55 Std.: 10,70 / 11,00
Dauno	PDO	1.5. Oils and fats	Direct sale on the spot market, bottled	150,2%	118,9%	130,5%	GI: 6,10 / 7,45 Std.: 4,95 / 5,55
			Sale to wholesalers, in bulk	104,3%	101,9%	103,3%	GI: 3,20 / 3,25 Std.: 3,05 / 3,20
Ekstra deviško oljčno olje Slovenske Istre	PDO	1.5. Oils and fats	Direct sale to retailers	141,7%	134,1%	138,0%	GI: 22,45 / 23,85 Std.: 16,75 / 16,85
			Direct sale to final consumers	118,4%	111,7%	115,2%	GI: 14,15 / 16,30 Std.: 12,20 / 14,45
Pomme du Limousin	PDO	1.6. Fruit, vegetables and cereals fresh or proc.		122,0%	104,5%	111,9%	GI: 0,70 / 1,00 Std.: 0,65 / 0,85
Lammefjordsgulerod	PGI	1.6. Fruit, vegetables and cereals fresh or proc.	Sale to wholesalers	100,0%	100,0%	100,0%	GI: 0,30 / 0,35 Std.: 0,30 / 0,35
			Direct sale to retailers	127,3%	100,0%	109,9%	GI: 0,40 / 0,50 Std.: 0,35 / 0,50
Pimiento Asado del Bierzo	PGI	1.6. Fruit, vegetables and cereals fresh or proc.		151,4%	132,4%	140,5%	GI: 8,75 / 9,25 Std.: 6,05 / 6,65

* Price premium indicator = (Price GI product / Price standard product) (in % terms)
Source: case study reports

Table 3.7 - Price premium indicator for the studied GI products: agricultural raw materials (2007-2011)*

Product	Status	Product class	Agricultural raw material concerned	Max	Min	5-year avg.	Order of magnitude (absolute value €/kg or €/l)
Montepulciano d'Abruzzo	PDO	Wines	Grapes	141,7%	112,0%	125,6%	GI: 0,25 / 0,35 Std.: 0,20 / 0,30
La Mancha	PDO	Wines	Grapes	108,0%	101,3%	104,9%	GI: 0,15 / 0,25 Std.: 0,15 / 0,20
Scotch Beef	PGI	1.1. Fresh meat (and offal)	Live cattle	111,8%	106,5%	109,1%	GI: 1,50 / 2,20 Std.: 1,30 / 2,05 (live weight)
Jambon d'Ardenne	PGI	1.2. Meat products	Live pigs	No difference in price between GI and standard production = 100%			GI & Std.: 1,35 / 1,60 (live weight)
Soprèssa Vicentina	PDO	1.2. Meat products	Live pigs	116,0% (indicative value for the whole period considered)			GI: 1,30 / 1,60 Std.: 1,10 / 1,40 (live weight)
Emmental de Savoie	PGI	1.3. Cheeses	Liquid milk	141,3%	113,8%	126,8%	GI: 0,35 / 0,45 Std.: 0,25 / 0,35
Pecorino Sardo	PDO	1.3. Cheeses	Liquid milk	No difference in price between GI and standard production = 100%			GI & Std.: 0,60 / 0,85
Vorarlberger Bergkäse	PDO	1.3. Cheeses	Liquid milk	No difference in price between GI and standard production = 100%			GI & Std.: 0,40 / 0,45
Dauno	PDO	1.5. Oils and fats	Olives	No difference in price between GI and standard production = 100%			GI & Std.: 0,35 / 0,45
Pomme du Limousin	PDO	1.6. Fruit, vegetables and cereals fresh or proc.	Fresh apples**	168,2%	125,9%	152,1%	GI: 0,30 / 0,45 Std.: 0,15 / 0,30
Lammefjordsgulerod	PGI	1.6. Fruit, vegetables and cereals fresh or proc.	Fresh carrots**	100,0%	92,9%	98,6%	GI: 0,15 / 0,25 Std.: 0,15 / 0,25
Pimiento Asado del Bierzo	PGI	1.6. Fruit, vegetables and cereals fresh or proc.	Fresh peppers	87,0%	60,8%	74,2%	GI: 0,75 / 0,90 Std.: 1,10 / 1,30

* Price premium indicator = (Price GI raw material / Price standard raw material) (in % terms)
** Non-processed products: *"agricultural raw materials"* = harvested agricultural products (fresh apples / carrots) in the conditions required for forwarding to packing stations
Source: case study reports

Prices at the relevant levels of the supply chains are provided – in terms of absolute value and as shares of final retail consumer price[16] respectively – in tables 3.8 and 3.9 (for the GI supply chain) and 3.10 and 3.11 (for the standard supply chain). Prices in absolute value at farming and processing level are provided as average values; retail prices in absolute value are provided as average values or – where substantial differences were observed – as ranges.

It can be observed that:

- Suppliers of agricultural raw materials generally receive up to 25% - and in some cases up to 40% - of the retail value of products (i.e. their final retail consumer price)

[16] Final retail consumer prices were retrieved via desk research (usually through the websites of both large-scale retailers and specialized retailers) or via direct checks at point of sale (for the same two typologies of retailers).

- Only in a few cases do producers of final products obtain more than a 70% share of the retail value of the same (producers' share also includes the remuneration of agricultural raw materials used in production)

The above considerations apply to both GI and standard products.

As for the comparison between the situations of each GI product and of the corresponding standard product concerning the allocation of retail value at the different levels of the supply chain (table 3.12), the following considerations apply:

- The shares of retail value pertaining to the agricultural level are often similar in both the GI and standard supply chains, with three notable exceptions (in the case studies on Vorarlberger Bergkäse PDO, the GI supply chain fares much better than the standard one; in the case studies on Emmental de Savoie PGI and Pimiento Asado del Bierzo PGI, the situation is the opposite).
- The picture concerning the shares of retail value pertaining to the processing level of the supply chain is more mixed, as in some cases the shares are larger for GI production, whereas in other cases the shares are larger for standard production.

If the reasoning is made in terms of absolute value (table 3.13) rather than in relative terms, the equivalent value of raw materials[17] (pertaining to farmers) and/or the ex-factory price of the final product (pertaining to processors) are often higher in the GI supply chain than in the standard supply chain. As the retail price of GI products is usually higher (and often much higher) than the retail price of the corresponding standard products, the shares of retail value pertaining to farmers and/or processors can be smaller in the GI supply chain than in the standard supply chain.

[17] Defined as the value at farm price of the raw material needed to obtain one unit (kg or l) of final product.

Table 3.8 – Prices at the different levels of the supply chain (in absolute value): GI products

Product	Status	Product class	Absolute values (Euros/kg or Euros/l)				
			Value of agricultural raw material*	Ex-factory price (final product)		Wholesale price** (final product)	Retail price (final product)
				Marketing channels	Ex-factory price		
Montepulciano d'Abruzzo	PDO	Wines	0,46	Direct sale to downstream processors, in bulk	0,58	-	4,00-30,00 (bottled)
				Sale to wholesalers, in bulk	0,68	n.a.	
				Sale to wholesalers, bottled	2,52	n.a.	
La Mancha	PDO	Wines	0,24	Sale to wholesalers	1,06	n.a.	1,50-15,00 (bottled)
				Direct sale to retailers	2,39	-	
				Direct sale on the spot market	3,21	-	
Scotch Beef	PGI	1.1. Fresh meat (and offal)	*		5,23	n.a.	8,55
Jambon d'Ardenne	PGI	1.2. Meat products	*		9,66	n.a.	Large-scale retailers: 13,00-35,00
Soprèssa Vicentina	PDO	1.2. Meat products	*	Sale to wholesalers	9,65	n.a.	Large-scale retailers: 15,00 (sold as a whole) 17-19,00 (sliced at the counter)
				Direct sale to retailers	10,68	-	
Emmental de Savoie	PGI	1.3. Cheeses	4,76		6,88	n.a.	Large-scale retailers: 12,70
Pecorino Sardo	PDO	1.3. Cheeses	3,79	Sale to wholesalers	7,00	n.a.	Large-scale retailers: 14,90-16,30
				Direct sale to retailers	7,08	-	
				Direct sale to final consumers	7,97	-	
Vorarlberger Bergkäse	PDO	1.3. Cheeses	4,26	Sale to wholesalers	5,51	n.a.	Large-scale retailers: 6,50-18,00
				Direct sale to retailers	7,45	-	
				Direct sale to final consumers	10,12	-	
Dauno	PDO	1.5. Oils and fats	2,01	Sale to wholesalers, in bulk	3,23	n.a.	5,50-13,50 (bottled)
				Direct sale on the spot market, bottled	6,72	-	
Ekstra deviško oljčno olje Slovenske Istre	PDO	1.5. Oils and fats	no sales of olives	Direct sale to retailers, bottled	23,18	-	18,00-42,00 (bottled)
				Direct sale to final consumers, bottled	15,17	-	
Pomme du Limousin	PDO	1.6. Fruit, vegetables and cereals fresh or proc.	0,36		0,85	n.a.	2,50-3,00
Lammefjordsgulerod	PGI	1.6. Fruit, vegetables and cereals fresh or proc.	0,20	Sale to wholesalers	0,32	n.a.	1,01
				Direct sale to retailers	0,46	-	
Pimiento Asado del Bierzo	PGI	1.6. Fruit, vegetables and cereals fresh or proc.	2,19		8,98	n.a.	9,00-12,00 (average quality) 37,00-40,00 (high quality)

Source: case study reports

* value at farm price of the raw material needed to obtain one unit (kg or l) of final product; calculation is unfeasible for meat and meat products, as live animals are used to obtain multiple products after slaughtering

** sales through wholesalers often concern just minor shares of total marketed volumes; lack of data for wholesale prices has no relevance for the other channels

Table 3.9 - Prices at the different levels of the supply chain (in % share of retail price): GI products (main channels only)

Product	Status	Product class	as % share of retail price				
			Value of agricultural raw material*	Ex-factory price (final product)		Wholesale price** (final product)	Retail price (final product)
				Marketing channels	Ex-factory price		
Montepulciano d'Abruzzo	PDO	Wines	1-12%	Direct sale to downstream processors, in bulk	2-15%	-	100%
La Mancha	PDO	Wines	2-16%	Direct sale to retailers	at least 16%	-	100%
Scotch Beef	PGI	1.1. Fresh meat (and offal)	*		61%	n.a.	100%
Jambon d'Ardenne	PGI	1.2. Meat products	*		28-75%	n.a.	100%
Soprèssa Vicentina	PDO	1.2. Meat products	*	Direct sale to retailers	56-72%	-	100%
Emmental de Savoie	PGI	1.3. Cheeses	38%		54%	n.a.	100%
Pecorino Sardo	PDO	1.3. Cheeses	23-26%	Direct sale to retailers	43-48%	-	100%
Vorarlberger Bergkäse	PDO	1.3. Cheeses	24-66%	Sale to wholesalers	30-85%	n.a.	100%
Dauno	PDO	1.5. Oils and fats	15-37%	Direct sale on the spot market, bottled	at least 50%	-	100%
Ekstra deviško oljčno olje Slovenske Istre	PDO	1.5. Oils and fats	no sales of olives	Direct sale to retailers, bottled	at least 55%	-	100%
Pomme du Limousin	PDO	1.6. Fruit, vegetables and cereals fresh or proc.	12-15%		28-34%	n.a.	100%
Lammefjordsgulerod	PGI	1.6. Fruit, vegetables and cereals fresh or proc.	19%	Direct sale to retailers	46%	-	100%
Pimiento Asado del Bierzo	PGI	1.6. Fruit, vegetables and cereals fresh or proc.	5-24%		at least 22%	n.a.	100%

Source: case study reports

* value at farm price of the raw material needed to obtain one unit (kg or l) of final product; calculation is unfeasible for meat and meat products, as live animals are used to obtain multiple products after slaughtering

** sales through wholesalers often concern just minor shares of total marketed volumes; lack of data for wholesale prices has no relevance for the other channels

Table 3.10 - Prices at the different levels of the supply chain (in absolute value): standard products

Product	Product class	Absolute values (Euros/kg or Euros/l)				
		Value of agricultural raw material*	Ex-factory price (final product)		Wholesale price** (final product)	Retail price (final product)
			Marketing channels	Ex-factory price		
Standard red wine (Abruzzo)	Wines	0,32	Direct sale to downstream processors, in bulk	0,40	-	Small retailers: 1,60-2,20 (bottled - bag in box, 5l)
			Sale to wholesalers, in bulk	0,57	n.a.	
			Sale to wholesalers, bottled	1,56	n.a.	
Standard red wine (La Mancha)	Wines	0,21	Sale to wholesalers	0,60	n.a.	n.a.
			Direct sale to retailers	1,34	-	
			Direct sale on the spot market	1,84	-	
Beef (Red Tractor scheme)	1.1. Fresh meat (and offal)	-		4,81	n.a.	7,16
Jambon de Cobourg	1.2. Meat products	-	Sale to wholesalers	5,69	n.a.	Large-scale retailers: 9,00-10,00
			Direct sale to retailers	6,13	-	
Standard soprèssa (produced in Vicenza province)	1.2. Meat products	-	Sale to wholesalers	8,53	n.a.	Large-scale retailers: 14,00-16,00 (sliced at the counter)
			Direct sale to retailers	9,28	-	
Standard Emmental (produced in Brittany)	1.3. Cheeses	3,78		4,47	n.a.	Large-scale retailers: 8,56
Standard semi-cooked sheep cheese (produced in Sardinia)	1.3. Cheeses	3,77	Sale to wholesalers	7,19	n.a.	Large-scale retailers: 14,80-15,20
			Direct sale to retailers	6,96	-	
			Direct sale to final consumers	8,26	-	
Standard Bergkäse (produced in Vorarlberg)	1.3. Cheeses	3,83	Sale to wholesalers	5,60	n.a.	Large-scale retailers: 10,00-23,00
			Direct sale to retailers	7,76	-	
			Direct sale to final consumers	10,85	-	
Standard extra-virgin olive oil (produced in Foggia province)	1.5. Oils and fats	2,00	Sale to wholesalers, in bulk	3,12	n.a.	5,50-13,50 (bottled)
			Direct sale on the spot market, bottled	5,15	-	
Standard extra-virgin olive oil (produced in Istria region)	1.5. Oils and fats	no sales of olives	Direct sale to retailers, bottled	16,79	-	11,00-18,00 (bottled)
			Direct sale to final consumers, bottled	13,19	-	
Standard Golden apples (prod. in Tarn-et-Garonne region)	1.6. Fruit, vegetables and cereals fresh or proc.	0,24		0,76	n.a.	1,50-2,00
Standard carrots (produced in other regions of Denmark)	1.6. Fruit, vegetables and cereals fresh or proc.	0,20	Sale to wholesalers	0,32	n.a.	1,01
			Direct sale to retailers	0,42	-	
Standard Pimiento Asado	1.6. Fruit, vegetables and cereals fresh or proc.	2,19		6,40	n.a.	Large-scale retailers: 10,50-12,00 (for high-quality products)

Source: case study reports

* value at farm price of the raw material needed to obtain one unit (kg or l) of final product; calculation is unfeasible for meat and meat products, as live animals are used to obtain multiple products after slaughtering

** sales through wholesalers often concern just minor shares of total marketed volumes; lack of data for wholesale prices has no relevance for the other channels

Table 3.11 - Prices at the different levels of the supply chain (in % share of retail price): standard products (main channels only)

Product	Product class	as % share of retail price				
		Value of agricultural raw material*	Ex-factory price (final product)		Wholesale price** (final product)	Retail price (final product)
			Marketing channels	Ex-factory price		
Standard red wine (Abruzzo)	Wines	15-20%	Direct sale to downstream processors, in bulk	18-25%	-	100%
Standard red wine (La Mancha)	Wines	n.a.	Direct sale to retailers	n.a.	-	n.a.
Beef (Red Tractor scheme)	1.1. Fresh meat (and offal)	-		67%	n.a.	100%
Jambon de Cobourg	1.2. Meat products	-		59-66%	n.a.	100%
Standard soprèssa (produced in Vicenza province)	1.2. Meat products	-	Direct sale to retailers	58-67%	-	100%
Standard Emmental (produced in Brittany)	1.3. Cheeses	44%		52%	n.a.	100%
Standard semi-cooked sheep cheese (produced in Sardinia)	1.3. Cheeses	25-26%	Direct sale to retailers	46-47%	-	100%
Standard Bergkäse (produced in Vorarlberg)	1.3. Cheeses	17-38%	Sale to wholesalers	24-56%	n.a.	100%
Standard extra-virgin olive oil (produced in Foggia province)	1.5. Oils and fats	15-37%	Direct sale on the spot market, bottled	at least 38%	-	100%
Standard extra-virgin olive oil (produced in Istria region)	1.5. Oils and fats	no sales of olives	Direct sale to retailers, bottled	93%	-	100%
Standard Golden apples (produced in Tarn-et-Garonne region)	1.6. Fruit, vegetables and cereals fresh or proc.	12-16%		38-50%	n.a.	100%
Standard carrots (produced in other regions of Denmark)	1.6. Fruit, vegetables and cereals fresh or proc.	20%	Direct sale to retailers	42%	-	100%
Standard Pimiento Asado	1.6. Fruit, vegetables and cereals fresh or proc.	18-21%		53-61%	n.a.	100%

Source: case study reports

* value at farm price of the raw material needed to obtain one unit (kg or l) of final product; calculation is unfeasible for meat and meat products, as live animals are used to obtain multiple products after slaughtering

** sales through wholesalers often concern just minor shares of total marketed volumes; lack of data for wholesale prices has no relevance for the other channels

Table 3.12 - Prices at the different levels of the supply chain (in % share of retail price): GI products vs. standard products (main channels only)

Case study	Product	Product class	as % share of retail price				
			Value of agricultural raw material*	Ex-factory price (final product)		Wholesale price** (final product)	Retail price (final product)
				Marketing channels	Ex-factory price		
Montepulciano d'Abruzzo	PDO	Wines	1-12%	Direct sale to downstream processors, in bulk	2-15%	n.a.	100,0%
	Standard		15-20%	Direct sale to downstream processors, in bulk	18-25%	n.a.	100,0%
Scotch Beef	PGI	1.1. Fresh meat (and offal)	*		61%	n.a.	100,0%
	Standard		*		67%	n.a.	100,0%
Jambon d'Ardenne	PGI	1.2. Meat products	*		28-75%	n.a.	100,0%
	Standard		*		59-66%	n.a.	100,0%
Soprèssa Vicentina	PDO	1.2. Meat products	*	Direct sale to retailers	56-72%	-	100,0%
	Standard		*	Direct sale to retailers	58-67%	-	100,0%
Emmental de Savoie	PGI	1.3. Cheeses	38%		54%	n.a.	100,0%
	Standard		44%		52%	n.a.	100,0%
Pecorino Sardo	PDO	1.3. Cheeses	23-26%	Direct sale to retailers	43-48%	-	100,0%
	Standard		25-26%	Direct sale to retailers	46-47%	-	100,0%
Vorarlberger Bergkäse	PDO	1.3. Cheeses	24-66%	Sale to wholesalers	30-85%	n.a.	100,0%
	Standard		17-38%	Sale to wholesalers	24-56%	n.a.	100,0%
Dauno	PDO	1.5. Oils and fats	15-37%	Direct sale on the spot market, bottled	at least 50%	-	100,0%
	Standard		15-37%	Direct sale on the spot market, bottled	at least 38%	-	100,0%
Ekstra deviško oljčno olje Slovenske Istre	PDO	1.5. Oils and fats	no sales of olives	Direct sale to retailers, bottled	at least 55%	-	100,0%
	Standard			Direct sale to retailers, bottled	93%	-	100,0%
Pomme du Limousin	PDO	1.6. Fruit, vegetables and cereals fresh or proc.	12-15%		28-34%	n.a.	100,0%
	Standard		12-16%		38-50%	n.a.	100,0%
Lammefjordsgulerod	PGI	1.6. Fruit, vegetables and cereals fresh or proc.	19%	Direct sale to retailers	46%	-	100,0%
	Standard		20%	Direct sale to retailers	42%	-	100,0%
Pimiento Asado del Bierzo	PGI	1.6. Fruit, vegetables and cereals fresh or proc.	5-24%		at least 22%	n.a.	100,0%
	Standard		18-21%		53-61%	n.a.	100,0%

Source: case study reports

* value at farm price of the raw material needed to obtain one unit (kg or l) of final product; calculation is unfeasible for meat and meat products, as live animals are used to obtain multiple products after slaughtering

** sales through wholesalers often concern just minor shares of total marketed volumes; lack of data for wholesale prices has no relevance for the other channels

Table 3.13 - Prices at the different levels of the supply chain (in absolute value): GI products vs. standard products (main channels only)

Case study	Product	Product class	Absolute values (Euros/kg or Euros/l)				
			Value of agricultural raw material*	Ex-factory price (final product)		Wholesale price** (final product)	Retail price (final product)
				Marketing channels	Ex-factory price		
Montepulciano d'Abruzzo	PDO	Wines	0,46	Direct sale to downstream processors, in bulk	0,58	n.a.	4,00-30,00 (bottled)
	Standard		0,32	Direct sale to downstream processors, in bulk	0,40	n.a.	Small retailers: 1,60-2,20 (bottled - bag in box, 5l)
Scotch Beef	PGI	1.1. Fresh meat (and offal)	*		5,23	n.a.	8,55
	Standard		*		4,81	n.a.	7,16
Jambon d'Ardenne	PGI	1.2. Meat products	*		9,66	n.a.	Large-scale retailers: 13,00-35,00
	Standard		*		6,13	n.a.	Large-scale retailers: 9,00-10,00
Soprèssa Vicentina	PDO	1.2. Meat products	*	Direct sale to retailers	10,68	-	Large-scale retailers: 15,00 (sold as a whole) 17-19,00 (sliced at the counter)
	Standard		*	Direct sale to retailers	9,28	-	Large-scale retailers: 14,00-16,00 (sliced at the counter)
Emmental de Savoie	PGI	1.3. Cheeses	4,76		6,88	n.a.	Large-scale retailers: 12,70
	Standard		3,78		4,47	n.a.	Large-scale retailers: 8,56
Pecorino Sardo	PDO	1.3. Cheeses	3,79	Direct sale to retailers	7,08	-	Large-scale retailers: 14,90-16,30
	Standard		3,77	Direct sale to retailers	6,96	-	Large-scale retailers: 14,80-15,20
Vorarlberger Bergkäse	PDO	1.3. Cheeses	4,26	Sale to wholesalers	5,51	n.a.	Large-scale retailers: 6,50-18,00
	Standard		3,83	Sale to wholesalers	5,60	n.a.	Large-scale retailers: 10,00-23,00

(continued)

Source: case study reports

* value at farm price of the raw material needed to obtain one unit (kg or l) of final product; calculation is unfeasible for meat and meat products, as live animals are used to obtain multiple products after slaughtering

** sales through wholesalers often concern just minor shares of total marketed volumes; lack of data for wholesale prices has no relevance for the other channels

(continued)

Case study	Product	Product class	Absolute values (Euros/kg or Euros/l)				
			Value of agricultural raw material*	Ex-factory price (final product)		Wholesale price** (final product)	Retail price (final product)
				Marketing channels	Ex-factory price		
Dauno	PDO	1.5. Oils and fats	2,01	Direct sale on the spot market, bottled	6,72	-	5,50-13,50 (bottled)
	Standard		2,00	Direct sale on the spot market, bottled	5,15	-	5,50-13,50 (bottled)
Ekstra deviško oljčno olje Slovenske Istre	PDO	1.5. Oils and fats	no sales of olives	Direct sale to retailers, bottled	23,18	-	18,00-42,00 (bottled)
	Standard			Direct sale to retailers, bottled	16,79	-	11,00-18,00 (bottled)
Pomme du Limousin	PDO	1.6. Fruit, vegetables and cereals fresh or proc.	0,36		0,85	n.a.	2,50-3,00
	Standard		0,24		0,76	n.a.	1,50-2,00
Lammefjordsgulerod	PGI	1.6. Fruit, vegetables and cereals fresh or proc.	0,20	Direct sale to retailers	0,46	-	1,01
	Standard		0,20	Direct sale to retailers	0,42	-	1,01
Pimiento Asado del Bierzo	PGI	1.6. Fruit, vegetables and cereals fresh or proc.	2,19		8,98	n.a.	9,00-12,00 (average quality) 37,00-40,00 (high quality)
	Standard		2,19		6,40	n.a.	Large-scale retailers: 10,50-12,00 (for high-quality products)

Source: case study reports

* value at farm price of the raw material needed to obtain one unit (kg or l) of final product; calculation is unfeasible for meat and meat products, as live animals are used to obtain multiple products after slaughtering

** sales through wholesalers often concern just minor shares of total marketed volumes; lack of data for wholesale prices has no relevance for the other channels

3.2.2 GI production vs. standard production: differences in production costs

The comparative analysis between the costs of GI products and of the corresponding standard products (tables 3.14 and 3.15) was carried out by means of an *ad-hoc* ***"additional cost indicator"*** (ACI), given by the formula (Cost of GI production / Cost of standard production) (in % terms). If the value of the indicator is > 100%, there is an additional cost for GI production with respect to standard production.

In general, ***production costs for GI products*** are higher than those for standard products, with the only exception being Lammefjordsgulerod PGI (however the cost advantage vs. standard production is minimal in this case, and mainly related to differences in production cost of fresh carrots, as explained below). In the case of Pecorino Sardo PDO, the additional cost vs. standard production is marginal, and basically limited to the administrative costs for PGI production. The higher cost differentials usually apply for GI products whose production methods require additional phases / operations, and/or are subject to significant limitations in productivity (see § 3.1.2): this is indeed the case of Sopréssa Vicentina PDO, Emmental de Savoie PGI, Pomme du Limousin PDO and Pimiento Asado del Bierzo PGI (ACI ranging between 135% and 168%).

As for the dynamics of additional production costs over time, clear trends emerge for some products, whereas for the remaining ones the extent of additional cost tends to be rather stable, or varies without revealing a clear trend. Additional costs for Ekstra deviško oljčno olje Slovenske Istre PDO, Pomme du Limousin PDO and (at least for the second half of the observed period) Emmental de Savoie PGI show clear declining trends; in the last two cases, such dynamics can, in part, be explained by the declining trend of price premiums for the corresponding agricultural raw materials (see § 3.2.1).

Intra-class differences in additional costs for GI production are substantial in the case of cheeses and fresh vegetables (i.e. Pomme du Limousin PDO and Lammefjordsgulerod PGI); significant intra-class differences in additional costs can be found for meat products and oils, whereas intra-class differences tend to narrow in the case of GI wines.

Additional costs for GI production vary remarkably for PDOs (ACI ranges between 101% and 142%) and even more so for PGIs (ACI ranging between 105% and 168%).

Production costs of raw materials for GI production[18] are usually at least equal to production costs for standard raw materials, and in 5 cases out of 13 are higher. There are however two exceptions: fresh peppers for Pimiento Asado del Bierzo PGI and (to a lesser extent) fresh Lammefjordsgulerod PGI carrots for packing. In the case of Pimiento Asado del Bierzo, the cost disadvantage for standard raw material stems from the fact that fresh peppers for the standard supply chain cultivated in el Bierzo region are produced in farms which are usually smaller than the ones focusing on GI production, and also from the use of unskilled, part-time labour with lower productivity. In the case of fresh Lammefjordsgulerod PGI carrots for packing, the production method used in the GI area (harvest in autumn + cold storage on the farm until forwarding to packing station) was found to be slightly less costly than the production method used in other areas (storage in the soil under a bed of straw during winter + gradual harvesting + removal and disposal of straw). Both exceptions hence derive from very specific situations.

In the case of agricultural raw materials too, the need for additional phases/operations, limitations in productivity and specific/minimum quality requirements[19] for raw materials (as compared to those for standard production) usually result in the most significant additional costs for GI production (this is especially the case of grapes for both GI wines, liquid milk for Emmental de Savoie PGI and – to a lesser extent – also live pigs for Soprèssa Vicentina PDO and fresh Limousin PDO apples for packing).

[18] It is worth reminding that in the case of non-processed products (Pomme du Limousin PDO, Lammefjordsgulerod PGI), *"agricultural raw materials"* are harvested agricultural products (fresh apples / carrots) in the conditions required for forwarding to packing stations (see § 2.4.1).

[19] These usually concern technical parameters which are relevant for the quality of the final product: minimum live weight of pigs, use of unpasteurised milk only etc.

No clear trends emerge from the evolution of additional costs over time, also as for some products it proved impossible to collect primary data on production costs for specific years.

Intra-class differences in additional costs for raw materials for GI production are significant in the case of wines, meat products, cheeses and fresh vegetables.

In 4 out of 7 cases, producing raw materials for PDOs resulted in additional costs that vary significantly (ACI ranges between 110% and 143%), whereas there is only one PGI (Emmental de Savoie) for which production of raw materials has a significant additional cost: in the case of all the other PGIs, production of raw materials occurs with no additional costs, or even at a lower cost than production for the standard supply chain.

Table 3.14 – Additional cost indicator for the studied GI products: final products (2007-2011)*

Product	Status	Product class	Specific production model (if relevant)	Max	Min	5-year avg.	Order of magnitude (absolute value €/kg or €/l)
Montepulciano d'Abruzzo	PDO	Wines	Production of bottled wine	148,1%	141,0%	145,1%	GI: 1,50 / 2,00 Std.: 1,05 / 1,40
			Production of wine in bulk	109,0% (indicative value for the whole period considered)			GI: 0,10 / 0,15 Std.: 0,05 / 0,15
La Mancha	PDO	Wines	Production of wine from grapes produced in-house	115,8% (indicative value for the whole period considered)			GI: 0,20 / 0,25 Std.: 0,15 / 0,20
			Production of wine from purchased grapes	121,9% (indicative value for the whole period considered)			GI: 0,35 / 0,40 Std.: 0,30 / 0,35
Scotch Beef	PGI	1.1. Fresh meat (and offal)		107,6%	103,0%	105,0%	GI: 3,10 / 4,65 Std.: 2,90 / 4,50
Jambon d'Ardenne	PGI	1.2. Meat products		127,9%	126,6%	127,3%	GI: 6,05 / 6,10 Std.: 4,75 / 4,85
Soprèssa Vicentina	PDO	1.2. Meat products		165,5%	127,9%	142,4%	GI: 5,65 / 7,20 Std.: 4,25 / 5,10
Emmental de Savoie	PGI	1.3. Cheeses		179,3%	149,3%	159,7%	GI: 5,95 / 6,55 Std.: 3,55 / 4,35
Pecorino Sardo	PDO	1.3. Cheeses		101,6%	100,0%	100,9%	GI: 4,65 / 5,55 Std.: 4,65 / 5,50
Vorarlberger Bergkäse	PDO	1.3. Cheeses		139,6%	113,5%	120,2%	GI: 4,60 / 5,65 Std.: 3,40 / 4,90
Dauno	PDO	1.5. Oils and fats		110,6%	106,1%	107,9%	GI: 2,10 / 2,95 Std.: 1,95 / 2,80
Ekstra deviško oljčno olje Slovenske Istre	PDO	1.5. Oils and fats	Small-format containers for direct sale to retailers	132,9%	124,4%	128,3%	GI: 11,45 / 12,40 Std.: 8,60 / 9,95
			Large-format containers for direct sale to final consumers	124,8%	117,3%	120,7%	GI: 10,65 / 11,70 Std.: 8,60 / 9,95
Pomme du Limousin	PDO	1.6. Fruit, vegetables and cereals fresh or proc.		143,5%	121,2%	134,9%	GI: 0,55 / 0,75 Std.: 0,40 / 0,55
Lammefjordsgulerod	PGI	1.6. Fruit, vegetables and cereals fresh or proc.		100,0%	92,9%	98,6%	GI: 0,15 / 0,25 Std.: 0,15 / 0,25
Pimiento Asado del Bierzo	PGI	1.6. Fruit, vegetables and cereals fresh or proc.		173,5%	163,8%	167,7%	GI: 5,70 / 5,85 Std.: 3,35 / 3,50

* Additional cost indicator = (production cost GI product / production cost standard product) (in % terms)
Source: case study reports

Table 3.15 - Additional cost indicator for the studied GI products: agricultural raw materials (2007-2011)*

Product	Status	Product class	Agricultural raw material concerned	Max	Min	5-year avg.	Order of magnitude (absolute value €/kg or €/l)
Montepulciano d'Abruzzo	PDO	Wines	Grapes	160,0%	83,3%	125,0%	GI: 0,05 / 0,10 Std.: 0,05 / 0,15
La Mancha	PDO	Wines	Grapes	183,4%	118,9%	142,8%	GI: 0,15 / 0,20 Std.: 0,05 / 0,15
Scotch Beef	PGI	1.1. Fresh meat (and offal)	Live cattle	No appreciable difference in cost between GI and standard production = 100%			GI & Std.: 280 / 405 (€ per head)
Jambon d'Ardenne	PGI	1.2. Meat products	Live pigs	No appreciable difference in cost between GI and standard production = 100%			GI & Std.: 1,40 / 1,45 (live weight)
Soprèssa Vicentina	PDO	1.2. Meat products	Live pigs	110,4% (indicative value for the whole period considered)			GI: 1,45 / 1,55 Std.: 1,30 / 1,40 (live weight)
Emmental de Savoie	PGI	1.3. Cheeses	Liquid milk	129,0%	119,1%	122,5%	GI: 0,25 / 0,35 Std.: 0,20 / 0,25
Pecorino Sardo	PDO	1.3. Cheeses	Liquid milk	No appreciable difference in cost between GI and standard production = 100%			GI & Std: 0,90 / 1,10
Vorarlberger Bergkäse	PDO	1.3. Cheeses	Liquid milk	No appreciable difference in cost between GI and standard production = 100%			GI & Std: 0,30 / 0,35
Dauno	PDO	1.5. Oils and fats	Olives	No appreciable difference in cost between GI and standard production = 100%			GI & Std.: 0,25 / 0,30
Pomme du Limousin	PDO	1.6. Fruit, vegetables and cereals fresh or proc.	Fresh apples**	115,8% (indicative value for the whole period considered)			GI: 0,20 / 0,25 Std.: 0,15 / 0,20
Lammefjordsgulerod	PGI	1.6. Fruit, vegetables and cereals fresh or proc.	Fresh carrots**	100,0%	87,5%	96,2%	GI: 0,05 / 0,15 Std.: 0,10 / 0,15
Pimiento Asado del Bierzo	PGI	1.6. Fruit, vegetables and cereals fresh or proc.	Fresh peppers	95,0%	86,3%	91,8%	GI: 0,35 / 0,45 Std.: 0,40 / 0,55

* Additional cost indicator = (production cost GI raw material / production cost standard raw material) (in % terms)
** Non-processed products: *"agricultural raw materials"* = harvested agricultural products (fresh apples / carrots) in the conditions required for forwarding to packing stations
Source: case study reports

Table 3.16 gives additional details on ***administrative costs for GI production***. It can be noted that the structure of administrative costs varies very significantly across the 13 GI products, and that its average overall extent (wherever its calculation is meaningful, as for certain products there are countless possible combinations of the different items, leading to a different total administrative cost) varies from negligible (like in the case of Pomme du Limousin PDO) to significant (like in the case of Soprèssa Vicentina PDO).

Additional details on ***typical additional costs for GI production*** (other than administrative ones) are provided at table 3.17 (for final products) and 3.18 (for agricultural raw materials). It is worth highlighting that for final products, the main additional costs derive from the higher cost of agricultural raw materials, from lower productivity and from the need of specific phases/operations; as for raw materials, the main additional costs are related to lower productivity and the need of specific phases/operations.

Table 3.16 – Overview of administrative costs for GI production

Product	Status	Administrative cost (Euros)				Total administrative cost
		Control cost		Certification cost		
		Operators	Control cost	Items	Certification cost	
Montepulciano d'Abruzzo	PDO	Producer of grapes	0,0008 (kg of claimed grapes)	Sample taking	15,00 per sample of wine	
		Grapes intermediaries	0,0005 (kg of sold grapes)			
		Wine intermediaries	0,0014 (l of wine certified and sold)	Laboratory	24,00 per sample of wine	
		Producer of wine	0,0014 (l of claimed wine)			
		Bottling companies	0,0014 (l of bottled DO wine)	Commission of wine tasting	0,0006 (l of wine subject to certification)	
La Mancha	PDO	0,02 (€/l)				0,02 (€/l)
Scotch Beef	PGI	Control cost (annual cost per producer)		Certification cost		
		about 7.000€ (average)				
Jambon d'Ardenne	PGI	Control cost (Euros/kg)				
		Type of ham	First 1.000 tickets	Tickets 1.001-10.000	Annual certification fee (Euros, per producer)	
		Whole ham on bone	0,20	0,11	309,00	
		Heart ham ("Coeur")	0,28	0,15		
		Noix ham	0,43	0,18		
Soprèssa Vicentina	PDO	Membership fee (Euros/kg)	Control cost and certification cost (Euros/kg)			1,10-1,20 (€/kg)
		0,60	0,50-0,60*			
Emmental de Savoie	PGI	Collective promotion and R&D (Euros/kg)	Control cost and certification cost (Euros/kg)			0,11 - 0,12 (€/kg)
		0,10	0,01 - 0,02			
Pecorino Sardo	PDO	Membership fee (Euros/kg)	Control cost and certification cost (Euros/kg)			0,07 (€/kg)
		0,06**	0,01**			
Vorarlberger Bergkäse	PDO	Control cost (per producer, per year)		Certification cost		1.500 € per producer, per year
		1.500 € (average)				

(continued)

Note: control costs derive from the carrying out of documental controls and on-site auditing; certification costs are of purely administrative nature (e.g. emission of certificates)

(continued)

Product	Status	Administrative cost (Euros)									Total administrative cost
		Operators	Consortium fees (per operator)			Control and certification cost					
			Fee	First year	Other years	Subscription fee (1st year)		Annual cost (other years)		Other control cost	
						Fixed fee per operator	Variable fee	Fixed fee per operator	Variable fee		
Dauno	PDO	Producers of olives	Subscription	51,64		50,00	5,00 €/ha	40,00	1,00 €/ha	250,00 (first sample of oil) + 150,00 (following samples of oil)	Variable depending on the type of operator and the items involved in the calculation (i.e. n° marks used, hectares, kg of oil produced, n° samples)
			Membership	50,00	50,00						
		Processors	Subscription	51,64		50,00		40,00			
			Membership	100,00	100,00						
		Intermediaries	Subscription	51,64		50,00		40,00	3,00 (€/100 kg oil)		
			Membership	100,00	100,00						
		Bottling companies	Subscription	51,64		50,00		40,00	3,00 (€/100 kg oil)		
			Membership	100,00	100,00						
			Marks	0,15*** €/mark	0,15*** €/mark						
Ekstra deviško oljčno olje Slovenske Istre	PDO	Membership fee (Euros) (per producer, per year)		Control cost (Euros) (per producer, per year)		Certification cost (Euros, per producer, per year)					875,00 € per producer, per year
		25,00		600,00		250,00					
Pomme du Limousin	PDO	0,0003 €/kg									0,0003 €/kg
Lammefjordsgulerod	PGI	Control cost (per producer, per year)				Certification cost					
		about 147,00 € (average)									
Pimiento Asado del Bierzo	PGI	0,05 - 0,07 €/kg									0,05 - 0,07 €/kg

Note: control costs derive from the carrying out of documental controls and on-site auditing; certification costs are of purely administrative nature (e.g. emission of certificates)
Source: case study reports

Table 3.17 – Final products: overview of additional costs for GI production (other than administrative ones)

Product	Status	Product class	Main raw material used	Specific production model (if relevant)	Main additional costs vs standard production (other than administrative costs for GI production)				Total additional cost (Euros/kg or Euros/l of final product) (includes administrative costs for GI production)
					Higher cost of raw materials	Additional costs for specific phases / operations	Additional costs from lower productivity	Other / notes	
Montepulciano d'Abruzzo	PDO	Wines	Grapes	Production of bottled wine	€ per kg of grapes: 0,00 - 0,05 (produced in-house) 0,00 - 0,10 (purchased)	- in some cases, additional operational costs for quality-oriented practices (soft pressing, cold maceration etc.)	- wine yield cannot be pushed beyond the allowed maximum => more grapes are needed per l of wine => additional costs	- Cost of bottles and corks for GI wines is usually higher	0,45 - 0,65
				Production of wine in bulk					0,00 - 0,05
La Mancha	PDO	Wines	Grapes	Production of wine from grapes produced in-house	€ per kg of grapes: 0,00 - 0,05	- for certain wine types, additional costs for maturation	- wine yield cannot be pushed beyond the allowed maximum => more grapes are needed per l of wine => additional costs	- Cost of bottles and corks for GI wines is usually higher	0,00 - 0,05
				Production of wine from purchased grapes	€ per kg of grapes: 0,00 - 0,05				0,05 - 0,10
Scotch Beef	PGI	1.1. Fresh meat (and offal)	Live cattle		€ per kg (live weight): 0,20 - 0,25			- Additional costs for ensuring segregation of PGI production in slaughterhouses (< 0,05 €/kg of final product)	0,15 - 0,25
Jambon d'Ardenne	PGI	1.2. Meat products (cooked, salted, smoked, etc.)	Live pigs => pig rear legs			***- longer maturation times => main additional cost***	- greater weight loss (due to longer maturation times)	- greater space requirements (due to longer maturation times) => additional costs	1,25 - 1,35
Soprèssa Vicentina	PDO	1.2. Meat products (cooked, salted, smoked, etc.)	Live pigs => half carcasses of pigs		€ per kg (live weight): 0,15 - 0,25	- additional costs for trimming and boning of half carcases		- need to use only specific cuts => additional costs	1,20 - 2,80

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Product	Status	Product class	Main raw material used	Specific production model (if relevant)	Main additional costs vs standard production (other than administrative costs for GI production)				Total additional cost (Euros/kg or Euros/l of final product) (includes administrative costs for GI production)
					Higher cost of raw materials	Additional costs for specific phases / operations	Additional costs from lower productivity	Other / notes	
Emmental de Savoie	PGI	1.3. Cheeses	Liquid milk		€ per l of liquid milk: 0,05 - 0,15		- lower cheese yields (additional cost = 0,35 - 0,40 €/kg of final product)	- limited scope for achieving economies of scale in GI production => additional costs	2,05 - 2,85
Pecorino Sardo	PDO	1.3. Cheeses	Liquid milk					***Additional costs for GI production are mainly of administrative nature***	Negligible
Vorarlberger Bergkäse	PDO	1.3. Cheeses	Liquid milk				- lower cheese yields => main additional cost		0,55 - 1,35
Dauno	PDO	1.5. Oils and fats (butter, margarine, oil, etc.)	Olives					***Additional costs for GI production are mainly of administrative nature***	0,00 - 0,10
Ekstra deviško oljčno olje Slovenske Istre	PDO	1.5. Oils and fats (butter, margarine, oil, etc.)	Olives	Small-format containers for direct sale to retailers	- vertically integrated producers (processing of own olive production) => use of more costly (around +15%) "low-impact" chemical inputs in olive groves			- additional bottling & handling costs (0,50 - 0,90 €/l of final product) - fees for participation in fairs (around 2.000 € per fair per producer)	2,40 - 2,85
				Large-format containers for direct sale to final consumers					1,70 - 2,15

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Product	Status	Product class	Main raw material used	Specific production model (if relevant)	Main additional costs vs standard production (other than administrative costs for GI production)				Total additional cost (Euros/kg or Euros/l of final product) (includes administrative costs for GI production)
					Higher cost of raw materials	Additional costs for specific phases / operations	Additional costs from lower productivity	Other / notes	
Pomme du Limousin	PDO	1.6. Fruit, vegetables and cereals fresh or processed	Fresh apples		€ per kg of fresh apples (before sorting and packing): 0,05 - 0,20		- no pre-sorting in GI production (to preserve quality) => lower productivity of packing lines => additional costs	- additional costs for special packaging	0,10 - 0,25
							- total additional costs for packing & handling: around 0,05 €/kg of final product		
Lammefjordsgulerod	PGI	1.6. Fruit, vegetables and cereals fresh or processed	Fresh carrots						GI production cost is slightly lower than standard one
Pimiento Asado del Bierzo	PGI	1.6. Fruit, vegetables and cereals fresh or processed	Fresh peppers		€ per kg of fresh peppers for roasting: 0,20 - 0,35			- limited scope for achieving economies of scale in GI production => additional costs	2,20 - 2,50

Source: case study reports

Table 3.18 – Agricultural raw materials: overview of additional costs for GI production (other than administrative ones)

Product	Status	Product class	Agricultural raw material concerned	Main additional costs vs standard production (other than administrative costs for GI production)			Total additional cost (Euros/kg or Euros/l of raw material) (includes administrative costs for GI production)
				Additional costs for specific phases / operations	Additional costs from lower productivity	Other / notes	
Montepulciano d'Abruzzo	PDO	Wines	Grapes	- practices (pruning) aimed at limiting grape yield - additional treatments to improve grape quality	- grape yield cannot be pushed beyond the allowed maximum		0,00 - 0,05
La Mancha	PDO	Wines	Grapes		- grape selection needed to stay below the allowed maximum yield		0,00 - 0,05
Scotch Beef	PGI	1.1. Fresh meat (and offal)	Live cattle				Negligible
Jambon d'Ardenne	PGI	1.2. Meat products (cooked, salted, smoked, etc.)	Pig rear legs				Negligible
Soprèssa Vicentina	PDO	1.2. Meat products (cooked, salted, smoked, etc.)	Live pigs	- longer rearing cycle (at least one additional month of fattening)	- lower conversion rate of feed in the final part of the fattening period => need to include more costly ingredients with higher nutritional value in feed		0,15 - 0,20 (kg of live weight)
Emmental de Savoie	PGI	1.3. Cheeses	Liquid milk		- use of local breeds with lower productivity	- higher cost of feeding due to restrictions in allowed ingredients - additional costs due to extensive dairy farming in mountain areas	0,05 - 0,10
Pecorino Sardo	PDO	1.3. Cheeses	Liquid milk				Negligible
Vorarlberger Bergkäse	PDO	1.3. Cheeses	Liquid milk				Negligible

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Product	Status	Product class	Agricultural raw material concerned	Main additional costs vs standard production (other than administrative costs for GI production)			Total additional cost (Euros/kg or Euros/l of raw material) (includes administrative costs for GI production)
				Additional costs for specific phases / operations	Additional costs from lower productivity	Other / notes	
Dauno	PDO	1.5. Oils and fats (butter, margarine, oil, etc.)	Olives				Negligible
Pomme du Limousin	PDO	1.6. Fruit, vegetables and cereals fresh or processed	Fresh apples*	- manual thinning is sometimes performed to increase sugar content in apples	***- apple yield cannot be pushed beyond the allowed maximum (main additional cost)***		0,00 - 0,05
Lammefjordsgulerod	PGI	1.6. Fruit, vegetables and cereals fresh or processed	Fresh carrots*				GI production cost is slightly lower than standard one
Pimiento Asado del Bierzo	PGI	1.6. Fruit, vegetables and cereals fresh or processed	Fresh peppers				GI production cost is slightly lower than standard one

Source: case study reports

3.2.3 GI production vs. standard production: differences in gross margins

In order to investigate the presence and extent of an additional gross margin for GI products vs. the corresponding standard products, an *ad-hoc* ***"additional gross margin indicator"*** (AGMI) was devised, given by the formula (Gross margin GI production / Gross margin standard production) (in % terms). If the value of the indicator is > 100%, there is an additional gross margin for GI production with respect to standard production.

In most cases the ***gross margin for final GI products*** (table 3.19 and figure 3.1) is higher than the one for standard products. There are, however, some notable exceptions, namely Vorarlberger Bergkäse PDO, Pomme du Limousin PDO, Soprèssa Vicentina PDO, and (for two marketing channels out of three for which a comparison is possible) also Pecorino Sardo PDO.

In the case of Vorarlberger Bergkäse PDO this outcome derives from the combination of lower prices than the standard product (see § 3.2.1) with significant additional costs for GI production (see § 3.2.2). In two cases - Pomme du Limousin PDO and Soprèssa Vicentina PDO - the price premium for GI products over the corresponding standard products (see § 3.2.1) is more than offset by the additional costs for GI production (see § 3.2.2). In the case of Pecorino Sardo PDO, the price of the GI product is lower than the one of standard products in the two marketing channels concerned, and this (combined with additional costs of GI production, which are mainly of administrative nature) reverses the comparison in favour of the standard product. It is worth noting that trends in production volume and value were clearly negative for Soprèssa Vicentina PDO over the observed period (see § 3.1.1): this trend is surely also explained by the disadvantage in gross margin vs. standard production. The above-mentioned GI products are produced even in the absence of an additional gross margin versus standard production for various reasons. In the case of Vorarlberger Bergkäse PDO, GI production is mainly related to better access to specific market outlets (discount stores, exports to third countries), and applies particularly to short maturation types. In the case of Soprèssa Vicentina PDO, GI products mainly act as a "presentation card / promotional tool" for selling the corresponding standard products to large-scale retailers. In the case of Pomme du Limousin PDO, most Golden Delicious apples produced in the Limousin area are actually produced according to the GI specifications, but only a limited share is marketed under the GI name with the GI logo, as packers mostly rely on their strong commercial brands as marketing tools (this also applies for Vorarlberger Bergkäse PDO). Production of Pecorino Sardo PDO is mainly explained by the "ticket to trade" function it performs in specific market outlets, often to the advantage of standard production.

The extent of additional gross margin for GI products varied remarkably across the different case studies: it ranged from three times the gross margin of the standard product (Jambon d'Ardenne PGI[20]), to twice that margin or more (sale of bottled Montepulciano d'Abruzzo PDO to wholesalers[21]; sale of La Mancha PDO in most channels; Emmental de Savoie PGI), to a significant but more limited advantage in the remaining cases (AGMI ranging between 109% and 132%). It must, in any case, be highlighted that some of the highest additional margins for GI production are linked with rather low margins for standard production; at the other extreme, the absence of an additional margin for GI production in some cases involves nevertheless substantial margins in both GI and standard production. The presence of negative gross margins in the case of Vorarlberger Bergkäse PDO and Emmental de Savoie PGI concerns single years which were characterised by exceptional market circumstances.

[20] In this specific case, the interviewed experts observed that the average price of the GI product calculated from survey data was above the upper limit of what they considered the indicative price range for sale to wholesalers and for direct sale to retailers. In addition, production cost for the GI product did not include the component deriving from additional space/time required for maturation, which producers were unable to quantify. In light of these elements, the additional gross margin for GI production can be lower than the value reported in table 3.19, especially in the case of sale to wholesalers.

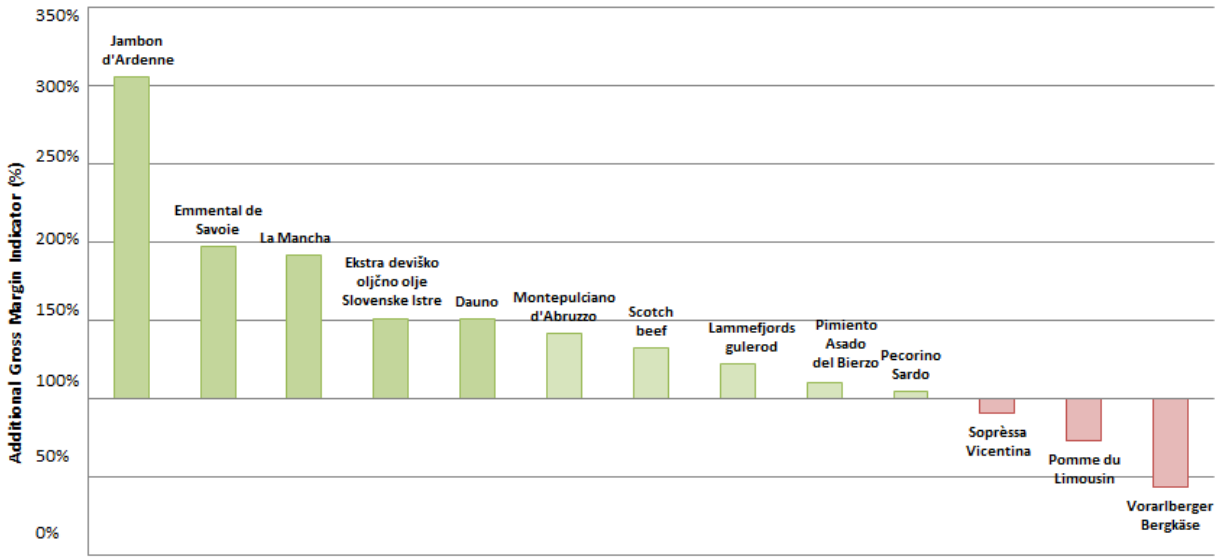
[21] It is worth observing that bottles of high-quality Montepulciano d'Abruzzo PDO can reach ex-winery prices up to 30 times or more the ex-winery price of a bottle of standard red wine. Such "elite" bottles were excluded from the assessment of differential gross margins.

Table 3.19 – Additional gross margin indicator for the studied GI products: final products (2007-2011)*

Product	Status	Product class	Marketing channel	Max	Min	5-year avg.	Order of magnitude (absolute value €/kg or €/l)
Montepulciano d'Abruzzo	PDO	Wines	Sale to wholesalers (bottled)	302,6%	166,0%	228,9%	GI: 0,75 / 0,85 Std.: 0,25 / 0,50
			Sale to wholesalers (in bulk)	134,9%	80,8%	118,8%	GI: 0,20 / 0,90 Std.: 0,25 / 0,65
			Direct sale to downstream processors (in bulk)	191,3%	98,6%	141,1%	GI: 0,30 / 0,70 Std.: 0,15 / 0,45
La Mancha	PDO	Wines	Sale to wholesalers (grapes produced in-house)	210,8%	192,9%	203,8%	GI: 0,75 / 0,95 Std.: 0,35 / 0,50
			Direct sale on the spot market (grapes produced in-house)	188,9%	175,8%	181,0%	GI: 2,80 / 3,25 Std.: 1,60 / 1,75
			Direct sale to retailers and downstream processors	224,5%	157,4%	191,1%	GI: 2,00 / 2,40 Std.: 1,05 / 1,30
			Sale to wholesalers (purchased grapes)	254,2%	220,7%	238,3%	GI: 0,60 / 0,80 Std.: 0,20 / 0,35
			Direct sale on the spot market (purchased grapes)	193,7%	179,7%	185,3%	GI: 2,65 / 3,10 Std.: 1,45 / 1,60
			Direct sale to retailers and downstream processors	237,6%	160,3%	199,2%	GI: 1,85 / 2,25 Std.: 0,90 / 1,20
Scotch Beef	PGI	1.1. Fresh meat (and offal)		184,0%	115,3%	132,4%	GI: 0,45 / 1,30 Std.: 0,25 / 1,05
Jambon d'Ardenne	PGI	1.2. Meat products		332,3%	277,6%	305,0%	GI: 3,00 / 3,50 Std.: 0,90 / 1,50
Soprèssa Vicentina	PDO	1.2. Meat products	Direct sale to retailers	97,5%	76,0%	90,4%	GI: 3,80 / 4,65 Std.: 4,30 / 5,05
			Sale to wholesalers	96,7%	61,2%	81,3%	GI: 2,60 / 3,85 Std.: 3,55 / 4,30
Emmental de Savoie	PGI	1.3. Cheeses		370,4%	70,6%	196,9%	GI: - 0,05 / + 1,00 Std.: 0,25 / 0,85
Pecorino Sardo	PDO	1.3. Cheeses	Direct sale to retailers	108,7%	100,0%	103,9%	GI: 1,70 / 2,25 Std.: 1,70 / 2,20
			Sale to wholesalers	100,6%	79,9%	89,4%	GI: 1,70 / 2,25 Std.: 1,70 / 2,50
			Direct sale to final consumers	103,7%	82,1%	89,6%	GI: 2,55 / 3,10 Std.: 2,95 / 3,55
Vorarlberger Bergkäse	PDO	1.3. Cheeses	Direct sale to retailers	75,1%	60,1%	68,6%	GI: 1,65 / 3,10 Std.: 2,80 / 4,60
			Sale to wholesalers	53,0%	26,7%	43,5%	GI: -0,30 / 1,20 Std.: 0,60 / 2,20
			Direct sale to final consumers	82,4%	71,9%	76,9%	GI: 4,30 / 5,80 Std.: 5,95 / 7,60
Dauno	PDO	1.5. Oils and fats	Sale to wholesalers, in bulk	115,9%	102,9%	108,8%	GI: 0,35 / 1,25 Std.: 0,30 / 1,20
			Direct sale on the spot market, bottled	195,3%	127,0%	150,5%	GI: 3,15 / 4,85 Std.: 2,25 / 3,55
Ekstra deviško oljčno olje Slovenske Istre	PDO	1.5. Oils and fats	Direct sale to final consumers	112,5%	94,7%	102,2%	GI: 3,35 / 4,60 Std.: 3,40 / 4,55
			Direct sale to retailers	166,8%	135,3%	151,0%	GI: 10,95 / 11,50 Std.: 6,85 / 8,15
Pomme du Limousin	PDO	1.6. Fruit, vegetables and cereals fresh or proc.		104,8%	44,0%	73,1%	GI: 0,10 / 0,30 Std.: 0,20 / 0,35
Lammefjordsgulerod	PGI	1.6. Fruit, vegetables and cereals fresh or proc.	Sale to wholesalers	109,1%	100,0%	103,0%	GI: 0,70 / 1,20 Std.: 0,70 / 1,10
			Direct sale to retailers	160,0%	100,0%	121,8%	GI: 1,70 / 2,10 Std.: 1,25 / 2,00
Pimiento Asado del Bierzo	PGI	1.6. Fruit, vegetables and cereals fresh or proc.		132,4%	90,2%	109,9%	GI: 2,95 / 3,50 Std.: 2,60 / 3,30

* Additional gross margin indicator = (gross margin GI product / gross margin standard product) (in % terms)
Source: case study reports

Figure 3.1 - Additional gross margin indicator for the studied GI products: final products (main marketing channel only**)*



* Additional gross margin indicator = (gross margin GI product / gross margin standard product) (in % terms)
** *Direct sale to retailers*: Soprèssa Vicentina PDO, Pecorino Sardo PDO, Ekstra deviško oljčno olje Slovenske Istre (PDO), Lammefjordsgulerod (PGI) / *Direct sale on the spot market (bottled)*: Dauno PDO / *Direct sale to downstream processors (in bulk)*: Montepulciano d'Abruzzo PDO / Sale to wholesalers: Vorarlberger Bergkäse PDO / *Indicative average of all marketing channels (no detail by channel available)*: Scotch Beef PGI, Jambon d'Ardenne PGI, Emmental de Savoie PGI, Pomme du Limousin PDO, Pimiento Asado del Bierzo PGI

Source: case study reports

Coming to the ***investigation of the possible reasons explaining differences in the gross margins achieved by the studied GI products vs. the corresponding standard products***, a number of relevant findings can be highlighted.

In general, GI products with only slight differences in intrinsic features – quality parameters, organoleptic characters etc. – from the corresponding standard products achieve relatively limited advantages in gross margins (Lammefjordsgulerod PGI sold directly to retailers) or even no advantage at all (this happens for Vorarlberger Bergkäse PDO, Pecorino Sardo PDO, Pomme du Limousin PDO, and – in case of sale to wholesalers – also Lammefjordsgulerod PGI). There are, however, notable exceptions: despite being significantly different from standard *soprèssa*, Soprèssa Vicentina PDO achieves lower margins than the former; on the contrary, despite not being so intrinsically different from the corresponding standard product, Dauno PDO achieves significant additional gross margins over it when sold bottled on the spot market (AGMI equal to 150%). This said, Soprèssa Vicentina was found to have a smaller disadvantage vs. standard production if compared with the disadvantages applying for Pomme du Limousin PDO and Vorarlberger Bergkäse PDO, which feature only slight intrinsic differences compared to the corresponding standard products: this further supports the conclusion that intrinsic product differentiation is more likely to lead to additional gross margins for GI production.

As for the possible linkage between additional gross margins and the extent of marketed volumes, evidence from the case studies and inputs from the interviewed experts suggest that large marketed volumes for a GI are usually the result of a development process which is fuelled by good profitability (and hence that establishing a linkage between high volumes and substantial additional gross margins makes sense), and also that large marketed volumes help to keep production costs down (by allowing economies of scale and also by "spreading" fixed administrative costs for GI production over a wider production base). Indeed, all three high-volume GI products studied (the two GI wines and Scotch Beef PGI) achieve higher margins than the

corresponding standard products. However, as evidence from the Montepulciano d'Abruzzo PDO case study also suggests, when expansion of production volumes (fuelled by high prices and good profitability) exceeds market demand, oversupply crises can occur, with consequent declines in prices and profitability. It must also be highlighted that – among the studied GI products – intermediate or small-volumes can also achieve significant or substantial additional margins.

In terms of possible links between additional gross margins for GI products and marketing channels and practices, the main findings of the analysis are as follows:

- The role of strong export orientation in the achievement of additional gross margins is not clear. Indeed, two products with strong export orientation (La Mancha PDO and Jambon d'Ardenne PGI) achieve substantial additional gross margins, but another GI product (Vorarlberger Bergkäse PDO) achieves remarkably lower gross margins than the corresponding standard product.
- Direct sales to retailers can help in achieving higher additional gross margins versus sales via intermediaries: this happens for Pecorino Sardo PDO and for Lammefjordsgulerod PGI.
- Additional gross margins from direct sales to final consumers are not necessarily the highest possible. For the two products for which a comparison between GI production and standard production was possible, the additional gross margin for GI products was actually found to be rather limited (Ekstra deviško oljčno olje Slovenske Istre PDO[22]) or even absent (Pecorino Sardo PDO).

The study team further elaborated on the results of case study work in order to ***assess whether and to what extent certain combinations of factors and/or characteristics identifying the different GI products under investigation could be linked to certain results in terms of additional gross margin vs. the corresponding standard products***. To this end, a number of "investigation patterns" were developed, linking the different combinations of factors/features associated with each GI product to the results it achieved (measured by the AGMI): the "trees" in figures 3.2 and 3.3 are visual representations of the most significant "investigation patterns". Different sets of criteria/features were combined to obtain different "trees":

1. Differentiation in the intrinsic features of the GI product (as compared to the corresponding standard product): significant vs. low/absent
2. Nature of the GI product: unprocessed vs. processed (this can be relevant especially for the allocation of retail value of the final product among the different supply chain levels: see § 3.2.1)
3. Status of the GI product: PDO vs. PGI (especially because this can imply significant differences in the extent of the geographical areas for, respectively, producing agricultural raw materials and producing the final product)
4. Marketed volume of GI product: low, intermediate, high
5. Orientation towards export markets (i.e. exports accounting for more than 55% of total sales) vs. orientation towards the domestic market
6. Role played by integration/co-ordination forms between production of agricultural raw materials and production of the final product (as stronger integration/co-ordination could reduce production costs via efficiency gains and/or economies of scale, as well as grant superior market power to the upstream levels in the supply chains concerned)

Before illustrating what emerged from the elaborations made, it is worth highlighting that – due to the relatively limited number of GI products included in the selection (13) – the higher the number of criteria considered in building the "tree", the higher the likelihood of identifying GI product types actually comprising only one specific product[23]. It is also essential to consider that figures 3.2 and 3.3 "mask" some important

[22] For this product, however, direct sales to final consumers mostly occurred in a peculiar context – sales to friends and relatives – which prevented producers from achieving substantial price premiums.

[23] The interviewed experts suggested that a number of additional elements could – at least in theory – play a significant role in achieving higher gross margins from GI production (even though most of them are not specific to it, i.e. they can also be relevant for standard production): concentration in the retail sector; prevalence of large-scale retailers vs. small/medium specialised retailers; average price levels in the different food categories, as these could have an influence on consumers' willingness to pay for the products concerned, etc. However, lack of systematic evidence on these elements in the case studies, as well as the need

differences between individual products grouped in the same typology, and among different marketing channels for each individual product).

The "tree" in figure 3.2 combines two main criteria: differentiation and volume. The figure highlights that ***the presence of significant intrinsic differentiation vs. the standard product is an essential condition for GI products to achieve higher differential gross margins***. This finding is consistent with the rationale for product differentiation (see below), and also with the experience of the interviewed experts.

A strong ***orientation towards exports*** (which was found for 3 out of 13 studied GI products) was found to be associated with substantially higher gross margins in two cases, but with remarkably lower gross margins in the remaining one: as a consequence, it was ***not deemed a key reason*** behind the achievement of additional gross margins via GI production.

The introduction of a further criterion, i.e. the unprocessed/processed nature of the GI product, suggested that ***unprocessed products*** (which are, in any case, a minority of the GI products included in the selection) tend to achieve ***lower differential gross margins than most processed GI products***. Indeed only one of the two unprocessed GI products covered by the study (Lammefjordsgulerod PGI) achieved an additional margin: this was lower than the ones achieved by some processed products (especially wines and oils), but comparable to or higher than the ones achieved by other processed products.

On the other hand, ***no clear link*** was observed between the achievement of higher gross margins for GI products and the ***integrated or non-integrated organisation*** of their supply chains; this criterion was therefore not used in defining further investigation patterns.

Consideration of the ***PDO/PGI status*** resulted in the creation of the three-criteria "tree" in figure 3.3. Observation of this "tree" revealed that:

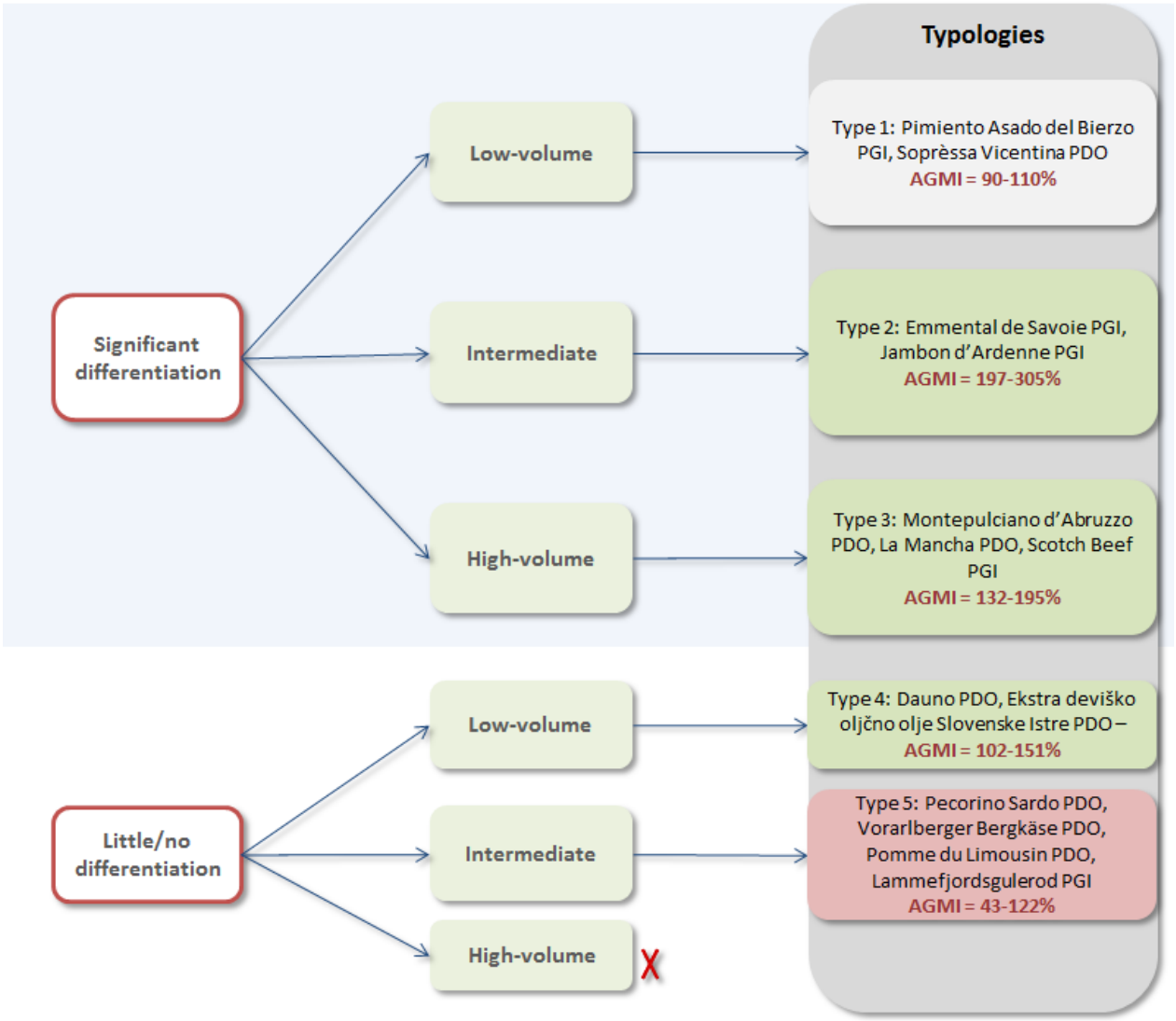
- Some of the studied PDOs achieve substantial additional gross margins, whereas other PDOs generate lower margins than the corresponding standard products
- All the studied PGIs, on the other hand, achieve additional gross margins (of remarkably variable extent) over the corresponding standard products

This could be explained (at least in part) by a certain tendency for less strict requirements concerning the sourcing of agricultural raw materials in PGI product specifications (as compared to those for PDOs): this can help to limit additional production costs for GI production. In light of the relatively limited number of PGIs studied, however, there is ***no solid enough evidence to conclude that PGIs have a better capacity of granting additional gross margins than PDOs***, but the ***PGI status might tend to "shelter" producers from disappointing differential margins***.

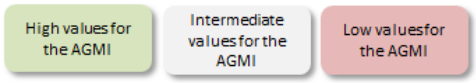
As already observed, the ***size of marketed volumes*** (which was considered as a criterion in all the investigation patterns) appears to be ***linked to a certain degree with the extent of the additional gross margin*** (the possible presence of such a link was also suggested by some of the interviewed experts): all three high-volume GI products considered indeed achieve additional gross margins ranging from significant to substantial. On the other hand, it is worth noting that expansion of production volumes beyond actual market demand can lead to oversupply, and hence to a decline in prices and profitability. It must also be highlighted that substantial additional gross margins are also achieved by some of the intermediate and low-volume products studied.

to avoid "fragmentation" of the investigation patterns into an excessive number of criteria/features, suggested the exclusion of such elements from the analysis.

Figure 3.2 - Key factors for obtaining a differential gross margin: investigation pattern N° 1

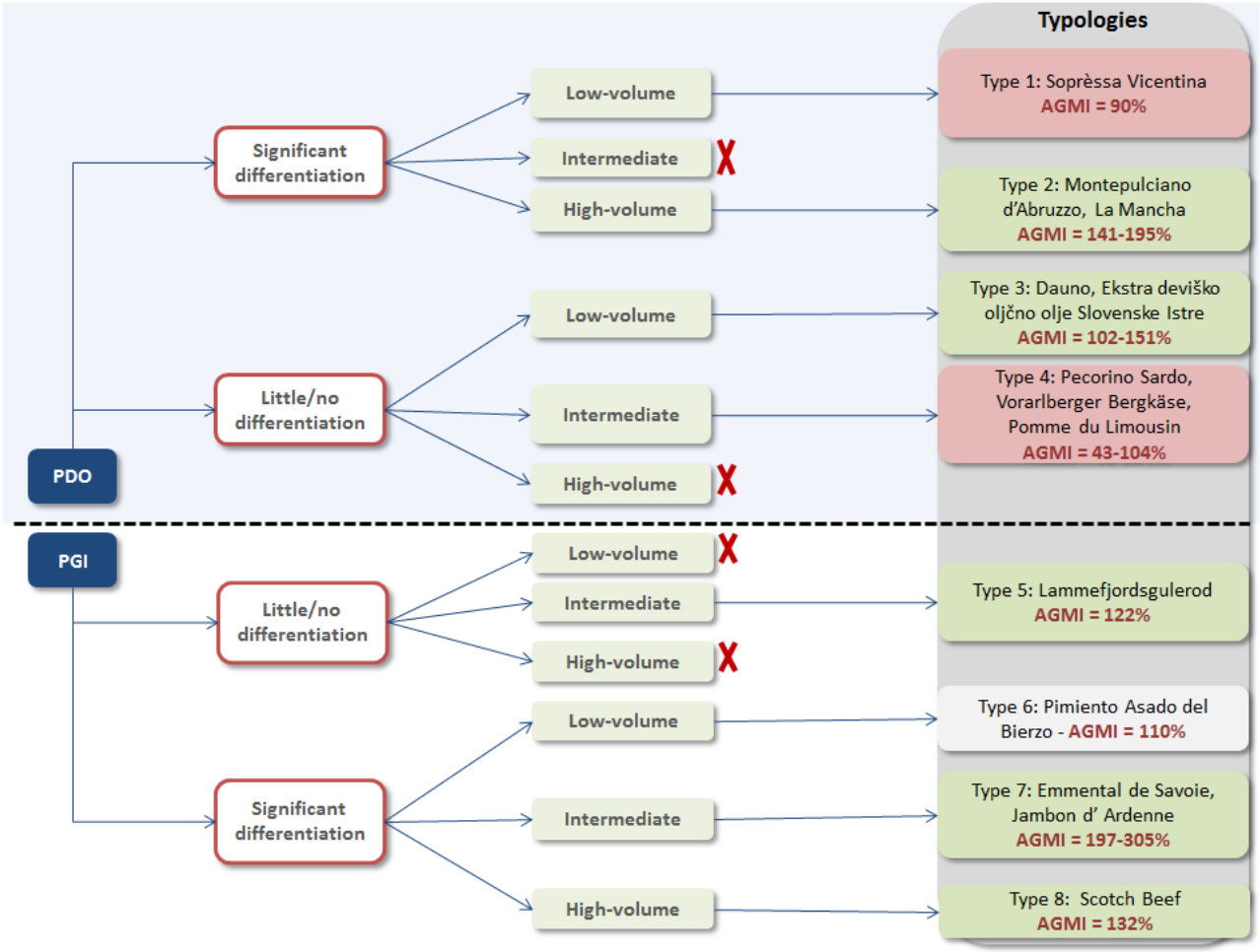


Typology key:

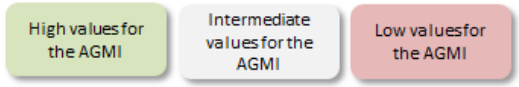


Source: case study reports

Figure 3.3 - Key factors for obtaining a differential gross margin: investigation pattern N° 2



Typology key:



Source: case study reports

A further exercise was carried out to identify ***possible links between the extent of the additional gross margin over standard products*** and additional factors/characteristics, such as the ***date of registration of the GI*** (including pre-existing GI registration at national / regional level), the ***market channel used*** and the ***"intensity"*** (even if considered in a qualitative way) ***of support for promotional activities***.

This exercise moves from the rationale behind the implementation of differentiation strategies, which basically relies on four main elements:

1. Creation of product differentiation, based on intrinsic features and/or on immaterial factors (e.g. association with a specific geographical area, with cultural or ethical values etc.)
2. Identification of the product differentiation (in our case, through a geographical indication)
3. Communication of the product differentiation (through information and promotion activities)
4. Recognition and appreciation of the product differentiation by consumers (also in the form of willingness to pay an additional price)

In table 3.20, all the combinations between the studied GI products and the different market channels which allowed a comparison with the standard product are ordered by decreasing extent of AGMI and linked to a number of key characteristics / factors (including the date of registration as a GI, the presence of intermediaries in the market channels used and the "intensity" of support for promotion), in order to assess the presence of regularities, i.e. of potential links between certain features/factors and a determined extent of the additional gross margin vs. the corresponding standard products.

Once again, the importance of product differentiation based on intrinsic features as a key factor to achieve higher additional gross margins emerges clearly, whereas the ***linkages with the other factors/characteristics*** appear to be ***less clear and straightforward***.

The possible role played by the ***level of awareness of, trust in and willingness to pay for GI products among consumers*** in the achievement of additional gross margins for GI production was also considered. To this end, the degree of recognition of EU GI logos by consumers in different Member States (as measured by a 2012 Eurobarometer survey) was related to the extent of differential margins for GI production.

This investigation (figure 3.4) revealed no link between the two variables; this outcome can be explained – at least in part – by the following limitations:

1. The available data on margins did not allow to distinguish the performance of each product in terms of AGMI on different geographical markets (domestic vs. export). If a GI product is mostly exported, the level of consumers' awareness of GIs on the domestic market should have limited influence on its overall economic performance.
2. Data on consumers' awareness of GIs in the Eurobarometer survey were not related to individual PDO/PGI products, but referred to the average level of consumers' awareness of all GI products in a certain Member State. In a specific country, the average level of awareness can be high (as it happens, for instance, in Italy), but the actual level of awareness about a specific GI product can be much lower: this helps to explain the absence of a clear link between the average levels of awareness in the concerned Member States, and the economic performances of the individual GI products.

Some evidence from case study work also suggests that if it is true that a favourable attitude of consumers towards GIs constitutes an important condition for better valorisation of GI products, it is also true that such outcome is not automatic, and very much depends on the reputation of individual GI products among consumers (rather than on the reputation of GI products in general).

Table 3.20 - Key factors for obtaining a differential gross margin: list of GI products and corresponding marketing channels ordered by decreasing AGMI%

Product	Product class	AGMI 5-year avg.	Order of magnitude of GM (absolute value €/kg or €/l)	Marketing channel	Fresh or processed product	Status	Registration as GI (year when was first granted)	Differentiation in intrinsic features vs. standard product	Marketed volume	Export vs. domestic market orientation	Integrated vs. non-integrated supply chain	Market channels involving intermediaries	RDP measure 133 - promotion	Other support promotion	Partic. in fairs
Jambon d'Ardenne	1.2. Meat products	305,0%	GI: 3,00 / 3,50 Std.: 0,90 / 1,50		Processed	PGI	1996 (1974 at MS level)	Significant	Intermediate	Export	Non-integrated		N	Y	Y
La Mancha	Wines	238,3%	GI: 0,60 / 0,80 Std.: 0,20 / 0,35	Sale to wholesalers (purchased grapes)	Processed	PDO	2007 (1932 at MS level)	Significant	High	Export	Integrated	Yes	N	Y	Y
Montepulciano d'Abruzzo	Wines	228,9%	GI: 0,75 / 0,85 Std.: 0,25 / 0,50	Sale to wholesalers (bottled)	Processed	PDO	2007 (1968 at MS level)	Significant	High	Domestic	Integrated	Yes	Y	Y	Y
La Mancha	Wines	203,8%	GI: 0,75 / 0,95 Std.: 0,35 / 0,50	Sale to wholesalers (grapes produced in-house)	Processed	PDO	2007 (1932 at MS level)	Significant	High	Export	Integrated	Yes	N	Y	Y
La Mancha	Wines	199,2%	GI: 1,85 / 2,25 Std.: 0,90 / 1,20	Direct sale to retailers and downstream processors (purchased grapes)	Processed	PDO	2007 (1932 at MS level)	Significant	High	Export	Integrated		N	Y	Y
Emmental de Savoie	1.3. Cheeses	196,9%	GI: - 0,05 / + 1,00 Std.: 0,25 / 0,85		Processed	PGI	1996	Significant	Intermediate	Domestic	Integrated		(eligible but no support)	N	Y
La Mancha	Wines	191,1%	GI: 2,00 / 2,40 Std.: 1,05 / 1,30	Direct sale to retailers and downstream processors (grapes produced in-house)	Processed	PDO	2007 (1932 at MS level)	Significant	High	Export	Integrated		N	Y	Y
La Mancha	Wines	185,3%	GI: 2,65 / 3,10 Std.: 1,45 / 1,60	Direct sale on the spot market (purchased grapes)	Processed	PDO	2007 (1932 at MS level)	Significant	High	Export	Integrated		N	Y	Y
La Mancha	Wines	181,0%	GI: 2,80 / 3,25 Std.: 1,60 / 1,75	Direct sale on the spot market (grapes produced in-house)	Processed	PDO	2007 (1932 at MS level)	Significant	High	Export	Integrated		N	Y	Y
Ekstra deviško oljčno olje Slovenske Istre	1.5. Oils and fats	151,0%	GI: 10,95 / 11,50 Std.: 6,85 / 8,15	Direct sale to retailers	Processed	PDO	2007	Little/no	Low	Domestic	Integrated		Y	N	Y
Dauno	1.5. Oils and fats	150,5%	GI: 3,15 / 4,85 Std.: 2,25 / 3,55	Direct sale on the spot market, bottled	Processed	PDO	1997	Little/no	Low	Domestic	Integrated		N	Y	Y
Montepulciano d'Abruzzo	Wines	141,1%	GI: 0,30 / 0,70 Std.: 0,15 / 0,45	Direct sale to downstream processors (in bulk)	Processed	PDO	2007 (1968 at MS level)	Significant	High	Domestic	Integrated		Y	Y	Y
Scotch Beef	1.1. Fresh meat (and offal)	132,4%	GI: 0,45 / 1,30 Std.: 0,25 / 1,05		Processed	PGI	1998	Significant	High	Domestic	Non-integrated		N	Y	Y
Lammefjordsgulerod	1.6. Fruit, veget. and cereals…	121,8%	GI: 1,70 / 2,10 Std.: 1,25 / 2,00	Direct sale to retailers	Fresh	PGI	1996	Little/no	Intermediate	Domestic	Integrated		N	N	N

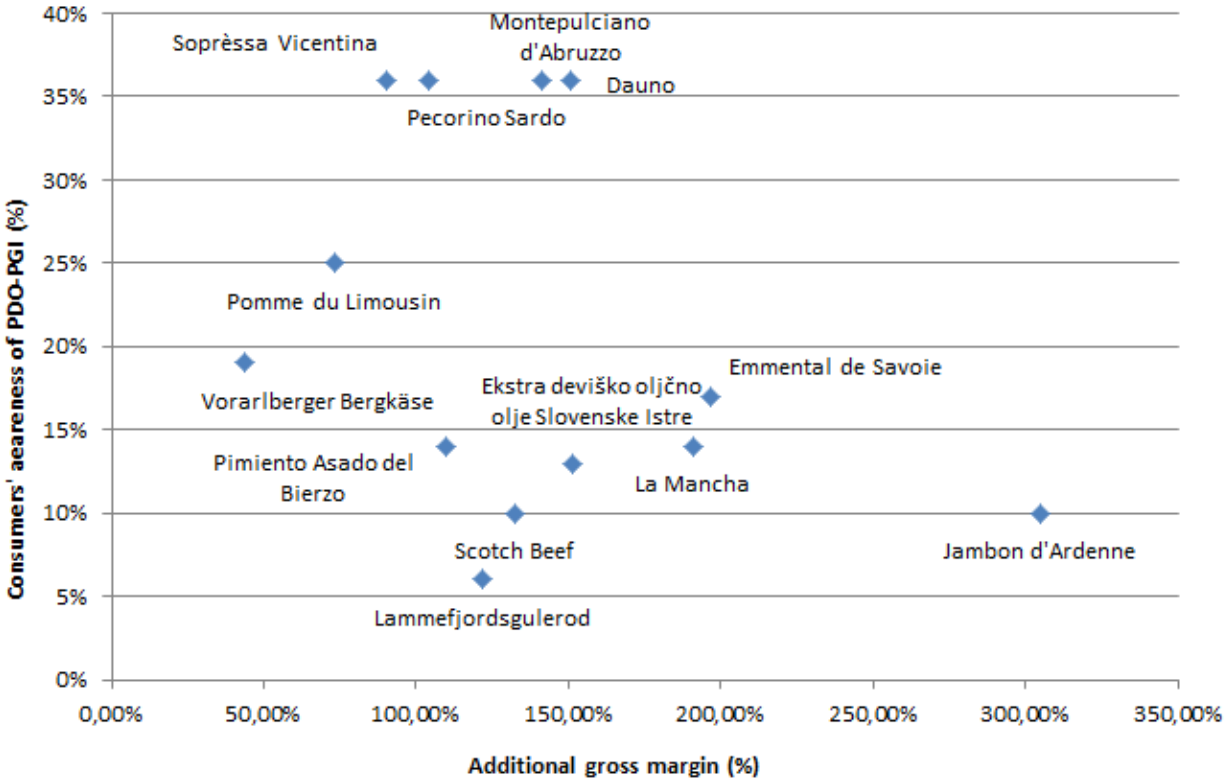
(continued)

(continued)

Product	Product class	AGMI 5-year avg.	Order of magnitude of GM (absolute value €/kg or €/l)	Marketing channel	Fresh or processed product	Status	Registration as GI (year when was first granted)	Differentiation in intrinsic features vs. standard product	Marketed volume	Export vs. domestic market orientation	Integrated vs. non-integrated supply chain	Market channels involving intermediaries	RDP measure 133 - promotion	Other support promotion	Partic. in fairs
Montepulciano d'Abruzzo	Wines	118,8%	GI: 0,20 / 0,90 Std.: 0,25 / 0,65	Sale to wholesalers (in bulk)	Processed	PDO	2007 (1968 at MS level)	Significant	High	Domestic	Integrated	Yes	Y	Y	Y
Pimiento Asado del Bierzo	1.6. Fruit, veget. and cereals …	109,9%	GI: 2,95 / 3,50 Std.: 2,60 / 3,30		Processed	PGI	2006	Significant	Low	Domestic	Integrated		N	Y	Y
Dauno	1.5. Oils and fats	108,8%	GI: 0,35 / 1,25 Std.: 0,30 / 1,20	Sale to wholesalers, in bulk	Processed	PDO	1997	Little/no	Low	Domestic	Integrated	Yes	N	Y	Y
Pecorino Sardo	1.3. Cheeses	103,9%	GI: 1,70 / 2,25 Std.: 1,70 / 2,20	Direct sale to retailers	Processed	PDO	1996 (1992 at regional level)	Little/no	Intermediate	Domestic	Integrated		N	Y	Y
Lammefjordsgulerod	1.6. Fruit, veget. and cereals …	103,0%	GI: 0,70 / 1,20 Std.: 0,70 / 1,10	Sale to wholesalers	Fresh	PGI	1996	Little/no	Intermediate	Domestic	Integrated	Yes	N	N	N
Ekstra deviško oljčno olje Slovenske Istre	1.5. Oils and fats	102,2%	GI: 3,35 / 4,60 Std.: 3,40 / 4,55	Direct sale to final consumers	Processed	PDO	2007	Little/no	Low	Domestic	Integrated		Y	N	Y
Soprèssa Vicentina	1.2. Meat products	90,4%	GI: 3,80 / 4,65 Std.: 4,30 / 5,05	Direct sale to retailers	Processed	PDO	2003	Significant	Low	Domestic	Non-integrated		Y	N	Y
Pecorino Sardo	1.3. Cheeses	89,6%	GI: 2,55 / 3,10 Std.: 2,95 / 3,55	Direct sale to final consumers	Processed	PDO	1996 (1992 at regional level)	Little/no	Intermediate	Domestic	Integrated		N	Y	Y
Pecorino Sardo	1.3. Cheeses	89,4%	GI: 1,70 / 2,25 Std.: 1,70 / 2,50	Sale to wholesalers	Processed	PDO	1996 (1992 at regional level)	Little/no	Intermediate	Domestic	Integrated	Yes	N	Y	Y
Soprèssa Vicentina	1.2. Meat products	81,3%	GI: 2,60 / 3,85 Std.: 3,55 / 4,30	Sale to wholesalers	Processed	PDO	2003	Significant	Low	Domestic	Non-integrated	Yes	Y	N	Y
Vorarlberger Bergkäse	1.3. Cheeses	76,9%	GI: 4,30 / 5,80 Std.: 5,95 / 7,60	Direct sale to final consumers	Processed	PDO	1997	Little/no	Intermediate	Export	Integrated		(eligible but no support)	N	Y
Pomme du Limousin	1.6. Fruit, veget. and cereals …	73,1%	GI: 0,10 / 0,30 Std.: 0,20 / 0,35		Fresh	PDO	2007 (2005 at MS level)	Little/no	Intermediate	Domestic	Integrated		N	Y	Y
Vorarlberger Bergkäse	1.3. Cheeses	68,6%	GI: 1,65 / 3,10 Std.: 2,80 / 4,60	Direct sale to retailers	Processed	PDO	1997	Little/no	Intermediate	Export	Integrated		(eligible but no support)	N	Y
Vorarlberger Bergkäse	1.3. Cheeses	43,5%	GI: -0,30 / 1,20 Std.: 0,60 / 2,20	Sale to wholesalers	Processed	PDO	1997	Little/no	Intermediate	Export	Integrated	Yes	(eligible but no support)	N	Y

Source: case study reports

Figure 3.4 - Consumers' awareness of PDO/PGI and additional gross margin of GI products (measured as AGMI)*



* AGMI / additional gross margin indicator = (gross margin GI raw material / gross margin standard raw material) (in % terms)

Source: case study reports (AGMI); European Commission (2012), "Special Eurobarometer 389, Europeans' Attitudes Towards Food Security, Food Quality And The Countryside" (consumers' awareness of PDO-PGI = domestic level of recognition of PDO/PGI).

The ***evolution of additional gross margins over the observed period*** allows to identify clear trends for some products, while for the remaining ones the extent of additional gross margins does not show significant variations over time, or varies (sometimes substantially) without revealing a clear trend. Additional gross margins for La Mancha PDO tended to increase over time in most of the situations considered; analogous increasing trends can be also observed for Ekstra deviško oljčno olje Slovenske Istre PDO (in the case of direct sale to retailers) and for a number of products which reversed a disadvantage in gross margin vs. standard products over the second half of the observed period: Montepulciano d'Abruzzo PDO (in the case of sale in bulk to wholesalers), Emmental de Savoie PGI, Pecorino Sardo PDO, Pomme du Limousin PDO and Pimiento Asado del Bierzo PGI. The presence of very high maximum or very low minimum values of AGMI over the observed five-year period relates to single years with peculiar market conditions; it is also worth noting that the extent of gross margins in absolute value for GI or standard products can be rather limited in certain years, and this can amplify differences between GI and standard production in relative terms, as measured by the AGMI.

Intra-class differences in the differential gross margins for GI production are extremely wide for three classes:

- Meat products (where two extremes can be observed: a disadvantage in gross margin for the GI product in the case of Soprèssa Vicentina PDO, and the greatest advantage in gross margin for a GI product among the 13 case studies - AGMI equal to 305% - for Jambon d'Ardenne PGI)
- Cheeses (where extreme situations were again found: from a clear disadvantage in gross margin for Vorarlberger Bergkäse PDO, to a substantial advantage over the standard product in the case of Emmental de Savoie PGI – AGMI equal to 197%)
- Wines, mainly due to the great variety of ex-winery prices of GI wine (AGMI ranging between 119% and 238%)

Differences are less remarkable – but nonetheless large – for oils (AGMI ranging between 106% and 151%).

As for the ***PDO vs. PGI comparison***, the analysis revealed that:

- Some of the studied PDOs achieve substantial additional gross margins, whereas other PDOs generate lower margins than the corresponding standard products
- All the studied PGIs achieve additional gross margins (of remarkably variable extent) over the corresponding standard products

The extent of differential gross margins (and in the case of PDOs, also the very presence of an additional gross margin vs. standard production) is, in any case, extremely variable across both PDOs and PGIs: differences in additional gross margins are extremely wide for PDOs (AGMI ranging between 104% and 238%) and even wider for PGIs (AGMI ranging between 103% and 305%).

Coming to the analysis of ***gross margins for agricultural raw materials***[24] (table 3.21 and figure 3.5), the only significant disadvantage concerning production for the GI supply chain can be observed for fresh peppers for production of Pimiento Asado del Bierzo PGI, and derives from a rather peculiar situation: a price disadvantage vs. standard production (see § 3.2.1) which is only partially offset by lower production costs (see § 3.2.2). In some cases there are no significant differences in gross margins between GI and standard production: this situation applies for live cattle for Scotch Beef PGI, live pigs for Jambon d'Ardenne PGI, liquid milk for Vorarlberger Bergkäse PDO and Pecorino Sardo PDO, olives for Dauno PDO and (on average) fresh Lammefjordsgulerod PGI carrots for packing.

In 5 cases out of 12[25] (grapes for both GI wines, live pigs for Soprèssa Vicentina PDO, liquid milk for Emmental de Savoie PGI, and fresh Limousine PDO apples for packing), there is a very clear advantage in gross margin for production of agricultural raw materials for the GI supply chain, the extent of which can be up to nearly three times the gross margin for standard production. Similar to what had already been observed for final products, some of the highest additional margins for GI raw materials were linked with rather low margins for standard raw materials; at the other extreme, the margin disadvantage for GI production in the case of Pimiento Asado del Bierzo PGI involves rather significant margins in both GI and standard production.

As for the dynamics of additional gross margins, figures for grapes for Montepulciano d'Abruzzo PDO show a clear increasing trend over the observed period, whereas figures for liquid milk for Emmental de Savoie PGI and fresh Lammefjordsgulerod PGI carrots for packing show clear declining trends (in the case of Emmental de Savoie PGI, this evolution is linked with the unfavourable trend of price premiums for liquid milk for GI production over the observed period: see § 3.2.1). Similarly to what already observed for final products, the presence of very high maximum or very low minimum values of AGMI over the considered period relates to

[24] It is worth reminding that in the case of non-processed products (Pomme du Limousin PDO, Lammefjordsgulerod PGI), *"agricultural raw materials"* are harvested agricultural products (fresh apples / carrots) in the conditions required for forwarding to packing stations (see § 2.4.1).

[25] The analysis was not performed for Ekstra deviško oljčno olje Slovenske Istre PDO, as the sale of olives for processing into (GI or standard) extra-virgin oil is virtually non-existent in the GI area (due to widespread presence of vertical integration between olive farming and oil making).

single years with peculiar market conditions; it is also worth noting that the extent of gross margins in absolute value for GI or standard raw materials can be very limited (end even negative) in certain years, and this can amplify differences between GI and standard production in relative terms, as measured by the AGMI.

Intra-class differences in additional gross margins for production of raw materials for the GI supply chain are substantial for wines, cheeses and fresh vegetables.

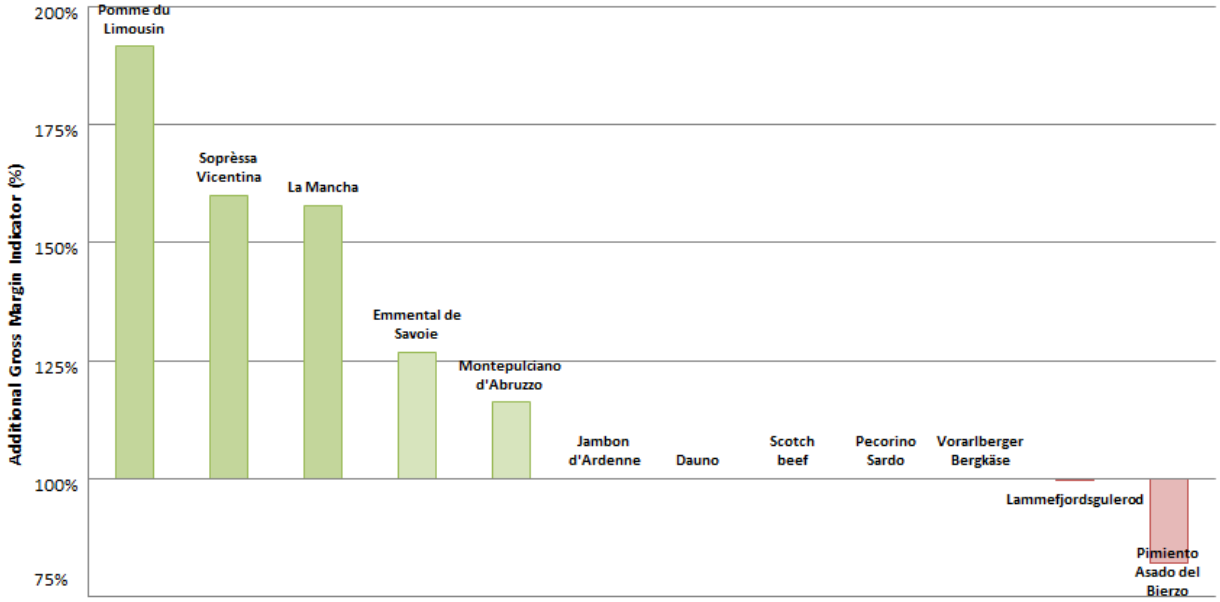
The extent of additional gross margins for production of raw materials for PDOs varies greatly (AGMI ranging between 132% and 283%), and can be substantial (production of grapes for La Mancha PDO, of live pigs for Soprèssa Vicentina PDO, and of fresh Limousin PDO apples for packing); on the contrary, with the sole exception of Emmental de Savoie PGI (where production of raw materials benefits from a substantial additional margin), producing raw materials for the other PGIs results in no additional margins, and even in lower gross margins vs. production for the standard supply chain (this is the case of production of fresh peppers for Pimiento Asado del Bierzo PGI).

Table 3.21 - Additional gross margin indicator for the studied GI products: agricultural raw materials (2007-2011)*

Product	Status	Product class	Agricultural raw material concerned	Max	Min	5-year avg.	Order of magnitude (absolute value €/kg or €/l)
Montepulciano d'Abruzzo	PDO	Wines	Grapes	141,7%	109,1%	132,4%	GI: 0,15 / 0,30 Std.: 0,10 / 0,25
La Mancha	PDO	Wines	Grapes	414,4%	109,2%	215,8%	GI: 0,05 / 0,15 Std.: 0,00 / 0,15
Scotch Beef	PGI	1.1. Fresh meat (and offal)	Live cattle	No appreciable difference in gross margin between GI and standard production = 100%			GI & Std.: 160 / 235 (€ per head)
Jambon d'Ardenne	PGI	1.2. Meat products	Live pigs	No appreciable difference in gross margin between GI and standard production = 100%			GI & Std.: 0,05 / 0,10 (€/kg live weight)
Soprèssa Vicentina	PDO	1.2. Meat products	Live pigs	220,0% (indicative value for the whole period considered)			GI: - 0,20 / + 0,15 Std.: - 0,25 / + 0,05 (€/kg live weight)
Emmental de Savoie	PGI	1.3. Cheeses	Liquid milk	239,6%	78,6%	153,6%	GI: 0,05 / 0,15 Std.: 0,05 / 0,10
Pecorino Sardo	PDO	1.3. Cheeses	Liquid milk	No appreciable difference in gross margin between GI and standard production = 100%			GI & Std.: - 0,30 / - 0,40
Vorarlberger Bergkäse	PDO	1.3. Cheeses	Liquid milk	No appreciable difference in gross margin between GI and standard production = 100%			GI & Std.: 0,10 / 0,15
Dauno	PDO	1.5. Oils and fats	Olives	No appreciable difference in gross margin between GI and standard production = 100%			GI & Std.: 0,10 / 0,20
Pomme du Limousin	PDO	1.6. Fruit, vegetables and cereals fresh or proc.	Fresh apples**	500,0%	150,0%	283,3%	GI: 0,05 / 0,20 Std.: - 0,05 / + 0,10
Lammefjordsgulerod	PGI	1.6. Fruit, vegetables and cereals fresh or proc.	Fresh carrots**	114,3%	75,0%	99,0%	GI: 0,00 / 0,15 Std.: 0,05 / 0,15
Pimiento Asado del Bierzo	PGI	1.6. Fruit, vegetables and cereals fresh or proc.	Fresh peppers	82,7%	45,6%	64,3%	GI: 0,40 / 0,50 Std.: 0,50 / 0,90

* Additional gross margin indicator = (gross margin GI raw material / gross margin standard raw material) (in % terms)
** Non-processed products: *"agricultural raw materials"* = harvested agricultural products (fresh apples / carrots) in the conditions required for forwarding to packing stations
Source: case study reports

Figure 3.5 - Additional gross margin indicator for the studied GI products: agricultural raw materials***



* Additional gross margin indicator = (gross margin GI raw material / gross margin standard raw material) (in % terms)
** Non-processed products (Pomme du Limousin PDO; Lammefjordsgulerod PGI): *"agricultural raw materials"* = harvested agricultural products (fresh apples / carrots) in the conditions required for forwarding to packing stations
Source: case study reports

3.3 Results of in-depth economic analysis of theme 5: other elements of added value

Besides the purely monetary dimension of added value for GI producers (i.e. achieving an additional gross margin: see § 3.2.3), and the positive commercial results which may be achieved through GIs (access to new markets and increased market penetration: see § 3.3.2), a number of other elements of added value can be present for GI producers. These additional elements have been highlighted in a number of studies (see for instance: Arfini F., Belletti G., Marescotti A. (2010); Babcock B. A., Clemens R. (2004); Banović M. et al. (2007); Bramley C., Biénabe E., Kirsten J. (2009); Sylvander B., Barjolle D., Arfini F. (2000)) and also in interviews with relevant stakeholders (OriGIn and EFOW) and independent experts: they have been systematically investigated in the framework of the 13 case studies elaborated for the present study.

Synoptic table 3.22 summarises at a glance the main findings of case-study work on the other possible elements of added value stemming from GI production; in the next sections (§ 3.3.1 to 3.3.5), the main findings emerging from case-study work with reference to these other elements of added value for GI producers will be illustrated in more detail.

Table 3.22 – Other elements of added value stemming from GI production

Product	Status	Product class	Other elements of added value							
			Protection of intellectual property rights	Access to new markets	Increased market penetration	Improved visibility	Better access to participation in fairs	Better access to promotion funds and investment aid	Better support under rural development	Other elements
Montepulciano d'Abruzzo	PDO	Wines	YES			YES	YES	From single CMO	Mainly from measure 133 (Abruzzo RDP)	
La Mancha	PDO	Wines	YES	New outlets in export markets		YES	YES	From single CMO	YES	Positive impacts on the GI area as a whole
Scotch Beef	PGI	1.1. Fresh meat	YES	New outlets in export markets	On the EU market	YES	YES	Co-financed (EU+national) promotion support	Mainly from LFAS and LMO schemes (Scotland RDP)	
Jambon d'Ardenne	PGI	1.2. Meat products	YES	New outlets in export markets and on the domestic market		YES	YES	From national and/or regional governments		- Positive impacts on the GI area as a whole - Maintaining meat processing in the GI area
Soprèssa Vicentina	PDO	1.2. Meat products		New outlets on the domestic market		YES	YES		Mainly from measure 133 (Veneto RDP)	
Emmental de Savoie	PGI	1.3. Cheeses	YES		On the domestic market	YES	YES	From national and/or regional governments		- Positive impacts on the GI area as a whole - Maintaining dairy farming in the GI area - Strengthening the organisation and resiliency of the supply chain
Pecorino Sardo	PDO	1.3. Cheeses	YES	New outlets on the domestic market		YES		Co-financed (EU+national) promotion support		
Vorarlberger Bergkäse	PDO	1.3. Cheeses	YES	New outlets in export markets and on the domestic market					Mainly from measure 132 (Austria RDP)	- Maintaining dairy farming in the GI area (in combination with production of standard Bergkäse)

(continued)

(continued)

Product	Status	Product class	Other elements of added value							
			Protection of intellectual property rights	Access to new markets	Increased market penetration	Improved visibility	Better access to participation in fairs	Better access to promotion funds and investment aid	Better support under rural development	Other elements
Dauno	PDO	1.5. Oils and fats		New outlets on the domestic market	On the domestic market	YES	YES	From single CMO		
Ekstra deviško oljčno olje Slovenske Istre	PDO	1.5. Oils and fats		New outlets in export markets and on the domestic market		YES	YES		Mainly from measures 133 and 142 (Slovenia RDP)	Achieving a closer focus on product quality
Pomme du Limousin	PDO	1.6. Fruit, vegetables and cereals fresh or processed				YES	YES	From national and/or regional governments		- Positive impacts on the GI area as a whole - Strengthening the organisation and resiliency of the supply chain
Lammefjordsgulerod	PGI	1.6. Fruit, vegetables and cereals fresh or processed	YES						YES	
Pimiento Asado del Bierzo	PGI	1.6. Fruit, vegetables and cereals fresh or processed	YES	New outlets in export markets			YES	From national and/or regional governments		Positive impacts on the GI area as a whole
TOTAL			**9**	**9**	**3**	**10**	**10**	**9**	**7**	

Source: case study reports

3.3.1 Protection of intellectual property rights

Issues concerning protection of intellectual property rights – such as attempts at product imitation, unfair use of GIs, use of "GI-sounding" terms, etc. – emerged in some case studies: Montepulciano d'Abruzzo PDO and La Mancha PDO wines (mostly in export markets), Pecorino Sardo PDO and Lammefjordsgulerod PGI (on the respective domestic markets), and Jambon d'Ardenne PGI (on both export and domestic markets).

In the above cases, the GI usually proved to be an effective way of protecting intellectual property rights, sometimes also thanks to the intervention of the competent EU authorities[26].

A significant role of the GI in preventing the above-mentioned unfair practices, and more generally in protecting the intellectual property rights encapsulated in the denomination of the GI product, was also highlighted for Scotch Beef PGI, Emmental de Savoie PGI, Vorarlberger Bergkäse PDO and Pimiento Asado del Bierzo PGI.

Overall, protection of intellectual property rights as an element of added value deriving from GI protection was highlighted in 9 out of 13 case studies.

3.3.2 Access to new markets and increased market penetration

From a theoretical standpoint, product differentiation through GI production should help the producers concerned to access new markets, both domestically and abroad. However, to achieve such an outcome, some essential conditions must be in place, namely:

1. There should be sufficient awareness about GIs among customers and final consumers, who should have a correct understanding of the underlying reality, and attach positive values to it. This has been underlined by many researchers in their studies (see for instance: Bonnet C., Simioni M., (2001); Fotopoulos C., Krystallis A. (2001 and 2003); Giraud G. (2002); Landon S., Smith C.E. (1997); Loureiro M.L., McCluskey J.J. (2000); Robles R., Vannini L., Alvarez R. (2011); Sylvander B., Barjolle D., Arfini F. (2000)).
2. Besides attaching positive values to GI products, final consumers must also be willing to pay a price premium for them, as these products are usually more costly to produce than standard products (the empirical results of the present study, as well as the results of previous studies, have confirmed this: see § 1.3 and 3.2.2). The importance of consumers' willingness to pay as a promoting factor for commercial success of GI products has indeed been highlighted in a number of studies (see for instance: Gil J. M., Gracia A., Sánchez M. (2000); Fotopoulos C., Krystallis A. (2001 and 2003); Landon S., Smith C.E. (1997); Sylvander B., Barjolle D., Arfini F. (2000)).

With specific reference to access of GI products to new export markets, the presence/absence of barriers to trade (both tariff and non-tariff ones), and in general the international regulatory framework for GI protection also play a critical role. This emerges both from relevant literature (see for instance Addor F., Grazioli A. (2002); Arfini F., Belletti G., Marescotti A. (2010)) and from interviews with relevant stakeholders (OriGIn and EFOW) and independent experts carried out for the study.

[26] One of the interviewed experts observed that the main issue concerning protection of IPRs through GI protection is that the actual degree of protection can vary greatly not only according to the third country concerned, but also between different Member States within the EU. Issues concerning the use of "like-sounding" names are particularly difficult to address, even in the cases where the GI has been registered. To make protection of IPRs through GI protection more effective, *ad-hoc* multilateral agreements with wide-ranging international acknowledgment would be needed, or at least a combination of bilateral agreements with the main trading partners of the EU. On the other hand, special attention should be paid at EU level when considering whether to grant GI status to products which are basically branded products of individual producers.

As regards the issue of achieving increased penetration of GI products in markets where they are already present, the main critical factor is promoting awareness about GIs and willingness to pay for GI products in a widened base of final consumers.

In the next sections, the main findings emerging from case-study work with reference to the effectiveness of GIs as a tool to access new markets (§ 3.3.2.1), and to their success (or lack thereof) in increasing their penetration in the markets in which they are already present (§ 3.3.2.2) will be highlighted.

3.3.2.1 Access to new markets

Case-study work revealed that the status of PDO/PGI played a significant role in granting access to new markets in a number of cases.

With reference to the domestic market, in the case of Soprèssa Vicentina PDO, Jambon d'Ardenne PGI, Vorarlberger Bergkäse PDO, Pecorino Sardo PDO, Dauno PDO and Ekstra deviško oljčno olje Slovenske Istre PDO, the GI status was found to have played a significant role in allowing producers to start supplying large-scale retailers and/or to find new customers outside the areas where the products were traditionally known and appreciated by consumers. The case of Soprèssa Vicentina PDO is particularly interesting, as it emerged that the GI product has actually been used by producers as a "presentation card / promotional tool" to start selling standard *soprèssa* to large-scale retailers (all GI producers also produce standard *soprèssa*). The case of Ekstra deviško oljčno olje Slovenske Istre PDO revealed a significant role of the GI in allowing access to very specialised market outlets, like gourmet shops and sale to producers of gift packages.

The role of GI in securing access to new export markets (mainly because consumers in foreign markets saw the GI as an additional guarantee of product quality, checked by an external body) emerged in the case of La Mancha PDO wine, Scotch Beef PGI, Jambon d'Ardenne PGI, Vorarlberger Bergkäse PDO, Ekstra deviško oljčno olje Slovenske Istre PDO (even though export volumes are still extremely limited in this case) and Pimiento Asado del Bierzo PGI.

In the remaining cases, the GI *per se* appeared to have no significant role in promoting access to new markets for GI producers, which was instead the result of other factors (better focus on product quality, effective marketing and promotional strategies, improvements in logistics, etc.).

Overall, a significant role of GI protection in granting access to new markets was highlighted in 9 out of 13 case studies.

3.3.2.2 Increased market penetration

A significant role of the GI status in promoting increased market penetration was identified in 3 case studies out of 13: Scotch Beef PGI (within the EU), Emmental de Savoie PGI and Dauno PDO (on the respective domestic markets).

In the remaining cases, the GI status was found not to have played a significant role in this respect.

3.3.3 Improved visibility

A link between the GI status of a product and improved visibility for the producers concerned was found in 10 out of 13 case studies. This link can be more or less direct, as improved visibility can also derive (in part, at least) from promotional initiatives funded via Rural Development Programmes (see § 3.3.4.2) and/or from better access to participation in fairs (see below).

In the survey of GI producers carried out for the study, the achievement of improved visibility thanks to the GI status of their products was underlined by producers of Montepulciano d'Abruzzo PDO, La Mancha PDO, Scotch Beef PGI, Soprèssa Vicentina PDO, Jambon d'Ardenne PGI, Emmental de Savoie PGI, Pecorino Sardo PDO, Dauno PDO, Ekstra deviško oljčno olje Slovenske Istre PDO and Pomme du Limousin PDO.

In most of the above cases, the GI status of products also proved to be a significant factor for producers to get better access to participation in fairs, which in turned resulted in improved visibility. This element of added value for GI producers emerged in 10 out of 13 case studies: Montepulciano d'Abruzzo PDO, La Mancha PDO, Scotch Beef PGI, Soprèssa Vicentina PDO, Jambon d'Ardenne PGI, Emmental de Savoie PGI, Dauno PDO, Ekstra deviško oljčno olje Slovenske Istre PDO, Pomme du Limousin PDO and Pimiento Asado del Bierzo PGI. This element of added value for producers was often linked with better access to support from measure 133 "Supporting producer groups for information and promotion activities for products under food quality schemes" of the related Rural Development Programmes (see § 3.3.4.2), inasmuch it promoted the participation of individual GI producers and/or organisations of GI producers to fairs.

3.3.4 Better access to funding

3.3.4.1 Better access to promotion funds and investment aid

A significant role of the GI status of the products in granting better access to promotion funds and investment aids to the producers concerned was identified in 9 out of 13 case studies.

The GI status helped producers of Montepulciano d'Abruzzo PDO, La Mancha PDO, and Dauno PDO to benefit from support in the framework of the single CMO, in the form of both promotion funds and investment aid.

Better access to promotion funds and/or investment aid - including support funded by national and/or regional governments - was highlighted in the cases of Jambon d'Ardenne PGI, Emmental de Savoie PGI, Pomme du Limousin PDO and Pimiento Asado del Bierzo PGI.

Finally, GI status also helped producers of Scotch Beef PGI and Pecorino Sardo PDO in securing support for promotional initiatives co-financed by the EU and national governments[27].

3.3.4.2 Better support under rural development

In a number of cases, GI production benefits from better support under Rural Development Programmes, thanks to preferential access to support granted via specific measures. The measures concerned are usually No. 132 "Supporting farmers who participate in food quality schemes"[28] and No. 133 "Supporting producer groups for information and promotion activities for products under food quality schemes"[29]); in some cases, GI producers are also granted priority access to investment aids conveyed via measures 121 "Modernisation of agricultural holdings"[30] and 123 "Adding value to agricultural and forestry products"[31]. Access to support from measure 142 "Supporting setting up of producer groups"[32] is relevant only for the case study on

[27] One of the interviewed experts noted that to benefit from the "co-financed" forms of public support, private subjects (e.g. consortia of producers) operating in the GI supply chain often have to mobilise substantial resources: this could constitute a serious constraint for a wider participation of low-budget subjects (e.g. small groups of GI producers) to the initiatives supported via co-financing.

[28] Article 20 (c) (ii) of Reg. No. 1698/2005.

[29] Article 20 (c) (iii) of Reg. No. 1698/2005.

[30] Article 20 (b) (i) of Reg. No. 1698/2005.

[31] Article 20 (b) (iii) of Reg. No. 1698/2005.

[32] Article 20 (d) (ii) of Reg. No. 1698/2005.

Slovenian Ekstra deviško oljčno olje Slovenske Istre PDO, as the measure is applicable only to New Member States.

A role of GI status in granting better support under Rural Development Programmes was found in 7 case studies out of 13: Montepulciano d'Abruzzo PDO, La Mancha PDO, Scotch Beef PGI (mainly thanks to support available under the Less Favoured Area Scheme Scotland and the Land Management Options scheme), Soprèssa Vicentina PDO, Vorarlberger Bergkäse PDO (as far as the contribution of support from measure 132 in reducing the administrative costs of GI production is concerned), Ekstra deviško oljčno olje Slovenske Istre PDO (including support to the Consortium of GI producers via measure 142) and Lammefjordsgulerod PGI.

In other cases (Emmental de Savoie PGI, Pecorino Sardo PDO), in spite of the GI products concerned being eligible for support provided via one or more of the aforementioned measures, no support was actually granted to producers over the considered period, because they opted not to apply for it, or because they were not eligible for it.

3.3.5 Other possible elements of added value for GI producers

Some notable elements of added value for GI producers - other than the ones illustrated in § 3.3.1 – 3.3.4 - also emerged from the case-study work[33].

The positive impacts that the GI has on the area concerned as a whole were highlighted in 6 case studies out of 13: La Mancha PDO, Jambon d'Ardenne PGI, Emmental de Savoie PGI, Vorarlberger Bergkäse PDO[34], Pomme du Limousin PDO, and Pimiento Asado del Bierzo PGI. These impacts were deemed to improve the socio-economic environment where GI producers operated, and hence constituted an additional element of added value for them.

In the specific case of Emmental de Savoie PGI, it also emerged that GI production played an important role for maintaining dairy farming in a mountain area which could not compete with other areas in terms of pure cost competitiveness. An analogous role of GI production was highlighted in the case of Jambon d'Ardenne PGI, with reference to the processing stage (production of agricultural raw materials for GI production is not subject to geographical limitations, as neither are the slicing and packing activities).

In the cases of Emmental de Savoie PGI and Pomme du Limousin PDO, the role of GI production in strengthening the organisation and resiliency of the supply chain was highlighted.

Finally, producers of Ekstra deviško oljčno olje Slovenske Istre PDO agreed on the fact that GI production was an effective way for producers to achieve a closer focus on quality in production of extra-virgin olive oil in that specific area of Slovenia, mainly thanks to the elaboration and application of product specifications[35].

[33] The interviewed experts suggested additional elements which – even though they were not detected in the selected case studies – could potentially be present: for instance, particular forms of vine farming linked to GI production could have a beneficial effect for the rural landscape, and help to build stronger links between production of GI wines and rural tourism.

[34] In this specific case, it emerged that production of Bergkäse has certainly had an important role in keeping mountain dairy farming viable in Vorarlberg (especially for what concerns smaller family farms); however, this role has not been played by production of Vorarlberger Bergkäse PDO alone, but rather by the entire "Bergkäse system", comprising both GI and non-GI production.

[35] One of the interviewed experts emphasised the importance of added value from achievement of a closer focus on quality through the process of "building" a GI product (discussion and elaboration of product specifications; strengthening of the organisation of the supply chain, especially in terms of relations between its actors; etc.). Even in the cases where such a process does not lead to the registration of a GI product, it can nevertheless have beneficial effects for the supply chain, as well as for the geographical area concerned, especially if considered in a wider perspective of rural development, i.e. in terms of "mobilisation" of actors and resources.

4 CONCLUSIONS

This chapter illustrates the conclusions for each of the five study questions which can be drawn from the results of the investigations made in the framework of 13 case studies (see § 3).

Due to the very high number and the great variety of GI products in the EU, ***the conclusions drawn in this assessment should not be generalised to the entire universe of GI products.***

4.1 To what extent have GI products a higher price in comparison with their corresponding standard products?

➔ ***In most cases GI products achieve a price premium over the corresponding standard products*** even if ***extreme variability in the extent of the price premium for GI products*** was observed.

The comparative analysis between the prices of GI products and of the corresponding standard products (see § 3.2.1 for an illustration of the results) was carried out by means of an *ad-hoc* ***"price premium indicator"*** (PPI).

The results of the comparative analysis carried out for ***final products*** showed that ***in most cases*** (also considering the different marketing channels and practices used) ***GI products achieve a price premium over the corresponding standard products***: exceptions are relatively few, and the extent of the disadvantage vs. standard production is, in any case, limited. This said, ***extreme variability in the extent of the price premium for GI products*** was observed: in a number of cases, prices of GI products were only marginally higher than the prices of corresponding standard products (+2/3%), whereas at the upper limit of the range, prices of GI products were close to double the price of the corresponding standard products[36]. Price premiums achieved by the two unprocessed GI products studied were lower than the ones achieved by some processed products (especially wines and oils), but comparable to or higher than the ones achieved by other processed products.

The remarkable variability in the extent of the price premium *within* the various product classes covered by the selection of case studies, and the limited number of cases per class (which made the calculation of "class average values" pointless), did not allow to identify clear differences in the extent of price premiums *across* the different classes. Analogous considerations apply for the PDO vs. PGI comparison.

As for ***agricultural raw materials***, ***price premiums for raw materials for GI production were very limited or absent in the majority of cases.*** Significant price premiums for GI production over standard production were observed in less than one third of the cases. This might be explained either by the fact that no particular requirements applied to the raw material or by the fact that for the GI concerned there was no geographical limitation to the sourcing of raw material. Similarly to what was observed for final products, the remarkable intra-class variations did not allow to identify clear inter-class differences in the extent of price premiums; as for the PDO vs. PGI comparison, besides the absence of clear differences between the two groups, it is worth observing that raw materials for production of PDOs achieved remarkably different price premiums, whereas differences in price premiums for raw materials for production of PGIs were less substantial. This might be explained by the fact that geographical limitations concerning the sourcing of raw materials and requirements concerning technical parameters of the raw materials themselves – which can determine price differentials vs. standard production - are more common for PDOs than for PGIs.

[36] Especially in the case of top-quality bottled GI wines and oils, the ex-factory price can even be several times higher than the ex-factory price of standard products; however, the "outlier" prices of these top-quality bottles, usually targeted at an "élite" of consumers, were not considered in the elaborations made for the assessment.

The study also investigated the ***allocation of retail value of the final product*** (i.e. its final retail consumer price[37]) ***among the different levels of the supply chain***, reasoning both in terms of absolute value and in relative terms (shares of retail price pertaining to each supply chain level). If the reasoning was made in terms of absolute value rather than in relative terms, the equivalent value of raw materials[38] (pertaining to farmers) and/or the ex-factory price of the final product (pertaining to processors) were often higher in the GI supply chain than in the standard supply chain. As the retail price of GI products was usually higher (and often much higher) than the retail price of the corresponding standard products, the shares of retail value pertaining to farmers and/or processors could be smaller in the GI supply chain than in the standard supply chain. The available evidence revealed that:

- suppliers of agricultural raw materials generally received up to 25%, and in some cases up to 40%, of the retail value of products;
- only in a few cases producers of final products went beyond a 70% share of the retail value of the same (producers' share includes also the remuneration of agricultural raw materials used in production).

The above considerations would apply to both GI and standard products.

4.2 Does a potential higher price for a GI product compared with a 'standard' product, translate into a higher gross margin for the producers (and farmers in particular)?

➔ As far as ***producers of final products*** are concerned, ***in most cases the gross margin for final GI products was higher than that for standard products***.

➔ As for ***farmers supplying agricultural raw materials***, the ***situation was less conclusive.***

The comparative analysis between the gross margins of GI products and of the corresponding standard products (see § 3.2.3 for an illustration of the results) was carried out by means of an *ad-hoc* ***"additional gross margin indicator"*** (AGMI).

As far as ***producers of final products*** are concerned, the comparisons made allowed to conclude that ***in most cases the gross margin for final GI products was higher than that for standard products***. In a case study, the presence of a (limited) additional gross margin for GI production was observed in only one marketing channel out of three, whereas for three other cases the gross margin from GI production was significantly lower than the one from standard production (in two cases, the price premium for GI products was more than offset by the additional costs for GI production, whereas in another case lower prices for the GI product were combined with significant additional costs for GI production).

It is worth noting that in some cases GI production took place even in absence of an additional gross margin over standard production. This happened for various reasons, including (see also § 3.3 and 4.4): the importance of GI status for accessing specific market outlets; the function of "promotional tool" for standard production performed by the GI product; the fact that whereas production mostly took place according to GI specifications, only a limited share of it was actually marketed with the GI logo.

The extent of the additional gross margin for GI production varied remarkably across the different case studies, from three times the gross margin for standard production to just a slight advantage (+3-4%) over it. It must anyway be underlined that some of the highest additional margins for GI production were linked with rather low margins for standard production; at the other extreme, the absence of an additional margin for GI production in some cases involved nevertheless substantial margins in both GI and standard production.

[37] Final retail consumer prices were retrieved via desk research (usually through the websites of both large-scale retailers and specialized retailers) or via direct checks at point of sale (for the same two typologies of retailers).

[38] Defined as the value at farm price of the raw material needed to obtain one unit (kg or l) of final product.

Similarly to the conclusion in § 4.1 regarding prices, such extreme variability (which could also be observed within the same product class) did not allow to identify clear differences in the extent of additional margin across the different product classes. Only one of the two unprocessed GI products (fresh fruit and vegetables) covered by the study achieved an additional margin: this was lower than the ones achieved by some processed products (especially wines and oils), but comparable to or higher than the ones achieved by other processed products.

The extent of differential gross margins (and in the case of PDOs, also the very presence of an additional gross margin vs. standard production) was, in any case, extremely variable across both PDOs and PGIs.

As for ***farmers supplying agricultural raw materials***, the ***situation appeared to be more mixed and less clear than for final producers***. Whereas in some cases[39] a very clear advantage in gross margin for production of agricultural raw materials for the GI supply chain (up to nearly three times the gross margin for standard production) was observed, in other cases there were no significant differences in gross margins between GI and standard production, and in one case it emerged that – due to a rather peculiar situation[40] – production of raw materials for the standard supply chain allowed to achieve better margins than production of raw materials for the GI supply chain. Similarly to what was already observed for final products, some of the highest additional margins for GI raw materials were linked with rather low margins for standard raw materials; at the other extreme, the only case of margin disadvantage for GI production involved rather significant margins in both GI and standard production. Once more, the extreme variability within most product classes did not allow to identify clear inter-class differences in the extent of the additional gross margin. It was interesting to observe that ***producing raw materials for PGIs resulted in no additional margins over standard production in most of the cases*** (as previously highlighted, in one case the gross margin was even better for standard production), whereas ***production of raw materials for PDOs allowed farmers to achieve significant or substantial additional gross margins in half of the studied cases***. This might be explained by the fact that geographical limitations in the sourcing of raw materials and requirements concerning technical parameters of raw materials themselves are usually more restrictive for PDOs than for PGIs; this implies that one of the conditions for achieving additional margins, i.e. the presence of price premiums, is more likely to apply for production of raw materials for PDOs than for PGIs.

4.3 What are the key factors for obtaining a gross margin that is higher/lower?

➔ Intrinsic product differentiation was identified as a key factor for obtaining a positive differential margin compared to standard production.

➔ Higher gross margin for GI products was also the result of effective marketing strategies and tools, including the use of short market chains and export-oriented strategies.

➔ Other factors like support to promotion and consumers' awareness played a role.

Within the constraints related to the relatively limited number of case studies carried out, some conclusions on the key factors behind achievement of positive or negative differential gross margins in GI production vs. standard production could be drawn from the results presented in § 3.2.3. Further elaborations were also made on the results of case study work, in order to assess whether and to what extent certain combinations of factors and/or characteristics identifying the different GI products studied could be linked to certain results in terms of additional gross margin vs. the corresponding standard products.

[39] The comparative analysis on gross margins for agricultural raw materials was not performed in the case study on Ekstra deviško oljčno olje Slovenske Istre PDO, as the sale of olives for processing into (GI or standard) extra-virgin oil is virtually non-existent in the GI area.

[40] In this specific case, production of raw materials for the standard supply chain also granted access to the market for fresh products, where higher prices could be obtained. This option was not available for raw materials for the GI supply chain.

Intrinsic product differentiation (i.e. presence of significant differences in the intrinsic features – quality parameters, organoleptic characters, etc. – of a GI product vs. the corresponding standard product) can be identified as a ***key factor for obtaining a positive differential margin in GI production***. In general, ***GI products with only slight differences in intrinsic features from the corresponding standard products achieved relatively limited advantages in gross margins, or even no advantage at all***, whereas ***GI products which were significantly different from the corresponding standard products tended to achieve more important advantages***; only few exceptions to these trends emerged from case-study work.

Intrinsic product differentiation can be obtained through the combination of geographical specificities with significant differences in production methods, concerning use of different raw materials, application of limitations in productivity (to achieve superior product quality) and use of production techniques featuring additional / specific operations. It must also be recalled that for a PGI, according to EU legislation, any geographical limitations concerning the sourcing of raw materials should be justified. Evidence from the case studies, as well as the interviewed experts, suggested that unlike PDOs, PGIs are more often based on reputation than on intrinsic differences from standard products, and this implies that additional costs tend to be lower for PGIs. On the other hand, the findings of the case studies (as well as the interviewed experts) stressed the fact that premium prices for GI products are often the result of elements which have little or nothing to do with GI status, like good marketing skills among producers, use of effective marketing strategies and tools etc.

Other factors also appeared to play a role in achieving additional gross margins, even if they proved less decisive, in particular because they also have an effect on gross margins of standard products. ***Recourse to shorter, more direct marketing channels*** (i.e. absence of intermediaries), ***sale of bottled products vs. sales in bulk*** (for GI wines and oils), and ***strong orientation towards exports***, have actually helped GI producers to achieve positive differential margins vs. standard producers in a number of cases, but the evidence in this respect from case-study work is somewhat mixed: this suggests that ***prudence should be used in considering the above elements as "key factors" for achieving higher gross margins through GI production***. The fact that these factors can be relevant also in standard production implies that the actors in the GI supply chain first need to implement adequate production and marketing solutions (which have proved their effectiveness in a wide variety of business environments) in order to be able to pursue additional gross margins through GI production. In other terms, it seems unlikely that GI production alone can overturn the disappointing results which usually come from inadequate production and/or marketing solutions.

The role of other potential key factors studied appeared rather unclear, in particular the time-length since the date of protection of the GI or the type of registration (PDO or PGI).

As for the ***marketed volumes***, all high-volume GI products included in the selection achieved remarkable or significant differential gross margins over the corresponding standard products, but also some low- or intermediate volume GI products achieved similar results. Evidence from the case studies and inputs from the interviewed experts suggest that large marketed volumes for a GI are usually the result of a development process which is fuelled by good profitability (and hence that establishing a link between high volumes and substantial additional gross margins makes sense), and also that large marketed volumes help to keep production costs down (by allowing economies of scale and also by "spreading" fixed administrative costs for GI production over a wider production base). On the other hand, some wine experts noted that expansion of production volumes beyond actual market demand can lead to oversupply, and hence to a decline in prices and profitability.

As far as a possible impact of the ***support for promotion*** is concerned, the situations was definitely mixed: participation in fairs appeared to be a widespread practice which usually received public support (via measure 133 of Rural Development Programs and/or other public funding), but it did not systematically lead to satisfactory results in terms of additional gross margins.

The possible role played by the ***level of awareness of, trust in and willingness to pay for GI products among consumers*** in the achievement of additional gross margins for GI production was also considered (see § 3.2.3).

To this end, the degree of recognition of EU GI logos by consumers in different Member States (as measured by a 2012 Eurobarometer survey[41]) was put in relation with the extent of differential margins for GI production. The investigation revealed no link between the two variables; however, evidence from case-study work suggested that if a favourable attitude of consumers towards GIs constitutes an important condition for better valorisation of GI products, such an outcome is not automatic, and very much depends on the reputation of individual GI products among consumers (rather than on the reputation of GI products in general).

4.4 What other added value is there for producers of GI products?

➔ ***A number of elements of added value other than higher gross margins was identified in the case studies***: ***protection of intellectual property rights; improved visibility; access to new markets; better access to promotion funds and investment aid; better support under rural development; positive impacts on the GI area as a whole.***

The elements which emerged most often were the following (see § 3.3):

1. ***Protection of intellectual property rights***. The function of GI protection in this respect was found to be twofold: a) providing the legal framework for reacting effectively against attempts of imitation, misuse, use of "GI-sounding" terms, etc.; b) acting as a tool to prevent the aforementioned issues. Evidence from the case studies, as well as input from the interviewed experts, actually suggested that in some cases the protection of intellectual property rights, and in general of "immaterial" elements (e.g. know-how of producers, cultural values, traditions, etc.) which have helped to build the reputation of a particular production area is the main reason behind the creation of a GI (rather than the implementation of a product-differentiation strategy based on intrinsic differences versus a standard product).
2. ***Improved visibility***, often deriving from ***better access from participation in fairs*** (sometimes participation was funded through measure 133 "Supporting producer groups for information and promotion activities for products under food quality schemes" of the Rural Development Programmes concerned).
3. ***Access to new markets***. The GI status was found to have promoted access to new domestic and/or export markets in most cases, whereas it appears to have played a less significant role in promoting increased market penetration.
4. ***Better access to promotion funds and investment aid***. Case-study work highlighted some situations concerning better access to support for promotion and investments in the framework of the single CMO (for GI wines and oils), better access to support from co-financed EU programmes (as far as promotion is concerned), and better access to support for promotion and/or investments funded by national or regional governments.
5. The GI status was found to grant ***better support under rural development*** in over half of the cases. The measures concerned are usually No. 132 "Supporting farmers who participate in food quality schemes" and No. 133 "Supporting producer groups for information and promotion activities for products under food quality schemes"; in some cases, GI producers are also granted priority access to investment aids conveyed via measures 121 "Modernisation of agricultural holdings" and 123 "Adding value to agricultural and forestry products".

[41] European Commission (2012), "Special Eurobarometer 389, Europeans' Attitudes Towards Food Security, Food Quality And The Countryside".

Other additional elements of value added were also identified, namely:

a. Positive impacts that the GI had on the concerned area as a whole (highlighted in more than one third of the cases): these impacts were deemed to improve the socio-economic environment where GI producers operated, and hence constituted an additional element of value added for them.
b. GI as a key factor to maintain certain production activities (at farming and/or processing stage) within the GI area.
c. Important role of GI production in strengthening the organisation and resiliency of the supply chain.
d. GI production as an effective way for producers to achieve a closer focus on product quality, mainly thanks to the drawing up and application of product specifications.

The elements in points b, c, and d were detected in few case studies, and were mostly related to specific conditions applying in those cases.

4.5 What are the enabling and disabling factors for the generation of added value?

➔ Due to the great variety of GIs, ***a variety of factors plays a role in generating added value for GI producers***: ***intrinsic product differentiation***; use of ***shorter, more direct marketing channels***; achievement of ***greater production volumes*** and/or ***stronger orientation towards exports***; ***adequate levels of awareness of, trust in and willingness to pay for GI products among consumers; strong supply-chain organisation; attention to GI production from policy makers and competent institutions***

In light of the findings of the case studies, the factors behind the generation of added value for the actors concerned (producers of final products and farmers supplying agricultural raw materials) through GI production appear to be extremely diversified. In some cases, these factors are strictly linked to specific conditions concerning that particular area, production and consumption system, etc., and are hence difficult or outright impossible to "replicate" outside that peculiar context.

This said, some factors were found to be more frequently linked with certain outcomes, especially as far as the generation of higher gross margins vs. standard production is concerned (see § 4.3 in this respect); on the contrary, the presence of the same element of added value *other than differential gross margins* (see § 4.4) appears to derive from very different combinations of factors.

As seen in § 4.3, ***intrinsic product differentiation*** can be identified as an enabling factor for the ***generation of added value for GI producers through higher gross margins***; in the case of ***farmers supplying agricultural raw materials***, ***operating in the supply chain of a PDO*** (rather than in the supply chain of a PGI) emerged as an enabling factor for the same outcome.

As highlighted in § 4.3, the use of ***shorter, more direct marketing channels*** could be another enabling factor for the creation of valued added through higher gross margins, as well as the achievement of ***greater production volumes***[42] and/or of a ***stronger orientation towards exports***; however, the linkage between such factors and the achievement of higher gross margins appears to be ***less clear and straightforward than the link with intrinsic product differentiation***. To pursue additional gross margins through GI production, the concerned actors need to apply adequate production and marketing solutions (which are as important as in standard production). In other terms, GI production alone cannot shelter producers from disappointing results, if inadequate production and/or marketing solutions are applied.

An ***essential "context factor" for obtaining better prices for GI production*** (which is a pre-condition for achieving higher margins) is the presence of an ***adequate level of awareness of, trust in and willingness to***

[42] The relation between additional gross margins and high marketed volumes appears to be mutual, as the presence of additional gross margins often promotes the growth of marketed volumes, which in turn can help in increasing additional gross margins via economies of scale in GI production. However, as already noted, expansion of production volumes beyond actual market demand can result in oversupply, and hence in a decline in prices and profitability.

pay for GI products among consumers. Even if no link could be detected between the degree of recognition of EU GI logos by consumers in different Member States (as measured by a 2012 Eurobarometer survey) and the extent of differential margins for GI production, some evidence from case studies suggests that GI products tend to struggle especially where consumers know little about GI protection, and attach limited value to origin when making purchasing decisions. These conditions are likely to be found in Member States where a "critical mass"[43] of supply of GI products (in terms of volumes, and even more so of variety and depth of assortment) has not been reached yet. This said, if a favourable attitude of consumers towards GI products is important for their valorisation, this is mainly related to the reputation of individual GI products among consumers, rather than to the reputation of GI products in general (see also § 4.3).

Finally, a ***strong supply-chain organisation*** (vertical and horizontal integration/co-ordination within the supply chain; dynamic organisations of GI producers; etc.), if combined with ***attention to GI production from policy makers and competent institutions***, could be an ***enabling factor for the creation of added value in terms of improved visibility*** (also thanks to better access to promotional activities) and ***better access to funding***, even if evidence in this respect from case study work is – once more - somewhat mixed.

[43] The concept of "critical mass" of supply of GI products is a qualitative one: Member States with a high number of long-standing registered GI products in all or most product categories (including a significant number of high-volume products), with most GI products featuring a wide assortment within an ample range of retail prices, can be deemed to have reached a "critical mass" of supply of GI products.

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