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# Do geographical indications certify origin and quality? A conceptual framework and an exploratory test on Gouda cheeses

Martijn Huysmans, Daniël van Noord and Gero L. Höhn<sup>1</sup>

**Abstract** – Geographical indications (GIs) protect regional speciality foods such as Gouda from Holland. While the EU asserts that GIs certify and protect traditional high-quality products, the US sees them as protectionist. This article first reviews the GI-origin nexus for a series of well-known GIs. It then develops a conceptual framework of different quality attributes and analyses how GIs may certify quality on those attributes. Regional origin may count as a quality attribute per se, or only indirectly through taste. The conceptual framework is illustrated with an exploratory blind tasting of Gouda cheeses. The framework and empirics shed light on the possibilities and limits for GIs to certify quality to different consumers.

**Keywords** – Regional Foods, Protected Designations of Origin (PDOs), Protected Geographical Indications (PGIs), European Union, Food Quality.

## INTRODUCTION

The premise of the EU's GI system is that the origin of a product has a direct influence on the quality of the good: the notion of *terroir* (Barham, 2003). This link may arise due to geographical factors such as soil and climate, as well as human factors such as ancestral know-how or *savoir-faire*. In order to use a protected GI name, producers have to be located in the protected region and follow the product specification, which specifies the allowed ingredients and production methods. This stands in contrast to GI systems in the US or other countries in which policy-makers tend to back private trademarks more distinct from specific *terroir* (Barham, 2003). Clarifying the role of EU GI origin in certifying quality is hence important.

In addition, not much literature exists on which actual or perceived quality attributes of GIs drive their economic success. While origin can be a significant driver of consumer choices in some cases, it is not always important and less relevant for "New World" consumers in particular (Moser et al., 2011).

All in all, our article represents a first step towards clarifying the potential mechanisms, possibilities and limits for GIs to credibly certify origin and quality to different types of consumers.

## DATA AND METHODS

First, our paper reviews previous literature on the GI-origin nexus. We enrich the review with own qualitative findings based on publicly available information

about EU GIs stored in the eAmbrosia database. Next, we apply the *SECPP model of quality* to GIs and based on that we develop a stylised economic model that describes consumers' quality considerations.

Finally, we conducted an *exploratory blind tasting* with 82 Dutch adults in 2019 to assess the actual gustatory quality of GIs. Each participant was given two different slices of cheese, selected randomly and in random order among a generic Gouda, PGI Gouda Holland, and PDO Gouda North-Holland. This resulted in six potential treatments, e.g. first the PGI and then the generic Gouda. For each type the cheapest young cheese was selected to avoid comparing products of higher quality than necessary to qualify for a product name.

The tasting was blind in the sense that participants did not know which cheeses they were tasting to ensure that they only focus on taste, i.e. gustatory quality, to avoid biases based on seeing the GI label.

## RESULTS

### *Limits of the GI-origin nexus:*

First, paradoxically, for some GIs such as PDO Gouda North-Holland and Stilton cheese, the production is actually not allowed in the eponymous cities.

Second, the link between region and product may be less strict than sometimes assumed. The famous Italian PDO hams from Parma, San Daniele, Modena or Carpegna source pig meat from much larger regions than the small "core" production area.

Third, the protected GI areas may not be constant over time. This may limit the sharp identification of GI names with specific regions. The areas of several French cheese GIs have been amended significantly: in 2014 the area of Livarot was increased by 146%. Other areas were decreased: Roquefort by 90% in 2008, Pont l'Évêque by 62% in 2015, Fourme d'Ambert by 58% in 2010 and Camembert de Normandie by 52% in 2013.

Fourth, some GI names such as "Feta" have no direct link to a region. The name reportedly comes from the Italian "fetta (slice)" (Gangjee, 2007), and the very large production zone of Feta cheese covers all Greek mainland plus the prefecture of Lesbos.

All in all, while GIs do certify origin, there are limitations to the nexus between GIs and such origin.

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*GIs and the SECPP model of Quality:*

The standard economic model of quality is the theory of **S**earch, **E**xperience, and **C**redence attributes. Tietzel and Weber (1991) extend this model by introducing **P**lacebo and **P**otemkin attributes. In contrast to credence attributes, Potemkin attributes cannot be verified even after purchase (e.g. Fair Trade).

Prima facia, some GI product requirements are likely to affect taste such as the use of Buffalo milk for PDO Mozzarella di Bufala Campana. Such requirements represent either search or experience attributes. In addition, they may guarantee the authenticity of a product, although this is a malleable concept.

At the very minimum GIs certify origin per se, a credence attribute. However, while all GIs have clear rules on the origin of raw materials, the rules may be more flexible than consumers think such as in the case of Italian PDO hams.

Some GIs also regulate Potemkin attributes. For instance, GIs may protect rural livelihoods and ecosystems. Also, PGI Gruyère cheese stipulates a minimum of 150 grazing days for cows per year, which ensures a certain degree of animal welfare. However, all these examples cannot be reliably determined from the end product and require process audits.

For those consumers who care about attributes such as origin and authenticity, a GI label can help them easily find the product they want. The label transforms these attributes into a search attribute. A consumer who buys a certified PDO Camembert de Normandie knows better what to expect than if she buys a generic Camembert. Herein lies the value of a GI: if the system functions properly, it informs the customer of product quality attributes she cares about, before making a purchase.

In a stylised economic model, we capture the corresponding consumers' quality equation, which is composed of three main components: *taste*, *origin* and *authenticity*. Origin may be a direct quality attribute per se, as well as influence taste through terroir. Our model proposes that if consumers only care about taste, origin per se and authenticity do not matter. For such consumers, GIs are only informative if they affect taste through terroir and mandated methods.

*Exploratory Gouda cheese blind tasting:*

While the link between geographical origin and quality has to be verbally described, there is no requirement for independent verification (e.g. blind tasting) for GI protection to be granted. This means that, at least in theory, the product specifications of some GI products may not be identifiable in a blind tasting. For instance, the producers of PDO Gouda North-Holland did not have to show through a blind tasting that their cheese made from North-Holland milk tastes better than Gouda made from other milk.

The results of our exploratory study are mixed. While adult Dutch consumers clearly prefer PDO Gouda in our blind tasting, the same is not true for PGI Gouda Holland that "only" requires Dutch milk (see Fig. 1). Therefore, it seems that the product requirements for this specific PGI do not guarantee a better taste to consumers in our experiment.

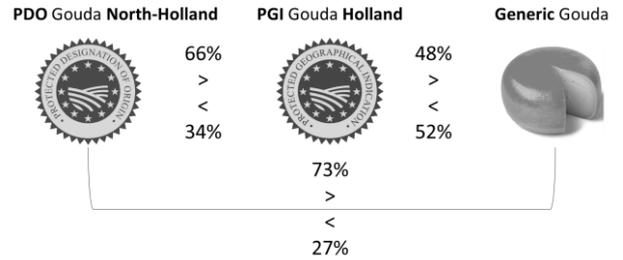


Figure 1. Results from exploratory blind tasting of Gouda cheeses with Dutch consumers (N=82).

**DISCUSSION AND CONCLUSION**

Our paper shows how the SECPP model of quality can be used to evaluate the EU GI quality schemes for PGIs and PDOs. By separating out the different quality attributes that GIs may affect, we hope to have clarified the possibilities and limits for GIs to certify quality and appropriate value of traditional foods.

It appears that while the product specifications of some GIs may clearly affect taste, those of others do not. Hence, consumers and policy-makers whose quality considerations concern only search and experience attributes will not generally find that GIs certify quality in that narrow sense. The latter may especially apply to New World consumers that tend to care less about origin. Hence, full GI protection of EU GIs on the US market may be unrealistic as well as unnecessary.

To continue, future empirical research has to investigate in other contexts and with more participants how specific GIs affect the SECPP quality attributes and their relevance to different consumer types.

In conclusion, overall, GIs do certify a certain regional origin. Next to the influence of the specific terroir, GIs may impose rules that affect composition and taste. However, this gustatory influence of GI product specifications is not independently verified by e.g. blind tastings. Our small exploratory blind tasting shows that while a majority of consumers prefers PDO Gouda North-Holland to generic Gouda, the same is not true for PGI Gouda Holland.

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