

The Labels in Agriculture, Their Impact on Trade and the Scope for International Policy Action

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1 Introduction

Both economic growth and increased international trade have put on the shelves many new products, requiring a better mastering of food quality and safety. As incomes rise, consumers are more prepared to pay for quality, and demands for information including labeling and traceability at the world level have gained momentum in many countries. The need for a signal may be even more important when consumers cannot be certain of a product's origin, which is the case when agricultural products from a variety of processors and countries are sold at the retail level with no brand designation.

Today's consumers are faced with a plethora of products certification labels concerning safety, nutrition, geographic origin, organic status, respect of the environment, ethical conditions or fair trade. While a private (manufacturer/retailer) brand belongs to a single firm, labels are used by several producers/firms complying with the label rules. This chapter will focus on these labels and their links with international trade.

The links between labeling and trade are difficult to measure. The availability of data is usually the limiting factor in estimating demand curves or elasticities for specific quality segments. With official statistics (such as Comext by Eurostat or UNCTAD-TRAINS), series of prices and quantities for products are very often aggregated without considering quality differences. Precise data are missing for evaluating the international trade impact coming from labels.

Even though few precise estimates exist, and even though the figures that the various countries put forward are always arguable, some studies (Johnson 1997; Ndayisenga and Kinsey 1994) show that national product quality regulations have a significant effect on agro-food trade. Replicating such studies for the labels regulation would be very hard, since there is a great diversity of labels in each country, and each label concerns a relatively tiny segment of the market (not detailed by the official statistics).

Despite the lack of information regarding the trade issues, this chapter provides clues for thinking about the labeling impact on trade. Before

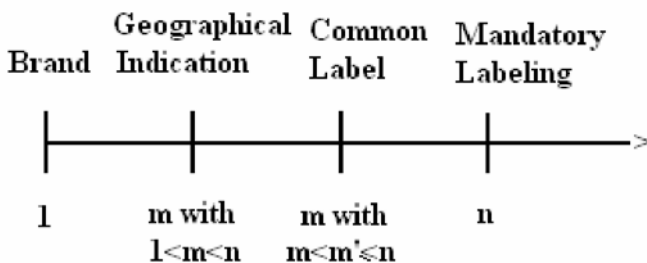
detailing some issues regarding the relationships between labeling and international trade, the paper recalls some effects coming from labeling. For each issue, we present a survey of main contributions in both the empirical and theoretical literatures.

2 A Brief Review of the Main Features Concerning the Label

In agricultural markets, labeling, branding, and/or regulation all serve to mitigate potential inefficiencies resulting from imperfect information about product characteristics. If consumers are not fully informed about product characteristics, they may consume a product with an undesired characteristic or pay a price that does not reflect the quality associated with the product in question. Although a label, a brand, and/or a regulation are proposed as tools for mitigating market failures that have resulted from imperfect information (Akerlof 1970), the instruments themselves may generate other distortions, including antitrust concerns or consumers' misunderstanding.

The agribusiness sector is characterized by the coexistence of multinational companies wielding oligopolistic/oligopsonistic power and farmers with very limited ability to influence prices and capture marketing gains. In the United States and Europe, the degree of concentration in agribusiness varies considerably among states and sectors. The strategies of quality promotion differ a lot according to the concentration in different sectors.

Figure 1 illustrates the different types of organization for signaling quality with the number of competitors or sellers involved in one quality signal, when n sellers are identified by consumers in a downstream market. While a private (manufacturer/retailer) brand (or a trademark) belongs to a single firm, voluntary labels are used by several producers/firms. Mandatory labels are imposed on all sellers. Regarding the labels, Figure 2.1 distinguishes between a geographical indication (GI) and a common label (with, in general, a larger number of sellers, $m' > m$) for insisting on the level of exclusion. A geographical indication excludes the sellers who do not produce in the restricted area, which can be a tool for controlling supply (implying some antitrust concerns). Common labels are used by several producers/firms complying with the label rules and/or having a common characteristic (organic status, respect of the environment, ethical conditions or fair trade) that is not particular to one product.



Source: Marette 2005

Fig. 1. The number of competitors involved in one quality signal

Note that there is a great diversity of situations since (i) one or several brands may post a geographical indication or a common label and/or (ii) several farmers may contract with a brand for the packaging and labeling of a product. Numerous labels are adopted voluntarily, allowing a firm to choose either to label its product or to promote its own brand. Labels are managed by producers/consumers associations, certification firms or non-governmental organizations (NGOs). The state provides property rights protection, laws against false characteristics description and sometimes quality-monitoring assistance. In particular, providing standards and guidelines may be what the government does best. The biggest obstacle here is the credibility of the government itself, but, if the public deems labels to be important, it is an obstacle that a public agency needs to overcome.

Clearly, in a very concentrated industry, the quality promotion is mainly based on brand reputation and private strategies of advertising. The agri-business-multinational companies invest a lot in advertising (Sutton 1991). The existence of economies of scales pushes toward concentration among producers/brands since promotion and advertising imply fixed costs. Because a brand is hard to set up for small industries or scattered farmers, collective labels for promoting high-quality products are necessary.¹

Label proliferation is the main flaw of the collective labels (Lohr 1998). Consumers Union (2005), a US-based consumer advocacy group, lists over 100 eco-labels on its web site. Just a few of the more well-known labels are the German Blue Angel, the Nordic Swan, dozens of organic certification labels, “Dolphin Safe,” “California Clean,” “Bird Friendly,” “Shade

¹ Producers’ cooperation (or collusion) may be necessary to signal quality when the fixed costs of advertising and third-party certification are large (Marette et al. 1999; and Marette and Crespi 2003).

Grown,” and Green Seal. Clemens (2005, p. 8) accounts for “approximately 700 geographical indications (excluding wines and spirits) currently registered in the European Union and the continuous stream of applications to register more products.” Peri and Gaeta (1999) count more than 400 official appellations in the wine sector in Italy, 450 appellations in France, and 1,397 in the wine sector in Europe.

The label proliferation may create confusions for consumers. Indeed, Loisel and Couvreur (2001) show that even in France such signals of quality are not clear to many consumers. For example, the recognition of quality labels by French consumers is only 43% for Label Rouge (a high-quality seal for poultry, see Westgreen, 1999), 18% for l'Agriculture Biologique (organic food) and only 12% for Appellations d'Origine Contrôlée (the French GI). One major problem is simply the legibility and clarity of a label, especially one showing some official seal. Although Label Rouge is a well-established label, which suggests that reputation matters, the fact that less than half of French consumers recognize it is suggestive of the problems inherent in any label.

3 The Uncertain Effects of Increased International Trade

In general, policy reform is contributing to a gradual deregulation and trade liberalization, but where food quality is concerned, brand, labeling and regulation are important. As tariffs decrease and/or competition is more intense, the signaling becomes more important for preserving commercial niches.

Trade liberalization and international competition lead to new contexts of competition that modify the signaling strategies. As precise data are missing (see the introduction) and effects are hard to predict, some conjectures are useful for understanding market mechanisms. In a context of perfect information, the opening of a domestic market to imports from other countries results in an increase in domestic welfare. In a context of imperfect information, opening a market to foreign competition increases the incentive for the domestic producer to differentiate itself by improving quality and revealing more information. Consumers may also want to get more information about the origin of products and the conditions of production in foreign countries. These effects may lead to the emergence of new brands or labels, leading to a potential increase of labels proliferation. It should be noted that, except for the wine market and the cheese from Parma, very few GI benefit from an international reputation.

However, if the fixed cost for informing and improving quality is high trade liberalization may result in producers' concentration entailing brands and advertising concentration. Shaked and Sutton (1987) showed that the concentration increases as the market size increases (which is the case with trade liberalization). If quality and information are produced with a fixed cost a firm by selecting a relatively high level of quality can potentially drive competitors with lower quality products out of a market. As fixed cost is not passed to consumers via prices, producers may slash prices for eliminating potential rivals. As a result, concentration at the production level will increase and product variety will decrease in market size. A reinterpretation of this previous result could lead to a reduction of the number of producers and brands coming from the development of international trade. Note that trade liberalization leading to concentration could favor the development of private brands rather than common labels.

These two opposite conjectures show the complexity of the markets effects and it is not obvious to know which effect will dominate. In this context, it is useful to confront the previous implications linked to the increased international trade with the following empirical facts.

3.1 The Need for More Information by Consumers

Some consumers are interested in getting more information about the conditions of production in developing countries. Recently, labels for fair trade and fair working conditions in developing countries gained prominence, even if the market share is relatively limited (between 2% and 4% for different products and locations). Table 1 shows a rapid increase in the production volume under the seal provided by Max Havelaar, one leader of fair-trade certification.

Table 1. World volume of production with the Max Havelaar seal (in tons)

	2001	2002	2003
Coffee	14.432	15.779	19.872
Tea	1.085	1.226	1.989
Bananas	29.072	36.641	51.336
Cocoa	1.453	1.656	3.473
Sugar	468	650	1.164
Rice	0	392	545

Source: <http://www.maxhavelaar.org>

However, some famous brands only offer a small percentage of their production under the fair trade label.² In 2004, only 1% of Starbucks coffee was labeled fair trade, leading to criticisms by some activists about this low volume (Linn 2004). Starbucks responded that it is already a large purchaser of fair trade coffee but that there is not enough of that product that meets its standards.

Table 2 exhibits the cost structure of one packet of coffee in France. The final price difference is mainly explained by the farm gate price between both types of coffee, while the costs are similar for other stages presented in Table 2. The “fairness” in this context comes from the difference at the farm gate price equal to 0.39 euros. Such a premium represents 10% of the final price in the supermarket, which is consistent with the literature findings regarding the price premium.

Table 2. Price of a coffee packet in France (250 gr.) and Arabica from South America

Euros	Without Fair Trade Label	Max Havelaar
Farm gate price	0.19	0.58
Middlemen	0.06	-
Cooperative costs	-	0.08
Exportation costs	0.14	0.14
Max Havelaar fee		0.05
Cost of importation and roasting	1.41 à 2.61	1.45 à 2.5
Final price in supermarket	1.8 à 3	2.3 à 3.35

Source: Lecomte 2003.

Large differences in social conditions/standards in the world explain the demand for ethical characteristics by consumers.³ The definition of “fairness” is relatively tricky to set up. The Achilles’ heel of ethical labeling is the lack of a clear definition combined with a “lenient” certification

² Recently, eight companies with brands in France signed an agreement with Max Havelaar for offering products made with “fair” cotton (Les Echos, March 4, 2005, p. 18).

³ Bigot (2002) examined a variety of attribute signals that might exist in a product and showed that, at least for French consumers, the rank in terms of importance was the absence of child labor, followed by the origin of the products, and decent working conditions for workers who produced the product, positive environmental externalities such as the absence of pollution during the production process. He found that 53% of French consumers would pay a premium for ethical characteristics and this premium would only be 5%. Another 44% would pay no such premium.

process. In this context, the regulation is useful for imposing a clear definition for some labels and/or for controlling the certification activity of private middlemen.

The increased international trade leads to a higher consumers' sensitivity regarding the origin of products. Economists have shown that the origin of food products seems to matter – at least for European consumers. Loureiro and McCluskey (2000) show that the label of origin for fresh meat in Spain leads to price premia for medium quality. Scarpa et al. (2005) and Whirthgen (2005) confirm the existence of consumer preferences for territorial origin of production certification and regional food. Stefani et al. (2005) show that, in the case of Italian spelt, a direct impact of the origin on the willingness to pay exists. Roosen et al. (2003) also suggest that consumers place more importance on labels of origin as opposed to private brands for beef, although this study is applied to European consumers facing the mad cow disease, for which regional labels take on a highly significant meaning. Bazoche et al. (2005) show that label information has an effect during an experimental process that compares the consumers' reactions to French and Californian wines.⁴

The previous developments suggest that a significant effect on prices or consumers' willingness to pay exists, even if the price premium is relatively low. As McCluskey and Loureiro (2003, p. 101) mention, "The major generalization we can draw from [the] group of empirical studies on consumer response to food labeling is that consumer must perceive high eating quality in order for the food product to command a premium. This was particularly important for socially responsible and origin-based products." It means that good quality of products is essential for having a premium with a fair trade label.

3.2 A New Context of Competition

The international competition has deeply reshaped the world market. Development of brands and wineries concentration in Australia and Chile are challenging the leadership of the European GI in world markets.

The wine sector in the European Union is based on the GI for medium- and high-quality wines, where grape production is regulated, with a maximum yield allowed per unit of land. This yield system, which is often

⁴ Note that these results concern European markets. Even if geographical indications are used less often in the US than in Europe, US farmers are also concerned by this tool, for instance with the Arizona Grown label, Idaho Potatoes, Florida Oranges, Vidalia Onions, Wisconsin Real Cheese, and so forth (Hayes and Lence 2002; Hayes et al. 2004; McCluskey and Loureiro 2003).

disconnected from market demand, does not impede excess supply in some areas, as for the Beaujolais area in France in 2005 (Bombaron 2005). The maximum yield imposed on GI may impede farmers to reach the minimum-efficient scale.⁵ Some European GI imposed numerous restrictions that stifle the search for commercial efficiency. The excess of regulation for linking origin and quality seems problematic (see Zago and Pick 2004, Ribaut 2005). Conversely, the main features of regulations in the United States, Chile, and Australia are the lack of detailed rules, that is, the freedom to experiment with new techniques; the production and marketing of wines according to single varieties of grapes, sometimes associated with the production region; and a very intense use of marketing investments. All of these features appear to be quite relevant in the world market.

Wineries in Australia are much bigger than the ones in Europe. The average vineyard size in France is less than 2 hectares versus 111 hectares in Australia. Four firms are dominating the Australian market, namely, Foster, Southcorp, Hardy, and Orlando Wyndham. The combined production share of the four largest firms in New Zealand is 85%, while the combined production share of the two largest firms in South Africa is 80%.⁶ In other words, the wine promotion in Australia, Chile or the US favors the brand advertising, which facilitates the good reputation and the recognition by buyers. The brand is the most visible information for the Australian wines. This trend seems consistent with the theoretical results of Shaked and Sutton (1987), namely a trend towards more concentration of the brands in a context of increase in market size.

Unlike the industry in Australia or Chile, the wine industry in Europe is very fragmented. The opportunities for mergers in Europe are limited by ownership structures with scattered producers, geographic boundaries, and/or product diversity. Indeed, apart from some notable exceptions, e.g., the Champagne (Economist 2003) or Bordeaux regions, the wine industry in Europe is made up of many small firms, which may lack adequate capital for the necessary investments in new technologies and marketing policies.

⁵ Benitez et al. (2005) compare the cost structure of GI producers with non-GI producers for the production of French Brie cheese. They exhibit that GI producers face a more costly production technology and do not profit from scale economies.

⁶ Recent international mergers revamped international wine trading (Marsh, 2003a,b). In 2000, Foster merged with Beringer, a Californian wine firm. In 2003, Hardy merged with Constellation Brands, a U.S. company. As Marsh (2003b) puts it, those mergers undermined Europe's dominance of the sector.

The small size of wineries in Europe reinforces the problem of the proliferation of appellations/wineries (Marette and Zago 2003). The large number of GI assures product diversity but certainly increases buyers' confusion (see Consumer Reports 1997). The recognition of quality labels by French consumers is only 12% for Appellations d'Origine Contrôlée, the French GI system (see Loisel and Couvreur 2001). Berthomeau (2002) discusses the difficulty that the various French appellations have had in entering new export markets because of the absence of any clear specification of the label that distinguishes one appellation from another in consumers' minds. The collective reputation of French wines plummeted during the last decade (Conan 2005; Echikson 2005; Ribaut 2005). The inter-professional group of Bordeaux producers (CIVB, Conseil Interprofessionnel des vins de Bordeaux) completely revamped its generic advertising campaign for reaching consumers of different countries in order to restore its collective reputation (Germain 2005).

In addition, in Europe, the GI system needs to be reformed (Giraud-Heraud et al. 2002; Ribaut, 2005). The Champagne appellation is an example in which the combination of famous brands (with large vineyard size and enough capital for advertising) and a prestigious GI matters for consumers ready to pay a large premium (see Combris et al. 2003). An "efficient" combination of brands and GI also characterizes the Napa Valley appellation, which generates a price premium compared to an equivalent-quality bottle with a different appellation (Bombrun and Sumner 2003). A possible solution for improving the European GI system would consist of simplifying the GI rules by associating brands with a production region such as Bordeaux or Chianti. The issue of GI regarding international trade is maybe overstated since the previous example under-scores the fragility of the GI system for wine coming from the recent changes in the world wine market.

4 Which International Policy Action?

Labeling and consumer information policies are often portrayed as preferable alternatives to regulation because they are cheaper for producers, leave the choice to consumers and are less likely to constitute trade barriers (see Beales et al. 1981 and OECD 1999). Mandatory labels may entail trade distortions or impede the entry of producers who cannot comply with the requirements.⁷ Ideally, economists and policy makers

⁷ See Bureau et al. (1998), Mahé (1997), Nimon and Beghin (1999), and Sheldon (2002).

have argued that regulators should develop trade policy to cap as much as possible any trade distortions coming from a labeling program (Runge and Jackson 1999). The distortions under a mandatory label are generally lower than the ones coming from an import ban or a minimum-quality standard (see Bureau et al. 1998).

There is an inclination for each country to develop its own system of labels. There is a practical and admittedly simple test to help policy makers discern whether mandatory labeling is being used to increase societal welfare or whether it is being used as a trade barrier (Crespi and Marette 2001 and 2003). Essentially, in a country that requires labeling, if the ratio of consumers concerned about one characteristic to indifferent consumers is low, a voluntary label signaling this characteristic is likely to improve welfare. Conversely, if this ratio is high, then a mandatory label may increase welfare in that country. Thus, observations of governments requiring labels when consumers in those countries show little interest in the debate should be closely examined. Moreover, heterogeneity among consumers may lead to different regulations that may increase the labels proliferation at the international level.

The labeling raises the issue of the access to the domestic market for foreign producers who want to compete in the label niche. Product labeling is theoretically covered by the 1979 Technical Barriers to Trade (TBT) Agreement, but in practice a number of problems arise at an international level with regard to transparency, mutual recognition and control, and these problems proliferate as countries impose their own specifications and labels.

4.1 Mutual Recognition or Harmonization

In principle, foreign producers (with enough capital) may adhere to a voluntary label program and benefit from a collective reputation already established by the common label which should favor entry. The compliance cost linked to the label requirement may ruin the foreign incentive to enter a common label program. This last problem is often crucial for producers in developing country.

The compliance cost explains the effort for harmonizing the label system in the European Union (EU). The European Commission wants to impose the standardization of food labels across the EU. "National laws vary, leading to increased costs for producers for packaging and labeling. Streamlining the various laws will bring considerable cost savings for the food industry, explained Günter Verheugen [the EU industry commis-

sioner].”⁸ The labels proclaiming Protected Designation of Origin (PDO) and Protected Geographical Indication (PGI) are already defined at the European level (EEC 1992). The harmonization among different labeling systems is difficult to implement since some countries must make their labels rules more stringent while others must make their labels rules more lenient.

In contrast to standardization (or harmonization), mutual recognition is the alternative way to combine labeling diversity and trade development among countries. Mutual recognition of labeling for organically farmed products is sometimes difficult to achieve because countries apply the relevant criteria more or less strictly, or because some countries are considering granting such labels to genetically engineered or irradiated products. For organic products in Europe or in the US, foreign producers may stamp their products with a domestic organic label under different procedures. The article 11 of Regulation 2092/91/EEC in the EU and the US National Organic Program open up the respective organic food market to products from third countries based on the concept of equivalence. Lohr and Krissoff (2001) showed ambiguous effects of these mutual recognition programs in terms of domestic and exporters’ welfare for organic products.

With respect to organic foods, definitions vary a lot among countries. What constitutes an “organic food” has been very difficult to define (Browne et al. 2000). The United States Department of Agriculture’s new guidelines on organic food certification came after years of discussion with industry groups as to what characteristics could be considered as organic. The new regulations prevent organic producers from using irradiation to decontaminated products, sewage sludge as fertilizer, and genetically modified ingredients, although some had argued that these techniques did not affect “organic” production since the foods were not produced using conventional chemical fertilizers or pesticides. It is not certain that such a definition is “universal” or applied by other countries or by other private eco-labels. In this debate, the stumbling block is the importance of production conditions for consumers with preferences that vary a lot among countries, impeding the labels harmonization.

The mutual recognition of geographical indications is allowed by the 1994 WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). Geographical indications signaling a particular quality coming from one area are protected under articles 22 to 24 of the TRIPS agreement. If a quality dimension is recognized for a product coming from a single area, no producer external to this area is allowed to mimic the indication. An additional protection for Geographical Indications is provi-

⁸ See *World Food Law*, February 2005, 80, p.10.

ded for wine (article 23). However, an appellation deemed as “generic” cannot benefit from the exclusive geographical indication (article 24). Controversy arises when names that are protected in one region have a common usage in another. Thus, the term Parmesan protected in Europe is a generic name in the US. The decision concerning the “generic” dimension is decided by national courts. This explains why the name *Chablis* is considered (1) as a generic name that every farmer may use in the US and (2) as a protected geographical indication limited to restricted area of Burgundy in France.

The controversies about the definitions of geographical indications between Europe and the United States (Babcock and Clemens 2004) led to a recent panel on geographical indications (WTO 2005). The panel suggested that some points of the EC regulation 2081/92 regarding the role of governments has to be amended (EEC 1992). In particular, the rights of US trademarks could not be limited by GI regulations. However, the panel recognizes that some articles of the TRIPS Agreement were not violated by the EC regulation 2081/92 (for details see Clemens 2005). A recent agreement between the US and the EU seals mutual recognition of practices for the wine market (USTR 2005). The agreement cancels numerous exemptions that allowed US wine to be imported into the EU. Both countries mutually recognize oenological practices. The US agreed to limit the use of traditional names like Champagne and Chianti which means that they are ready to improve the compliance of some appellations with the requirement of the article 23.

This 2005 agreement on wine between the US and the EU is bilateral. One complementary possibility would be to search for multilateral agreement for the initial definition of the label or the harmonization of labels.

4.2 Labels Defined at the International Level

In a context of labels/appellations proliferation, an international reputation is very hard to acquire because of buyers’ confusion and insufficient promotional efforts or education. The small market share of each label does not lead to sufficient economies of scale, since promotion mainly generates fixed costs. One possibility would consist of defining official signs of quality at an international level to reduce label proliferation and possible trade distortions.

The definition of international standards could be organized by forums or by NGOs. This is for instance the case for the fair trade definition. For determining an international standard on what is fair, several national

organizations (including Max Havellaar introduced in Table 3) joined the Fairtrade Labeling Organization (FLO 2005).

Few labels defined by international organizations already exist. The MSC label signals sustainable and environmentally responsible fisheries. This label is managed by the Marine Stewardship Council, an independent organization. The Forest Stewardship Council (FSC) delivers the FSC label that signals sustainable developments in the forest management.⁹ This international label is a first step in the effort to reduce barriers to certification in developing countries. This label (with 23% of market share for the certified wood in 2002) competes with Sustainable Forestry Initiative (SFI) label in the US (17% of market share) and the label of the Pan European Forest Certification System (PECF) in Europe (38% of market share). Indeed, the FSC label is used by wood producers in numerous countries (see Table 3).

Table 3. Certified forest sites endorsed by FSC in 2004

Continent	Europe	North America	Latin America	Africa	Asia-Pacific	Total
Area certified (million ha)	27.3	9.7	6.4	1.94	1.59	46.9
%	58.1	20.6	13.6	4.1	3.3	100

Source: www.certified-forests.org (accessed in April 2005)

The FSC certification concerns production sites with an average size equal to around 68,500 hectares per site. The increase of the total number of hectares certified with the FSC label over the last decade suggests a

⁹ The ISO 9000 certification is also a signal with a world dimension. The focus of ISO is on system quality rather than the quality of the end product, thus ISO 9000 certification in no way ensures that a firm produces high-quality products. This last point explains why we abstract from ISO considerations for the rest of the paper. The International Standards Organization (ISO) based in Geneva, develops “standards” which represent voluntary principles of good practice and the ISO 9000 series of standards detail internationally accepted procedures and guidelines to maintain a consistent quality in product design, production, installation and servicing, and practices for certification. ISO certification then involves a third party certifying that these aspects of a firm’s quality management system are in accordance with the principles laid down by the standard. These standards are not intended to replace product safety or other regulatory requirements, but specify those elements that quality management systems must have to produce final products that consistently meet the required specification.

viable existence of a label adopted and recognized in numerous countries.¹⁰ Fisher et al. (2005) note that the standardization of certification programs is unlikely to overcome all the barriers deriving from various certification programs across countries. The effects of harmonized standards for reducing producers' compliance cost could be significant in a sector such as the wood industry.

5 Conclusion

This paper introduced some economic effects linked to labels in a context of international trade. All the results reviewed here suggest that labels often matter to consumers in a context of international trade development. More particularly, the fair trade labels and the identification of origins with GI may lead to a significant premium for producers in developing countries. However, more details and new studies would be necessary for refining the analysis. In particular, the collection of more precise data regarding the market segmentation would be valuable for the analysis.

Eventually, the clarity of the information and the absence of confusion for consumers should guide the private and regulatory intervention at the international level. The main drawbacks are the labels' proliferation and consumers' confusion, which limit the efficiency of such a collective system for signaling quality compared to brands. Clearly, conditions for the success of collective-quality promotion are the absence of signal proliferation and the absence of excess regulation that may create barriers to certification and impede the product differentiation. International trade raises the issue of the mutual recognition versus the standardization of the existing labels among various countries. One possibility for avoiding label proliferation would consist of defining official signs of quality at an international level to reduce label proliferation and possible trade distortions. The definition of international standards could be organized by NGOs.

¹⁰ Part of the European furniture industry has signed a charter and is contemplating using only wood that has been granted the FSC or PEFC environmental label.

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