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Country-of-Origin Labeling for Processed Foods

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DEDICATION

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Introduction

The country-of-origin is the “nationality” of a food when it goes through customs in a foreign country, and is a “brand” that may be designed with a national flag when the food is for sale in a foreign market. The “nationality” determines which kind of treatment – preferential or non-preferential – the food receives at customs, and as a national brand it is often associated with safety, quality and the general reputation of the nation. In international trade, the country-of-origin is important information with commercial value.

For the application of trade policy at customs a product has only one country-of-origin. With economic globalization, determining the “nationality” of a food becomes a complex issue since a food may be manufactured in a country with ingredients that are produced in another country. Moreover, the country-of-origin determined in terms of trade policy is the country where a food underwent the last substantial transformation and often is not the country that produced the primary material or main ingredient. Therefore, the country-of-origin indicated on a label – which consumers can see – is only partial information about the origin of a processed food. In other words, for foods produced in multiple countries there exists information asymmetry between manufacturers and consumers, which is characterized by the imperfect information for consumers about the origin of foods.

The concept of asymmetric information was created by George Akerlof in 1970. In his famous paper “The Market for 'Lemons': Quality Uncertainty and the Market Mechanism”, Akerlof affirmed that when buyers cannot judge a product's quality before purchase, low-quality products may drive high-quality products out of the market. Michael Spence and Joseph Stiglitz further developed the theory of information asymmetry. A common view is that information asymmetry may lead to market inefficiency, even market failure.

In studying the circumstances of foreign foods in the emerging Chinese market, I have found the theory of information asymmetry can easily be applied to explain the problem caused by misinformation on the country-of-origin of extra virgin olive oil from Italy to China: Both the olive oil produced from olives grown in Italy and a blend

of Spanish or Greek olive oil (major percentage) and Italian olive oil (minor percentage) bottled in Italy are labeled in Chinese “Country-of-Origin: Italy”. When a Chinese consumer buys the European Community olive oil bottled in Italy, he / she thinks it was produced in Italy and overestimates the item's value, thus is cheated by the origin statement. Meanwhile, sellers of real Italian olive oil face unfair competition.

From the perspective of information economics, asymmetric information can affect the efficiency and fairness of the market mechanism in the allocation of resources. In the case of olive oil blends, the distributor's game is based on imperfect information provided to consumers, utilizing the country brand of Italy to maximize profit. On another hand, the misleading origin marking occurs because China's non-preferential rules of origin could not determine which country is the country-of-origin. Observing this phenomenon, I chose this interesting research theme: How to mark the country-of-origin of a food produced by two or more countries so that consumers would not be misled and market order would not be distorted?

According to the WTO Agreement on Rules of Origin, when a good is produced by more than one country, the country-of-origin is the “country where the last substantial transformation has been carried out”. The Codex Stan 1-1985, which is the global reference for food labeling, states: “The country-of-origin of the food shall be declared if its omission would mislead or deceive the consumer. When a food undergoes processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country-of-origin for the purposes of labeling.” However, the last substantial transformation criterion determines only one country-of-origin and cannot resolve the problem of misinformation about the country-of-origin of the olive oil blend.

Although WTO member countries agreed that for goods not wholly obtained in one country the criterion for determining the country-of-origin is the last substantial transformation, the detailed rules for conferring the originating status may vary from country to country when a product is manufactured partially or totally from non-original (foreign) material. For the same product, the country-of-origin may be the country where the primary material was produced or where the final processing was carried out, depending on the rules of origin of the importing country.

Adding to the confusion is the country-of-origin officially determined might be different from that perceived by consumers. For example, when roasted coffee is imported into the USA or China, the country-of-origin of the product is the country where the coffee beans were roasted, but not the country where the coffee beans were grown, because in both the USA and China the coffee roasting process is considered “substantial transformation”.

The WTO has been committed to harmonizing worldwide the non-preferential rules of origin, but after many years the harmonization is not yet completed. Meanwhile, many more countries signed Free Trade Agreements for dealing with bilateral trade under the preferential rules of origin that they agreed to. Therefore, it becomes more possible that the country-of-origin determined for the application of trade policy is different from that for the origin marking, since only the non-preferential rules of origin should be used for the purpose of origin marking.

In defining the country-of-origin, under the general criterion of last substantial transformation a product always has only one country-of-origin for the application of trade policy, and consumers do not have accurate information about the country-of-origin of a food manufactured in a country from the primary material produced in another country. In order to provide accurate information to consumers, I think it would be better to label multi-origin foods by multiple countries of origin marking: Both the producing country of the primary material and the processing country of final product shall be marked if the marking according to the last substantial transformation is misleading.

In every country the government plays a very important role in matters concerning the country-of-origin marking of foods. Since the beginning of this century, the mandatory country-of-origin (COOL) has been introduced in the European Union (2000), USA (2002) and some other countries and also has been applied to more and more products, so as to better guarantee food safety and quality. However, in the international scene, COOL is a controversial issue criticized as a trade protection measure. The most notable example was the COOL dispute between the USA and

Canada/Mexico where the WTO ruled that United States' COOL measure is inconsistent with its WTO obligations.

COOL seems to be a trade protection measure, and the consumer's right to know the origins of their foods seems to be in conflict with free trade.

In recent years, much academic research on COOL has been carried out for studying the value of COOL information for consumers, the influence of origin labeling on consumers' choice, the effect of COOL on trade, etc. Up to now, academic studies are mainly limited to fresh and non-transformed or slightly processed foods (beef, fruit, and dried single ingredient foods), and have not concerned the rules of origin. My research on the multiple countries of origin marking for foods manufactured in a country with the main ingredient produced in another country is a new subject in academia.

The basic purpose of this research is to define criteria for the country(ies)-of-origin marking so as to provide accurate information to consumers and favor fair trade. The further objective is to study regulatory principles for the formulation of COOL policy and estimate the effect of COOL on international trade.

The research methodology I use is the Delphi method to conduct qualitative and systematic research on COOL, with the goal of gathering perspectives and ideas from experts in food labeling and food policy.

This Delphi study is conducted in three rounds:

- The 1st Round mainly focuses on the possible protectionism of COOL, the necessity to label the origin of the main ingredient and its potential influence on international trade.
- The 2nd Round focuses on how to mark the country-of-origin of a food produced in more than one country, and how to guarantee the reliability of information about country-of-origin.
- The 3rd Round discusses a regulatory principle proposed for the formulation of policy on the COOL of main ingredients, the definition of main ingredient and the desirability and feasibility for a worldwide standardization of the country-of-origin marking.

The panel of experts is composed of 19 members in 13 countries: Australia, Belgium, Chinese Taipei, Ghana, Italy, Japan, Malaysia, Morocco, New Zealand, Panama, UK, Uruguay and USA. Ten experts are academic, five are from government departments and four are representatives of consumer associations.

This Delphi study is conducted via the web site www.foodorigin.org where participating experts can provide their answers to my questionnaires.

The experts actively discuss all topics, providing very broad perspectives on the issues concerning COOL.

In addition to the Delphi study, I enhance the research on COOL by analyzing the rules of origin and drafting a guideline for the standardization of origin marking. Moreover, from the perspective of information economics, I analyze the market phenomena related to COOL and how to increase market efficiency by reducing the asymmetric information about food origin. Finally, I estimate the potential effect of the multiple countries of origin labeling on the business models of international trade, and analyze the regulatory options for mandatory or voluntary COOL of main ingredients.

Chapter 1

Background, Motivations and Objectives

The economic globalization of the food sector means not only active international trade of foodstuffs, but also the phenomenon that a food is manufactured in a country with ingredients that are produced in another country. The country-of-origin of a food produced in two or more countries is a complex issue in the application of trade policy (e.g. preferential or non-preferential treatment at customs of the importing country), because different rules of origin might result in different determinations of country-of-origin.

Since the non-preferential rules of origin allow a product only one country-of-origin, the origin information indicated on the label of a “multinational food” is partial; consumers do not have accurate information about its origin.

From another point of view, COOL is a major factor in fraudulent trade of foods. Preventing fraudulent practices on the origin statement is a difficult task in the countries where high value foods are produced and consumed.

On the international scene, Country-Of-Origin Labeling (COOL) on foods is also a controversial issue: It is often said that consumers have a right to know where their foods come from, while COOL was once criticized as a trade protection measure.

Therefore, when a food is produced in one country with primary materials imported from another country and then is exported to a third country, an important issue is how to mark its origin so as to provide accurate information to consumers without creating obstacles to fair trade. I hope this research will be useful for the formulation of policy on the COOL of main ingredients.

1.1 The Rules of Origin in the WTO Framework

In international trade, the country-of-origin as the “economic nationality” of goods is the reference for the importing country to apply trade policy. The criteria for

determining the country-of-origin of a product are often called “rules of origin”. There are two kinds of rules of origin:

(a) **Non-preferential rules of origin**, to be applied in non-preferential commercial policy instruments, such as most-favored-nation treatment, origin-marking requirements.

(b) **Preferential rules of origin**, to be applied in the trade between particular countries under their trade agreements or unilateral arrangements (Generalized System of Preferences), giving the benefit of tariff preference (entry at a reduced or zero tariff).

In order to facilitate international trade, the “Agreement on Rules of Origin” was signed in the Uruguay Round of Multilateral Trade Negotiations. The special purpose of this agreement is to harmonize the non-preferential rules of origin. All member countries of WTO agreed: “The country to be determined as the origin of a particular good is either the country where the good has been wholly obtained or, when more than one country is concerned in the production of the good, the country where the **last substantial transformation** has been carried out.”

The detailed criteria developed by different countries for recognizing “wholly obtained” are similar, while there is a wide variation for conferring the “substantial transformation”. Usually “substantial transformation” is determined by using one of the following methods:

- **Change of tariff classification:** The tariff nomenclature of a product in the Harmonization System is changed from a chapter to another chapter (two-digits level), from a heading to another heading (four-digits level) or from a subheading to another subheading (six-digits level), or at any other level.
- **Ad valorem:** The added-value realized in the “last transformation” country should reach or overpasses a percentage of the selling price from the country.
- **Specific processing:** In the manufacturing processes of a product, a specific operation is considered to confer or not confer the originating status of the product.

The change of tariff classification is the most common method to determine the origin of a good. The *ad valorem* rule and the specific processing rule are used when the substantial transformation cannot be determined by the tariff shift. These two supplementary rules are applied to limited ranges. For example, in China, *ad valorem* and specific processing criteria can be applied only to the goods indicated in a special list attached to the legislation on non-preferential origin rules; in Japan the *ad valorem* percentage criterion is not employed to determine the substantial transformation, while some specific processing operations are designated as "the substantial transformation which confers a new character to the goods".

However, up to now the rules of origin may differ from country to country; the same product may have different origins depending on which country's rule is applied. For example, under the laws of the United States, if the shrimp are raised in Country A and then shelled and frozen in Country B, the country of origin of the shrimp is Country A because the shelling and freezing operations do not change the character and the name of shrimp and so there is no substantial transformation. In contrast, the country-of-origin of the shrimp is Country B according to the regulations of the People's Republic of China, which applies the *ad valorem* and specific process rules to the process of shelling and freezing shrimp for recognizing a substantial transformation.

WTO aims to harmonize the non-preferential rules of origin, but it is a complex and time-consuming job. Before the harmonization of rules of origin is completed, the WTO member countries are obligated to follow the regulations established in the "Agreement on Rules of Origin", of which the most important are:

- Rules of origin are clearly defined;
- Rules of origin are not used as a trade policy instrument;
- Rules of origin do not themselves create restrictive, distorting or disruptive effects on international trade;
- Rules of origin applied to trade are not more stringent than those applied to determine whether a good is domestic.

The **harmonization of the rules of origin** is a difficult project. Up to now there is not any evidence about the realization of harmonization, but more and more Free Trade Agreements have been signed for **preferential treatments**. According to a working paper of WTO, as of 1 November 2010, there were 192 regional trade agreements. In recent years this number increased. The increase in trade agreements based on **preferential rules of origin** plays a more and more important role in the world economy, distorting trade and investment by the preferential treatment among the undersigning countries and consequently discriminatory treatments for other countries.

The different rules of origin among countries and the different rules of origin applied by a country to other countries form a complicated phenomenon in international economic relations, which has been called the “**spaghetti bowl effect**”.

As a matter of fact, the aforementioned regulation “The rules of origin do not themselves create restrictive, distorting or disruptive effects on international trade” is not respected by many WTO member countries.

1.2 The Marking of “Country-of-Origin”

How to label the country-of-origin of a food product depends on the determination of the country-of-origin of the finished product according to the rules of origin set up by the importing country.

Usually the “country-of-origin” is marked according to non-preferential rules of origin and under non-preferential rules a product has only one country-of-origin. The General Agreement on Tariffs and Trade 1994 established an important principle for origin marking: “The contracting parties recognize that, in adopting and enforcing laws and regulations relating to marks of origin, the difficulties and inconveniences which such measures may cause to the commerce and industry of exporting countries should be reduced to a minimum, due regard being had to the necessity of protecting consumers against fraudulent or misleading indications.” And it requires that “The contracting parties shall co-operate with each other with a view to preventing the use of trade names in such manner as to misrepresent the true origin of a product...”

Another important principle of WTO related to the country-of-origin marking is established in the Agreement on Technical Barriers to Trade (TBT Agreement – Art. 2.1): “Members shall ensure that in respect of technical regulations, products imported from the territory of any Member shall be accorded treatment non less favourable than that accorded to like products of national origin and to like products originating in any other country.” In the COOL dispute between USA and Canada/Mexico, the WTO Dispute Settlement (DS) Panel determined in November 2011 that: “the COOL measure is a technical regulation under the TBT Agreement, and that it is inconsistent with the United States' WTO obligations”, in particular, “the COOL measure violates Article 2.1 of the TBT Agreement by according less favorable treatment to imported Canadian cattle and hogs than to like domestic products...”. In March 2012, the United States appealed the WTO ruling. In June 2012, the WTO Appellate Body (AB) affirmed the previous DS Panel’s finding. On July 23, 2012, the WTO Dispute Settlement Body (DSB) adopted the DS and AB ruling. Then WTO set the deadline of 23 May 2013 for the United States to comply with its ruling. The reaction of the U.S. government has been very smart: On May 23, 2013, the USDA issued the final rule on “Mandatory Country of Origin Labeling of Beef, Pork, Lamb, Chicken, Goat Meat, Wild and Farm-Raised Fish and Shellfish, Perishable Agricultural Commodities, Peanuts, Pecans, Ginseng, and Macadamia Nuts”, requiring that labels should show where each production step (i.e., born, raised, slaughtered) occurs and prohibits commingling of muscle cuts of meat from different origins. With this final rule, USA has brought mandatory COOL requirements into compliance with its international trade obligations, and consumers can have more accurate information on the origin of meat.

In some countries (e.g. Russian Federation), the foreign manufacturer's address must be on the food label, and the country-of-origin can be indirectly declared as part of the address of the manufacturer. However, many countries (e.g. China, India, South Africa) don't accept this indication and require producers to state separately the “country-of-origin”; they don't require the business address of the manufacturer on the label, but that of the importer or distributor must be included. The distinct statement on country-of-origin is made in the following forms:

- “Product of (country name)”. This can be used when a food is wholly obtained in a single country, meaning all of the main ingredients are produced in the country and all the production processes are carried out within the same country. This type of indication of origin is common in Australia, Canada and South Africa.
- “Produced in (country name)”. This kind of statement of origin might mean (e.g. as defined in Australian legislation) that all of the main ingredients are produced in the country and the production processes are carried out within the same country, and could also mean (e.g. according to South African labeling regulations) that the last substantial transformation of the food occurs in a country different from the producing country of the main ingredient.
- “Made in (country name)” or “Manufactured in (country name)”. In some countries (e.g. Australia, China, Italy) this claim can be labeled when the country is the “country-of-origin” of the product, determined according to the rule of “wholly obtained” or that of “last substantial transformation”; in other countries (e.g. Canada, South Africa) this claim is used only for the products that undergo the last substantial transformation within the country.
- “Country-of-origin: (country name)”. This kind of statement is made according to the rules of origin, according to the criteria of “wholly obtained” and “last substantial transformation”. This form is used in the Chinese labels of foods imported into China.

Trade policy allows a product only one country-of-origin. When a food is a mix of products from different countries, the multiple country-of-origin is stated in various ways:

- In Australia, the retailer can state each country-of-origin or that the food is a mix of local and imported foods.
- In Canada, a multiple country-of-origin statement is not acceptable, but a blended claim is possible, such as "a blend of (country name) (product name) and (country name) (product name)".

- In the EU, a typical example is the blend of olive oils produced in more than one member country, of which the country-of-origin can be marked as “Community” or the names of the producing countries.
- In the USA, for a mix of foods produced in more than one country, all the producing countries of the mix must be listed on the label.

It is interesting to note that in South Africa, the “countries of origin” should be declared when a product is packed in a country different from where it is produced or manufactured, namely the “countries of origin” include the “producing country” (or manufacturing country) and the “packing country”. Of course in this case the packing country does not refer to the common meaning of “country-of-origin”, but it is useful for the traceability of food and can reduce information asymmetry between suppliers and consumers.

1.3 Legislative Provisions on Ingredient Origin Statement

In international food trade, labeling with authentic information has primary importance for the protection of consumers’ rights and interests. In recent years legislation on food labeling in many countries has evolved toward more stringent measures.

Generally, the legislative provisions on country-of-origin labeling for foods in various countries can be separated in two categories: one regards the determination of “country-of-origin” of the foods imported from other countries; another regards the statement on the place of origin of ingredients sourced from other countries and used in the domestic manufacture of foods. Currently, the majority of countries in the world have laws in the first category, while only a few countries have regulations in the second category. In other words, the statement on “country-of-origin” of ingredients is compulsory only in a few countries for certain kinds of food.

The first legislation in the world on the mandatory statement about the place of origin or provenance of the main ingredient is the **Italian Decree-law (Decreto Legge)**

n. 157/2004, promulgated on 24 June 2004 and effective two days later. It requires an indication of the place of origin or provenance of the fresh tomato used in the production of tomato puree (in Italian “passata di pomodoro”). The “place of origin or provenance” defined in this Italian Decree-law for a non-processed food means the country-of-origin and optionally the production area, and for a processed food it means the area of cultivation or farming of the primary material used in preparation and production.

Another interesting legislative initiative in Italy is Law No. 4 - “Provisions Related to Labeling and Food Quality (*Disposizioni in materia di etichettatura e di qualità dei prodotti alimentari*)” - promulgated on 3 February 2011, which required a statement of food origin: For non-processed foods, an indication of the place of origin or provenance regards the country of production of the products; for processed foods, the information concerns the place where the last substantial transformation occurred and the place of cultivation and breeding of the main agricultural raw material used in the preparation or manufacture of the products. This law on ingredient origin statement was to be in effect 6 March 2011, but it was necessary to formulate within 6 May 2011 a decree to “activate” this law. Since the Italian legislation should be consistent with the regulations of the European Union, there was not any decree promulgated to activate this law, so it is not in effect. Some Italians called Law N. 4 /2011 an Italian invention far from European reality.

In the European Union the general provision on food origin labeling is set by Article 3 of Directive 2000/13/EC: the indication of the place of origin or provenance is mandatory if the omission of such information might mislead the consumer. Meanwhile, some regulations of the European Parliament and Council of the European Union determined that origin labeling is mandatory for the following foodstuffs: beef and beef products (Regulation EC N°1760/2000), fruit and vegetables (Regulation EC N°2200/1996), fishery and aquaculture products (Regulation EC N°2065/2001), honey (Directive 2001/110/EC), eggs (Regulation EC N°2295/2003), olive oil (Regulation EC N°1019/2002, modified by Regulation EC N°182/2009). For all other products the origin may be indicated on a voluntary basis.

A great work on European food legislation was made on 25 October 2011: the European Council adopted the new EU Regulation 1169/2011 on food information to

consumers, which extends the mandatory indication of country of origin or place of provenance to unprocessed meat of swine, poultry, sheep and goats. The new Regulation entered into force on 12 December 2011 and shall apply 13 December 2014, with the exception of the provisions on the nutrition information, which applied 13 December 2013.

In addition, by 13 December 2013 (within two years of enforcement of the new regulation), the European Commission had to adopt acts implementing the application of “voluntary origin labeling” of foods, and make a report on the mandatory indication of the country of origin or place of provenance for the following products: (1) Meat used as an ingredient; (2) Types of meat other than beef, swine, sheep, goat and poultry; (3) Milk; (4) Unprocessed foods; (5) Single ingredient products; (6) Ingredients that constitute over 50% of a food.

Among the member states of the European Union, the United Kingdom has also made many interesting initiatives related to the ingredient origin statement. The “country-of-origin labeling guidance” issued by the British Food Standards Agency (FSA) aims to not only explain legislation applicable to origin labeling and provide advice on how to comply with EU legislation, but also to provide voluntary best practice advice on how businesses can make origin labeling more informative for consumers. In the part of Best Practice Advice, which is not mandatory, FSA suggests that it wouldn't be appropriate to describe a rabbit pie made in the UK from imported rabbit as “Produced in the UK”, and recommends to describe as:

“Made in Britain from imported rabbit”, or

“Made in Britain from French rabbit”, or

“Made in Britain from rabbit sourced from the EU” (i.e. from a number of different countries from throughout the European Union).

More generally, FSA suggests that in cases where manufacturers describe a product as “Produced in the UK” then the origin of any imported ingredients that characterize the product should be given.

Some developed countries outside the European Union have also already started legislation on the origin of food ingredients for the administration in their national markets.

Japan

Japan pays close attention to the origin of ingredients. Since 2006, the Japanese Quality Labeling Standard for Processed Foods, promulgated by the Ministry of Agriculture, Forestry and Fisheries in 2000 and reviewed several times in following years, has required an indication of the place of origin of the main ingredients for 20 categories of processed food; the concept of “main ingredient” refers to a fresh food that is used in the production of a processed food and has the largest percent by weight, and of which the weight is not less than 50% of the total ingredients. The Japanese Labeling Standard (last revised in 2008) clearly explains that the place of origin of main ingredients produced in Japan should be marked “domestically produced” or “name of region or other generally known name of place” or “water area” (only for marine products), while “country-of-origin” should be labeled on imports.

In other countries, the statement on the ingredient origin can be made on a voluntary basis. For example:

Australia

The Australian Competition and Consumer Act 2010 provides detailed rules on determining the country-of-origin. A food can be claimed as “Product of” or “Produce of” or “Produced in” a country when the country-of-origin of each significant ingredient is that country and all processes involved in the production or manufacture occur within that country. It is encouraged in Australia to make qualified claims about the origin of ingredients so as to provide more complete information to consumers. When a product satisfies the criteria for labeling “Made in Australia”, the label can indicate: “Made in Australia from local and imported ingredients” if the food is predominantly made from local ingredients, or “Made in Australia from imported and local ingredients” if it is predominantly made from imported ingredients.

Canada

The “Guide to Food Labeling and Advertising”, issued by the Canadian Food Inspection Agency (CFIA), provides that the following voluntary claims can be made

for foods that undergo the last substantial transformation in Canada. When all ingredients of a food are sourced from outside of Canada, "Made in Canada from imported ingredients" can be stated on the label; when a food contains both domestic and imported ingredients, "Made in Canada from domestic and imported ingredients" can be claimed, regardless of the percentage of Canadian content in the product.

The forms of statement on ingredient origin applied in Australia, Canada and United Kingdom can be summarized as the following four types:

- (1) "Made in (country name) from imported ingredients" if the ingredients of a food are sourced from outside the country.
- (2) "Made in (country name) from domestic and imported ingredients" if a food contains both domestic and imported ingredients.
- (3) "Made in (country name) from imported and domestic ingredients" if it is predominantly made from imported ingredients.
- (4) "Made in (country name) from (ingredient producing country name) (primary ingredient name)".

The legislative provisions on the statement of ingredient origin were promulgated in the aforementioned countries for the administration of their domestic markets, but not for foods exported to other countries. When a food made from "imported ingredients" is exported to a third country, the above expressions (1), (2) and (3) would be confusing to consumers in the third country, while the expression (4) provides clear information to consumers.

In general, the legislative policy on ingredient origin aims to provide accurate information to consumers, and also has the purpose of promoting national food industry and using domestic ingredients because consumers prefer foods made with domestic ingredients. However, in practice the interests of manufacturers must be also considered. The British FSA once said "*if the place that is declared as the origin of the food (according to the principle of last substantial change) is not the same as the place of origin of its primary ingredients, in order to not be misleading it may be necessary to*

provide information on the origin of those ingredients”. Then, in its country-of-origin labeling guidance (last edition) FSA comments: *“It is clear that many consumers want more information on the origin of meat ingredients in meat products, and in the Agency’s consumer research the ingredients in dairy products also score highly in this respect... Providing information on the origin of all ingredients in all products would be disproportionately burdensome for industries, and would risk overloading the label with information that is not seen as important by consumers.”* FSA advises that for the foods where the main or characterizing ingredient origin differs from stated product origin, the provision of ingredient origin information is problematic when ingredients are sourced from variable origins to take into account cost and availability.

For foods traded internationally, the statement on country-of-origin should be made according to the importing country's law. So far few countries have formulated regulations related to the country-of-origin of the main ingredient used in a food imported from another country. A particular example is found in **Indonesia**: in the pre-market safety control system, which is the strongest in Indonesian food legislation, the producer or importer must register and comply with mandatory administrative requirements and technical requirements, one of which is to indicate “additional information for certain ingredients”. In addition to the ingredients suspected to be originated from animals (e.g. fat) or from GMOs (e.g. soybean), the country of origin information on milk, egg powder, and ammonium bicarbonate must be stated. If a product fulfills the necessary requirements, it is given a registration approval number and becomes eligible for retail markets. However, on the food label it is required to indicate the name and address of the company that produces or imports the food into Indonesia and the registration number of the food, but the indication on the country-of-origin is not required. In other words, the indication on the country-of-origin of the particular ingredients doesn't intend to provide accurate information to consumers, but is for official control on food safety.

In recent years **South Africa** made great efforts through legislation to better enforce food safety and ensure consumer protection. A significant law is the new Regulations Relating to the Labeling and Advertising of Foodstuffs published on 1 March 2010 by the Minister of Health in terms of the Foodstuffs, Cosmetics and

Disinfectants Act 1972, which came into effect on 1 March 2012. This law requires that the country-of-origin of a foodstuff must be declared on the label in two different ways according to the origination of the main ingredients:

- (1) *"Product of (name of country)" if all the main ingredients, processing and labour used to make the foodstuff are from one specific country;*
- (2) *"Produced in (name of country)", "Processed in (name of country)", "Manufactured in (name of country)", "Made in (name of country)" or similar words when a foodstuff is processed in a second country which changes its nature.*

In addition to this requirement, the words "*Packed in (name of country)*" may be indicated on the label.

Under such a provision, consumers can know if a food product imported from another country is wholly produced in the country or made from primary material produced in another country, or produced and/or manufactured in a country and packed in another country.

This regulation in South Africa on the country-of-origin of imported food includes more detailed general rules than those of other countries that I have analyzed (the others have similar definitions but for the administration of foods manufactured or packed in their own territory). However, it does not require a statement of the country-of-origin of main ingredient.

I have also studied labeling regulations of some other developing and emerging countries such as China, Ghana, India and Malaysia. Comparing the food laws in various countries, I make the following comments:

- The developed countries (Australia, EU, Japan, USA, etc.) have already started legislation on the origin of food ingredients, but all focus on their national markets (community market for EU) but not the international market (when a finished food product is exported to another country).
- Developing and emerging countries (with exception of South Africa) formulate food laws focusing on the issue of safety, but the information on the origin of food ingredients is not yet considered important for consumers. A significant

example is that in Indonesia the food pre-market registration system requires a statement on the country of origin of milk and egg powder used as ingredients, but such a statement is not required on labels.

1.4 A Case Study: From Misinformation to Market Failure

I began to pay attention to the issue of “Country-of-Origin” labeling when I noted the misinformation about the origin of the blend of extra virgin olive oil exported from Italy to China (my country of origin). In February 2011 I saw in several supermarkets in Guangzhou (China) some olive oils labeled in Chinese “Country-of-origin: Italy”, but in Italy were commonly known as “olio comunitario (Community oil)”, mainly originating from Spain or Greece. After I returned to Italy, I discussed the trend of increasing consumption of olive oil in China with an Italian consultant who requested information about the Chinese market. He then asked two well-known companies to send me information regarding 100% Italian extra virgin olive oil and that of “Community oil”. The price of 100% Italian is about 20% higher than that of community oil. Regarding the indication of the country-of-origin of “community oil”, which was a blend of Greek or Spanish oil (majority) and Italian oil (minor percent), the head of an Italian company said to me that he would prefer to label “Countries of origin” as “Greece and Italy” or “Spain and Italy” according to the EC Regulation, but the problem was that Chinese importers didn't accept multiple country-of-origin labeling and the blend of olive oils bottled in Italy could not be sold in the Chinese market if its country-of-origin was marked as “Greece” or “Spain”.

According to Chinese Regulation on Non-Preferential Rules of Origin, the *ad volorem* criterion cannot be applied to determine the country-of-origin of a blend of vegetable oils (including olive oil). If the preferential rules of origin undersigned by China with some other countries are applied, the “bottling country” of a blend of olive oils could be determined as the “country-of-origin” when the total cost in the bottling country (the value of the olive oil contributed by the country and the cost of bottling) is not lower than a certain percentage. For example, in the Asia-Pacific Trade Agreement

the originating status can be conferred if the total cost of non-original materials is lower than 55% of the FOB price of the finished product.

Because there is not any preferential agreement between China and Italy (European Union), the *ad valorem* criterion cannot be applied to determine the country-of-origin of the olive oil bottled in Italy. When the “Italian olive oil” partially produced in Italy was imported in China with the label in Chinese stating “Country-of-origin: Italy”, the Chinese importers may have understood that it was not a pure Italian olive oil, however they chose the blend – but not 100% Italian olive oil – because the price of the blend was lower. Evidently, there was a gap of information about the exact composition of the olive oil blend between the Italian exporters and the Chinese importers, while Chinese consumers were misinformed by the origin labeling. From the perspective of information economics, the asymmetric information about the country-of-origin allows the importers of olive oil blends to take advantage of consumers who can't distinguish Italian olive oil from the Community blend.

At the end of 2011, Chinese media exposed the gravity of the problem related to country-of-origin labeling of olive oil blends imported from Italy. Soon after the publication of the article “*Il business dei furbetti dell'olio - così l'extravergine taroccato arriva sulle nostre tavole (The business of scoundrels of oil – leads to fake extra virgin on our tables)*” in the famous Italian newspaper “*La Repubblica*” dated 23 Dec. 2011, several Chinese newspapers reported that “about 80% of Italian olive oils are not produced in Italy...” For many Chinese consumers the mislabeling on the country-of-origin was a commercial fraud.

The misinformation about the “Community oil” bottled in Italy also resulted in a negative impact on the business of real Italian extra virgin olive oil traded in the Chinese market. In the spring of 2012, the extra virgin olive oil “100% Italian” imported by a company in Guangzhou was declared by an inspector of the Guangdong Quality Inspection and Quarantine Bureau as one of the two good olive oils in the Guangzhou market, while the qualities of other olive oils were not good (he told this to my brother as a friend but not in an official communication). But the manager of the import company said the people still doubted the origin of “100% Italian” olive oil and new clients always asked her: “Is your olive oil really produced in Italy?”

I imagined the discovery of misinformation about the origin of olive oil blend bottled in Italy would produce a negative impact on the import of extra virgin olive oil from Italy to China, while imports from Spain and Greece could increase. Recently, the statistical data have confirmed this reality.

Table 1-1. Imports of virgin olive oil (tariff code 150910 in HS 2007) into China

(Source: United Nations Commodity Trade Statistics Database – UN Comtrade)

Partner	2010		2011		2012	
	Trade Value (US\$)	Net Weight (kg)	Trade Value (US\$)	Net Weight (kg)	Trade Value (US\$)	Net Weight (kg)
World	76,181,369	18,430,900	131,780,109	30,320,620	151,947,773	39,273,845
Italy	25,637,636	6,501,391	29,759,609	7,155,109	29,662,879	7,704,603
Greece	5,062,237	1,054,455	8,079,506	1,639,579	11,579,834	2,495,978
Spain	36,037,942	8,876,451	77,466,546	18,194,453	92,094,439	24,774,842

Table 1-2. The market share of virgin olive oil in China

(calculated according to the trade values in Table 1-1)

Partner	2010	2011	2012
World	100%	100%	100%
Italy	33.65%	22.58%	19.52%
Greece	6.64%	6.13%	7.62%
Spain	47.3%	58.78%	60.61%

The data in Table 1-1 show that in 2011 the total import value of virgin olive oil in China increased by 72.9% from the previous year, and all imports from Italy, Greece and Spain increased. In 2012 the total import value in China increased by 15.3%, but the value of imports from Italy declined 0.33%, while that from Greece increased 43.3% and from Spain increased 18.9%. The decline of imports from Italy into China in 2012 was caused by Chinese consumers' learning that the majority of olive oil labeled "Country-of-origin: Italy" were not a real Italian product, but were "adulterated" with olive oil from other countries.

When a food is traded internationally, it is easier to cheat consumers with inaccurate or misleading information on its country-of-origin. But when the truth comes out, market failure occurs immediately.

Chinese consumers were misinformed possibly due to these reasons: a) Chinese importers of “Community olive oil” wanted to get higher profits by using the label “Italian olive oil”; b) China's regulation on the rules of origin is imperfect and not harmonized with that of the European commission (specifically regarding the labeling of olive oil).

However, although many Chinese consumers know the olive oils imported from Italy probably are not produced in Italy, the Community olive oil blends bottled in Italy are continually labeled in Chinese “Country-of-Origin: Italy”.

In order to expand this case study, I visited two olive oil mills and two bottling companies in Italy. There are two business models:

- (1) **Small mills** produce olive oil from olives grown in Italy and supply only authentic Italian extra virgin olive oil. Their products are not present in Italian supermarkets; the majority of Italian consumers don't know their brands. They sell extra virgin oil to some Italian families, restaurants, bottling companies and export to some foreign countries.
- (2) **Big trading companies** buy olive oil from the small mills in Italy and from Spain and other countries, make blends of olive oils and bottle them, and then sell “100% Italian extra virgin olive oils” and the blend of Community olive oils. Their products occupy the Italian supermarkets; their brands are well-known.

One of the bottling companies has already developed its business in Chinese markets. In the 2013 it exported more than ten containers to China. Another moderately-size bottling company has exported a few containers to China.

Two oil mills are also interested in developing their business in the Chinese markets. For each type of extra virgin olive oil they can tell the olive grower and the exact area where olives grow. One of them produces top quality olive oils and has won many worldwide prizes, such as GOUTTE D'OR in France, GOLD MEDAL AWARD

in Los Angeles International Extra Virgin Oil Competition, GOLD MEDAL during the fair SIAL - OlivAsia in Shanghai. Its products are sell well in some developed countries, but strangely after the fair in Shanghai this olive oil mill could not develop their business in the Chinese market. The owner of this famous but small mill begun his conversation with me saying: “They who sell low-quality oil make more money...”

1.5 Academic Research on COOL

In recent years, many studies on COOL have been conducted. According to their research subjects, I cluster the most interesting works in the following categories:

(1) Value of COOL information for consumers

- **Ward, R., Bailey, D.V., Jensen, R. (et al 2005)**

Product: Beef

Finding: The information about traceability and country of origin is valuable to consumers.

- **Philip Davies (et al, 2010):**

Product: Beef

Findings: The country of origin label is an important indicator for consumers of both the quality and safety of food. A key feature of the country of origin labeling is the traceability of food products, particularly their origin, production and distribution histories.

- **Yong C.K. (et al, 2010)**

Product: Beef

Findings: Consumers knowledgeable about beef placed a high value on marbling when the country-of-origin was known, while the country-of-origin label had little impact on the value of marbling for less knowledgeable consumers.

- **Tonsor, G.T., Schroeder, T.C., Lusk, J.L.(2012)**

Product: Beef

Findings: Consumers value meat products labeled 'Product of North America' approximately the same as 'Product of United States'. The results suggest that a transition from one label to the other is equally satisfying for the consumer and also less costly for processors and more acceptable to trade partners.

(2) Origin labeling and consumers' choice

- **Kimura, A., Kuwazawa, S., Wada (et al) (2011)**

Product: Soy product (natto)

Finding: Overall purchase intention was affected by country of origin, attached seasonings, and price; those attributes accounted for 81.0%, while the sensory attributes of the product accounted for 19.0% of purchase intents.

- **Menozi, D., Mora, C., Faioli, G. (2011)**

Product: Milk

Findings: Italian country-of-origin label adds value to and increases consumer choice of producer's and retailer's own brands.

- **Ivanković, A., Kelava, N. (2012)**

Product: Animal products

Finding: Consumers in Croatia prefer food products produced within national agricultural production systems, and show a certain reserve towards imported food, especially from overseas countries.

- **Chern, W.S., Chang, C.Y. (2012)**

Products: Olives, oolong tea

Findings: The estimated premiums are 67.5%, 84.7% and 99% for Taiwanese products over their alternatives of Chinese olives, Chinese oolong tea, and Vietnamese oolong tea, respectively. Enacting and rigorously enforcing a COOL law would increase

economic benefits to consumers in Taiwan and put the imported products on a level playing field.

- **Peterson, H.H., Bernard, J.C., Fox, J.A., Peterson, J.M. (2013)**

Products: Rice, pork

Findings: During experimental auctions, in the first round based only on taste, U.S., Japanese, and third country products were valued similarly; in a second round with information only on product origin, bids for domestic products increased while bids for U.S. and other foreign products declined.

- **Klößner, H., Langen, N., Hartmann, M. (2013)**

Product: Pepper

Finding: Consumers are not willing to pay a significant higher price for COO labeled pepper.

- **Lim, K.H., Hu, W., Maynard, L.J., Goddard, E. (2013)**

Product: Beef

Finding: U.S. consumers prefer domestic-originated beef to imported beef, and are willing to pay significant amount for BSE-tested, traceability-enabled, and tenderness-assured beef.

(3) COOL and food quality

- **Author: Loureiro M.L. (et al, 2007)**

Product: Beef

Findings: The indication of origin may only become a signal of enhanced quality if the source-of-origin is associated with higher food safety or quality.

- **Wang, H.H., Zhang, X., Ortega, D.L., Olynk Widmar, N.J. (2013)**

Product: Seafood

Findings: Many U.S. consumers think the country of origin label (COOL) is extremely important but they don't check the label when purchasing. They trust Canada much more than Indonesia, Ecuador, Thailand, China and Vietnam, and quality certification labels help to improve trust with Indonesia and Ecuador but not much on the other countries.

(4) Effect of COOL on trade

- **Johnecheck W.A. (et al, 2010)**

Product: Tomato

Findings: Employing a low to mid-range consumer preference scenario for U.S. over Mexican tomatoes reveals that COOL has the potential to reduce the value of Mexican tomato exports to the United States by 14% to 32% and total agricultural exports by 1% to 3%.

- **Author: Matsumoto S. (2011)**

Product: Beef

Findings: The impact of COOL on beef markets varied widely among the countries examined. While the market shares of Australia, Canada, France, and Netherlands have expanded as a result of the implementation of COOL, those of Germany and Ireland have contracted.

- **Plastina, A., Giannakas, K., Pick, D. (2011)**

Product: Fresh apple

Findings: The market and welfare effects of mandatory COOL are shown to be case-specific and dependent on the labeling costs at the farm and retail levels, the strength of consumer preference for domestic products, the market power of retailers, the marketing margin along the supply chain, and the relative costs of imported and domestic products. Domestic producers are the most likely beneficiaries of mandatory COOL, followed by domestic consumers.

- **Rabbani, A.G., Dey, M.M., Singh, K. (2011)**

Product: catfish

Findings: U.S. imports from Vietnam, China and Thailand are significantly affected by variables, including country of origin and catfish labeling.

- **Lombardi, P., Caracciolo, F., Cembalo, L. (et al) (2013)**

Product: Early potatoes

Finding: A country-of-origin labeling (COOL) policy - if appropriately implemented - could make the Italian “early potatoes” competitive once again.

- **Jones, K.G., Wozniak, S.J., Walters, L.M. (2013)**

Product: Uncooked frozen, uncooked fresh, and precooked salmon

Findings: The demand for fresh salmon may be linked to the quality signal associated with COOL. COOL had no significant impact on overall consumer demand for the three products.

In reviewing the findings of the various research, I make the following observations:

- It is common view that the COOL is useful for protecting consumers' interest by better informing them when they buy foods.
- Generally the COOL can favor the sale of local products and would have a negative impact on international trade.

Among the existing literature, all academic works related to COOL of foods were published in recent years, and the products studied were beef and other single ingredient foods (fruit, rice, fish, etc.) produced in one country. I have not found any academic publication on the COOL of the main ingredients of processed foods made in two or more countries. For my research the most interesting reference about origin labeling of main ingredients is the “Country-of-origin labeling guidance” issued by the British Food Standards Agency (FSA) for its national market.

1.6 Research Objectives

My research focuses on the international trade of processed foods that are produced with ingredients from one or more countries different than the country of final processing, and which are then exported to other countries. This is a new topic in academia.

For a processed food traded internationally I hypothesize the following business roles:

- (1) **Country A:** it produces the primary material for the food.
- (2) **Country B:** it handles the final processing of the food, with the primary ingredient imported from Country A.
- (3) **Country C:** it imports the finished product from Country B.

In addition to the blend of extra virgin olive oils produced in member countries of the European Union, I am very interested in analyzing the country-of-origin labeling of the following products:

- Coffee (in particular soluble coffee) sold with a famous brand that belongs to a country that does not produce coffee beans.
- Tomatoes used in the production of tomato puree.
- Fruit used in the production of fruit juice.
- Cocoa used in chocolate.
- Shrimps shelled and frozen in a country that isn't where they are farmed or fished.
- Cod fillets cut and frozen in a country that isn't where they are farmed or fished.
- Pork produced in a country and used in another country for the production of ham or salami.

As a starting point I have the following fundamental observations:

- (1) Consumers have the right to accurate information on the origin of products that they eat and drink, including the place of production of the primary ingredients.

- (2) The indication of the "country-of-origin" of the main ingredients of a processed food can increase consumers' awareness of the world we live in, favoring environmental protection and sustainable development in the producing country, and supporting the protection of its economic identity.
- (3) Both the producing country of primary material and the final processing country of finished goods should be indicated on the label, regardless of which country would be considered the country-of-origin from the viewpoint of trade policy.

The prime objective of this research is how to mark the country-of-origin of the foods produced in two or more countries so as to provide accurate information to consumers. Moreover, because COOL is a controversial issue in trade policy, I want to study it in a wide perspective, particularly about the following topics:

- Would COOL really favor protectionism?
- Which products should be labeled with the origin information of main ingredients?
- What should be the definition of "main ingredient"?
- Could COOL be substituted with the indication of geographic region (a group of countries, e.g. European Union, ASEAN)?
- What will be the potential impact of the main ingredient origin statement on international trade flows and production systems in various countries?
- Should COOL be voluntary or mandatory?
- Is it possible to establish a global COOL standard for foods?

The final goals of this research are:

- (1) To define criteria for marking country(ies) of origin so as to provide accurate information to consumer.
- (2) To estimate the effect of COOL of main ingredients of processed foods on international trade.
- (3) To provide references for the formulation of policy on COOL of main ingredients.

Chapter 2

Delphi Study on Country-of-Origin Labeling for Foods

Research Method and Design

On the basis of the case study on the misinformation about the origin of the extra virgin olive oil blend exported from Italy to China, I used the Delphi method to conduct qualitative and systematic research on COOL, aiming to gather opinions and perspective from experts in food labeling and food policy in various countries.

2.1 Research methodology - Delphi Method

The Delphi method is a controlled debate among experts who answer questionnaires in two or more rounds. Usually the coordinator sends an invitation and the introduction of the study to persons that might be interested in the discussion and are likely to contribute valuable ideas. Those who accept the invitation form the Panel of Experts, starting in the first round. After each round, the coordinator prepares a report on the previous round with anonymous summaries of the participants' opinions. The experts may revise their original answers after reading the opinions of other participants. In such a process, the discussion on a topic may converge towards a “consensus”; or if this does not occur, the reasons of divergence become clear.

Most Delphi studies use a panel of 10 to 50 people. Because the number is small, the participants don't represent the general population, but only particular groups they belong to.

The Delphi method is applied in forecasting and policy-making.

How to measure consensus is not clearly defined. A previous study suggested a criterion for agreement of 67% for policy issues. However, the Delphi method is not a mechanism for decision-making; it is an instrument for the analysis of policy issues. The primary objective of Policy Delphi is not to reach a consensus, but estimate the desirability and feasibility.

I used the Delphi method to study country-of-origin labeling of processed foods because this is a policy issue that can affect economic development and international trade.

The main goals of this Delphi study are as follows:

- (1) To assess the desirability of a mandatory COOL policy on main ingredients, by exposing all the pro and con arguments.
- (2) To examine my detailed ideas about multiple countries of origin marking for processed foods.
- (3) To compare, with experts in various countries, my perspective on the effect of the COOL of main ingredients on national production and international trade.

2.2 Research Design

This Delphi study on country-of-origin labeling was conducted in three rounds. In total there are 19 topics: 10 topics in the 1st Round, 6 topics in the 2nd Round and 3 topics in the 3rd Round.

Table 2-1. Structure of the Delphi study on COOL

Phase	Main Arguments
Round I	<ul style="list-style-type: none"> • Discussion on the possible protectionism of COOL • Necessity to label the origin of primary ingredients • Comparison between country-of-origin and region-of-origin • Origin marking of a mixture with similar ingredients • Impact of the COOL of main ingredients on international trade
Round II	<ul style="list-style-type: none"> • Advantages and disadvantages of mandatory COOL of main ingredients and those of voluntary COOL • Format of the multiple countries-of-origin marking • Assessment of the necessity to label the origin of main ingredients in various processed foods

	<ul style="list-style-type: none"> • Reliability of COOL information • Sellers' business attitudes and consumers' imperfect information
Round III	<ul style="list-style-type: none"> • General regulatory principle for COOL policy • Definition of main ingredient • Desirability for a worldwide standardization of the country-of-origin marking

Questionnaires of the three rounds were developed around the arguments listed in the Table 2-1.

Round I

The 1st Round mainly focused on the possible protectionism of COOL, the necessity to label the origin of primary ingredients, and the potential influence of the COOL of main ingredient on international trade flow.

Topic 1

Consumers have the right to accurate information on the origin of food, but could the indication of "country-of-origin" of primary materials also increase consumers' awareness of the world we live in?

Topic 2

Country-of-origin labeling (COOL) was once criticized as a trade protection measure, but I think the effects of COOL of food ingredients would depend on the type of product and the availability of local products in different countries. Would COOL favor protectionism? Considering that many food ingredients are produced in developing countries, could the COOL of primary ingredients have a positive impact on the developing countries?

Topic 3

In recent years the COOL of main ingredients has been introduced in some countries (e.g. Italy, Japan, Australia) for certain products sold in their domestic markets. If COOL for main ingredients is not yet required in your country, do you think the provision on COOL of main ingredients will be formulated in the near future? Or, if your country already requires the COOL of main ingredients, do you think the provision will be applied to more products in the near future?

Topic 4

Do you think the country-of-origin of ingredients should be stated for certain food products that are made with primary materials produced in a country different from that of the final processing country?

(some product examples: coffee, chocolate, tomato puree, fruit juice, shelled and frozen shrimps, cod fillets, ham, salami, etc)

Topic 5

Would the statement on the origin of primary ingredient produced in Country A lower the image of the finished product made in Country B?

Please provide examples of products and countries.

Topic 6

When a product made in two member states of the European Union is exported to a country outside of the European Union, the indication of origin “European Union” is adequate for applying trade measures (e.g. calculating the customs duty), but for foods do you think the origin countries (member countries of the European Union) should be indicated?

Topic 7

For a food product that is a mix of similar ingredients produced in Country A and Country B and is packed in Country B, do you think that both countries should be marked “countries of origin” or that the country-of-origin could be only one and should be determined according to *ad valorem* rule (value-added criterion)?

Topic 8

In various markets the indication of “European Community extra virgin olive oil” is very different from that of “Italian extra virgin olive oil”, while a survey showed that for the US population meat products labeled “Product of North America” is almost the same as “Product of United States” (Tonsor et al, 2012). Which factors should be considered for substituting the “country-of-origin” with “geographic region of origin”?

Topic 9

For commercial activities to state the origin of ingredients means to increase transparency. Will this influence trade flows among Country A (producing country of primary ingredient), Country B (where the final transformation undergoes) and Country C (consumer country)? Specifically, will trade between Country A and Country B decrease? Will trade between Country B and Country C decrease? Will trade between Country A and Country C increase?

Please explain your opinion with examples of products and countries.

Topic 10

In multilateral international trade, how will the ingredient origin statement influence the businesses of:

- Export from Country A (producing country of primary ingredient)
- Manufacture in Country B (where the last transformation occurs)
- Supply in Country C (consumer country).

Please state your perspective and explain why with examples of food products.

Round II

The 2nd Round aimed to discuss mandatory or voluntary COOL, how to mark the country-of-origin of a food produced in more than one country, and how to guarantee the reliability of information about country-of-origin.

Topic 11

Do you agree that COOL of main ingredients should be made on a voluntary basis?

What will be the potential problems if the COOL of main ingredients is mandatory?

What will be the advantages and disadvantages of a voluntary system?

Topic 12

When the following products are made with primary ingredients produced in a country different from that of the final processing, please indicate the degree of necessity to state the country-of-origin of main ingredient:

- A. Olive oils for blends of olive oils;
- B. Coffee beans for roasted coffee;
- C. Green tea leaves for black (fermented) tea;
- D. Tomato for tomato puree;
- E. Fruit for fruit juice;
- F. Cocoa for chocolate;
- G. Wheat seeds for flour;
- H. Flour for noodles;
- I. Fresh shrimps for shelled and frozen shrimps;
- J. Fresh cod for frozen cod fillets;
- K. Pork for ham or salami;
- L. Beef for hamburgers
- M: Chicken for chicken nuggets

Degree of necessity:

0 - Absolutely not necessary

1 - Not necessary

2 – Not very necessary

3 - Necessary

4 - Very necessary

Note: This closed-answer questionnaire is designed for qualitative analysis related to rules of origin. Please respond for each product in the following way: Product code – Degree (for example: A – 3, B-2, etc).

Topic 13

According to non-preferential rules of origin, a product can only have one country-of-origin, which is the country of the last substantial transformation, while for many consumers the “country-of-origin” means the country where the primary ingredient is produced. Do you think that multiple countries of origin labeling which specifies the producing country of the main ingredient and the manufacturing country of the finished product (e.g. chocolate is labeled: “*Made in Switzerland from Ghanaian cocoa*”; or, “*Producing country of cocoa: Ghana; Manufacturing country of chocolate: Switzerland*”) could resolve the issue of misleading consumers?

Topic 14

Marking “100% (Country Name) (Products Name)” or “Product of (Country Name)” (for example, 100% Italian Extra Virgin Olive Oil) is an active way to distinguish typical foods of a country from the foods manufactured in the country from ingredients produced in other countries. Do you think this kind of declaration should be supported by a certificate of traceability (ISO 22005)?

Topic 15

For a food made in Country B with the main ingredient from Country A and exported to your country, in order to be sure that the information on the label is true, do you think the certificate of origin issued by Country B should state the originating country of the main ingredient and provide an authenticated photocopy of the certificate of origin of the main ingredient issued by Country A?

Topic 16

Every country requires that the foods imported from other countries must be labeled with information in the official language of their own country (e.g. a food imported into China must have a Chinese label), so that the local consumers can easily understand the information on the label. Therefore, when a food is exported from Country B of Language X to Country C of Language Y, the information panel of the label (usually the back label for bottled products, e.g. olive oil, wine) must be printed in Language Y according the law of Country C. Moreover, when the importer's name and contact

information is required in Country C, the label in Language Y must be customized for each importer. In other words, the customization of the label is essential for concluding international trade operations of pre-packaged foods. As a matter of fact, in the majority of cases, the statement on the country-of-origin of the main ingredients used in the production of pre-packaged foods for a certain importer doesn't add any additional labeling cost to the exporter, but could reduce the exporter's "game space" (flexibility) related to ingredient origin. Do you think the exporters' and importers' business attitudes would be determining factors for the statement of origin when a food is traded internationally? Would the COOL of main ingredients be useful for limiting the businesses based on the "imperfect information" of consumers?

Round III

The main objective of the 3rd and last round was to comment on regulatory principle proposed for the formulation of policy on the COOL of main ingredients. The definition of main ingredient was also discussed. Moreover, the experts were invited to provide suggestions for improving the Codex standard about COOL.

Topic 17

A voluntary COOL system has advantages and disadvantages, and its disadvantages could be remedied by mandatory COOL. I think an integrated voluntary/mandatory system could be the right solution. Since the markets in different countries have different supply systems, they need different COOL regulations. If a country does not experience commercial fraud based on false country-of-origin statements, its market does not demand mandatory COOL of ingredients, so its COOL of the main ingredient can be voluntary. If a country does endure commercial fraud related to the country-of-origin statement, its market needs new regulations, so mandatory COOL of the main ingredient should be introduced and applied to relevant food products in order to protect the interests of consumers and honest producers. Therefore, I propose a general regulatory principle for the formulation of a policy on ingredient origin statement: **COOL of the main ingredient is generally made on a voluntary basis, but should be**

mandatory for the foods that could be subject to fraudulent practices on the origin statement. What do you think of this proposal? Could it be suitable for the formulation of COOL policy on the main ingredient in your country?

Topic 18

For the formulation of the policy on COOL of a main ingredient, the definition of “main ingredient” is fundamental. In Japan’s COOL law and the possibly upcoming EU COOL regulation, the ingredients considered are those that “constitute over 50% of a food”. Do you agree with the threshold of “50%” or do you prefer another percentage?

Do you think “main ingredients” should also include the characterizing ingredient even when its percentage is lower than 50% (e.g. cocoa in chocolate; almonds in a confectionery with a picture of almonds on its packaging)?

Topic 19

The Codex Stan 1-1985 is the global reference for food labeling. Regarding the country-of-origin it states: “The country-of-origin of the food shall be declared if its omission would mislead or deceive the consumer. When a food undergoes processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country-of-origin for the purposes of labeling.” The statement on the place of origin of the main ingredient would lessen misleading consumers and conform to the spirit of this standard. Do you think that in the future Codex should set detailed criteria for marking the country-of-origin so as to standardize worldwide origin labeling on the main ingredient?

Please make comments and provide your input.

2.3 The Panel of Experts

In order to form the Panel of Experts, I sent 233 invitations to representatives of the following types of organizations in 65 countries.

A) Academic (university, research institute)

- B) Government departments (legislative body for food, public agency for food safety control, customs, etc.)
- C) Association of food producers
- D) Consumer association

An introduction about this Delphi study and the 1st Round questionnaire were attached to the invitation.

(1) Academic (university, research institute)

Experts invited are mainly authors who have published papers on country-of-origin and food labeling or on food traceability. Among the 68 scholars contacted, only 9 are in emerging and developing countries because COOL is not yet an academic subject in the majority of emerging and developing countries. Only one of the scholars who accepted my invitation is in an emerging country, while 12 scholars are in developed countries. Another scholar in a developed country would like to participate in the Delphi study, but he was too busy to do it as schedule. Other five scholars answered that this Delphi study is very interesting, but they should decline my invitation because their research areas are not COOL or changed in the recent years..

(2) Government departments (legislative body for food, public agency for food safety control, customs, etc.)

I sent 110 invitations to representatives of government departments who took part in the 41st Session of the CODEX Committee on Food Labeling in July 2013 and the 39th Session of the CODEX Committee on Food Labeling in May 2011. Among the 110 government officials, only 8 accepted my invitation, and 7 politely declined my invitation because they are not COOL experts, or because they could not participate in the Delphi study (COOL is a political issue in the international trade scene).

(3) Association of food producers

I sent invitations to directors, managers or presidents of 43 associations of producers in various sectors (dairy products, beverage, olive oil, frozen food, seafood, cocoa, coffee, pasta industry, fruit juice, etc.); 33 of them are in developed countries and

10 of them are in developing countries. One association immediately replied that they are too busy to participate in the research. A month later another association asked me some questions (when will I publish my Ph.D dissertation, who will have access to the results of this research, etc.), however they didn't accept my invitation to participate. Reasons for non-participation could be the following: 1) Some industries are generally more opposed to COOL than in favor of COOL; 2) The associations of producers in developing countries know little about the issue of COOL and the company brand or country brand (country-of-origin) is not yet important for their business; 3) The majority of the directors or presidents of the associations of producers are not familiar with the Delphi method as an academic research instrument.

(4) Consumer association

I sent invitations to 12 associations of consumers in developed countries and 5 replied affirmative. I have also tried to look for consumer associations in developing or emerging countries, but I don't know who might be interested in the issue of country-of-origin labeling for foods because it seems to me that they (e.g. the lawyer team of China's Consumer Association) are busy dealing with commercial fraud.

In total, there are only 26 experts in 15 countries who accepted the invitation to participate in this Delphi study on COOL for foods.

Table 2-2. Information on the invitations for participating in the Delphi study on COOL

Type of Organization	Invitations sent	Experts who have accepted the invitation	Percent of acceptance
Academic	68	13	19,1%
Government department	110	8	7,3%
Association of food producers	43	0	0%
Consumer association	12	5	41,7%
Total	233	26	11,2%

In order to facilitate communication and optimize timing, I constructed www.foodorigin.org to coordinate this Delphi study where participating experts can provide their answers to my questionnaire.

The experts who accepted the invitation were granted to access the web platform www.foodorigin.org by creating an account. The participating experts can log in the secure web site to respond to the questionnaire. They could declare own expertise as an economist or jurist or food specialist.

However, from 1st Dec. 2013 to 15 Jan. 2014, only 19 of the 26 experts had completed the 1st Round questionnaire. The reason that some people accepted the invitation but did not complete the 1st Round questionnaire after more than 30 days could be that it is not easy to answer the questions in a substantive way. This could also explain why only 11,2% of people accepted the invitation.

Table 2-3. Information on Expert Panel Members

Description		Number	Percent
Type of Organization	Academic	10	52,6%
	Government department	5	26,3%
	Association of food producers	0	0%
	Consumer association	4	21,1%
Type of Expertise	Economist	6	31,6%
	Food specialist	6	31,6%
	Jurist	0	0%
	<i>Not indicated</i>	7	36,8%
Level of development of the countries where experts live	Developed	14	73,7%
	Emerging	1	5,2%
	Developing	4	21,1%

Effectively **the panel of experts is composed of 19 members in 13 countries: Australia, Belgium, Chinese Taipei, Ghana, Italy, Japan, Malaysia, Morocco, New Zealand, Panama, UK, Uruguay and USA.** More information on the participating experts is indicated in Table 2-3.

Since none of the experts belong to “Association of food producers”, it is not possible to conduct research related to food producer associations. Since none of the experts indicated his / her expertise as “Jurist” and seven experts did not indicate their expertise, and because all six “Economists” are academics, it is difficult and unnecessary to compare the viewpoints of experts according to their type of expertise. Given that only one expert is in an “Emerging” country, in comparing experts' viewpoints “emerging countries” will be considered together with “developing countries”.

Table 2-4. Expert Panel Members in developed and developing countries

Type of Organization	Experts in developed countries	Experts in developing countries
Academic	9	1
Government department	1	4
Consumer association	4	0
Total	14	5

In addition to the Panel of Experts, the Review Panel consists of only one member who works in an American university. This review expert was selected on the basis of good collaborations with me in past years for editing economic, social and cultural publications.

The web platform is based on Drupal and has been configured so that each participating expert can express viewpoints by making comments on questions, but cannot view comments made by other experts. Only I, the supervisor and review expert can see all comments.

In each round, experts' opinions and comments were collected and aggregated in the following ways:

- Type of organization that experts belong to: academic – government department – consumer association.
- Level of development of the countries where experts live: developed – developing.

In the report of each round I compared their anonymous answers and highlighted the common and divergent points of view.

Differing from many Delphi studies that do not publish the names of participating experts, in my final report of this study (my Ph.D dissertation) the names of all the participating experts are listed in the “Acknowledgement”, as a signal of my heartfelt thanks to them.

Chapter 3

Delphi Study on Country-of-Origin Labeling for Foods

Round I

The questionnaire for the 1st Round was created with ten topics around the necessity of country-of-origin labeling of main ingredients and its potential influence on international trade. All ten questions are unstructured and open-ended, providing space for experts to include additional remarks.

The questionnaire for the 1st Round was sent to experts together with the introductions for this Delphi study.

Among the 19 experts who completed the 1st Round questionnaire, some did not provide substantive answers to all ten questions, however, each of them gave valuable comments to some questions. No response was rejected for the reason that the expert did not reply in a substantive manner to all questions.

In the following report on the 1st Round, I first list the substantive content from the comments of the panelists, and then I summarize the comments. I prefer to retain the original substantive comments because after reading the viewpoints of experts one can understand better the summaries that I make.

Question 1-1

Consumers have the right to accurate information on the origin of food, but could the indication of "country-of-origin" of primary materials also increase consumers' awareness of the world we live in?

15 participating experts agree that COOL of primary materials can increase consumers' awareness, while one doesn't think so. Three experts expressed their opinions only on the right to accurate information.

An academic said that clear COOL of ingredients can help boost trust and business in international food trade in today's world where consumers continue to be health conscious, and it is important in two cases:

- 1) In the case of fresh primary materials because of food poisoning and illnesses that have occurred as a result of international food trade. Good examples are the recent E-coli outbreak in Europe, which was related to bean sprouts, and bovine spongiform encephalopathy in beef in the US/Canada market.
- 2) The manufacturer would want to know the country of origin for the primary ingredients they are transforming into final products and listing under the List of Ingredients. While they may not indicate countries of origin for each ingredient, such information may become important in times of food safety problems (e.g. food ingredients can cause allergies or hypersensitivity in some consumers) when they may want to give consumers more details about the processed products involved.

Three experts from government departments made comments on the right to accurate information on the origin of food:

- In some cases it may be important to the consumer. For example, when the raw material is beef or milk the consumer should be able to know the origin of it. Also consider that usually the food label has a lot of information and this means that consumers do not read everything. Then we assess whether it is good to add more information.
- The right should be respected and we should seek always comply to the extent of the possibilities.
- It depends on the definition of accurate. Does accurate mean that it is correct (not misleading) or does accurate mean precise - that it is the actual country rather than a group of countries such as the EU.

All other substantive comments are listed in the following Table 3-1.

Table 3-1. Comments on Question 1-1

Type of Organization	Comments
Academic	<ul style="list-style-type: none"> • Consumers have a right to know where the food is coming from, how the food is produced, and what kinds of primary materials are used. Based upon this information, consumers can make their own decision. In the long run, COOL increases consumers' awareness regarding not only the product attributes but also environmental attributes such as organic, eco-labeling, sustainability, etc. • If information about country of origin for primary products is not currently provided, providing more information would of course change consumers' perception of products and awareness of how the food supply chain functions. • Country-of-origin labeling of primary materials could provide consumers with additional information about the international nature of food production, processing and distribution. • Any additional information on a product label can increase awareness of product flows, if the labels are actually read and understood. • Yes, but would be difficult to legislate. • I suppose origin labeling could increase awareness, but how many consumers would spend time reading labels of processed products listing 10 different countries of possible origins? More importantly, what would identifying ingredients back to origins cost the firm to track, segregate, and label? What consumer is willing or able to pay for all the added cost? • I agree consumers have the right to know the origin of food. In my opinion, the indication of COO of primary materials could increase consumers' awareness. For example, I'd like to know where ingredients of my favourite industrial cake (or other products) come from. • Yes, I agree with both of these points. If COO of ingredients is mandated, some consumers may become more sensitized to an issue that they might otherwise care little about. However, it would depend on the type of product. Much purchasing of food products is "low involvement", and the majority of consumers does not notice or care very much where ingredients originate.

<p>Government department</p>	<ul style="list-style-type: none"> • Civilization rests on the confidence that an individual's human basic rights will be respected by all, including the 'right to know' (right to information). This is because this right to information allows the consumer to make informed choices. Information on the packaging of food is how the manufacturer passes information about the product to the consumer. Based on the above, the indication of "country-of-origin" of primary materials will also increase consumers' awareness of the world they live in. And a good example is what was given in the preamble with chocolate made in Switzerland, but using cocoa produced from Ghana is indicated. This will definitely increase consumers' awareness about the country Ghana, which is a 'third world' or a developing nation, showing that irrespective of all the negative media propaganda given to African countries, consumers will get to know that still something good comes from Africa, more so a small country like Ghana. • In terms of increasing the consumer awareness, if that means improving their knowledge of geography, then yes, but if it refers to a better understanding of the supply chain, then no.
<p>Consumer association</p>	<ul style="list-style-type: none"> • COOL would provide consumers with information about the source of their food so it could potentially increase awareness of the global nature of the food supply, but this is likely a side benefit. • Any time we label where food comes from, regardless if it is primary materials or whole foods, it educates consumers. More can be learned about which places produce which foods and consumers can learn more about the countries of production. • In general, country of origin labeling could play a role in raising awareness of today's food system among the public. For those consumers (70% in the EU) who are interested in knowing where their food comes from, it would provide them with the information they are looking for but cannot find on most food labels at present. Most importantly, country of origin labeling would contribute to making our food system more transparent, from the farm to the fork. • Australian consumers are particularly interested in the country of origin of food because of a preference buying local, health issues, interest in

	<p>means of production, environmental and fair wage issues and cost of transportation. There appears to be less interest in the source of primary materials except where extraction involves exploitation of labor and land (particularly in developing countries) and environmental issues. However I do not think country of origin labeling would increase awareness of the world we live in.</p>
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Question 1-2

Country-of-origin labeling (COOL) was once criticized as a trade protection measure, but I think the effects of COOL of food ingredients would depend on the type of product and the availability of local products in different countries. Would COOL favor protectionism? Considering that many food ingredients are produced in developing countries, could the COOL of primary ingredients have a positive impact on developing countries?

The responses to Question 2 are very different. Some experts said COOL favors protectionism or could potentially be protectionist, while others have opposing opinions. There are also points of view between these two extremities. A distinctive comment is “It could be an externality”. All interesting answers are listed in Table 3-2.

Table 3-2. Main comments on Question 1-2 (Would COOL favor protectionism?)

Type of Organization	Comments
Academic	<ul style="list-style-type: none"> • COOL does not favor protectionism. It could be an externality. COOL lets consumers and SHOULD let consumers make decision on where their food comes from. • The consequence of COOL is dependent on consumers’ choice. If consumers prefer domestic products, it cannot be avoided. Should we call it protectionism? I do not think so. • It is hard to draw one simple conclusion globally. In many cases I think those pushing for COOL to be mandatory are doing so to impose

	<p>protectionistic trade barriers. In other cases, some groups are pushing for COOL (whether voluntary or not) to simply increase transparency.</p> <ul style="list-style-type: none"> • COOL would potentially favor protectionism. • Yes it would favor protectionism. You can see it currently with COOL for red meat in the United States. The rules are designed to increase costs for sourcing animal to Canada or Mexico. Depending on product complexity, COOL rules can always be designed as a protectionism measure. • COOL is trade protection, even if it is not intended to be. Recognize that if I have to identify separate origins for every ingredient I might use, I have significant incentive to use only one origin for my ingredients or at least use the same origin over time for each ingredient, because every time I change an individual ingredient origin, I have to change all my labels, potentially segregate all product lines if I am using multiple origins for the same ingredients, etc. This reduces spatial market integration and efficiency and is in effect a trade barrier overall as it limits new entrants into the raw product production arena because their entry increases cost for potential buyers of the raw product. Entry limits are trade barriers. • COOL is likely to favor protectionism, since COOL could send a signal that some products are safer and better simply because they were produced in a specific country. • From the perspective of the consumer, knowing the COO is not about food protectionism or nationalism. It is rather about food information. Usually consumers prefer knowing COO, such as other information; consequently it is important to give it to them through labeling. When you buy food, it is useful to know where the ingredients come from. However, knowing the COO could be not sufficient to consider whether the food is safe or suitable. • COOL certainly has the potential to favor protectionist sentiment. I am doubtful that COOL of primary ingredients would benefit developing countries in most cases.
Government department	<ul style="list-style-type: none"> • Opponents of mandatory COOL have indicated that there is no proven study which shows that consumers want such labeling and believe that

	<p>COOL is a thinly disguised trade barrier intended to increase importers' cost and if this is true, then the likelihood of certain countries using mandatory COOL as a protectionism strategy is a possibility and will require certain regulatory measures.</p> <ul style="list-style-type: none"> • COOL is definitely used as a protectionist measure - food patriotism drives consumers to buy food from their own country. There is a growing awareness of the quality of food from other parts of the world. For example, Pakistani mangoes are considered of a higher quality than other mangoes.
Consumer association	<ul style="list-style-type: none"> • COOL is not protectionism. It is a consumer right to know issue. COOL provides consumers with information about the source of their food. All consumers everywhere have the right to know where their food comes from. • COOL does not favor protectionism. It is a consumer tool providing information as to the source of food products and can influence what food consumers purchase. A large proportion of Australian consumers will buy Australian grown because of loyalty to the country, supporting local farmers and knowledge of Australian law in relation to farming practices. However consumers are also influenced by price, availability, cultural influences on food preparation and advertising. • The protectionism is a possibility. • Consumer research carried out in 2012 in 4 EU countries (Austria, France, Poland and Sweden) showed that consumers are interested in knowing where their food comes from for a series of reasons, of which the order of importance varies across countries. For a majority of French and Polish consumers, they relate the origin of food to its safety (56% and 61% respectively) and quality (52% and 57%). Austrians primarily use origin information to assess the quality of food (56%) but also its environmental impact (50%). French, Swedish and Polish respondents, on the other hand, tend less to associate the origin of food to its environmental impact (38%, 38% and 17% respectively). 40%-45% of consumers in all four countries look at the origin of the food they buy due

	<p>to ethical concerns (social or animal welfare standards, etc.) they may have with some countries. A third (France) to half (Austria, Poland, Sweden) of consumers are just interested in knowing where their food comes from (meaning this does not necessarily affect their final buying decision). Finally, a minority of consumers (1%-3%) spontaneously reply they pay attention to the origin of their food as they wish to support the local economy/local farming or prefer regional products. Based on the research findings, nothing seems to suggest that country of origin labeling would necessarily result in consumers buying only "national" food.</p>
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Regarding the impact of COOL of primary ingredients on developing countries, there are also different but complementary answers:

- COOL already assists developing countries in some areas. For example consumers often choose their coffee beans by country of origin.
- The statements on labels for "main ingredients" are of great value for the producer countries, provided that they retain their specialty characteristic due to the addition of flavors or colors of the material or product since it only originates in that country or region.
- COOL of primary ingredients could have a positive effect on developing countries because consumers may want to promote growth in those countries by purchasing their authentic products.
- COOL of primary ingredients definitely has a positive impact especially on developing countries, where most primary food ingredients come from.
- No, we think it does not always have a positive effect; if the source is from Asia or Africa, Uruguay consumers would see it as something negative.
- In the case of cocoa and coffee, COOL of primary ingredients may have a positive impact; in the case of corn and/or wheat, the statement that many food ingredients are produced in developing countries is not correct, as many developing countries in Asia import tons of grain.
- Since most exports from developing countries are basically primary materials, and request of country-of-origin of ingredients for certain selected food products in that respect might give some visibility to those developing countries, but

whether it will impact those countries positively economically is something else to be determined.

- COOL of primary ingredients can have a positive impact on developing countries, in terms of foreign exchange, only if the particular ingredients are not available in the importing industrialized countries. Otherwise, consumers would normally want to have their foods processed from local ingredients they have grown up consuming and are likely to be in fresh form unlike imported ones that would be frozen or preserved to avoid deterioration in transit. Mandatory COOL (while it is relevant as it is a way for easy identification of ingredients' sources) may in a way limit the export of ingredients from developing to developed countries.
- Given that many food ingredients are produced in developing countries, the COOL of primary ingredients do not necessarily have a positive impact on the developing countries. Countries that are less economically developed tend to have a negative country image and a negative country-of-origin impact. In addition, in order to adapt to the COOL requirements of a developed country, the producers of a developing country typically have to bear the costs of meeting standards themselves.
- But the overall positive effects will outweigh those are negative. Consumers having more of a choice usually bodes well for countries with better regulations. It would also drive other countries to raise their standards.
- One must always ask why a market does not "start on its own" if assessing possible value; that is, what is to keep developing countries from voluntarily increasing origin information on products they produce? If they perceive a net value this will naturally develop.

Question 1-3

In recent years COOL of main ingredients has been introduced in some countries (e.g. Italy, Japan, Australia) for certain products sold in their domestic markets. If COOL for main ingredients is not yet required in your country, do you think the provision on COOL of main ingredients will be formulated in the near future? Or,

if your country already requires COOL of main ingredients, do you think the provision will be applied to more products in the near future?

All substantive answers are aggregated in Table 3-3 according to the level of development of the countries where experts live.

Table 3-3. Main comments on Question 1-3

Level of development	Comments
Developed countries where COOL of certain ingredients is required	<ul style="list-style-type: none"> • (Japan) Maybe, the provision will be applied for some products. But, considering the cost of the enforcement, not so many ingredients will be covered by the law; the definition of "primary" is difficult and sometimes misleading. • (Chinese Taipei) The government already requires the COOL of main ingredients for some products, such as beef and organic products. The provision will be applied to more products in the near future, according to the government announced policy direction.
Australia and New Zealand, different COOL policies under a joint Food Standards Code	<ul style="list-style-type: none"> • Australian legislation requires food to be labeled with country of origin but it may, for example, be labeled under specific circumstances, "Made in Australia from imported ingredients". It is unlikely that food labeling legislation will be changed by the present federal government. • Australia and New Zealand have a free trade agreement, but NZ does not have similar requirements regarding COOL of main ingredients. A change of government could possibly result in COOL being applied in NZ also, but it is doubtful that would happen with the present free-market administration.
EU, where COOL is required but COOL of main ingredients is not mandatory	<ul style="list-style-type: none"> • The new food labeling Regulation (EU) 1169/2011 (not yet in application) provides that where the country of origin or the place of provenance of a food is given and where it is not the same as that of its primary ingredient: (a) the country of origin or place of provenance of the primary ingredient in question shall also be given; or (b) the

	<p>country of origin or place of provenance of the primary ingredient shall be indicated as being different to that of the food. The European Commission is also due to prepare a report, by December 2014, looking at the feasibility of making it mandatory to indicate the origin of a food's primary ingredient(s) on a systematic basis.</p> <ul style="list-style-type: none"> • The general principle has been accepted that where a food business volunteers the origin of the product, it must also give the origin of the main ingredient. • When the COOL process begins, it will be probably applied to more and more products.
<p>USA, where COOL is required but COOL of ingredients is not mandatory</p>	<ul style="list-style-type: none"> • The trend is towards more rather than less COOL on food ingredients. • COOL will be expanded, probably it will become more political as the number and types of food increases. • The provision may be applied more, but it will always be determined by consumer willingness to pay versus costs. • The provision of COOL on main ingredients will happen in the near future. We are having trouble keeping the current COOL laws in place. • COOL is a requirement for some food products but not for all. I don't expect COOL to be applied to more products. Costs are too high for many of these products. • COOL will be expanded anytime soon due to industry opposition to COOL and the current political environment. The current concern is that COOL may be rolled back.
<p>Developing countries where COOL is not applied</p>	<ul style="list-style-type: none"> • (Ghana) Presently, COOL on main ingredients is not required in my country and I do not think it will be a requirement in the near future but maybe in the distant future when it has become accepted generally by all. • (Malaysia) COOL for main ingredients is not yet required in my country. However, although I have not consulted with the Ministry of Health on this, I think such regulations will be formulated at some point in the future to keep abreast with international trends and as a matter of addressing food safety issues associated with foreign food trade.

	<ul style="list-style-type: none"> • (Panama) The labeling rules should be established in each country to implement this new concept of country of origin labeling. I believe that establishing a statement of the raw materials used in the product is viable. • (Uruguay) It is not intended to identify the origin of the raw material in composite foods.
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Among the answers to this question, a very interesting perspective is: “Why mandate such provisions? This makes no sense when voluntary measures exist already to do this if someone wants to pay the premiums necessary to accomplish origin labeling. A mandated COOL will always be less economically efficient than a voluntary system.”

Question 1-4

Do you think the country-of-origin of ingredients should be stated for certain food products that are made with primary materials produced in a country different from that of the final processing country?

(some product examples: coffee, chocolate, tomato puree, fruit juice, shelled and frozen shrimps, cod fillets, ham, salami, etc.)

The majority of participating experts agreed to label the country-of-origin of primary materials, while one academic suggested the COOL of main ingredients should be voluntary but not mandatory, and another expert from a government department considered the fact that many products are blended according to seasons. All substantive answers of participating experts are listed the following Table 3-4.

Table 3-4. Main comments on Question 1-4

Type of Organization	Comments
Academic	<ul style="list-style-type: none"> • Yes, the country-of-origin of ingredients should be stated as possible. • Yes. Some of the above examples are very different. • Certainly, the country-of-origin of ingredients should be stated for certain

	<p>food products that are made with primary materials produced in a country different from that of the final processing country. Using Taiwan's organic soymilk as an example, the final soymilk processing country is Taiwan, but USA imported organic soybean and Brazil imported sugar are shown on the bottle of soymilk as well.</p> <ul style="list-style-type: none"> • Consumer awareness is making consumers aware of their rights to have access to product information, to be safe and to have better choices. They could benefit from hearing about alerts and warnings and finding out about safety issues, also or above all for food. Internet helps consumers in finding relevant information. For these reasons, the COOL of ingredients should be stated for all food products made with primary materials produced in a country different from that of the final processing country. • The proposal is desirable, but importing countries cannot directly check the practices of processing countries. • COOL of ingredients should primarily be for certain products as indicated above, e.g., those known to cause allergens or hypersensitivity. An elaborate COOL regimen may also include all food ingredients considering that the vast majority of these come from the developing world where the food safety infrastructure and facilities may not be well developed. • I personally favour COOL labeling of primary materials, because I feel consumers have a right to this information - even though I am skeptical that it would greatly influence the purchasing behaviour of most consumers. • Not mandated, no. Voluntary, yes. • No need for regulation. If consumers value origin, firms can differentiate their product and ask for certification by a third party.
Government department	<ul style="list-style-type: none"> • What should be done is to look at it holistically and look at its impact on fair trade basing it on most of the WTO agreements taking into consideration issues of developing countries, etc., and the principles of non-discrimination. • If, in the products named as examples, it would be stated the origin of the raw material.

	<ul style="list-style-type: none"> • No - many of the products mentioned are blended according to seasons. Coffee is blended at different times of year depending on which hemisphere it has come from. Italian coffee and English breakfast tea are blended products, do not mislead and rely on their quality by being able to pick appropriate ingredients 'in season'. • Some commodities such as shelled shrimp, fruits, vegetables, cod fillets, ham, etc., are not subject to processes that change their nature and are not transformed or changed, their country-of-origin labeling must be maintained.
Consumer association	<ul style="list-style-type: none"> • Yes, labeling ingredients with their country of origin, even if it is different from where the product was assembled, is still valuable to consumers and would further educate them about their food in necessary ways. • Yes, consumers should know that primary ingredients come from a particular country even if the product is processed in another country. A good example is a recent rule by the U.S. Department of Agriculture allowing chicken grown in the US or Canada to be sent to China for processing and then sent back to the US in the form of soups, nuggets, frozen dinners, etc. Consumers want to know that the chicken is from the US but also want to know that the chicken was processed in China. • Yes. Consumer research showed that for both meat-based and vegetable/fruit-based foods, consumers want to know the country of farming/harvesting and the country where the processing operations took place. For instance, for a jam, consumers want to know the country where the apples come from and the country where they were transformed into jam. For cooked ham or salami, consumers want to know the country(ies) where the pig was born, reared and slaughtered and the country where the pig meat was transformed into ham/salami. • It would be useful for consumers to know both the source and country of manufacture of a food product. However with global sourcing of produce for some products I am not sure if it would be practical.

In addition, an academic expert has commended: “It may increase administrative cost and possibly lead to the spaghetti bowl effect. However, as many countries join the

COOL of ingredients, there would be an incentive that avoids the spaghetti bowl effect, eventually leading to a lower administrative cost.”

Another academic also paid much attention to cost: “If more information is added without consumer demand, this increases offsetting corresponding costs as a net negative economic situation will develop. Conversely, if no additional information is added to labels various ‘consumer groups’ will increasingly call for this information, document extreme on-the-ground examples and ultimately raise the **cost of ‘no action’**.”

Question 1-5

Would the statement on the origin of primary ingredient produced in Country A lower the image of the finished product made in Country B?

Please provide examples of products and countries.

Some experts answered “No”, while some said “Yes” or “possible”. One expert made a general affirmation: “It could either lower or reduce it - depends on the products and the countries involved”. Another expert also said “It depends” and explained: “For example, the ‘made in Italy’ food is a highly differentiated product system. The quality of made in Italy food is recognized all over the world. In this context, main ingredients should come from Italy and not only the finished product. For example, in the case of Italian wine, consumers should know if Italian grape or foreign grape is used. Grape imported from other countries (without a good wine tradition) could lower the image of the finished wine made in Italy. In this case the main ingredient is very important in the final product. It is not the same for Italian coffee: in this case the main ingredient does not come from Italy. Italian coffee culture in the international consumptionscope is acknowledged all over the world, and Italy is considered the archetype of a coffee consuming nation. Italian companies import coffee from different countries, but in this case the COO of the main ingredient is not relevant. The specific Italian brand grants the quality of the finished coffee. However relevant changes in the consumptionscope could modify the perception of the role of the COO of the ingredients.”

The examples and opinions provided by other experts are listed in Table 3-5.

Table 3-5. Examples provided by the participating experts

Type of Organization	Comments
Academic	<ul style="list-style-type: none"> • US pork used in a product sold in China is likely to raise the image; Mexican beef used in a product sold in the US is like to lower the image. • If a hamburger comes from an animal born in Mexico yet later raised and slaughtered in the US and carries corresponding label information at the retail level, this could arguably reduce the value of the same product compared to an older "status quo" situation of no origin information. Conversely, if Mexico is replaced by Canada as the source then there may be no impact on product demand. Perhaps the case of adding "US origin" to a product consumed in Mexico would be an example of an image improvement. In this case however one has to ask why this hasn't occurred on its own if valuable. • In the USA Polish hams may be considered premium but that they may be processed in the USA but doesn't have a negative impact on the USA processor. • Vegetables produced in China lower the image of the finished product made in other countries. Fish caught in Japan lower the image of the fished product made in other countries. • Suppose that Italy imports wheat from Morocco. Italy produces pasta using the wheat and exports it as a final product. In such case, Morocco is Country A and Italy is Country B. The statement of Morocco as producing country of the primary ingredient of pasta may lower the overall image of Italian food. • Lots of made-in-Taiwan tea bags are used tea leaves from Vietnam. However, the Taiwanese consumers tend to regard Vietnamese tea as cheaper, lower quality, and higher probability of having pesticide residual. Therefore, if the statement on the origin of the primary ingredient produced in Vietnam would be very likely to lower the image

	<p>of the final tea-bag products made in Taiwan.</p> <ul style="list-style-type: none"> • No, I don't think so in most cases. It depends on perceptions of hygiene standards in producer countries, and adherence to safe insecticide levels, etc. Consumers take a lot on faith regarding the safety standards and their implementation on the part of their own authorities in regard to imported food ingredients. • No, because imported primary ingredients are scrutinized and thoroughly checked by authorities for conformity with set WTO and national standards. Once accepted and processed into final products by domestic, reputable food companies they should be well accepted on the marketplace by the ultimate consumer. I think wholesomeness, nutritional quality, freshness and safety of the finished products may be more important than the name of the country from which ingredients used originated.
Government department	<ul style="list-style-type: none"> • Yes. For example an infant formula made in Australia with the milk raw material from China, it would not be well accepted. Another situation would be produced in Mexico with canned fish from Asia. • The image can be lowered if the product presents problems. • Not necessarily. British lasagna made with genuine Italian parmesan cheese, would improve the perceived quality of the product. • If on Swiss chocolates, it is indicated that cocoa, which is one of the main primary ingredient is from Ghana, Brazil or Cote d'Ivoire, the image of Switzerland will be lowered. Neither if coffee made in France with coffee beans from Kenya and if this is indicated, it will lower the image of France. • If the primary ingredient is recognized and special quality that allows greater consumer acceptance will highlight its attributes, declaring the origin of the raw material can help your business valuation.
Consumer association	<ul style="list-style-type: none"> • If the ingredient were processed in, say China, but the finished product was made in Canada, then some consumers would refuse to buy it because of China's poor food safety reputation but the consumer has the right to make that choice. • In previous Chinese chicken example, consumers may be concerned that

	<p>China was processing US chicken because of the lax food safety standards and enforcement in China. So in that case, the processing country may have a lower image than the product's originating country.</p> <ul style="list-style-type: none"> • The origin of the primary ingredient is just factual information. We do not believe that it would 'lower' the image of a product that is said to come from a different country than that of its ingredients for the simple reason that not providing this information would mislead the consumer, which is precisely why it will become mandatory in the EU as of 2015. • Some manufacturers and consumers may feel this because a locally made product will normally be purchased in preference to one produced elsewhere.
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Moreover, three experts respectively said: “The quality of ingredient may be more important than the processing”; “COOL of main ingredients would just provide accurate information about where ingredients come from”. When a producing country of main ingredients has a poor reputation, “Such labeling would encourage countries with weaker food safety regulations to step up and change their regulations for the better.”

Question 1-6

When a product made in two member states of the European Union is exported to a country outside of the European Union, the indication of origin “European Union” is adequate for applying trade measures (e.g. calculating the customs duty), but for foods do you think the origin countries (member countries of the European Union) should be indicated?

The answers of the experts from academic organizations are very different. Some American academics said:

- No, the same rules should apply to all products.
- No. EU is OK.
- This will depend on specific individual examples and feedback. In many cases, providing the extra level of information that comes with distinguishing the specific countries typically comes at a cost that is not offset, making this a net

economic loss situation.

- At what cost? And never mandated, only voluntary.

Some Asian academics said:

- For food the origin countries (member countries of the European Union) should be clearly indicated. It is not sufficient enough to just know whether a product comes from the EU or not. A majority of consumers want to know the specific country their food comes from.
- Japanese consumers prefer the identification of the origin countries more because they often gauge the product quality based on the origin countries. For example, French wine, Italian tomato, Spanish ham, etc.
- The countries of origin can be indicated to ensure consistency in the labeling of products for export, but care should be taken so that such labeling should not result in extra costs for the industry and ultimate consumers, who pay the final price.

A European academic said: “The indication of origin European Union is not always adequate for foods. The ‘made in Italy’ food (but also French food and wine, German beer, Scotch whisky, Norwegian salmon, etc.) is characterized by a very differentiated product system, with a wide range of typical products. The presence of a lot of products and specific regional preparations is the most distinctive feature of made in Italy food. For this reason not always the indication of ‘European Union’ origin is sufficient.”

It is interesting that viewpoints of the representatives of two American consumer associations are close to those of the Asian and European academics but not those of American academics. They said:

- Yes, the EU now represents many different countries. Consumers want more specificity than "EU" - they want to know which country produced the food.
- It couldn't hurt to have the countries of origin instead of just indicating European Union. Consumers are interested in having more detail instead of less.

Another Asian academic did not simply answer “yes” or “no”, but he expressed a viewpoint that could be a regulatory principle: “If consumers in Europe appreciate the details of COOL statement including specific countries in EU, they should be indicated because they can see the difference. Different products inclusive of production process should be treated differently until they are consumed. It is also a matter of agriculture in each country. If agricultural practices in EU are more or less similar, it does not matter to consumers. If there is no general consensus in controversial issues such as pesticide use, GMO labeling and so on, indicating specific countries in the EU can keep arising the issues to discussion.”

Five other experts outside the EU said:

- The consumers want information.
- In Uruguay it is mandatory that it says the country where the product was produced. European Union would not be accepted.
- In Australia the country of origin is required to be stated, not an economic zone. The actual country is more useful to consumers because it clearly identifies the source country. For example, Italian tomatoes have a known and acceptable quality in Australia whereas tomatoes sourced from a number of unidentified European counties would be of unknown quality.
- I don't have any particular view in this regard. I assume that EU standards are applied relatively uniformly across EU states - but I have no real basis for this intuitive feeling. Therefore, "EU" seems OK to me.
- I believe that only the names of the countries where food comes should appear, but not indicate the European Union. The label of a product having a commercial value should be allowed to recognize quality and safety elements, so the hygienic systems of the countries play an important role. If food is made with hygienic grade in both countries and has not changed its nature, only one country should be declared.

The representative of a consumer association in the EU said: “We cannot comment on this as it would depend on the applicable law in the importing country. However, by

analogy and projecting the European consumer's perspective to consumers outside the EU, we would tend to reply that yes, the origin countries should be labeled (and not just EU/non-EU, which consumers in the EU say is not meaningful information to them).”

A government official in the EU commented: “EU is perfectly acceptable because products from the EU are generally of a higher quality than products outside the EU. The exporter, however, misses a marketing opportunity to promote their food by individual countries”.

Question 1-7

For a food product that is a mix of similar ingredients produced in Country A and Country B and is packed in Country B, do you think that both countries should be marked “countries of origin” or that the country-of-origin could be only one and should be determined according to *ad valorem* rule (value-added criterion)?

Two academics agreed that both countries should be marked “countries of origin”, while an academic affirmed that the country-of-origin of a mixed food should be labeled according to the *ad valorem* rule, and under the regulation of his country - "When a food undergoes processing in a second country which changes its nature, the country in which the processing is performed is considered to be the country of origin for the purpose of labeling" - Country B should be labeled on the food product as the country of origin. Another academic also said: “In some cases, when possible, I think that the COO could be only one and should be determined according to *ad valorem* rule. However, if ingredients from Country A and B are both relevant, those countries could be marked as countries of origin of ingredients. It depends on the relevance of the ingredients in the finished product.”

Other answers are given in different ways, please see Table 3-6.

Table 3-6. Comments on Question 1-7

Type of Organization	Comments
Academic	<ul style="list-style-type: none"> • List all countries in order of value. • Information on products should be given to consumers as much as possible. The cost of COOL may increase initially, but I think that the cost of COOL would be decreased as many counties implement COOL with the same labeling policies. Another point is that COOL policies may distort incentives. Suppose that Country A is Morocco and Country B is Italy. Suppose that almost all wheat, an ingredient of pasta, is imported from Morocco. If all countries of origin of ingredients are stated in the final products, Italy would like to put her name, thereby generating additional incentive. The generated incentive would have multiple effects on wheat farmers in both Morocco and Italy. • Processor X could elect to offer a product that has all kinds of details on product and ingredient origins under a voluntary system. Processor Y could offer an identical product with none of these origin labels. If consumers are willing to pay Processor X more than the added costs, Processor Y will adopt as well. So, nothing "should be marked" by origin, the question is what profitably "could be marked" and let the market figure out which is preferred by consumers. • A standard "one rule fits all" approach cannot be applied. The actual "impact" varies. If a ready-to-eat, pre-cooked meat product is composed of beef from an animal born, raised, and slaughtered in the U.S., is on bread from the U.S., and only the pickle comes from outside the U.S., I see it has a net loss situation to add the label detail on "pickle sourced from X." However, if "produced in U.S. and X" was on the label that also would be misleading. • No, I do not think that labeling is necessary. I do believe, however, that firms should have to keep records of origin for traceability purposes in case of a food safety incident.
Government department	<ul style="list-style-type: none"> • If origin claims are given, then all the countries involved should be credited. • In Uruguay you must put the country in which the food underwent the last

	significant modification. For example, with a molten cheese made with cheese from Brazil and Uruguay, Uruguay should read as the source.
Consumer association	<ul style="list-style-type: none"> • Mixed origin products should have COO information about each of the ingredients, provided they are the majority ingredients in the finished product. • Both countries of origin should be labeled. It would be the most transparent and thus informative to the consumer. • From the consumer perspective, it would be preferable if the different potential origins would all be labeled. • Under Australian legislation food that is manufactured in a country may be labeled 'Manufactured in' if it is substantially transformed in the country claimed and at least 50% of the production cost was in that country. However, from a consumer perspective, I believe that both country A and country B should be stated.

Question 1-8

In various markets the indication of “European Community extra virgin olive oil” is very different from that of “Italian extra virgin olive oil”, while a survey showed that for the US population meat products labeled “Product of North America” is almost the same as “Product of United States” (Tonsor et al, 2012). Which factors should be considered for substituting the “country-of-origin” with “geographic region of origin”?

An academic explained: “Italy is probably seen as a producer of premium olive oil compared to certain other European countries. In contrast, meat products from North America are so dominated by US and Canadian production - both of which are probably more highly regarded than Mexican - that it is easy to see why ‘North American’ might equate in most American consumers' minds as ‘US and/or Canadian’.”

Another academic has listed three factors to be considered: 1) Cost of labeling; 2) Product category; 3) Consumers' attitudes and perceptions of a country/region.

Some other academics and the representative of a European consumer association expressed viewpoints that integrate the above three factors:

- It is dependent on the differences made in final products and in the production process. WTO prefers to use the concept of "product standard", but general consumers care about the "process standard". If at least one of the standards is different across countries, "country-of-origin" is better to use.
- When the region has more positive impact on consumers' perception than the country. However the North American designation is ridiculous. Tomatoes from Mexico have the same designation as locally produced. Retailers have the option to put local in store signs.
- Awareness of geography probably needs to be assessed. For instance, what portion of the survey respondents noted above know that North America includes Canada, Mexico, and the U.S.? If only 40% know this and 60% do not think Mexico is "included" then the finding is not surprising.
- If consumers value a specific origin and it is not too costly for firms to provide that origin, then firms will willingly provide detail about the origin.
- It depends on the perceived quality of a product coming from a specific area. When consumers buy a product, a general image evoking the capability of a specific country/region to offer quality products could emerge in their mind.
- Let the free market figure this out. The efficient solution is to let the market figure out what people want, how much they will pay for it, and how and whether it can be supplied.
- As exemplified by the question itself, we believe that the consumer perception and understanding should guide any decision in this regard. The information that is provided should respond to consumers' expectations in the country where the food is marketed and should not be ambiguous or misleading.

Another academic has a different opinion:

(1) The name of the country should be included in the labeling of ingredients or products exported to far flung markets outside the region of the exporting country for easy recognition of the place of origin.

(2) The name of a region (e.g. European Community or North America) may not be explicit enough regarding the exact source or an ingredient or a product; hence, it may be understood well by the consumers from that region (e.g. The name of the region should be used for labeling on products meant for sale in the region).

However, the representatives of two American consumer associations don't appreciate the geographic region of origin. They said:

- It would just be the most straight-forward to not label with geographic regions of origin in place of country of origin. However, this may not always be the most practical approach. If producers want to use geographic region of origin they should not be allowed to use the name of a specific country in the name of the food unless it is from that country. For example you couldn't buy Italian extra virgin olive oil that is not from Italy.
- I disagree that "Product of North America" is the same as "Product of the US". US consumers want to know where product comes from which includes Canada and Mexico as separate countries, not as one North American entity. Geographic region of origin is no substitute for country of origin.

An expert in Uruguay and another in Australia said in their countries the “country of origin” must be stated and it is impossible to consider the substitution with “geographic region of origin”.

A British expert commented: “There is added value about giving the specific country of origin. Businesses can choose to give this information where there is a marketing advantage.”

A Panamanian expert has another point of view: “Factors that can recognize a designation of origin should be based on the characteristics linked to the geographical environment in which raw materials are produced such as "mineral water from the mountains”, smoked ham with firewood ‘sauce’ or typical herbs in the region, or the influence of the human factor involved in the process (e.g. prepared by priests or shamans with divine rites or religious rites)”.

Question 1-9

For commercial activities to state the origin of ingredients means to increase transparency. Will this influence trade flows among Country A (producing country of primary ingredient), Country B (where the final transformation undergoes) and Country C (consumer country)? Specifically, will trade between Country A and Country B decrease? Will trade between Country B and Country C decrease? Will trade between Country A and Country C increase?

Please explain your opinion with examples of products and countries.

Some experts think there will be not significant increases or decreases, while some think it will affect trade flows. The substantive answers are aggregated as follows according to the type of organization that experts belong to.

Academics:

- In cases where added transparency is being "pulled" into existence in the form of COOL, then consumers may be willing to pay the premiums necessary to alter trade flows such that "desired sources" are increasingly used in countries where more labeling is occurring. Conversely, if COOL implementation simply increases costs then trade flows may alter such that simpler combinations or products with a condensed set of sources develop as the costs simply exceed benefits. An example of the latter would be the apparent reduction in relative volumes of Mexican and Canadian live animal sourcing into retail products sold in the U.S. from animals processed (slaughtered) in the U.S.
- If origin labeling is required, trade flows will be restricted and new entrants will have a difficult time penetrating the market. Overall, trade is restricted and economic efficiency declines globally if origin labeling is required. If origin labeling is voluntary, trade could be increased, reduced, or unaffected, but global economic efficiency increases relative to mandatory origin labeling.
- I don't think there will be any significant increases or decreases. If olive oil is produced in Spain and processed in Italy and sold in the USA I don't think purchase behavior will change. My past research indicated that a company that

produced olive oil, processed in the same farm and sold in the USA had no real advantage over other olive oils that may be grown in one country and processed.

- Yes it will affect trade flows, but the extent depends on costs and whether there is a significant difference in consumers' willingness to pay for the product depending on origins.
- Trade between country A and B will increase because country A can happily import the finished products from country B. If the ingredients continue to remain of high quality, country B (food processing country) will likely continue to import the ingredients. For example, Singapore imports raw fish from Malaysia, does canning, and exports some of the processed fish back to Malaysia, which adds variety to the processed fish consumed in the latter country. This type of trade exchange creates a means of foreign exchange and adds to food variety for both countries.

Trade between countries B (food processing country) and C (consumer country) will also increase as the latter country will have a continuous supply of the products they consume but cannot process their own, maybe due to lack of ingredients or the appropriate manufacturing sector. For example, some of the fish processed in Singapore (from the example above) are exported to Africa as canned fish, especially in countries where canning cannot be done. In this case, trade between Singapore and those African countries will continue to increase so long as quality is not compromised in one way or the other.

Trade between Country A (producing country of primary ingredients) and Country C (consumer country) country will also increase indirectly. In the example above, the African countries' supply of canned fish depends on availability and continued supply of raw fish to Singapore by Malaysia.

- The answers depend on product category and overall image/stereotype that is attached to the products of that country. Let's consider tea bags as the first example. Vietnam is Country A (producing country of primary ingredient---tea leaves), Taiwan is Country B (where the final transformation occurs) and Japan is Country C (consumer country). Japanese consumers are generally felt to perceive Taiwanese tea products as high-quality and Vietnamese tea products as

low-quality. Therefore, increasing transparency by stating the origin of ingredients is likely to decrease tea-leaf trade between Vietnam and Taiwan and decrease tea-bag trade between Taiwan and Japan. The trade between Vietnam and Japan is unclear. Let's consider mixed grains as another example. Australia is Country A (producing country of primary ingredient---millet, wheat meal, oat and brown rice), Taiwan is Country B (where the final transformation occurs and remix with green bean produced in Taiwan) and Japan is Country C (consumer country). Japanese consumers are generally felt to perceive both Australian and Taiwanese grain products as high-quality. Hence, COOL may not have any effect among three countries.

- Not always. We should consider different aspects; for example, the micro and macro environment in which companies and consumers operate, the industrial specialization process of different countries, and the food tradition in the market. Another key factor could be the know-how in the transformation process. Does country A (with primary ingredients) own the know-how of transforming the ingredients in finished products, with the same quality as country B? If it does not have the know-how, the learning process could be very long.
- Let's think about the case of chocolate for an example. Export country A is Ghana in western Africa. Manufacture country B is somewhere in Europe. Consumer country B is the USA. At first, the ingredient COOL may decrease chocolate consumption in country C because the consumers in USA more or less realize that the food system (i.e. value chain) in chocolate is not fair enough considering the value added to each processing stage. Then, Country B starts considering investment into manufacturing factory in country A where primary ingredients of chocolate, cocoa, are produced. If chocolate produced in country A, Ghana, maintains the quality of chocolate compared to European chocolate, Country A can export chocolate as final products all over the world. Therefore, I think that trade between Country A and Country C eventually increases. It is important for Country B to export their production technology, quality control management, and marketing strategies to Country A. Country B should make profits from exporting manufacturing facilities and factories as well as management skills mentioned above. Trade between Country B and Country A

might increase when considering such non-products trade including foreign direct investment.

- Whether stating origin of ingredients has any bearing on trade flows between any of these countries will depend on how aware consumers are of hygiene and production standards in a given country, and also political issues that may arise. If lobby groups give particular prominence to an issue, then it can have an effect - but often these have been short-lived effects, as shown by instances of consumer boycotts resulting from political issues in particular countries (e.g., French nuclear testing).

Government departments:

- Consumers of late like to know what they are eating as well as the source of it, hence the issue of transparency becomes a selective criteria. Based on the aforementioned, I have the feeling that the increase in transparency caused by the country-of-origin of primary ingredients will rather influence trade flows positively in the sense that, since consumers are the driving force of trade flows, trade is therefore likely to increase between countries A-B-C; i.e., knowing that products from country B are always labeled in such a way that there is an increase in transparency, consumers in country C will then be influenced to opt for products from country B, thereby increasing trade between country B and C, which in the long term will cause an increase in trade between country A and B. The only caveat is when consumers of country C have an issue with primary products of country A. A typical example is: Ghana cocoa is noted to be the best in quality in the world, and assuming consumers in France prefer chocolates made in Switzerland using Ghana cocoa, then assuming Switzerland always indicates the country of origin of their primary ingredients, then all things being the same, trade in chocolates is likely to increase between Switzerland and France as well as increase in cocoa between Ghana and Switzerland.
- Food patriotism means that consumers will favour food produced in their own countries. The European Commission's Impact Assessment of extending origin labeling to meat used as an ingredient in processed foods indicates that this would cause segmentation of the EU market. We have not gotten any further

information on the scenario you mention.

- Regarding indicating the country of origin of ingredients, although it increases transparency, information I think is a minor given consumers see that most products are multi-ingredient and the origin of these will be complex. If consumers trust their supervisory authorities it should not change consumption patterns because you add this information. In many countries consumers consume by price, confidence in brand or food processor, so they will not read the country of origin of each ingredient. For both reasons, no change of consumption would change the trade between countries of the final product, its ingredients or the habits in the country of consumption. Eventually, you may have a product that could be promptly affected by the sale within a country as there will be organizations, without scientific basis, making use of the information to avoid any product that is consumed with an ingredient of a given country of origin. For example, by making use of a certain information bias regarding a specific product origin, a group of people could quit using any product if the product's original is considered problematic.

Consumer associations:

- It's possible that trade will decrease between countries A and B or B and C, effectively cutting out country B, but it really depends on the service and cost of labor in country B. If country B does a good job at a good price, then they will continue to export to country C. If country B does not do a good job, then they may stop exporting there but it could drive country B to do better work. The only problem here is the competitive cost of labor which could increase the negative wage battles across countries.
- Transparency is important for consumers. The more information a consumer has the better choice he or she can make. The country of origin is only one piece of information affecting the choice of the consumer. Others include cost, availability, promotion and cultural preference. COOL's influence on trade would vary depending on a consumer's knowledge of the particular source country and the other influences mentioned.

Question 1-10

In multilateral international trade, how will the ingredient origin statement influence the businesses of:

- Export from Country A (producing country of primary ingredient)**
- Manufacture in Country B (where the last transformation occurs)**
- Supply in Country C (consumer country)**

Please state your perspective and explain why with examples of food products.

As this question is an extension of Question 1-9, not all the experts provided substantive answers. However, among the responses to Question 1-10 there are very interesting perspectives.

Four academics and one public official made analyses around consumer perception and ingredient quality. They respectively said:

- It depends on product category and overall image/stereotype that is attached to products of that country. If consumers perceive Country A's ingredients as low-quality and Country B's products as high quality, then the ingredient origin statement would decrease Country A's export. Meanwhile, Country B's business should be negatively affected, since it uses low-quality Country A's materials. Supply in Country C would decrease as well since consumers in Country C are more aware that the primary ingredients are low quality. On the other hand, if consumers perceive both Countries A and B's products as high-quality, then the ingredient origin statement should not be a factor that would influence the business among three countries.
- In the perspective of the consumers, if a high quality ingredient is perceived by consumers in country C, export from country A increases because different companies, in different countries (where the last transformation occurs) will prefer to use these high quality ingredients. Country B could increase the use of this ingredient in order to offer to consumers a differentiated product, and to create brand awareness and loyalty. Supply in country C could increase if

consumers perceive the quality of a finished product, made in country B, with ingredients coming from country A. Further, it depends on the costs and pricing trends. For example, you could consider the case of coffee. If consumers would perceive the quality of Jamaican coffee as high, they would probably prefer to know that the finished coffee they buy is made using the main ingredient coming from Jamaica. This is a tool for differentiation of the product/brand and a way to command a premium price. Further, coffee companies in country B would prefer to buy coffee in Jamaica, and in this way Jamaican exports could increase.

- Export from Country A: COOL of ingredients will result in additional costs associated with packaging and labeling. On the other hand, if the products continue to be of high quality, perhaps COOL of ingredients can in a way be a source of marketing your ingredients to a number of countries that need the same ingredients to manufacture different products.

Manufacturer in Country B: COOL of ingredients will boost the manufacturer's business in country B since the ingredients will likely be of high quality as no country that wants to remain in business will put its name on poor quality ingredients. The price of the finished products will likely be higher as a result of the additional costs of labeling.

Supply in Country C: Supply of finished food products is likely to be consistent and reliable which will help increase business (the assumption is that this country does not have local ingredients and companies to process the food in question). However, the ultimate consumer is likely going to pay a higher price for the final product.

- I think ingredient origin statements will have little effect on the businesses of A, B or C. Most consumers are not sufficiently interested to read labels carefully.
- Consumer perception would have an influence on the export from country A. Consumers will first value products from their own country, secondly products from a country with a perceived high quality, and thirdly using individual high quality products. Pizzas with Italian mozzarella will be considered of a higher quality. The effects on trade mentioned above are unknown, as origin labeling rules are still in their infancy in terms of assessing trade flows over the long

term. We cannot see any adverse effects in terms of supply in country C.

Another academic has a broad perspective: “Business opportunities in country A depend on food processing technology and its management skills. For example, the quality of chocolate from Ghana must be as good as that from European countries. Business opportunities in country B depend on their strategies. They can either compete with Ghana and/or other ingredient producing countries or collaborate with them. In the long run, European countries would have to collaborate with ingredient producing countries and then make investments into processing factories for value adding. This would be business opportunities for European countries.”

Focusing on production standards, a consumer association representative expressed her opinion: “For export countries, it may hold them to higher production standards so they compete against countries known to have better food safety rules and regulations. Country B, where manufacturing occurs, could possibly suffer from having higher production costs due to higher labor standards. However, it may also hold these manufacturers to higher production standards. Country C, the consumer country, will likely benefit from being able to choose foods that they know or feel are produced with higher quality products and services. They will be able to choose foods manufactured in countries with fair labor standards and ethically, safely and renewable produced foods.”

Summaries

After analyzing many interesting opinions and ideas in the 1st Round of the Delphi study on COOL, I make the following summaries:

- (1) Generally the COOL of primary materials can increase consumers' awareness of the world, in particular, sensitize them to the producing countries. The cost of COOL is a topic to be discussed, but a clear statement on the origin of main ingredients can help build consumer confidence in today's global food system.

(2) COOL itself simply provides factual information to consumers and is not protectionism, but because of externalities, it is often legislated for the purpose of trade protection and utilized as a trade barrier, so it is potentially protectionism. One can say it is necessary to take measures to fight against a trade barrier imposed through mandatory COOL, however, the effect of COOL depends on consumers' choice.

COOL of main ingredients can have a positive impact on developing countries if specific ingredients are not available in developed countries; otherwise the impact would be negative because the production standards in developing countries are low or not trusted. However, COOL can increase the visibility of producing countries, and it can drive developing countries to improve their production standards.

(3) In developed countries (e.g. Japan) where COOL of main ingredients is already required for certain products, the provision will be applied to more products, while in the EU, COOL of main ingredients will become mandatory in the near future. In the USA where COOL of main ingredients is not yet started, the provision will not be introduced in the near future because of the political environment and industry opposition. In some developing countries it is possible to introduce COOL of main ingredients to keep up with the international trend, but in the majority of developing countries COOL of main ingredients will not be required in the near future because the public knows very little about COOL.

(4) Generally COOL of main ingredients is desirable, but which products should be it be applied to? Should it be mandatory or voluntary? The discussion will be expanded in the 2nd Round.

(5) The effect of COOL of main ingredients on the perceived quality of a finished product depends on the characteristics of the main ingredient and the reputation of its producing country in the agri-food sector. If the producing country of an ingredient has a poor reputation, the origin statement would lower the image of the finished product made in another country; if an ingredient is recognized for good

quality, COOL of ingredient can improve the image of the finished product, becoming a marketing instrument. In other ordinary cases, the effect of COOL would not be evident.

- (6) When a product made in two member states of the European Union is exported to a country outside of the European Union, the statement of origin “European Union” is adequate for applying trade measures (e.g. calculating the customs duty), but for foods the origin should be declared according to the law of importing country. Many countries don’t accept the origin marking “European Union” and require the exact country of origin. Given that consumers in Europe note the differences among the European countries and appreciate the origin labeling with country name, the indication of origin “European Union” is not very meaningful for consumers outside the EU. Moreover, a precise indication of origin will be useful for export promotion.
- (7) For a food product that is a mix of similar ingredients produced in Country A and Country B and is packed in Country B, the opinions of academics on the statement of origin are very different: both countries should be marked “countries of origin”; the country-of-origin should be labeled according to the *ad valorem* rule; nothing "should be marked" but let the market figure out which is preferred by consumers; a standard "one rule fits all" approach cannot be applied and the actual "impact" varies. The experts from government departments and consumer associations have similar opinions: they prefer to label both countries as countries of origin. However, for applying trade measures the originating status can be conferred only to one country and could be determined according to the *ad valorem* rule, while both countries could be marked as countries of origin for ingredients.
- (8) In substituting the “country-of-origin” with “geographic region of origin” (here it means a group of countries) the most important factor to be considered is the consumers’ perception of a specific region; another important factor is whether the production standard in the region is uniform. From the consumer perspective it is better to indicate a specific country but not a large region. It is possible that the cost

of COOL would be higher than that of stating the region, but the indication of a specific country of origin can bring a marketing advantage. In principle the origin information of a food should be provided so as to be easily and correctly perceived by the consumers in the country where the food is marketed.

- (9) For commercial activities to state the origin of ingredients means to increase transparency. When a food is produced in Country B with main ingredients from Country A and then exported to Country C, the influence of COOL of main ingredients on trade flows among the three countries would vary depending on many factors: the quality of the main ingredients produced in Country A, the industrial know-how and labor cost in Country B, the food culture and developing level of Country C, etc. If the ingredient quality is high and the manufacturing process is strongly characterized by local (country B) tradition or special technology (e.g. the production of chocolate), the trade flows among the three countries will increase. If the quality of the main ingredient is noted for poor quality, Country C will import less product from Country B, and the trade between Country B and Country C will decrease. If the manufacturing process is simple (e.g. blending olive oils), it is possible that Country C would directly import the ingredient from Country A, and the trade between Country A and Country B and that between Country B and Country C would decrease. Combinations of different products and different countries would result in various situations.
- (10) In multilateral international trade, if the ingredient origin statement is required, a producing country of high quality ingredients will increase its export, while a country producing poor quality ingredients will decrease its export and should improve their production standard to compete in the international market. The manufacturers in the processing country B will prefer to use high quality ingredients; in order to reduce production cost they would need a new strategy, for example to invest in the ingredient producing country A or in an important consumer country C; in this way Country B will export its processing technology and management skill to develop global businesses. Thanks to the foreign direct investment of Country B, Country A will be able to produce and export finished

products, and Country C will import primary material and develop industrial production for its domestic market.

Chapter 4

Delphi Study on Country-of-Origin Labeling for Foods

Round II

One of the objectives of the 2nd Round of this Delphi study on COOL is to deepen the discussion started in the 1st Round. Participants are invited to comment on the summaries of aggregated answers from the 1st Round, and they can revise their initial statements if they choose. Moreover, a new question about the necessity for stating the main ingredient origin is introduced so as to better compare viewpoints of the participating experts.

The new topics in the 2nd Round focus on assessing voluntary and mandatory COOL of the main ingredient, how to mark the country-of-origin of a food produced in more than one country, and how to guarantee the reliability of information about country-of-origin.

As of 28 Feb. 2014 only 16 experts in 11 countries responded to the 2nd Round questionnaire. The reasons the other three experts did not complete the 2nd Round questionnaire are not clear. All 16 participating experts expressed interesting opinions.

Table 4-1. Expert Panel Members in the 2nd Round

Type of Organization	Experts in developed countries	Experts in developing countries
Academic	8	0
Government department	1	4
Consumer association	3	0
Total	12	4

4.1 The Review of the 1st Round

Before discussing new topics in the 2nd Round, the 16 experts made comments on the 1st Round.

Question 2-1

Which discussions in the 1st Round do you find interesting?

The most interesting discussion is Question 1-2: “Would COOL favor protectionism?”

Two academics and an expert from a consumer association respectively said:

- I found interesting the divergent views on whether COOL would constitute trade protectionism!
- I find interesting above all the answers on Question 1-2. It depends on the perspective of the analysis. Consumers perspective is different from other perspectives. However, also other questions are interesting.
- I found the deferring views on whether COOL was food protectionism. I agree that there is a strong consumer interest in Australia in buying local, which is actively promoted by local producer organisations but is that protectionism or good promotion? Of the other questions there does appear to be a thread - while some support more information and others less there does appear to be agreement that some COOL information is desirable.

Another academic said: “Regarding the impact of COOL of primary ingredients on developing countries in Question 1-2, I find interesting in the following three responses who think that COOL of primary ingredients could have a positive effect on developing countries: (1) COOL already assists developing countries in some areas. For example consumers often choose their coffee beans by country of origin. (2) The statements on labels for "main ingredients" are of great value for the producer countries, provided that they retain their character specialty due to the addition of flavors or colors of the material or product since only originates in that country or region. (3) COOL of primary ingredients could have a positive effect on developing countries because consumers may want to promote growth in those countries by purchasing their authentic products.”

Three government officials respectively expressed their views:

- I consider interesting the different views on origin labeling in different countries, as the regulations do not currently require, however, the right of consumers to

know is always important and should be taken into account, but like other countries this concept will take time to be implemented. Most experts agreed labeled the country of origin of the raw material, specifically identified as fish, shrimp, fruit, considered cool because it allows the consumer to be aware alerts to possible allergies, etc.

- In my opinion is important to emphasize that, despite the different opinions, most experts believe that it is important that consumers know where the raw material comes from the food we consume.
- I was surprised how few experts from Government took part in the survey. I also found it interesting about the perceptions from some in the academic community about the importance consumers place on origin labeling.

The representative of an American consumer association said: “Overall I would say I am surprised by how supportive the involved parties were of COOL. There was a lot of focus on the positive aspects of COOL instead of the negative. In part, this could be due to the lack of participation by food producers.”

An American scholar commented: “The 'consumers have the right to information' viewpoint is stronger among fellow respondents that I may have guessed. This likely is driven by the multi-discipline makeup of respondents.”

A Japanese academic, who did not indicate his expertise, noted that “Many economists participated in the study.” And an American academic felt that “No consensus on expert's opinions of COOL. Some of these experts really need to learn economics.”

An economist who works in an American university felt “Divergence of opinions even within a category of respondents is interesting”, and then he said: “Also, the magnitude of international distrust among several on the panel surprises me. I also wonder if we have lost sight and understanding of comparative advantages in trade. Finally, there seems to be a sentiment among several that labeling products by origin, if some people want it and can and are willing to pay for it, should be mandated for the entire food system. That imposes sizeable economic costs to consumers who are not willing to pay

for this - they by definition are forced to subsidize the rest. I am fully aware of the studies that find consumers say they want origin labeling. Yet when we examine it more closely in a broader and more comprehensive context we see that for most consumers, at least in the US, origin is relatively low in a preference ordering that includes more important product traits of price, food safety, freshness, quality, nutrition, and health. If food from a particular country is not safe, we should simply ban the import from that source until it is demonstrated safe. Beyond that, letting the market work and sort out where and when consumers are willing to pay for origin or any other labeling is less intrusive of consumer choice than is making everyone pay for origin labeling of every product and product ingredient despite the fact that many don't care enough about origin to want to pay the costs.”

Question 2-2

After comparing your viewpoints with those of the other participating experts, would you like to revise any of your answers to the 1st Round questionnaire?

Ten experts answered “No”, while one said “Yes” but didn't specify the details, and another expert felt it difficult to compare and asked “Where do I get viewpoints of other participating experts to compare?”

One academic did not intend to revise his original statements but made an interesting reflection: “Not really, other than I realized I may have presumed my views were more obviously apparent than they were. My minority opinion of letting the market sort out where, when, and which consumers are willing to pay for origin labeling costs on which products clearly is not a widely held opinion in this panel. Where does the origin labeling stop and why. If I require labeling from another country, for at least the same list of reasons, next logically is labeling by region of the country, then by state or province, then by township or county, then eventually every ingredient by every farm source. I have seen food production and processing system variation that is as great across neighbors in the same county as I have seen across borders.”

A government official underlined an opinion: “I believe that some specific commodities such as shelled shrimp, fish, fruits, vegetables, cod fillets, etc. that they are not subject to processes that change their nature must maintain the labeling of country of origin...”

There are only two experts who would revise their original statements. Both of them are from consumer associations.

- I would like to specify for question four that COOL should be mandatory for all ingredients. Making labeling as clear and informative for consumers as possible is important when considering how to approach COOL. (*The original response was: Yes, labeling ingredients with their country of origin, even if it is different from where the product was assembled, is still valuable to consumers and would further educate them about their food in necessary ways.*)
- In relation to first round question 7 I support the most accurate COOL information so that consumers may make informed choices and stating that a food originated in one country and was processed in another provides better information and is not difficult to label or understand. (*The original response was: Under Australian legislation food is manufactured in a country may be labeled 'Manufactured in' if it is substantially transformed in the country claimed and at least 50% of the production cost was in that country. However from a consumer perspective I believe that both country A and country B should be stated.*)

The new statements of the two experts don't deny but can integrate with their original responses. So, we can say that none of experts made any substantive revisions on their original statements in the 1st Round.

4.2 New Topics of the 2nd Round

In the 2nd Round there are six new topics, of which five questions are unstructured and open-ended, while one is a closed-answer question.

Question 2-3

Do you agree that COOL of main ingredients should be made on a voluntary basis? What will be the potential problems if the COOL of main ingredients is mandatory? What will be the advantages and disadvantages of a voluntary system?

Five academics and three government officials agree that COOL of the main ingredient should be made on a voluntary basis, while an academic and three experts from consumer associations do not agree. Two other academics and one government official didn't say "Yes" or "No" to the first sub-question, but answered the second and third sub-questions.

All responses are aggregated as follows according the type of organization that experts belong to.

Academics:

- Yes. Anytime things are mandated "unintended consequences" develop. Moreover, segments of each impacted population inherently are harmed as mandatory policies impose costs that not all will place offsetting benefits on.
- Yes, I agree than COOL should be voluntary. The problems with mandating is that first it is costly and the bulk of credible research shows that origin labeling is ranked well below and worth way less than other much more important food attributes by the vast majority of consumers. A small minority is able and willing to pay the premium. Advantages of a voluntary system is that the companies that can and want to serve consumers that want COOL labeling will serve those consumer demands and those consumers who don't want to pay for COOL have their choice. The argument often stated for mandated COOL is that consumers have the right to know where their food comes from. Mandated labeling does not provide consumers the "opportunity" to know, but instead "forces" all to pay for this whether they want it or not. Why should the many who rank origin labeling very low in their value preferences be forced to pay for those that want and are

willing to pay for this? A disadvantage of voluntary labeling is those that do want origin labeling, may not have broad access to such because there are not a sufficient number of similar people willing to pay what it will take to create a viable market for such labeling.

- Yes, I agree that COOL of main ingredients should be made on a voluntary basis. The potential problem of mandatory COOL is that the additional costs to consumers, producers and government may far outweigh the benefits that COOL would generate. The advantages of a voluntary COOL are (1) it can be used as a marketing strategy; (2) it can deliver the benefits without imposing additional costs on all consumers, producers and government; (3) it provides flexibility so that trading interests will not be compromised. The disadvantage of a voluntary COOL is that consumers cannot have the accurate information on the origin of food if producers do not participate in the voluntary COOL system.
- COOL should remain voluntary. The value of COOL varies greatly across ingredients. Mandating COOL for all ingredients would mean creating welfare losses for ingredients for which COOL is less valuable. For those ingredients where COOL is valuable, the markets will supply COOL on its own.
- I think that COOL of main ingredients should be made on a voluntary basis. If consumers have preference on domestic products compared to imported one, the COOL allows the consumers to choose domestic products. It also suggests that the COOL provides useful information with consumers and it will prevail without mandatory requirement. However, if consumers have no preference between domestic and imported products, the COOL does not provide any useful information. The COOL does not prevail accordingly. Then any COOL including mandatory requirement is also not necessary. The point is that the COOL prevails only where consumers demand such information irrespective of governmental intentions. The role of government is to check the accuracy of labeling.
- It is a difficult question. Consumers are less likely to use COOL if it is placed on a voluntary basis. Farmers cannot sell products with premium.
- If the COOL of main ingredients should be made on a voluntary basis, consumer confusion could emerge in the market. If the COOL of main ingredients should be

mandatory, cost would rise for all the companies, also SMEs.

- No, I think it should be mandatory for COOL of main ingredients - even if few consumers bother to read this. Potential problems of having this mandatory arise when manufacturers change source country because of seasonal availability or other reasons.

Government departments:

- For now, I agree that COOL of main ingredients should be made on a voluntary basis because if it is made mandatory, it will more or less become a kind of technical barrier to trade for especially most developing countries like mine. Potential problems like impeding trade or exports from developing countries will be enormous. Most developing countries are going to experience very large negative balance of payments and this is going to affect the economies of such countries, baring in mind that most developing countries are already experiencing negative balance of payments. Secondly, most developing countries are already battling with issues of Sanitary and Phytosanitary issues and addition of mandatory COOL will be adding more fuel to fire.
- Would agree to establish COOL for main ingredients on a voluntary basis, due to the different existing regulations in the countries, the possibility that costs tags rise, the impracticality of mandatorily put the COOL labeling. COOL labeling is advantageous when it is required to emphasize the origin of the country with their own qualities and processes, a disadvantage of voluntary labeling is that it only applies to business relationships and could not take into account the consumer.
- In our experience it is not good to force the industry to put more information on the product labels. Consumers do not manage to read everything that is written on the labels of the products and they do not understand the purpose of so much informations. I think that would be mandatory must to accompany a good consumer education. However, for cost issues, providing this information should be voluntary and not mandatory.
- If the food manufacturer feels its important to highlight the origin of their ingredients, they should be able to do so. However Consumers could reasonable

expect that the origin of the ingredient should be given in a standard form. We also shouldn't see claims of origin which are surious, such as 'farm fresh' when the food hasn't seen been near a farm. Similarly, if a producer doesn't want to make claims about the origin of the food, for whatever reason, he should be able to do this too. In the latter case the producer might be buying at a specific price level from a wholesale supplier and changes the origin of the food on a regular (maybe daily basis). This is OK too.

Consumer associations:

- As I previously stated, I think that COOL should be mandatory. There are however problems with this approach. If COOL is mandatory it may be costly to smaller producers and distributors. Disadvantages of a voluntary system would be easier concealment of undesirable origins and the ability to use COOL in a misleading manner (I.e. stating that products come from one place when they may come from many but only the one country is being mentioned). An advantage is that there will be consumer driven incentives for companies to start doing this which puts more pressure on other companies.
- No, COOL of main ingredients should be mandatory. In the US we have seen that a voluntary approach doesn't work. It doesn't provide consumers with the COO information they want because companies decide not to provide it. For a mandatory approach, record-keeping and segregation will likely be the biggest challenges but are not insurmountable. Also, for multi-ingredient product, determining what constitutes "main ingredients" of the product will be a policy discussion. Advantages: consumers have more information about the source of main ingredients of their food. Disadvantages - not all ingredients will have information applied to it.
- Consumers have a right to know where food comes from or is processed and I therefore support mandatory COOL labeling. However any mandatory scheme needs to be simple and easy to understand. Complicated labeling or labeling that tries to cover too many ambiguities will not be as useful to consumers. Voluntary schemes will be used by ethical traders or traders whose research indicates particular consumer bias for their source of product. Unethical traders who wish to disguise where a product originates could avoid COOL labeling altogether.

Question 2-4

When the following products are made with primary ingredients produced in a country different from that of the final processing, please indicate the degree of necessity to state the country-of-origin of main ingredient:

- A. Olive oils for blends of olive oils;**
- B. Coffee beans for roasted coffee;**
- C. Green tea leaves for black (fermented) tea;**
- D. Tomato for tomato puree;**
- E. Fruit for fruit juice;**
- F. Cocoa for chocolate;**
- G. Wheat seeds for flour;**
- H. Flour for noodles;**
- I. Fresh shrimps for shelled and frozen shrimps;**
- J. Fresh cod for frozen cod fillets;**
- K. Pork for ham or salami;**
- L. Beef for hamburgers**
- M. Chicken for chicken nuggets**

Degree of necessity:

- 0 - Absolutely not necessary**
- 1 - Not necessary**
- 2 - Not very necessary**
- 3 - Necessary**
- 4 - Very necessary**

Note: This closed-answer questionnaire is designed for qualitative analysis related to rules of origin. Please respond for each product in the following way: Product code – Degree (for example: A-3, B-2, etc).

This question is introduced to deepen the discussion started in Question 1-4 of the 1st Round. All the answers of 16 participating experts in the 2nd Round are listed in the following Table 4-2.

Table 4-2. Estimation of necessity to state the country-of-origin of the main ingredient

Product code	Academic								Government Department					Consumer Association			Average value
A	0	0	1	4	4	3	3	4	4	3	4	3	1	4	4	4	2,9
B	0	0	1	4	4	3	3	3	2	2	4	2	1	4	4	4	2,6
C	0	0	1	4	4	3	3	2	3	4	3	1	1	4	4	4	2,6
D	0	0	1	3	4	2	3	3	2	3	2	0	1	4	4	4	2,3
E	0	0	1	2	4	2	3	2	1	3	3	1	1	4	4	4	2,2
F	0	0	1	2	4	3	3	3	3	3	2	1	1	4	4	4	2,4
G	0	0	1	4	3	2	3	2	2	0	4	3	1	4	1	4	2,1
H	0	0	1	4	3	2	3	2	1	1	2	4	1	4	1	4	2,1
I	0	0	1	3	4	4	4	4	3	4	4	4	1	4	4	4	3,0
J	0	0	1	3	4	4	4	4	2	4	4	3	1	4	4	4	2,9
K	0	0	1	2	4	4	4	4	3	2	3	2	1	4	4	4	2,6
L	0	0	1	2	4	4	4	4	4	4	4	3	1	4	4	4	2,9
M	0	0	1	1	4	4	4	4	2	4	4	3	1	4	4	4	2,8

The academics have very different judgments on the necessity to state the origin of main ingredients. Two economists in the USA said “absolutely not necessary” for all the products and another American scholar said “not necessary” for all the products. An academic in Japan give max importance for stating the ingredient origin of olive oil, coffee and tea, as well as flour and noodles for the reason that “consumers are likely concerned about GMO”, while for another Japanese scholar the ingredient origin statement of flour and noodles is “necessary” but less important than all other products, for which the origin statement is “very necessary”. The three academics in other countries think it would be very necessary to state the ingredient origin of animal products (fishes and meats), while for plant products the ingredient origin statement is less important.

The experts from government departments in developing countries generally pay more attention also to the ingredient origin statement of olive oil and animal products, while a government official in the EU commented: “It is not necessary for any of these products to have an origin. However to highlight the quality of a product the producer might choose to give the information.”

Very differently from the viewpoints of three American academics, two representatives of consumer associations (in the USA and another country) said “very necessary” for all the products, and another expert from an American consumer association said it is not necessary to state ingredient origin of flour and noodles, but “very necessary” for all other products.

It is also interesting to note that for all the academics and consumer association representatives the necessity to state the ingredient origin of flour is the same as that to state the ingredient origin of noodles, while the government officials in developing countries have differentiated estimations: Two of them think it’s more important to know the origin of wheat seeds for flour, and two others said it’s more important to know the origin of flour for noodles.

If we consider the average value of all the valuations, the above products can be subdivided into two categories:

(1) The average value is 2.4 or less :

- D. Tomato for tomato puree;
- E. Fruit for fruit juice;
- F. Cocoa for chocolate;
- G. Wheat seeds for flour;
- H. Flour for noodles.

The average values for these products can be rounded to 2. This means “not very necessary to state the ingredient origin”.

(2) The average value is greater than 2.5 :

- A. Olive oils for blends of olive oils;
- B. Coffee beans for roasted coffee;

- C. Green tea leaves for black (fermented) tea;
- I. Fresh shrimps for shelled and frozen shrimps;
- J. Fresh cod for frozen cod fillets;
- K. Pork for ham or salami;
- L. Beef for hamburgers
- M: Chicken for chicken nuggets

The average values for these products can be rounded to 3. This means “necessary to state the ingredient origin”.

Question 2-5

According to non-preferential rules of origin, a product can only have one country-of-origin, which is the country of the last substantial transformation, while for many consumers the “country-of-origin” means the country where the primary ingredient is produced. Do you think that multiple countries of origin labeling which specifies the producing country of the main ingredient and the manufacturing country of the finished product (e.g. chocolate is labeled: “Made in Switzerland from Ghanaian cocoa”; or, “Producing country of cocoa: Ghana; Manufacturing country of chocolate: Switzerland”) could resolve the issue of misleading consumers? Do you agree that all countries of possible origins would be listed (e.g. Cocoa sourced from: Ghana, Ecuador, Madagascar, Cote d’Ivoire, Peru, Jamaica, Dominican Republic)?

Before the 1st Round discussion started, I created only the first part of this questionnaire. The second part was added after I read the following opinions expressed by two experts in the 1st Round: in response to Question 1-7 one expert said “From the consumer perspective, it would be preferable if the different potential origins would all be labeled”, while another expert in his response to Question 1-1 asked “but how many

consumers would spend time reading labels of processed products listing 10 different countries of possible origins?” Previously, I read in “The Code of Practice for the

Labeling of Pork and Pork Products” produced by BPEX (this represents pig levy payers in England) some recommended examples of COOL for pork products such as sausages, ham and pork pies can sometimes be made with pork from a number of different countries, of which one is: “made with pork from country x, country y or country z”. In my view the origin statement should be accurate and I do not agree to indicate neither “*potential origins*” nor “*country x, country y or country z*”, therefore I introduced the second part of this question so as to compare my viewpoint with other experts in this Panel.

The responses from experts are quite different and can be aggregated in the following four types.

(1) “Yes” to both sub-questions

The representatives of two consumer associations said:

- I definitely agree that listing countries of origin for each part of processing and production would resolve issues with customers being misled. I think it’s vital that all countries of possible origin being listed.
- Yes, I think that type of labeling would be informative, truthful and useful for consumers. Yes, all possible countries of origin could be listed, but it's better and more complete for consumers to be more specific.

An academic has a similar viewpoint: “Yes, I think that multiple countries of origin labeling which specifies the producing country of the main ingredient and the manufacturing country of the finished product could resolve the issue of misleading consumers. Yes, I agree that all countries of possible origins would be listed.”

(2) “Yes” to the first sub-question and “No” to the second one

Four experts from government departments commented:

- Multiple countries of origin labeling, where the producing country of the main ingredient and the manufacturing country of the finished product is likely to resolve the issue of misleading consumers. This is because then the consumer knows that the main ingredient was from country A and the actual product was manufactured or produced in country B, hence transparency being dealt with here as well as consumer awareness increased. On the subject that all countries of possible origins to be indicated or listed without conditions or restrictions, will also be problematic since it is likely to bring about labeling issues as well as certain cost implications apart from making the packaging or labeling look awkward.
- I would agree to indicate the country in which the country is produced, but not a list of countries, presumably because there are mixtures of various grades of various countries and the concept of quality origin is lost.
- I think this form to declare the different countries of origin of ingredients not only helps consumers but not to confuse it even more. I do not agree with so many countries listed on the label of a product.
- Although for technical administrators the rules of origin are reasonably clear for most manufactured products, for food there is a mismatch between the rules and consumer expectations. This allows for claims to be made which don't correspond to the to the consumers understanding of the claim leading to confusion. There is also a mismatch when giving multiple countries of origin. Does giving multiple counties as you have done in the question mean that ingredients were generally sourced from these countries or that all these countries had been used to source to source the ingredients (ie there was always an ingredient from madagascar in the chocolate.)

An academic said: “Yes to the first question. Less certain about the second question... In my country it is common to see statements along the lines of: 'Ingredients may be sourced from several countries', or equally vague stuff. I do not agree with this casual approach. The argument for this type of practice is to save costs for manufacturers when they substitute one origin for another origin because of seasonal or cost-driven factors.”

Other two academics have similar viewpoints:

- In my opinion, multiple countries of origin labeling which specifies the producing country of the main ingredient and the manufacturing country of the finished product (e.g. chocolate is labeled: Producing country of cocoa: Ghana; Manufacturing country of chocolate: Switzerland) could partially resolve the issue of misleading consumers. I agree that listing all the countries of possible origins could be a problem.”
- I think that multiple countries of origin labeling which specifies both ingredient producing and the manufacturing country would resolve many issues on international trade. Number of countries listed in the label should be restricted by standardized procured for which we should have more discussions.

An expert from a consumer association also commented: “I believe stating the country of origin and the manufacturing country provides consumers with good information. Where raw materials are sourced from numerous countries listing more than two countries is probably no more informative than stating 'sourced from a number of countries'. However when the raw material is sourced from a number of countries or processed in a number of countries a product would be difficult to label and also be of lesser value to consumers. There is also the question of percentages of where different ingredients originate.”

(3) Don't overload information on the label

Three academics expressed similar viewpoints:

- The longer the list the more likely the origin information is to be ignored and/or not understood by consumers. Moreover, the longer the list (and more details included regarding production steps/alterations) the higher the costs incurred. The shorter the list when a final product was influenced by ingredients from multiple sources the more likely "concerned consumers" are to be upset and feel cheated out of "information they want." The net of these points drives the

dilemma at hand.

- (for the first question) No. I think consumers will confuse and start to ignore labels. (for the second question) I believe consumers cannot process complicated information while shopping.
- The entire sequence is confusing to consumers to the point that they will ignore the information because of information overload. Research indicates that we are overwhelming consumers with too many items on the label already. Origin is low on the relative ranked list of things consumers demand of food products as such, after we label price, weight, buy by date, nutritional information, potential health attributes, quality designations, and now the proposed passport of every place every ingredient has visited during its production and processing life - all for a purchase decision that the typical consumer makes in 5-10 seconds or less. If consumers really want all this information and they are truly going to study it all as they make individual product purchases, we better make way bigger parking lots at the retail store and we need to have one household member plan to spend 4 hours per week or more shopping at the retail food store. Not likely to happen, consumers will largely ignore the long list of country pedigrees.

(4) Use the last substantial transformation rule for the labeling

An expert from a government department responded to this question with the common official provision: “When a food undergoes processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country of origin for the purposes of labeling.”

An academic said: “I think the substantial transformation rule is sufficient. Listing all countries would be way too costly in many cases. For some products, the number of countries could possibly be 20. *NY Times* had a nice illustration of this for bread a few years ago.”

Summarizing the four types of answers, 11 experts support the first proposal of labeling the ingredient producing country and manufacturing country, while 5 experts have

opposing opinions. Regarding the second sub-question, only 3 experts agreed to labeling all the countries of possible origins, while 13 other experts criticized such labeling.

Question 2-6

Marking “100% (Country Name) (Product Name)” or “Product of (Country Name)” (for example, 100% Italian Extra Virgin Olive Oil) is an active way to distinguish typical foods of a country from the foods manufactured in the country from ingredients produced in other countries. Do you think this kind of declaration should be supported by a certificate of traceability (ISO 22005)?

Two academics expressed their opinions related to ISO traceability certification:

- This declaration is already supported by voluntary engagement of ISO efforts. If the question is whether to mandate ISO certification that is a different manner, and consistent with earlier questions I would not support that.
- ISO is a private certification. If the market rewards such certification, firms will seek them. Otherwise, consumers can always chose not to believe that firms are 100% truthful.

A government official did not agree “100% declaration”: If that claim were made, it is unclear exactly what that means to a consumer. Does the 100% refer to the origin or the product? For example, 100% British Beef might mean that all of the beef is British or that all of the product is beef. I would discourage this practice, as it can be confusing and therefore misleading to consumers.

All other experts explicitly agreed the “100% declaration” should be supported by a certificate of traceability. They expressed their opinion in various ways and with some further considerations. It is to be noted that a government official worried that the requirement on the traceability certification would cause a technical barrier to trade.

Six academics said:

- Yes. It is very difficult to prohibit producers from using COOL information for advertisement.
- Yes, if a company wants to name a product by origin, the labeling should have integrity and be refutable. The best way I can think of to do this is to require certification of traceability. I expect companies that want to make such claims would embrace making sure the labeling is sincere and not subject to easy replication that is not genuine.
- Yes, I think this kind of declaration should be supported by a certificate of traceability (ISO 22005).
- Yes, that makes sense.
- I agree "100% made in" could be an active way to distinguish typical foods. It is better if this declaration is supported by a certificate of traceability.
- I agree with that this kind of declaration should be supported by a certificate of traceability. I think that some consumers demand such information and the declared information should be verified when it is needed.

The three representatives from consumer associations said:

- I definitely agree that a certificate of traceability would be a great tool for consumer empowerment and clarity about country of origin. All claims should provide backing or verification.
- Yes, it should be supported because it provides specific information.
- Marking "100% (Country Name) (Products Name)" or "Product of (Country Name)" is very useful for consumers and easy to understand. Suppliers would also gain when supplying food from countries where consumers recognize that a particular country is a good source of quality produce (e.g. wine, olive oil, beef) or has sound environmental policies (e.g. GM free). The term '100%' would also need to be defined because food that is '100%' from one country may pick up minute quantities of other materials during processing. Any claim should be able to be substantiated whether by a certificate of tractability or otherwise. This question also raises the issue of what is consumer expectation where a 100%

claim is not made. The Australian Consumer and Competition's (ACCC) brochure dealing with country of origin claims uses "significant ingredient" or "significant component" in substantiating claims of country of origin. ACCC provide the following example - "... for an apple and cranberry juice to be able to carry a 'product of Australia' label, both the apple and the cranberry juice would have to be sourced from Australia. This is despite the cranberry juice being, on average, about 5% of the total volume of the product. If, however, a local source can be found for the apple juice and the cranberry juice then it would be legitimate to employ a 'product of Australia' label, even if, say, a preservative was added to the juice and the preservative was imported. This is because the preservative does not go to the nature of the good."

An expert from a government department said: "Yes, I think that would be very important to confirm the veracity of the statement. However, it is not easy to obtain and could generate barriers on trade between countries."

Question 2-7

For a food made in Country B with the main ingredient from Country A and exported to your country, in order to be sure that the information on the label is true, do you think the certificate of origin issued by Country B should state the originating country of the main ingredient and provide an authenticated photocopy of the certificate of origin of the main ingredient issued by Country A?

This question refers to customs procedure and official inspection, but not for providing information to consumers (in every country it is not required to show the certificate of origin to consumers). The responses of experts vary depending on their field and experience. Some experts agree that the certificate of origin issued by Country B should state the originating country of the main ingredient and provide an authenticated photocopy of the certificate of origin of the main ingredient issued by Country A, while an expert responded "No", and some experts have other considerations. All the

responses are aggregated as follows according to the types of organization that experts belong to.

Academics:

- Yes, in order to be sure that the information on the label is true, I think that the certificate of origin issued by Country B should state the originating country of the main ingredient and provide an authenticated photocopy of the certificate of origin of the main ingredient issued by Country A.
- Yes, this would be an appropriate approach.
- That should be ok, but I think it is not possible to consider all the details in this way.
- "In order to be sure that the information on the label is true" gets at trust and validation issues. Some parties will place trust in product claims until a breach event occurs. Others will only trust product claims if backed by 3rd party verification. Yet another group will discount all claims. I do not support mandating inclusion of certificates as that adds costs that likely do not have offsetting benefits.
- I believe most consumers want to know Country B in the above example. Yes. I think it is one of the major problems of the current COOL practice.
- If the COOL labeling system is voluntary, the company that wants to label should be required to make certain the labeling is consistent with the facts. If I am exporting from country A to C and all I want to label is that the product was processed in A, that is what I label. If I also want to inform consumers that the product was originally produced in country B, I should be able to add that to the label too. All of this must be genuine and subject to audit. Certification for my preferred claims are what matter here.

Government departments:

- For a regulatory body, maybe the answer will be yes, but for the ordinary consumer, I think this will be asking too much. Secondly, my issue is, will it be for a consignment of products or for each packaged product, because if the certificate of origin is to be requested for each product, then it is really asking for too much.

- Yes, I think this information shall be given.
- This practice could be possible provided that has governed the country for customs purposes.
- I think that would be ideal to achieve but it is not easy to obtain. However there are situations where it is absolutely necessary in the case of ingredients whose origins is a country that has had health problems related to it.
- If the country of origin was claimed on the label, I would expect to see this information on the commercial documents available from the producer.

Consumer associations:

- This sort of safeguard is a great means of protection for consumers. I feel that any sort of authentication is positive.
- Not sure.
- It is an offence under Australian Consumer Law to provide false or misleading information. The law applies to COOL and therefore it is in the interests of importers to be able to substantiate any claim they make. An authenticated photocopy may assist importers (and consumers) but an importer may need to take other steps to ensure their claims are true. An authenticated photocopy could be forged and should not be relied on in isolation. It is important that enforcement agencies also take steps to ensure the truth of claims. Perhaps by observing geographical flows of produce and testing the DNA where apparent false claims are made. I am aware of a criminal investigation where the DNA of tinned fish was used to show that the fish did not originate in the country claimed.

Question 2-8

Every country requires that the foods imported from other countries must be labeled with information in the official language of their own country (e.g. a food imported into China must have a Chinese label), so that the local consumers can easily understand the information on the label. Therefore, when a food is exported from Country B of Language X to Country C of Language Y, the information panel of the label (usually the back label for bottled products, e.g. olive oil, wine)

must be printed in Language Y according to the law of Country C. Moreover, when the importer's name and contact information is required in Country C, the label in Language Y must be customized for each importer. In other words, the customization of the label is essential for concluding international trade operations of pre-packaged foods. As a matter of fact, in the majority of cases, the statement on the country-of-origin of the main ingredients used in the production of pre-packaged foods for a certain importer doesn't add any additional labeling cost to the exporter, but could reduce the exporter's "game space" (flexibility) related to ingredient origin. Do you think the exporters' and importers' business attitudes would be determining factors for the statement of origin when a food is traded internationally? Would the COOL of main ingredients be useful for limiting the businesses based on the "imperfect information" of consumers?

Some experts found it difficult to understand and answer this question and did not give substantive responses, while other experts have various points of view.

Two academics in Asian countries made the following comments:

- Certainly, the exporters' and importers' business attitudes would be determining factors for the statement of origin when a food is traded internationally. For example, if Country A is an export-oriented economy, then the exporters in Country A may prefer to have more flexibility for marketing their food that applied to both domestic and export markets. The COOL of main ingredients would be useful for limiting the businesses based on the "imperfect information" of consumers only if labeling, either voluntary or mandatory, is true and accurate.
- I think it is necessary to consult with exporters and importers. However, the labeling system needs to be designed to reflect the preference of the consumers of importing countries.

Two academics in the US have different opinions:

- COOL of main ingredients will continue to be a trade barrier of discussion.

There is not such thing as 100% complete and accurate information and hence there will always be groups interested in expanding origin information tracking and provision. Likewise, there will always be groups concerned over parallel cost impacts. Finally, as long as comparative advantages in production of food exist there will be rational economic and political efforts to derive trade barriers when it comes to trade of food products and ingredients.

- No, the determining factor for all of this will be whether consumers care or not. If consumers want full information tracing food from every place any of its ingredients have been, and consumers are willing to spend all the time reading all these details, and consumers are willing to pay for all the costs of doing this, then they will do so. If not, consumers won't pay for this and such products will fail. The logical conclusion here is that if origin labeling of every location of every ingredient is important, we are going to need multiple page labels with really fine print attached to the product. I sure hope I have choices to pay the high premium for that extensive labeling or not pay the exorbitant premiums and purchase products that offer what I value most that don't have all the superfluous information that I would be forced to pay for if such labeling were mandated.

Two government officials said:

- Yes, I think the consumer would receive in this way, accurate and complete information.
- Commercial agents base their contracts on the laws, decrees and standards, labeling and phytosanitary measures enforced in their countries.

Another government official said “I don't fully understand the question”, but he has a clear perspective on the imperfect information: “However, I believe the answer to be 'yes' that I do think importers' and exporters' business attitudes would be determining factors, based on the accuracy of that information. Again, the accuracy of the information that businesses use would determine the limit to which the information to consumers was 'imperfect'.”

The representatives of consumer associations said:

- Yes I think importers' and exporters' attitudes would be determining factors for the statement of origin when a food is traded internationally. I think it would be a positive way to limit industry from taking advantage of consumers.
- Not sure.
- A label on packaged food carries a specific amount of information that appears to vary from country to country. In Australia mandatory information includes a description of the product, country of origin, quantity statement, name and address of the importer, list of ingredients, nutrition information and mandatory warnings. Even where lesser information is required in a particular country I believe that a COOL of main ingredients is of benefit to consumers and would assist in limiting “imperfect information”.

Summaries

After having analyzed all the responses on the new topics of the 2nd Round, I make the following summaries:

- (1) The majority of academics and the government officials agree that **COOL of the main ingredient** should be made on a voluntary basis, while a minority of academics and the representatives of consumer associations deem that it should be mandatory.

Comments on voluntary COOL of the main ingredient: It can be used as a marketing instrument; the producers that want to serve consumers with COOL information can make the origin statement according to consumer demands and this system does not impose additional costs on all producers and consumers. However, in a voluntary system, COOL only applies to business promotion; consumers cannot access COOL information if producers do not want to provide it and conceal undesirable origins. Moreover, it is possible that the origin information would not be given in a standard form.

Comments on mandatory COOL of the main ingredient: It can provide more accurate information to consumers, but could increase cost for all the producers including small companies, especially when producers change the source country because of seasonal availability or other factors. For less valuable ingredients a mandatory COOL would cause welfare losses. Moreover, it could become a kind of technical barrier to trade, especially for developing countries, namely impeding exports from developing countries.

- (2) Some academics and a government official think the COOL of the main ingredient would be not necessary or absolutely not necessary, while the experts from consumer associations deem it very necessary (except for one expert who thinks it would not be necessary to indicate the origin of wheat seeds for flour and the origin of flour for noodles). The viewpoints of other experts are between these two extremities; generally they pay more attention to the COOL of main ingredients for olive oil and animal-origin food products. According to the average value of the valuations made by all 16 experts, it is not very necessary to state the main ingredient origin of the following foods: tomato for tomato puree, fruit for fruit juice, cocoa for chocolate, wheat seeds for flour, and flour for noodles, while it is necessary to state the main ingredient origin of the following foods: olive oils for blends of olive oils, coffee beans for roasted coffee, green tea leaves for black (fermented) tea, fresh shrimps for shelled and frozen shrimps, fresh cod for frozen cod fillets, pork for ham or salami, beef for hamburgers, and chicken for chicken nuggets. The collective perspectives (average values in Table 4-2) show some signals related to the rules of origin (this argument will be analyzed in Chapter 6).
- (3) The majority (11 of 16) of experts agree that multiple countries of origin labeling which specifies the producing country of the main ingredient and the manufacturing country of the finished product (e.g. chocolate is labeled: “Made in Switzerland from Ghanaian cocoa”; or “Producing country of cocoa: Ghana; Manufacturing country of chocolate: Switzerland”) could resolve the issue of misleading consumers. Regarding the practice that all countries of possible origins would be listed, the majority (13 of 16) of experts do not agree it because the list of countries

would confuse consumers and the origin statement would have lesser value to consumers, who would ignore the origin information. Moreover, the longer list would bring higher costs for labeling (if the label dimensions should be increased), although the purpose of listing possible origins is to save costs for manufacturers when one origin is substituted with another origin for the reason of seasonal availability or managerial optimization. If a main ingredient is a mixture of various origins, the percentages of different origins should be considered; it is better not to list more than two countries of origin if there is not a particular purpose.

- (4) The majority (13 of 16) of experts agree that the declaration of “100% (country name) (product name)” should be supported by a certificate of traceability because it is good way for marketing typical products and some producers might use COOL information for advertisement. For consumers it is important that the origin statement would be truthful. The certification of traceability that could confirm the veracity of a “100% statement” would also be a marketing instrument. However, an important question to be considered is: Should the certification of traceability be mandatory for the “100% declaration”? If the answer is “Yes”, the requirement would be a technical barrier to trade for developing countries.
- (5) When a food made in Country B with the main ingredient from Country A is exported to Country C, it would be a positive approach that the certificate of origin issued by Country B would state the originating country of the main ingredient and provide an authenticated photocopy of the certificate of origin of the main ingredient issued by Country A. If the main ingredient origin is stated on the label, this information should be shown on commercial documents. However, an authenticated photocopy of certificate of origin of the main ingredient issued by Country A cannot guarantee that the origin statement on the label would be true, and importing Country C might need other method to verify the product origin if it would damage consumers' interests. The importer in Country C should address this issue according to the law of the country and should be able to substantiate the origin claim on the label.

(6) Because foods traded internationally must be labeled in the official language of the importing country and with the importer's name and contact information, the customization of the label is essential for concluding international trade operations of pre-packaged foods, and in the majority of cases, the accurate statement on the country-of-origin of the main ingredients used in the production of processed foods for a certain importer doesn't add any additional labeling cost to the exporter, but could reduce the exporter's flexibility related to ingredient origin. Whether or not to state the main ingredient origin principally depends on the law of the importing country and the importer's business approach. COOL of the main ingredient can reduce the “imperfect information” of consumers if the origin statement is truthful and accurate. The accuracy of the information provided by the exporter and importer would determine which information to consumers is “imperfect”. If consumers care for the origin of the main ingredient, COOL of the main ingredient will decrease the market demand for the products with a disguised origin.

Generally speaking, during the 2nd Round for some topics (e.g. “100% produced” should be supported by a certificate of traceability) exists a consensus of a certain degree, while for some other arguments (e.g. to choose voluntary or mandatory) it seems impossible to reach a consensus. However, this Delphi study on COOL does not aim to reach a consensus on all arguments. An important goal of the 1st Round and 2nd Round is to estimate the reasons of divergence so as to make a proposal related to COOL policy, which will be discussed in the 3rd Round.

Chapter 5

Delphi Study on Country-of-Origin Labeling for Foods

Round III

The main objective of the 3rd and last Round is to assess the discussions on the topics of the 2nd Round and then to expand the study in the regulatory direction.

Participant are invited first to comment on the summaries of aggregated answers from the 2nd Round, and they can revise their initial statements if they choose.

The new topics of the 3rd Round focus on considering a proposed regulatory principle for the formulation of policy on the COOL of main ingredients, discussing the definition of main ingredient and estimating the desirability for a worldwide standardization for country-of-origin marking.

Similar to many other Delphi studies, the number of participants dropped in each round. As of 3 April 2014 only 14 experts in 10 countries responded to the 3rd Round questionnaire.

Table 5-1. Expert Panel Members in the 3rd Round

Type of Organization	Experts in developed countries	Experts in developing countries
Academic	7	0
Government department	1	3
Consumer association	3	0
Total	11	3

5.1 The Review of the 2nd Round

Before discussing new topics in the 3rd Round, the 14 experts made comments on the 2nd Round.

Question 3-1

Which discussions in the 2nd Round do you find interesting?

Some experts responded directly to this question, and some expressed their opinions in a general way.

One academic said he found interesting and really enjoyed reading the divergent views on the multiple countries of origin labeling, and another academic found interesting the discussion on mandatory or voluntary COOL.

A government official also found interesting the discussion around COOL of main ingredients and around the differences of labeling the origin of a product and the origin of its main ingredient. He said: “We see it as potentially misleading when a manufacturer gives the origin of a product where its ingredients may be from elsewhere - this is unless it is obvious that this product's ingredient will not have the same origin as the place of manufacture - chocolate bars for example.”

The most interesting discussion for two experts from consumers associations was the rating of which foods should be labeled with main ingredient origin information. One said: “I was glad to see meat and seafood were cumulatively deemed important enough by all participating parties to require COOL. Olive oil, tea and coffee were also on this list I suspect because they are foods that have vastly differing qualities and sometimes claims about origin in their title.” Another said: “As an ex-regulator I understand the government perspective of having to legally establish the truth of more complex information and accept the academics view that too much information can confuse consumers. However as a consumer representative I believe that under a voluntary system only the responsible suppliers or those who feel it is a marketing advantage will use COOL. I also found the table of different products scored was interesting and would be interested as to know why some products rated lower than others.”

A government official said: “I still find some of the contributions of the consumer associations very interesting and I understand where they are coming from, but in taking their views with current international trade concerns and looking at it with an economic background, contributions do not sound too feasible even though it sounds like the natural thought to be advocated for the benefit of the consumer in general.”

An economist commented: “An interesting sentiment among some is that if origin labeling is not being provided now by retailers or food product manufacturers, where it is voluntary, that there is some kind of market failure. That is, manufacturers are trying to hide something or just don't want to provide origin labeling and this represents a failure of the system since it is presumed consumers want origin labeling. One thing that amazes me in the US at least is just how responsive food companies are to catering to broad consumer interests. Food companies are immensely responsive - in fact so responsive, there are a very large number of new food product launches annually that fail (e.g., Mintel). As such, if food companies could extract premiums greater than added costs from consumers by tracking and labeling product origins, they would have done so long ago and very prolifically. There is no market failure here that I can see as the premiums sufficient consumers are willing to pay apparently are less than the added costs to origin label.”

The majority of the experts were interested to see the different viewpoints of other participants. However, one academic, whose viewpoints were often different from those of the majority, said: “You introduced this research study with the objective of converging opinions. This will not happen with the panel you have. If you ask experts, who have thought these issues thoroughly before, there is no chance that they will change their opinions. In particular, you have people from consumer associations with obvious stakes in the those issues.” He felt the level of “economics” of this Delphi study is too low since in the questionnaires there is not “any mention of costs or benefits”.

Not in response to this last comment but to his proclamation (after the 1st Round) “Some of these experts really need to learn economics”, another academic said: “I guess this person is a true believer in the Homo economicus concept, and the prevalence of

rational decision-making. Oh well, we in marketing are rather persuaded by the guy who won the Nobel Prize in Economics in 2002 (Daniel Kahneman), that decision-making under conditions of uncertainty is rather determined by heuristics and intuitive thoughts - which work quite well mostly, but are subject to biases. Homo heuristicus, OK? COOL caters well for such mechanisms - providing 'mental shortcuts' to enable judgments about 'quality' (whatever that is), as do brands (think 'Nestle').”

Another government official commented: “All the topics are very interesting and important. The possibility of getting feedback from academics, consumers and representatives of other governments with considerable expertise in the issues, I found it very empowering. However, the discussion and the views expressed on mandatory or voluntary statement of ingredients has been very interesting and gives us things to reflect on.”

Question 3-2

After comparing your viewpoints with those of the other participating experts, would you like to revise any of your answers in the 2nd Round questionnaire?

Eleven experts responded “no”; four of them added further comments:

- (Economist) No, though I find the variability in perspectives quite intriguing - obviously, intelligent and informed people have divergent opinions on this topic.
- (Government official) No, although it is important to emphasize that by coming into contact the opinions of other participants in the study that clarify many concepts, understand not carrying to change my opinion about the responses.
- (Government official) No, although the other answers raise interesting questions.
- (Consumers association) Generally no - except to say that I agree that too much information can overwhelm consumers so that a balance of how much COOL information is provided in relation to its usefulness is necessary. I support healthy competition between suppliers of similar products but unfortunately eye-catching slogans and meaningless claims are often placed prominently and dominate other information (COOL, nutrition, ingredients) that is in fact of more value to consumers.

Only one government official chose to deepen his consideration on the multiple countries of origin (Question 2-5). He said: “I would agree to put the Country of Origin if the country is that of the last transformation, but not put a list of countries, since it presumed that food is mixtures of various grades of various Countries and the Concept of "Quality of origin” would be lost. The concept of country of origin is also linked to agricultural health of countries, and food safety. The concept of "quality of origin" are other attributes such as color, odor, taste and texture that can be indicated and measured by standards of product quality, referring to some geographical condition or production method. So you should define which attributes you want to highlight the quality or health or perhaps both on the label. Quality attributes regularly volunteer to declare on the label, the health aspects are measured through traceability, through health, safety or other certificates. Traceability of food must be linked to the concepts of quality. If countries despite triangulate or passing from country A to a B or C, if they have traceability in their companies, can lower the level of perception of low quality and health and safety risk to consumers, so could be declared on the label. I share the idea of other experts who said that the health, nutritional quality, freshness and safety of the final products can be more important than the name of the country (if different) from which the raw material or main ingredient is produced. However, according to other experts say "if the main ingredient is recognized and special quality that allows greater consumer acceptance states highlight their attributes the origin of the raw material can help your business valuation to the consumer. If products or main ingredients are of animal origin, when triangulation or more countries production occurs, consumers may worry health conditions of some of these countries for the safety and security of food, so the processing country could have an image of lower quality than the country of origin or the last country that made the final product.

5.2 New Topics of the 3rd Round

In the 3rd Round there are three new topics, which are unstructured and open-ended, so that the participating experts could freely express their opinions.

Question 3-3

A voluntary COOL system has advantages and disadvantages, and its disadvantages could be remedied by mandatory COOL. I think an integrated voluntary/mandatory system could be the right solution. Since the markets in different countries have different supply systems, they need different COOL regulations. If a country does not experience commercial fraud based on false country-of-origin statements, its market does not demand mandatory COOL of ingredients, so its COOL of the main ingredient can be voluntary. If a country does endure commercial fraud related to the country-of-origin statement, its market needs new regulations, so mandatory COOL of the main ingredient should be introduced and applied to relevant food products in order to protect the interests of consumers and honest producers. Therefore, I propose a general regulatory principle for the formulation of a policy on ingredient origin statement: COOL of the main ingredient is generally made on a voluntary basis, but should be mandatory for the foods that could be subject to fraudulent practices on the origin statement. What do you think of this proposal? Could it be suitable for the formulation of COOL policy on the main ingredient in your country?

Seven experts in seven countries (Australia, Chinese Taipei, Ghana, Italy, New Zealand, Uruguay and USA) agree or find interesting this general regulatory principle, even if they have further preferences. A representative of a consumer association disagrees because he prefers “total mandatory”, while two academic and a government official disagree because they believe the mandatory COOL of the main ingredient would not help resolving the problem of commercial fraud. Three experts affirm nor disagree but have other considerations. All comments are aggregated as follows according to the types of organization that experts belong to.

Academics:

- Yes, I suppose so - although I still feel it is the right of consumers to have COOL information for main ingredients. Therefore I would prefer to see mandatory COOL

of the main ingredient(s) across the board.

- I think this proposal is reasonable. It is suitable for the formulation of COOL policy on the main ingredient in Taiwan. For example, the mandatory COOL of tea leaves has been introduced after several cases that retailers were lying about the origins of their tea leaves and the Vietnamese tea leaves were found among Taiwanese tea packs.
- I agree with this proposal. It is important that COOL of the main ingredient should be mandatory for the foods that could be subject to fraudulent practices on the origin statement. It is a topic question above all for specific problem, for specific "country sounding", such as Italian sounding, French sounding, and so on.
- I think that COOL of the main ingredient should be always made on a voluntary basis, even under the fraudulent practices on the origin statement. Regulations should be made to prevent from fraudulent practices. Imposing mandatory COOL labeling likely increases more fraudulent practices. The role of government is to check the accuracy of the origin statement when it is placed on a voluntary basis.
- Anything could be "suitable" but I'm hesitant to overly support this approach. First, I don't think mandatory COOL remedies all the disadvantages of voluntary COOL. Second, there are several examples of protectionist pushes towards MCOOL that have little if nothing to do with experienced fraud.
- The proposal suggests mandating origin labeling because there is contention of potential or actual fraud. Laws mandating origin labeling won't preclude fraud, in fact they make more activities that used to be legal, now less legal. If there are problems with products from one origin or another, this needs to be dealt with in food quality grading and food safety inspection. This is not about origin labeling as that is stereotyping, profiling, and prejudice. Design a robust, trusted, reliable food quality and food safety system, which is needed regardless of origin - right? If you have that, you don't need to have origin labeling. Origin labeling is somehow trying to serve as a proxy or cue for safety and/or quality and it is a poor and highly error-prone cue. Why not go directly to the core of the concern rather than dancing around the circumference? I don't think there is always need for regulation and that regulation has to be the solution. There are already laws against fraud. What would

mandatory traceability add to these laws? I find it too easy to say that traceability would be mandatory for some products but not other. Where to draw the line?

Government departments:

- The proposal to me sounds reasonable for especially a country like mine, where the regulatory systems are weak, exit and entry points for goods too are not well manned and various fake and sub-standard goods flood our markets, an integrated Voluntary/Mandatory system is likely to help the system. For such a country like mine, commercial fraud is likely to be very high even though I don't have statistics to back it up, the above-stated proposed system is likely to be valid.
- Considering the proposal is interesting and could be worked on developing a policy on this issue, taking into account that is made for products that contain ingredients that come from countries or areas that do not give assurance about the safety of it. In our country it is mandatory for some foods like Meat, the importing company submit documentation the origin of the ingredient to evaluate traceability. However not required to be placed on the product label.
- I believe that establishing a voluntary or mandatory rule for fresh main ingredient is necessary to consult with the tanks of regulatory authorities. In my country we use the Central American technique regulation based on Codex and just says country of origin.
- I disagree with the proposal. All foods may be subject to fraudulent practises, but that doesn't necessarily mean that legislators should make origin labeling mandatory, potentially to the detriment of food sector businesses given the high cost of mandatory labeling of the country of origin. This also does not tackle the route of the problem with fraudulent activity and only counteracts one bi-product of the crime. It would not be suitable in the UK as it places a disproportionate burden on food businesses that may have been the victim of commercial fraud for something that would not necessarily prevent future fraud.

Consumer associations:

- I think that your proposal is compelling and a decent proposal that is more

diplomatic that the policies I would like to see put in place. It would be best, from the consumer perspective, to have policies that mandate COOL for all ingredients.

- I support the proposal that the main ingredient be stated and be mandatory but it should include all foods. Given the nature of COOL I would suggest that all countries would experience fraud at some time in relation to country-of-origin claims. Fraud is not restricted to COOL it can also include subtle messaging. For example where there is no COOL suppliers can include pictures and proprietary names that suggest that a product comes from a particular country when it does not. I believe that all foods could be subject to fraudulent practices on the origin statement - especially where products are in direct competition with a locally made or produced product.
- I disagree. The reason to require COOL is not just about food fraud. It's also about right to know and consumer information. Voluntary COOL provides consumers with incomplete information in the marketplace - some producers volunteer to provide it while others do not. So consumers do not have enough information about all products within a particular category in the marketplace. Markets function better with full information. In addition, if there is some cost involved in providing COOL, that places the ones who volunteer to provide the information at a competitive disadvantage in the marketplace, since the ones who do not provide COOL information are not taking on those costs.

Comparing the opinions of each expert from the 3rd Round with his/her previous response to Question 2-3 in the 2nd Round highlights some interesting evolutions:

(1) Four experts who agreed that COOL of main ingredients should be made on a voluntary basis don't agree that COOL should be mandatory for foods that could be subject to fraudulent practices on the origin statement.

(2) Two experts who agreed that COOL of main ingredients should be made on a voluntary basis are doubtful that COOL should be mandatory for foods that could be subject to fraudulent practices on the origin statement.

Table 5-2. Comparison of the answers between the 2nd Round and 3rd Round

Type of Organization	In the 2nd Round: Do you agree that COOL of main ingredients should be made on a voluntary basis?	In the 3rd Round: COOL should be mandatory for the foods that could be subject to fraudulent practices on the origin statement.
Academic	Yes	Doubtful
	Yes	No
	Yes	No
	Yes	Yes
	Yes	No (COOL of main ingredients should be always voluntary)
	No (it should be mandatory for COOL of main ingredients)	Yes
	Doubtful	Yes
Government	Yes	Yes
	Doubtful	Yes
	Yes	Doubtful
	Yes	No
Consumer association	No	Yes
	No	No (COOL of main ingredient should be mandatory for all products)
	No	Yes

(3) Two experts who were doubtful that COOL of main ingredients should be made on a voluntary basis agree that COOL should be mandatory for foods that could be subject to fraudulent practices on the origin statement.

(4) Two experts who didn't agree that COOL of main ingredients should be made on a voluntary basis agreed or have accepted that COOL should be mandatory for foods that could be subject to fraudulent practices on the origin statement.

(5) Two experts who agreed that COOL of main ingredients should be made on a voluntary basis also agreed that COOL should be mandatory for foods that could be subject to fraudulent practices on the origin statement.

(6) One expert who didn't agree that COOL of main ingredients should be made on a voluntary basis disagrees that COOL should be mandatory for the foods that could be subject to fraudulent practices on the origin statement because he thinks that COOL of main ingredients should be mandatory for all products.

Question 3-4

For the formulation of the policy on COOL of a main ingredient, the definition of “main ingredient” is fundamental. In Japan’s COOL law and the possibly upcoming EU COOL regulation, the ingredients considered are those that “constitute over 50% of a food”. Do you agree with the threshold of “50%” or do you prefer another percentage?

Do you think “main ingredients” should also include the characterizing ingredient (e.g. cocoa in chocolate; almonds in a confectionery with a picture of almonds on its packaging) even when its percentage is lower than 50%?

For an economist this question is too simple to be answered. He said: “Seems like details down in the weeds to me. 'Main' implies more than 50% doesn't it?”

Two other economists also didn't support the two questions but made some interesting comments:

- If you are going use a fixed # that will be problematic. For instance, on a weight basis there are many products that do not have a sole ingredient representing 50% of the total weight. Perhaps an alternative approach would be for the "first listed" or "first three listed" ingredients to have COOL. I'm not supportive of that either but at least one would know what is covered.
- No. First, it is 50% of what? Volume? Weight? Value? Main ingredient is a very unsatisfying criterion. If a limited number of ingredients are traced, traceability

should focus on those ingredients that can be problematic, not necessarily those that represent the greatest share.

The other eleven experts generally agreed with the definitions, and some of them provided further considerations.

Four academics said:

- I agree with the second proposition: that "main ingredients" should include the characterizing ingredient.
- Yes, I agree with the threshold of "50%". Using a picture on the packaging for the characterizing ingredient even when its percentage is lower than 50% should be voluntary. Food companies can do this if they want to place special emphasis on the presence of one or more valuable and/or characterizing ingredients to increase the values of their food products.
- 50% seems to be fair enough to me.
- I agree with the second statement. I think that "main ingredients" should also include the characterizing ingredient (e.g. cocoa in chocolate; almonds in a confectionery with a picture of almonds on its packaging) even when its percentage is lower than 50%. This is important for several food products.

Four government officials provided constructive opinions:

- I do not necessarily agree with the threshold of "50%" but think main ingredient should be fundamentally the highest percentage of an ingredient found in a product; for example assuming for a particular chocolate, cocoa which is basically the main ingredient is 40%, then maybe milk is about 20%, sugar 15%, and other additives making up 25%; hence, based on the above given threshold, the chocolate product can't be said to have its main ingredient as cocoa. This can't be, so I think whatever formulation of the policy on COOL should be flexible.
- I think a value between 50 and 60% would be appropriate. However, this varies a lot with the particular food involved. There are products having two

ingredients that can be considered the main composition of the waste. For example a protein food made from milk and soy powder that both define the characteristic use of the food could not define which is the main ingredient. Regarding the second point, our country requires that the ingredient is in at least 25% of the product so that they can put pictures of it. Otherwise it is considered misleading the consumer.

- I consider the feature: Fresh ingredients should be in the range over 50%. Here the legislation states that "when several ingredients such a compound ingredient may be declared such as in the ingredients list at the time of manufacture, either in the statement of the name (near to the common name of the food) very close to the words, images or graphics emphasizing the particular ingredient or list of ingredients, or according to in the product standard such as almond Chocolates (40%), cereal with strawberries (20%).
- Yes, I believe the main ingredient should not be represented by a percentage but by characteristic. With the 50% rule, there is the potential for alcoholic drinks to list the origin of their water, rather than the ingredients that provide the product with its notable characteristics. Additionally the same can be said for the meat in soups or on a pizza - they will rarely be as much as 50% but are most likely to be the ingredient of which consumers are most interested in the origin. This does open up the question of how one defines a characterising ingredient, which is why a voluntary scheme would be preferential, rather than detailing a regulation that could restrict flexibility based on products.

The three representatives of consumer associations said:

- I think 50% is probably a reasonable threshold.
- I agree with main ingredients constituting over 50% of the overall food product. Also including characterizing ingredients as main ingredients is a great idea as long as any ingredient that makes up more than 50% or more of the food is also characterized as one.
- I agree with the threshold being 50% as a general principle but it should also state 'contains other imported ingredients ' or 'contains imported ingredients' to

provide better information as to the origin of the ingredients. In relation to the cocoa in chocolate example I believe consumers would want to know where the cocoa came from as the main ingredient. If almonds were the main ingredient it would be misleading for the chocolate to state only the country of origin of the nuts. Consumers would be better informed if the label included the origin of both the cocoa and the nuts. If the law requires the main ingredient it should also include a requirement that in stating the main ingredient it does not mislead the consumer.

Question 3-5

The Codex Stan 1-1985 is the global reference for food labeling. Regarding the country-of-origin it states: “The country-of-origin of the food shall be declared if its omission would mislead or deceive the consumer. When a food undergoes processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country-of-origin for the purposes of labeling.” The statement on the place of origin of the main ingredient would lessen misleading consumers and conform to the spirit of this standard. Do you think that in the future Codex should set detailed criteria for marking the country-of-origin so as to standardize worldwide origin labeling on the main ingredient?

Please make comments and provide your input.

Among the 14 participants, six academics, one government official and three experts from consumer associations confirmed that standardization is desirable. Another government official and one academic said “not necessarily”. Two government officials mainly discussed the possibility of formulating such a standard on COOL.

The opinions of seven academics are as follows:

- Yes, this would make sense to me - and should not entail manufacturers in huge extra expense, which seems to be a major stumbling block for some of our economist friends.

- Yes, I think that Codex should set detailed criteria for marking the country-of-origin so as to standardize worldwide origin labeling on the main ingredient. But I think also it is a complex question.
- Standardization is a good idea. But I doubt this could happen in the near future in a satisfying way. My view is that the current rule is sufficient.
- Certainly, Codex should set detailed criteria for marking the country-of-origin so as to standardize worldwide origin labeling on the main ingredient in the future. For example, how to define “processing to change its nature” for every good item and possible producing scenario? I think this is a very complicated and difficult task.
- The country-of-origin of ingredients should be stated as possible. It may require the COOL of processing. To avoid the Spaghetti bowl effect on COOL, I agree that Codex should set detailed criteria so as to standardize worldwide COOL. It also eventually decreases administrative cost.
- Global standardization on such labeling is wise. Codex seems like the logical place for this. However, there must continue to be scrutiny that Codex matches with other international standards and does not become a fringe or driving force per se for such standards. Rather, Codex should be a place to help define and refine standards to help facilitate global commerce, but should not be the pilot driving global goals or initiatives.
- Not necessarily. I can envision a scenario where trade negotiations and pressures elevate such that Codex has to proceed down this path. That said, I overall believe that origin labeling in most instances works on its own in voluntary environments much more effectively than any mandatory approach could enable.

The four government officials have already participated in the work of labeling standards at CODEX and known how difficult the standardization will be. Their detailed opinions are below:

- I think it would be good to have a single criterion worldwide but the Codex work experience has shown me that it is quite difficult to achieve. It is influenced by many factors, cultural, education level of the population,

economic availability, among others. Currently being discussed in a proposal to unify Codex marking is the expiration date of the products and is not easy to reach agreements that meet the needs of all countries. However, I would support the study of a standard in this regard, Codex.

- Well I think with regards to this Codex standard on food labeling, if it is to be reviewed, Codex should just make sure there is no room for controversies and hence should set up the criteria for marking the country-of-origin so as to harmonise the origin labeling on the main ingredient.
- I consider that to require the CODEX to accept COOL of main ingredient must be based on "science" and studies that indicate that the country A is not declared affects the quality and health of the product and the COOL does not increase product costs; if consumers trust the health authorities of their countries should not give more importance to not declare the country A or B. However, if consumers seek transparency asking to know the source of what they are eating or fraud are common because triangular trades are in low standards and no sanitary or phytosanitary quality is controlled and no safety hazards or safety of the same failures in health controls or trade flows could start a discussion about the countries and their commercial agents and being raised in the labeling of the Codex committee.
- No, it would be unnecessary to “set detailed criteria” in this instance, as the labeling of main ingredients is too complex to be governed by fine detailed regulation. As said in the previous question, a voluntary approach based on the principle of not misleading consumers is sufficient.

The opinions of the experts from consumer associations are:

- I think standardizing worldwide labeling of the main ingredient would eliminate confusion and hold manufacturers to higher standards that are ultimately better for consumers.
- Codex criteria would be helpful in this regard. However, Codex should recognize that in some instances providing the originating country information as well as the processing country information may be useful to avoid misleading

or deceiving the consumer.

- I believe the Codex standard should be amended to state that the country-of-origin be stated on every occasion not only where consumers may be misled. I accept that for practical purposes there may be exceptions that could be dealt with by way of exemption. It also makes sense to state the country where the processing is performed. A consumer would be better informed by the statement (in relation to cocoa) “Made in France from Ivory Coast cocoa beans” than the statement “Made in France”. I believe a future Codex should establish more detailed criteria with perhaps an informative section providing examples.

Summaries

After analyzing all opinions and ideas in the 3rd Round of the Delphi study on COOL, I make the following summaries:

- (1) Regarding my proposal of a general regulatory principle for the formulation of a policy on ingredient origin statement - COOL of the main ingredient is generally made on a voluntary basis, but should be mandatory for the foods that could be subject to fraudulent practices on the origin statement – only 50% of the participating experts agree it or think it reasonable, while 29% (4 of 14) disagree. Among the reasons of disagreement, the most important is that a mandatory COOL of the main ingredient would not help resolve the problem of commercial fraud. It is a topic to be studied more in-depth: If mandatory COOL of main ingredients is applied to a food that is subject to fraudulent practices on the origin statement, will the fraudulent practices decrease? The answer may depend on the general legal environment of the country where commercial fraud related to food origin statement occurs (considering the last EU regulation on olive oil has reduced fraud in the Italian market, I think this general regulatory principle should work in Italy, but not for exports from Italy that would depend on the importing countries).

- (2) “Main ingredient means over 50%” is currently the most popular definition since the threshold of “50%” is indicated in Japan’s COOL law and the possibly upcoming EU COOL regulation. However, the percentage should be defined better according to the characteristics of the ingredient. I think the percentage should refer to the presence by weight in the final product (excluding water), and the definition of “characterizing ingredient” could be “appearance in the food designation (name) or being associated with the food designation, presence in words or pictures on the label”. In order to avoid misleading consumers, the minimum percentage of “characterizing ingredient” should also be defined in accordance with other non-COOL regulations (e.g. that about advertising).
- (3) A worldwide standardization of origin labeling on main ingredients is desirable and the competent organization should be Codex. However, this will be a very difficult work for Codex.

5.3 Conclusions of the Delphi Study

This Delphi study on COOL is completed. The typical use of the Delphi method for policy issues is to study the desirability and feasibility of a policy proposal; the different viewpoints expressed by the participating experts of each group – academic, government departments and consumers associations – helped me to reach this goal.

Regarding the topics discussed, there is a consensus of majority on some of the most important questions:

- Multiple countries of origin labeling which specifies the producing country of the main ingredient and the manufacturing country of the finished product could resolve the issue of misleading consumers.
- The declaration of “100% (country name) (product name)” should be supported by a certificate of traceability because it is good way for marketing typical products and some producers might use COOL information for advertisement.

- The worldwide standardization of origin marking will help reduce or even eliminate the confusion caused by different marking criteria, but it is very difficult work and mainly depends on Codex.

The most relevant divergence is that COOL of main ingredients should be mandatory or voluntary. The proposal of the general regulatory principle - COOL of the main ingredient is generally made on a voluntary basis, but should be mandatory for the foods that could be subject to fraudulent practices on the origin statement – seems to be an equilibrium among the divergences. However, mandatory COOL of the main ingredient itself can provide only information to consumers, so the problem of commercial fraud related to the origin statement should be enforced by a mandatory traceability system. For instance, on Jan. 1, 2014, Italy introduced a unified national registration system for olive oil (www.sian.it) tracing the movements of various products so as to better protect real Italian olive oil.

Different countries have different production and supply system. Market problems might differ and solutions should be also different.

In this Delphi study, generally speaking, there are evident divergences between the opinions of American academics and those of the experts from consumers associations (in USA and outside), while the perspectives of the academics in other countries are more near those of the representatives of consumers associations. Also the government officials stand between the American academics and the experts from consumers associations.

Among the academics, the difference between American and non-American is curious. Maybe this is because the food supply system, food culture and consequently academic research in the USA are very different from those in other countries.

For my research all kinds of opinions are valuable.

Unfortunately, in this Delphi study there was no participation by industry. However, the absence of industry in the Delphi discussions has been remedied by expanding the case study on the country-of-origin labeling of olive oils exported from Italy to China. After having visited and interviewed some Italian olive oil mills and bottling companies, I can affirm that in Italy the real Italian olive oil producers support COOL policy, while the bottling companies are “ambivalent”.

This Delphi study focused mainly on the COOL policy, while my research on the economic effects of COOL was conducted by analyzing the perspective of **information economics**.

Chapter 6

The Rules of Origin and the Standardization of Origin Marking

As aforementioned, under non-preferential rules a product has only one country-of-origin. When a food is produced by two or more countries, how to determine the country-of-origin depends on the rules of origin set up by the importing country. However, as we discussed in the previous chapters, multiple countries of origin marking can provide accurate information to consumers, and the worldwide standardization of origin marking can facilitate the labeling of foods traded internationally.

In this chapter, I analyze first the rules of origin and then propose a guideline to standardize the origin marking of foods.

6.1 The Rules of Origin

The rules of origin are based on the Harmonized System (HS), an international goods nomenclature to describe the systematic naming of things. It is run by the World Customs Organization (WCO). In the Harmonized System goods are listed according a hierarchical classification, broken down into finer and finer categories, producing an increasingly accurate description: Chapter (first two digits) → Heading (first four digits) → Subheading (first six digits) → Tariff item (first eight digits) → Classification number (10 digits). Designed to be used on a global basis, the first six digits are harmonized at an international level, while the last four digits have been designed for country-specific tariff and statistical purposes.

In the 2nd Round of the Delphi study, the necessity to state the origin of the main ingredient is discussed. All the foods are listed with their HS code in Table 6-1. The last column is a result from Question 2-4 of the 2nd Round.

Table 6-1. The tariff shift from the primary ingredients to finished products

Manufacturing Process	Main Ingredient		Finished Product		Tariff Shift from ingredient to finished product	Necessity to indicate the main ingredient origin
	HS 2012 Code	Description of the category of goods	HS 2012 Code	Description of the category of goods		
Blending of olive oil	150910	Olive oil, virgin	150910	Olive oil, virgin	No shift	Necessary
Roasting coffee	090111	Coffee, not roasted, not decaffeinated	090121	Coffee, roasted, not decaffeinated	Subheading level	Necessary
From green tea leaves to black (fermented) tea	090220	Tea, green (not fermented), whether/not flavored, in immediate packings of a content >3kg	090230	Tea, black (fermented) & partly fermented tea, whether/not flavored, in immediate packings of a content not >3kg	Subheading level	Necessary
From tomato to tomato puree	0702	Tomatoes, fresh or chilled.	200290	Tomatoes prepared or preserved otherwise than by vinegar or acetic acid.	Chapter level	Not very necessary
From apple to apple juice	080810	Apples, fresh	200971	Apple juices, unfermented and not containing added spirit, whether or not containing added sugar or other sweetening matter.	Chapter level	Not very necessary
From cocoa to chocolate	1801	Cocoa beans, whole or broken, raw or roasted.	1806	Chocolate and other food preparations containing cocoa.	Heading level	Not very necessary
	1805	Cocoa powder, not containing added sugar or other sweetening matter.				
From wheat to flour	100111	Durum wheat seed	11010011	Durum wheat flour	Chapter level	Not very necessary
From flour to pasta	11010011	Durum wheat flour	190219	Uncooked pasta, not stuffed, not containing eggs, such as spaghetti, macaroni, noodles.	Chapter level	Not very necessary
Shelling and freezing shrimps	030626	Not frozen: Cold-water shrimps and prawns	030616	Frozen: Cold-water shrimps and prawns (whether in shell or not)	Subheading level	Necessary
Cutting and freezing cod	030251	Cod, fresh or chilled	030471	Frozen fillets of cod	Heading level	Necessary

From pork to hams	0103	Live swine	160241	Hams & cuts thereof	Chapter level	Necessary
	0203	Meat of swine, fresh, chilled or frozen.				
From pork to salami	0103	Live swine	160249	Prepared / preserved preparations of swine, incl. mixture	Chapter level	Necessary
	0203	Meat of swine, fresh, chilled or frozen.				
From beef to hamburgers	0201	Meat of bovine animals, fresh or chilled.	160250	Preparations of bovine animals	Chapter level	Necessary
	0202	Meat of bovine animals, frozen.				
Chicken for chicken nuggets	020711	Meat and edible meat offal of fowls of the species Gallus domesticus, not cut in pieces, fresh or chilled.	160232	Preparations of fowls of the species Gallus domesticus	Chapter level	Necessary

It is interesting to note the variations from “main ingredient” to “finished product”: When the change of form or character is minimal (e.g. the change during roasting coffee), the HS numerical code shifts at a low level (subheading); when a processing procedure changes totally the form and character of the primary material, the HS numerical code shifts at the chapter level.

6.1.1 The Tariff Shift Rule to Determine the Country-of-Origin

The most common method to determine the originating country of a product is the change of tariff classification (e.g. HS numerical code). The majority of countries confer the originating status if the nomenclature heading (first four digits) changes, while some countries (e.g. Korea) determine the country of origin according to the change of subheading (first six digits), and some other countries don't use a one-cut tariff shift rule for all goods, that is, the changes of chapter, heading and subheading are used for different goods.

If the CTH (change of tariff heading) rule is applied to the foods listed in Table 6-1, their countries of origin may be the country where the “main ingredient” was produced or the country where the finished product was made.

- (1) The country of origin is the country where the “main ingredient” was produced because from main ingredient to finished product the HS code is not shifted at heading or higher level. This is valid for the following products: blends of olive oils, roasted coffee, black tea, shelled and frozen shrimps.
- (2) The country of origin is the country where the finished product was made because from main ingredient to finished product the HS code is shifted at heading or higher level. This is valid for the following products: tomato puree, apple juice, chocolate, flour, noodles, frozen fillets of cod, ham, salami, hamburgers, chicken nuggets.

If the CTSH (change of tariff subheading) rule would be applied, among the above products only the country of origin of olive oil blend is where the “main ingredient” was produced, while for all other foods the country of origin would be where the finished product was made.

The tariff shift rule is the main rule of origin. The other two rules – *ad valorem* and specific processing operation – are used to determine the originating country for a small part of goods, usually when the tariff shift rule could not meet the need of the trade policy of the importing country.

The European Union has defined specific rules for all kinds of goods. For the above foods the rules of origin and the country of origin under EU's rules are listed in Table 6-2.

Table 6-2. The country of origin under EU's rules of origin

Notes: "CC" - change from other chapter; "CTH" - change from other heading;

"CTSH" - change from other subheading.

Main ingredient	Finished product	Rule of origin on the finished products	Country of Origin
Olive oils	Blends of olive oils	1. Primary rule: CTH, or refining. 2. Residual rule applicable to mixtures: The origin of a mixture of olive oil shall be the country of origin of the materials that account for more than 75% by weight.	Producing country of main ingredient (>75%)
Coffee beans	Roasted coffee	CTSH	Processing country of finished product
Green tea leaves	Black tea	The origin shall be the country where the plant grew.	Producing country of main ingredient
Tomato	Tomato puree	CTH	Processing country of finished product
Apple	Apple juices	CTH	Processing country of finished product
Cocoa	Chocolate	CTH	Processing country of finished product
Wheat seed	Flour	CC	Processing country of finished product
Flour	Noodles	CTH	Processing country of finished product
Fresh shrimps	Shelled and frozen shrimps	The origin shall be the country where the crustaceans have been captured or gathered.	Producing country of main ingredient
Fresh cod	Frozen fillets of cod	The origin shall be the country where the fish has been captured; or if farmed, the country where the fish has been raised from egg or fry (including fingerling).	Producing country of main ingredient
Pork	Ham	CC	Processing country of finished product
Pork	Salami	CC	Processing country of finished product
Beef	Hamburgers	CC	Processing country of finished product
Chicken	Chicken nuggets	CC	Processing country of finished product

6.1.2 The Necessity to Indicate the Country-of-Origin of the Main Ingredient

The necessity to indicate the originating country of the main ingredient may be different in various countries with different rules of origin, because for the same product it is possible:

- (1) Its country-of-origin is the final processing country according the origin rules of an importing country;
- (2) Its country-of-origin is the country where the “main ingredient” was produced according the origin rules of another importing country.

Taking again the shelled and frozen shrimps as example: Under the EU's and USA's rules of origin, the country-of-origin is the country where the shrimps grew, so the country-of-origin of ingredient is the same as that of the finished product, and for the American consumers it is not necessary to discuss the necessity to label the “main ingredient” origin of the shelled and frozen shrimps. Conversely, according to the Chinese non-preferential origin regulation, the country-of-origin of the shrimps is where they were shelled and frozen, thus the country-of-origin of the ingredient is different from that of the finished product, and the question to label the “ingredient” origin arises.

Let us consider again the necessity to label the main ingredient origin under the EU's rules of origin. Comparing the last column of Table 6-1 with the country of origin determined in Table 6-2, we can note that:

- (1) The country of origin of the foods that are “not very necessary” to be labeled with main ingredient origin (tomato puree, apple juice, chocolate, flour, noodles) is the same as that of the processing country of the finished product. This means the rules of origin for these products can meet the basic need of origin marking.
- (2) For black tea, shelled and frozen shrimps and frozen fillets of cod, those that are “necessary” to be labeled with main ingredient origin, the country of origin is the same as the producing country of the main ingredient. This means under the European rules

of origin it is not necessary for these foods to include the ingredient origin statement but the origin labeling of finished products.

(3) Regarding the blend of olive oils, its rule of origin is not the tariff shift. The country of origin is where the “main ingredient” is produced if the “main ingredient” accounts for more than 75%. But, when the “main ingredient” is less than 75% (for example, the blend is composed of 70% Spanish olive oil and 30% Italian olive oil), where is the country of origin? It is a problem not only for origin labeling but also for customs procedure in applying the tariff duty rate.

(4) The country of origin of roasted coffee is not where coffee beans are produced but where they are roasted, while the country of origin of black tea is where tea leaves grew. Such different ruling criteria for two products in the same category might mean that the EU pays more attention to the trade of exporting countries of roasted coffee and producing country of green tea leaves.

(5) For the animal origin foods – ham, salami, hamburgers and chicken nuggets – the country of origin is the processing country of the finished product, but the necessity to indicate the main ingredient origin should not be neglected since the origin closely concerns safety.

(6) Among the vegetable products, the necessity to label the main ingredient origin of olive oil blend, roasted coffee and black tea is higher than that for tomato puree, apple juice, chocolate, flour and noodles. The reason could be that the first group of products is not deeply transformed during the processing (nothing for the olive oil blend), while for the second group the primary ingredients are deeply changed during the processing.

6.1.3 Non-preferential Rules of Origin and Multiple Countries of Origin Marking

A disadvantage of the tariff shift rule, that is the most important rule to determine the last substantial transformation, is that for some goods the “country of origin” can be easily changed by a simple processing operation. For example, if wheat seeds are milled

to flour, the tariff classification is changed from Chapter 10 to Chapter 11, and the country of origin is changed from the producing country of wheat seeds to the flour milling country. This means the origin labeling of main ingredient will be useful for anti-circumvention, which refers to the behavior of changing the country-of-origin of a certain product so as to pay less in customs duty or avoid a quota limit, or for other matters concerning the trade policy of the importing country.

Anti-circumvention is especially important for agri-food products because a complicated trading route usually takes more time and compromises the conservation of the foodstuff. From this point of view, labeling the main ingredient could also be useful for guaranteeing food safety and quality.

A consensus of majority reached in the Delphi study on COOL is that to label the producing country of the main ingredient and the manufacturing country of the finished product can provide accurate information to consumers. However, the multiple countries origin labeling challenges the non-preferential rules of origin, which determine only one country-of-origin according to the last substantial transformation criterion.

In the current international trade scene, there are many preferential trade agreements, and the “spaghetti bowl effect” always becomes stronger. The country of origin marked under non-preferential rules is often different from that defined by a preferential rule for the application of preferential trade policy. As a matter of fact, customs officials have already begun to distinguish the country of origin labeled on a food from that indicated in the certificate of origin. For this reason, it is not essential for government departments that the food origin information on the label should be same as the country of origin determined for the application of trade policy.

6.2 The Standardization of Origin Labeling

Differences between the laws, regulations, administrative provisions and agreements of various countries on country-of-origin and food labeling lead to confusion not only among consumers but also among importers and exporters, and further complicate the jobs of public officials who work in customs and food inspection agencies. Therefore, standardization can contribute to the smooth functioning of the global market.

However, the standardization of country-of-origin of foods is very hard work; it could be completed only by Codex Alimentarius. To accomplish such a great project, it needs first to establish guidelines, defining objectives, criteria, range, etc. My considerations are below.

6.2.1 The Objectives of Origin Marking Standardization

- (1) To provide accurate information to consumers and increase origin labeling efficiency;
- (2) To improve food safety and quality;
- (3) To promote fair trade among various countries;
- (4) To increase market efficiency in various countries;
- (5) To reduce public administration costs related to trade of foreign foods;
- (6) To increase the awareness of consumers about the world we live in, especially about the global food system;
- (7) To promote knowledge of different food cultures in the world.

6.2.2 The General Criteria of Origin Marking

- (1) The food origin labeling standard aims to provide accurate information to consumers, but not to determine the country of origin for the application of trade policy.

(2) The accurate origin marking of a food should be done according to the production procedure of the food. When a food is produced by two or more countries, multiple countries origin marking should be adopted: The producing country of the main ingredient, the manufacturing country of the finished product and the packing country (if it is different from the manufacturing country) should be indicated on label.

(3) Although the last substantial transformation criterion is not adopted for multiple countries origin marking, its function for determining the “country of origin” in customs procedure for the application of trade policy should be maintained.

(4) In defining the format of multiple countries origin marking, the last substantial transformation should be considered so that consumers could know, from the origin marking on the label, which one of the originating countries indicated on the label is the “country of origin” under the non-preferential origin ruling system.

(5) The tariff shift, *ad valorem* and specific processing are important referents for marking food origin:

- The tariff shift should be considered in the first place to define the format of multiple countries origin marking for foods with two or more ingredients.
- The concept of *ad valorem* should be used to define the origin marking when a food is a mixture of similar ingredients.
- The specific processing should be indicated with adequate terms when a food contains a single ingredient and from primary material to final product the processing operations are very simple and don't change the nature or character of the food.

6.2.3 The Contents of Origin Labeling Standard

The harmonization to be carried out should define first basic terms and then origin marking criteria for different kind of foods.

(1) Harmonization of Basic Terms

First it is necessary to properly define the basic terms, such as the following.

Product of (country name): It is necessary to define the minimum percentage of original (national) ingredient for processed foods. For a single ingredient food should it be 100%? For example, could “Italian extra virgin olive oil” be stated only if it is 100% produced in Italy? Should “Spanish ham” mean that the pig was raised in Spain?

Produced in (country name): To be defined the minimum original ingredient and main processing operations.

Made / Manufactured in (country name): To be defined the minimum original ingredient and main processing operations.

Main ingredient: To be defined the characters that make an ingredient considered “main”, such as percentage by weight in final product, appearance in the food designation (name) or association with the food designation, presence in words or pictures on the label.

(2) Origin Marking for Foods with Two or More Ingredients

In the three-lateral trade relation (Country A produces the ingredient, Country B manufactures the finished food and Country C imports the food), if Country B is considered the country-of-origin according to non-preferential rules, the accurate origin information could be written as one of the following forms (to be defined according to the language of Country C):

Made in (Country B) from (adjective of Country A) (primary ingredient name), for example: Made in Italy from Austrian Milk.

(Name of primary ingredient) produced in Country A

Final product (or its name) made in Country B

If the final processing in Country B is not sufficient for conferring the originating status and Country A is considered as the country-of-origin for applying trade policy, the accurate origin statement could be:

Produced in Country A

Packed in Country B

(3) Origin Marking for Mixed Foods

When a food is a mixture of similar ingredients produced in Country A and Country B and packed in Country B, the origin marking can be:

Produced in Country A and Country B (if the ingredient from Country A is more)

Or: Produced in Country B and Country A (if the ingredient from Country B is more)

Packed (or Bottled) in Country B

If a product is a mixture of materials produced in more than two countries, the origin can be stated in the same way. It is important that the countries be listed by order of their contribution to the product.

In order to provide clear information to consumers, it is better to specify “Mixture” or “Blend” in the sale designation:

Mixture of (adjective of Country A) and (adjective of Country B) (product name)

For example: *Blend of Spanish and Italian extra virgin olive oils.*

(4) Origin Marking for Single Ingredient Foods

The origin statement of a single ingredient food should be defined according to the characteristic of processing procedure.

If the processing operations are simple and change only the form of the primary material but not its character, the origin marking should indicate the processing operations (cutting, drying, roasting, cleaning, etc.). For instance, shelled and frozen shrimps can be labeled as below:

Grown in Country A

Shelled and frozen in Country B

Flour can be marked as:

Produced in Country A

Milled in Country B

If the processing operations changed the nature or character of the primary material, the format of origin marking can be that for foods with two or more ingredients. For example, the noodles can be marked as: *Made in Country B from (adjective of Country A) flour.*

The above description is my draft proposal for the standards of food origin marking. More details to be discussed.

Comparing the origin markings according to the last substantial transformation rules and the multiple countries of origin statement, it is obvious that multiple countries of origin labeling is much clearer than that marked by the last substantial rule under non-preferential origin system, and is not misleading for consumers.

It would be better if the standardization of origin marking could base on a harmonized system of the non-preferential rules of origin. But, in the recent years, there have been more and more free trade agreements signed by many countries and preferential origin rules are applied more widely to international trade, while WTO and WCO haven't made progress on the harmonization of non-preferential rules of origin.

Since the criterion of the last substantial transformation is not essential for the origin marking of foods produced in two or more countries, the standardization of origin marking doesn't need to wait for the harmonization of non-preferential rules. However, it will be important for Codex to have support from WTO and WCO for promoting the standardization of food origin labeling,

Table 6-3. Comparison between Non-Preferential Origin Marking and Multiple Countries Origin Marking

Under the CTH (change of tariff heading) rule and ad valorem rule (50%, only applied to olive oil blend) and the multiple countries of origin marking (assumption: main ingredient is produced in Country A, finished product is processed in Country B)

Main ingredient	Finished product	Change tariff heading rule and ad valorem rule (50%)	Multiple countries origin marking
Olive oils	Blends of olive oils	Produced in Country A (if >50% from there). Produced in Country B (if <50% from Country A)	Produced in Country A, Country B (or Produced in Country B and Country A) Bottled in Country B.
Coffee beans	Roasted coffee	Produced in Country A	Produced in Country A Roasted in Country B
Green tea leaves	Black tea	Produced in Country A	Made in Country B from Country A's tea leaves
Tomato	Tomato puree	Produced / made in Country B	Made in Country B from Country A's tomato
Apple	Apple juices	Produced /made in Country B	Made in Country B from Country A's apple
Cocoa	Chocolate	Produced /made in Country B	Made in Country B from Country A's cocoa
Wheat seed	Flour	Produced /made in Country B	Grown in Country A; Milled in Country B
Flour	Noodles	Produced / made in Country B	Made in Country B from Country A's flour
Fresh shrimps	Shelled and frozen shrimps	Produced in Country A	Grown in Country A; Shelled and frozen in Country B
Fresh cod	Frozen fillets of cod	Produced / made in Country B	Fished in Country A; Clean and cut in Country B
Pork	Ham	Produced / made in Country B	Made in Country B from Country A's pork
Pork	Salami	Produced / made in Country B	Made in Country B from Country A's pork
Beef	Hamburgers	Produced / made in Country B	Made in Country B from Country A's beef
Chicken	Chicken nuggets	Produced / made in Country B	Made in Country B from Country A's chicken

When the rules of origin marking in various countries are harmonized, exporters and importers will know better how to mark the origin, and consumers will have accurate information about the origin. The standardized origin marking will reduce the information asymmetry or communication “gap” and increase the efficiency of the market.

The purpose of the standardization is to introduce and enact international rules of origin marking that are applicable to all foods put on the global market. If the standardization would impede or restrict saleable foods, it might have anti-competitive effects, resulting in a technical barrier to trade. Therefore, with a prudent approach, the origin marking standard should not be compulsory. It could be used as other Codex standards, which are “recommendations for voluntary application by members” and “serve in many cases as basis for national legislation”. Any country can decide when and how to introduce and integrate the standards of origin marking with legislation according to its economic and social realities.

Chapter 7

Country-of-Origin Labeling in the Perspective of Information Economics

The country-of-origin is essential information in international trade. In the perspective of information economics, the origin statement of agri-food products has a very strong characteristic of “asymmetry”: The upstream producer has complete information about the place(s) of origin; the importer (distributor) has much less information than the producer (exporter), and the downstream consumers know even less than the importer. This asymmetric information for importers and consumers might implicate unfair market competition and reduce market efficiency.

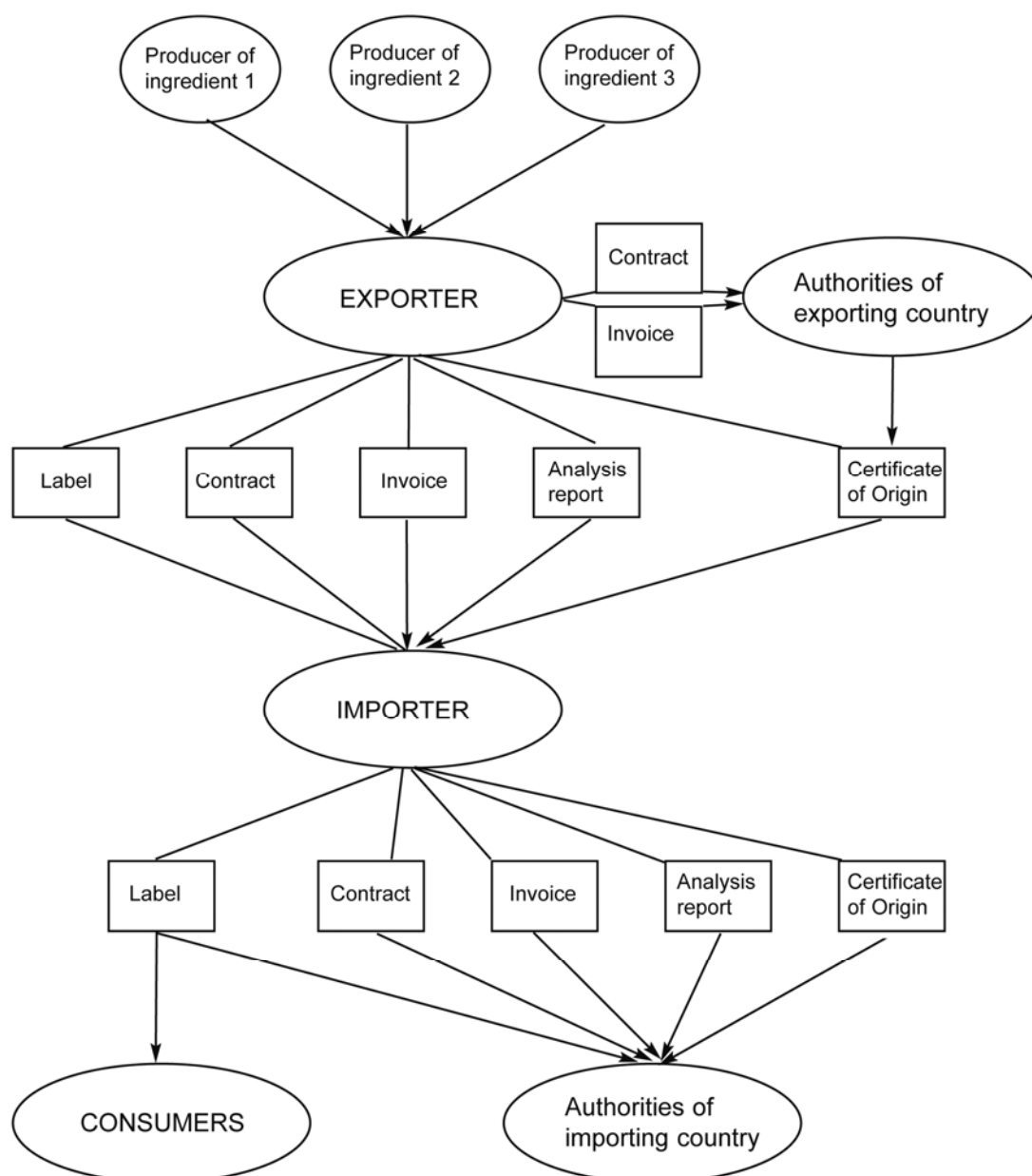
Generally information economics is based on the empirical analysis of existing economic phenomena. My research in this field started from a case study on the country-of-origin marking of olive oil imported from Italy into China. Observing the Italian olive oil sector and the Chinese market, I propose general explanations of economic phenomena related to country-of-origin labeling of processed foods.

This research focuses on how to reduce the problems caused by asymmetric and imperfect information about country-of-origin, thus improving economic efficiency and increasing the fairness of competition in international trade. Finally, I estimate the effect of accurate COOL information on business models and internationalization strategies.

7.1 Asymmetric and Imperfect Information about the Country-of-Origin of Foods

The country-of-origin could be asymmetric and imperfect information when a food is produced in two or more countries, especially when different categories of product are available in the global market.

Diagram: The commercial documents that show product origin information



For products traded internationally, the information “carriers” about the country-of-origin are: the quote (made by the exporter, not always with origin information), transaction contract (stipulated by both parties), invoice (made by the exporter according to the contract), analysis report (made in a laboratory in the exporting country according to the requirements of the importing country), certificate of origin (issued by

an authority of the exporting country according to the contract / invoice and the rules of origin of the importing country), and label (with information required by the law of the importing country). With the exception of the quote, the importer must present all other documents to the authorities of his country, which might require further verification. The downstream consumers can see only the origin information on the label.

Information asymmetry about the country-of-origin can be analyzed by dividing the trading process into two phases: The transaction between the exporter (producer) and importer (distributor), and the sale from the importer to consumers.

7.1.1 Information Asymmetry between Exporter and Importer

There are two categories of information asymmetry between the exporter and importer around the country-of-origin: The asymmetric information that exists before signing the trade contract, and the asymmetric information that occurs during executing the contract. The main problems that arise from asymmetric and imperfect information about the origin are: adverse selection before signing the contract, and moral hazard during executing the contract.

It is normal that the importer has only limited information about the food product. However, an importer who knows their business sector usually requires all information that determines the food quality and price. If an ingredient origin can influence the quality or characteristic of the product, the exporter and importer will define the ingredient origin in the trade contract. For example, when an Italian company exports extra virgin olive oil produced in Italy, “100% Italian” is indicated in the quote and then in the contract. Contrarily, an importer who is dealing with a new food and is not well-versed in the new field, may have asymmetric information about the food origin, meaning he does not know that the food could be manufactured from a main ingredient produced in another country, and would make an “adverse selection”: Some potential suppliers of high quality ingredient foods give him high quotes, some other potential suppliers of low quality ingredient foods give him lower quotes; the importer probably chooses a supplier with the lowest quote to sign a trade contract.

The information asymmetry around main ingredient origin might also take place after signing the trade contract. In the contract the product is authentic with a high quality ingredient produced in the exporting country, but the exporter does not provide goods ordered by the importer (e.g. 100% Italian extra virgin olive oil), meaning the exporter changes the origin of main ingredient through a hidden action (e.g. to substitute the goods with Spanish olive oil) to reduce his costs and make an additional profit outside the value of goods. This is a “moral hazard” for the importer's business.

The possibility of a “moral hazard” can also provoke the importer to make an “adverse selection”: Because of the concern that the exporter could substitute authentic origin ingredients with poor quality ingredients, an importer might choose products made from poor quality ingredients to avoid being cheated.

The consequence of “adverse selection” caused by asymmetric information on main ingredient origin is that the producers of poor-quality food make more money, while the producers of high-quality food lose their market share.

For the importer the possibility of encountering the problem of moral hazard depends on the producer's personality and the legislation of the producing country. Sometimes, the hidden action related to ingredient origin – adulteration – could be estimated in advance if the importer could judge the personality of a producer before signing the trade contract. Moreover, the product quality should be thoroughly described in the contract, which should be supported by a laboratory analysis report and samples. A clause about ingredient quality and origin can be introduced, defining the punishment in case of a quality problem, so as to mitigate or eliminate the potential moral hazard of the exporter.

The information asymmetry caused by a moral hazard could be verified, to a certain degree, by the official inspection at the entrance of the importing country when food samples are analyzed in a laboratory.

The legal environment of the exporting country can affect the possibility of “moral hazard” of the exporter. If the economic activities in the exporting countries are governed effectively, the moral hazard of the exporter could be limited by legal measures and the exporter supplying the goods according to the contract, and the importing country's market problem caused by disguised origin would be avoided.

7.1.2 Consumers' Asymmetric and Imperfect Information about Food Origin

The label is the communication channel from the producer and importer to the consumer. The information panel of the label should be designed according to the law of the importing country. It is often translated or written by the importer in the official language of his country.

The labeling purpose of the producer and importer is to sell the products. Thus, all information on the label should be useful for the sale: To be in compliance with the law to obtain the authorization to enter a foreign market, and to attract the consumers in foreign countries. Under these two motivations, the information on the label can be regrouped in two categories: The basic information required by the importing country (e.g. the product's name, ingredient list, producer's name, importer's name and address, etc.), and the product description for marketing and within the limits defined by the advertising norms of the importing country.

Regarding the origin information it is generally required to indicate the country-of-origin according to the rules of origin of the importing country, while the ingredient origin would be indicated if such a statement is useful for the importer's marketing purposes.

For consumers who get origin information from the label, information asymmetry might consist of the following aspects:

(1) Asymmetric origin information

The country-of-origin indicated on the label according to the last substantial rule is not what a consumer perceives. For example, for the majority of consumers the country-of-origin of coffee should be the country where coffee beans grew, not where the coffee beans were roasted.

(2) Imperfect origin information

The information about the country-of-origin is not complete and may be misleading. In particular, when a food is a mixture, only the final processing country is indicated as the “country of origin”, while the originating country of the main ingredient is not indicated on the label. For example, the blend of Spanish (80%) and Italian (20%) olive oils bottled in Italy is labeled with “Country of Origin: Italy”.

The first problem is caused by the imperfection of the rules of origin, but not from the importer or exporter. Its influence on the market is not clear.

The second problem – imperfect and misleading information – usually is a “scam” created by the importer under imperfect rules of origin. The importer can disguise the origin of a food, making the product seem to be of high quality. Consequently, many consumers make an “adverse selection”: Because the cost of the product with a disguised origin is lower than the authentic one, the importer may promote the low cost; the consumers who don't know how to judge the quality of a foreign food may be attracted by the promotion. Thus, the consumers buy poor-quality products with a disguised origin. In this case, dishonest importers get a major market share and make a high profit, while the honest importer of authentic products can obtain only a small market share.

Adverse selection caused by disguised origin information can be prevented if the importer has to declare main ingredient origin and the origin rules of the importing country are clearly defined.

In brief, asymmetric information about the food origin can drive out true-origin goods: If consumers cannot distinguish between a food of a true origin and another of a disguised origin before purchase, the food with a disguised origin would be sold more.

Because the country-of-origin statement on the label and the certificate of origin issued by the exporting country must be done in conformity with the laws of the importing country, the protection of the right and interests of consumers in the importing country mainly depends on the laws of the importing country.

7.1.3 The Country-of-Origin Signaling as a Marketing Instrument

It is a common view that “signaling” can reduce or even eliminate the problem of adverse selection caused by asymmetric information. In the trade sector, “signaling” refers to the better-informed party (seller) communicating the characteristics of its products to a less-informed party (buyer), so as to emphasize the quality of a product.

In B2B (exporter-importer) contacts, the adverse selection problem that arises from the origin can be easily resolved: When the ingredient origin is not clear, the potential importer may feel uncertain about the quality if the source of the ingredient can influence the product quality. He can require more information from the producer, and the producer can also actively provide ingredient origin information to explain the quality of his products. If an originally uninformed importer obtains accurate information about the quality related to ingredient origin, he might decide to deal with the high quality products with an authentic origin. Only a producer who thinks the ingredient origin statement can better show the safety and quality of his product would want to signal the source of the ingredient. Generally, by the means of dialogue and communication, this adverse selection can be resolved if the importer is interested in dealing with authentic origin products.

In B2C (distributor-consumer) trade, consumers can get information only from the label, while the importers usually don't have direct contact with consumers. The sellers (producers and importers) can provide origin information to consumers only by

labeling. If the origin information on the label is symmetric (i.e. accurate), consumers can know the quality before purchase; authentic origin products sell for more than those with a disguised origin. This market is efficient since the products are sold according to their value. When in a market there are different categories of foods with the same declaration of origin (e.g. “Italian extra virgin olive oil”), if consumers cannot identify high quality foods of real origin, they would be more attracted by price and packaging regardless of quality. The adverse selection problem cannot be easily resolved because of the consumers' inability to identify the real origin. In such case, the country-of-origin labeling of the main ingredient would be a useful marketing instrument.

7.1.4 The Characteristic of Emerging Markets

When a new type of food is first available in a foreign market, the local consumers are not familiar with the food; usually they can know it only after purchase and any information obtained about the food prior to purchase is that indicated on the label. In estimating the food quality, the country-of-origin is an important reference, while the manufacturer's brand may not be a relevant factor because the brands are new for the foreign consumers. If there are two categories of product with the same origin statement, but one is a traditional food produced with an original ingredient of the exporting country and another with ingredients sourced from another country, the foreign consumers are not able to distinguish the quality difference and would buy more of the product with non-original ingredient if it costs less.

The market failure caused by asymmetric and imperfect information about the origin can be more serious in emerging markets, because the majority of foreign consumers don't know how to judge the quality of newly introduced foods. Let us review again the case of extra virgin olive oil exported from Italy into China: generally speaking the quality of Italian olive oil is higher than that produced in Spain and Greece, while according to quotes from some Italian bottling companies, the price of Italian olive oil is about 20% higher than the blend of European Community oils. However, because the majority of Chinese consumers are not able to distinguish between the real Italian olive oil and the blend of Community oils bottled in Italy, the sale price of real Italian olive

oil in the Chinese market is near that of the Community oils blend. In China the Community olive oil blends with lower quality are sold much more than those of 100% Italian olive oil with better quality, even though consumers hope to eat good olive oil. Consequently, an importer of real Italian olive oil will make less profit. Importers of false Italian olive oil benefit from consumers' ignorance, while importers of real Italian olive oil suffer. The market with such an outcome is inefficient and unhealthy. Such a problem does not occur if the origin information is symmetric, meaning if all olive oils are labeled with accurate origin information.

When consumers in an emerging country eat more foreign foods, their knowledge about product quality will increase, the market will mature, and the problem of adverse selection will be reduced.

7.2 Micro Information and Macro Information about Foods

For consumers the information asymmetry about a foreign food can be divided into two categories: “micro information” about a specific product, and “macro information” about the producer and the producing country.

Among the information labeled, the micro information includes the ingredient list, nutritional value, the producer's and importer's address, etc., that can be easily tested by scientific instruments or visibly checked. The macro information includes the country-of-origin, brand, and certifications, which may contain a lot of general information that is not printed on the label.

The “micro information” is a metric for evaluating a particular food, and also can be used to evaluate the “macro information”, for example whether the brand is good.

The “macro information” is very important for consumers; sometimes it may make the “micro information” more credible or even can “substitute” the “micro information” on the label (for example, many Italians buy tortellini made by a housewife without a label

because they live in the same place and the consumer knows the “producer”). For foods trade internationally, asymmetric information concerns mainly the “macro information” in a broad perspective.

7.2.1 The Patriotism or Precautionary Approach

Various research has shown that consumers prefer domestic or local foods. Often this preference is called “patriotism”, “nationalism” or “protectionism”.

Certainly, every country wants to protect the food industry from the competition of foreign food; politicians and journalists can also call for “patriotism”. My question is: Why does this happen in the food sector but not in other sectors (informatics, textiles, etc.)?

Foods concern safety and health. For a consumer, when he/she sees a new foreign food, the most important valuation is whether it is safe or not. In food legislation, many countries (probably all countries) adopt the **precautionary principle**; in my view, many consumers may take a “**precautionary approach**” so as to avoid a safety problem. When a processed food is made in a foreign country they don't know, even if “micro information” on the label is clear, the “macro information” is very weak. Such information asymmetry gives consumers a lack of confidence, and in uncertainty they prefer to buy local foods.

7.2.2 The Origin Statement and Geographic Distance

In general, signaling can enhance product quality reputation in foreign markets, but how to state the origin of a food should be carefully studied. The geographic distance between the exporting country and importing country is an important factor to determine the **efficiency of origin marking**.

With the increase of geographic distance, the social and cultural differences also increase, the “macro information” of the consumers about the region / country

decreases, then the information asymmetry between the producer and consumers increases. For consumers in a nearby country or in the same vast region, the origin statement of a vast region is not clear or precise. On the contrary, for the consumers in a faraway country, the origin statement of a vast region is also not precise, while the origin indication of a small zone is not clear if the place is not well known worldwide.

Let us suppose there are three kinds of origin marking:

- 1) A vast region (a group of countries, e.g. European Union);
- 2) Country (e.g. Italy);
- 3) A specific zone in the country (e.g. Bari).

The corresponding products are:

- A) Blend of Community extra virgin olive oil
- B) 100% Italian extra virgin olive oil;
- C) Extra virgin olive oil PDO “Terra di Bari”.

For marketing in a distant country, the indication of a zone in the producing country could also be problematic because the foreign consumers don't know the administrative divisions of the producing country, unless the zone is famous for tourism. It is important that the people in the consuming country could perceive the place.

Table 7-1. Comparison of different kinds of origin marking

Origin statement	Product example	Marking accuracy	Perception of consumers	
			In a near country	In a far country
Vast region	Blend of Community olive oil	Low	Not precise enough	Not precise enough
Country	100% Italian olive oil	Sufficient	Good	Good
Zone (inside a country)	Olive oil of “Terra di Bari”	High	Good	Depends

For example, when a food is to be exported to a country far from Italy, it is better to not say “produced in Puglia” but “Southern Italy”, because the majority of consumers haven’t heard of Puglia; one can say “produced in Venice” but not “produced in Treviso” since Treviso is not well known worldwide even if it is near Venice; it is better to indicate Treviso as “Northern Italy”.

The specific knowledge of a certain place is particular, and it is the source (reason) of asymmetric information concerning faraway countries.

7.2.3 Information Asymmetry concerning the Origin Certification

The origin statement can be supported by certification, for example ISO 22005 (certificate of traceability) and other certifications like PDO (Protected Designation of Origin) and PGI (Protected Geographical Indication) in the European Union. These certifications can be indicated on a label and even put on a web site, while the certificate of origin, as a commercial document, usually is not shown to consumers.

Because the consumers in a distant foreign country do not have enough “macro information” about a specific zone of an exporting country, it is difficult to understand the quality of PDO and PGI, but easier with “ISO”; also “Biologic” certification is easily understood.

In addition to the understanding of a specific zone, another problem for recognition in distant markets would be that the criteria of the certifications PDO and PGI are not well known, so consumers in distant countries could not recognize its value. Contrarily, the certification of biologic products is managed in various countries with common or similar criteria, but it can be accurately perceived by foreign consumers even when the certification is not made by an accredited certification agency in the importing country.

When a certification inexpensively informs consumers about the origin of a food and does increase slightly the labeling cost, the certification is desirable for consumers. The country of origin marking is an essential part of the label design, and doesn't increase

the deadweight cost of labeling. POD and PGI certifications can provide authentic origin information, but clearly increase the cost of labeling and finally the product cost. The consumers can pay for the certification information if it is worth the cost. When an origin statement is not made according to consumers' knowledge, they would not pay it. Generally speaking, consumers' are willing to pay for authentic foods but not for labeling. The Italian PDO olive oils are not accepted well by the markets outside of Europe, because consumers in distant countries don't know the management system of PDO and the different zones of Italy.¹

Origin marking can be efficient for marketing only if the information is accurate and understood by consumers.

7.3 The Effect of Main Ingredient Origin Labeling on Business Models of International Trade

Sellers consider whether or not to state the country-of-origin of main ingredients by estimating the advantages and disadvantages:

- (1) To indicate the ingredient origin for marketing purposes.
- (2) Not to show the ingredient origin because of seasonal and / or cost-driven factors.
- (3) Not to show the ingredient origin so as to disguise the “country-of-origin” on the label.

Because the origin marking of the main ingredient can be a marketing instrument, the producers who use high quality ingredients will mark the origin of the main ingredient, while the manufacturers who use a low quality ingredient would not indicate the country-of-origin of the main ingredient on the label.

¹ During my visit to an olive oil mill in southern Italy, its export manger responded that their PDO olive oil sells well in Germany and some other European countries, but is not well accepted by other foreign markets, while their biologic olive oil sells well also in some distant countries. This confirmed my analysis on the PDO and biologic products in foreign countries corresponds with reality.

These two categories of producers have different production systems and business organizations. In the sector where commercial fraud may occur related to country-of-origin statement there are two typical business models:

(1) Traditional production

High value foods are typical products of a certain zone and have a local tradition. They represent food culture created by the local people over a long history. All authentic traditional products are produced from local ingredients and the supply of the main ingredient is stable.

(2) Global sourcing and manufacturing

The companies manufacture “traditional foods” with ingredients sourced from other countries to reduce the production costs and gain more profit.

Commercial fraud usually occurs by substituting a local ingredient with a globally sourced ingredient, but is less possible when a company uses an ingredient imported from a country to substitute that imported from another country. For example, in Italy fraudulent practices in the food sector are often discussed, but it is never reported that someone uses false origin cocoa to produce counterfeit chocolate made in Italy.

Whether a producer would support the COOL of the main ingredient depends mainly on its business model.

When the COOL of the main ingredient is voluntary, only the producers of the first category will mark the origin of the main ingredient, thus consumers' cannot know where the main ingredient comes from when they buy foods made from an ingredient produced in a country with a poor reputation in the agri-food sector.

If the COOL of the main ingredient was mandatory, the traditional production could be recognized by the foreign markets according to the real value, while the foods with a disguised origin would decrease the competitive force. The international business strategy of the global sourcing manufacturers should be adjusted: The triangular

business (Country A – Country B – Country C) would become bilateral business (Country A – Country C), that is, the manufacturer should invest in the producing country of the ingredient or in the most important consuming country of finished products to develop its business.

In brief, mandatory COOL can favor substantial development of the traditional food industry and force the globally-sourcing companies to transfer their business to other countries or produce authentic traditional foods with local ingredients.

7.4 The Regulatory Principles of Origin Marking

In every country the government plays an important role in the food supply system. The government's power may greatly affect the degree of information asymmetry surrounding the country-of-origin.

7.4.1 The Government's Role in Reducing Origin Information Asymmetry

Regarding the country-of-origin labeling, the government's activities are:

- (1) Legislative body: To define rules of origin and criteria for the marking of origin; to formulate the laws and regulations on food labeling, the COOL policy, etc.
- (2) Customs: To control all commercial documents, in particular the country-of-origin declaration, so as to apply trade policy.
- (3) Inspection agency for food control: To check all commercial documents and possibly to require other documents, to make laboratory analysis of foodstuff so as to verify whether the information on the label is reliable, and whether the label conforms with the laws and regulations.

Therefore, the government has the power to establish limits on information asymmetry related to food origin between consumers and producers, and improve information reliability.

Table 7-2. The interests and duties of consumers, producers / distributors and government regarding the labeling for foods traded internationally

	Interests	Duties
Consumers	Having truthful and clear information.	
Producers / distributors	(1) Information as marketing instrument. (2) Low labeling costs.	(1) Providing information to consumers according to law. (2) Documents and samples for customs control and for safety and quality inspection.
Government	(1) To guarantee food safety. (2) To maintain market order. (3) To favor economic development.	(1) To guarantee food safety. (2) To formulate food policy and labeling law. (3) To check the information claimed on the label.

In this digital era, the collaboration between governments should not be difficult. As a matter of fact, the customs of many countries are already effectively linked under the **Customs Co-operation Council Recommendations on information technology** (ref. Revised KYOTO Convention). When a container of goods departs from the customs of the exporting country, the customs of the importing country can know quickly which kinds of goods will arrive. For foods manufactured in Country B from primary material produced in Country A and then exported to Country C, the export certificate sent by Country A to Country B should be forwarded by Country B to Country C if customs of all three countries uses an electronic certification system. Such a mechanism could be used for controlling commercial fraud related to main ingredient origin, and for anti-circumvention.

7.4.2 Legislative Principles

In formulating COOL policy the government might consider to protect not only consumers' rights and interests, but also favor economic activities such as food production and trade in its country.

With any economic regulation, there is always support and opposition, and a government should find equilibrium among the different interests of various parties.

For the importing country, the government would be able to “catch” the interests of consumers or that of dishonest importers. For the exporting country, the government would favor the development of traditional production or support the globalized manufacturing with ingredients sourced from other countries to substitute the local ingredient.

Different markets need a different COOL policy. Among EU member states, Italy is the country that calls for the mandatory COOL because the traditional Italian food industry is threatened by disguised origin products.

In the Delphi study, I proposed a general regulatory principle for the formulation of a policy on ingredient origin statement: **COOL of the main ingredient is generally made on a voluntary basis, but should be mandatory for the foods that could be subject to fraudulent practices on the origin statement.**

My proposal is based on the following considerations:

(1) Where commercial fraud occurs, the market is inefficient and competition is unfair, so it needs new rules to improve efficiency and fairness.

(2) If there is no commercial fraud regarding a particular food, the market of the food is regular and may be efficient, so it is not necessary to introduce new regulations to interfere with the market.

Here for the commercial fraud I refer not only to the serious problem concerning safety, but also to those without safety problems but with a false origin declaration for the reason of increasing commercial value. My legislative proposal for non-safety commercial fraud is based on the **Principle of Corrective Justice**. This means: Where commercial fraud occurs, the market competition is unfair, there are some defects or errors in the existing ruling regulations that must be corrected.

Inversely, with any food safety issue one must apply the **Precautionary Principle**, of which the definition made in 1998 Wingspread Statement is: *“When an activity raises threats of harm to the environment or human health, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically.”*

In the food laws of all countries, this principle is fundamental; under this principle the public administration may immediately stop distribution or order withdrawal from the market of foods likely to be hazardous.

Regarding the false or disguised origin statement that does not compromise safety, to introduce a new rule after commercial fraud occurs is a reactive strategy; it is better to have preventative measures. The Uruguayan law - that the country-of-origin statement of the main ingredient is required in official control but not mandatory for labeling – seems to be a good method to prevent commercial fraud related to the origin of main ingredients.

The misinformation on the country-of-origin is an important fraudulent practice in the market of high value foods. Therefore, it will be appropriate to mandate the COOL of main ingredient to the foods with high value.

To estimate whether a law would be positive or not requires analysis of its potential effects. For the importing country, if the COOL of main ingredients is mandatory, consumers' rights and interests can be better protected, but it may create a technical barrier to trade. For the exporting country, mandatory regulation on the COOL of main

ingredients may favor the sustainable development of its traditional food production, while the business of the globalized producers would be restricted. Different countries need different COOL policies.

Regarding the voluntary COOL of main ingredient, the government should establish **standards of conduct**. A producer may decide whether or not to indicate the ingredient origin, but if he chooses to, the ingredient origin statement must be done under precise criteria and not in a free format. The standards of conduct should be compulsory.

The economic system of the importing country is closely linked with that of the exporting country not only by the goods traded and business operators documented, but also by the consequence of the transactions characterized with unfair competition. A **worldwide standardization of origin marking** will favor collaboration among various countries.

Conclusions

From my research conducted in various ways - the case study on the country-of-origin labeling of extra virgin olive oil blend, the Delphi study for gathering perspectives and ideas from experts in food labeling and food policy, and the analysis related to rules of origin and from the perspective of information economics – it is clear that multiple countries of origin marking can provide accurate information about the origin of a food produced by two or more countries, avoiding misinformation for consumers and improving market efficiency and fairness.

If the country-of-origin of a processed food is marked according to the criterion of the last substantial transformation, consumers have imperfect information about the origin of the food. When the last processing country exports food manufactured from ingredients produced in another country, the country-of-origin indicated on the label might be the same as that of a traditional food wholly produced in the country. If the country-of-origin of the main ingredient is a determining factor of food quality, consumers' asymmetric and imperfect information about the origin will lead to adverse selection. A typical situation in Italy is that the quality of the “multinational” food is lower than that of traditional Italian food. If the two kinds of foods are marked with the same country-of-origin declaration, the multinational food will be overvalued in the international market, while the traditional food will be undervalued. Consequently, the manufacturer of the multinational food makes profits outside the value of the good, while the producer of authentic origin food is not competitive in the foreign market.

In an emerging market the problem caused by imperfect origin information is much more serious than what could happen in a mature market, since consumers don't know how to distinguish the quality of a newly introduced foreign food and they are easily cheated by the disguised origin information. For this reason, it is difficult for a producer of traditional high quality food to enter emerging markets, but the multinational food can find a sales channel. Opportunistic sellers control the market power.

The main method for resolving the problems of market inefficiency and unfairness caused by asymmetric and imperfect origin information is to equalize the origin information by multiple countries of origin marking: The producing country of the primary material, the manufacturing country of finished products and the packing country (if it is different from the manufacturing country) should be all indicated on the label.

For processed and packed foods traded internationally, labeling has a deadweight cost because the label should be customized for each importer according to the law of the importing country and is usually printed for each transaction. The consumers' WTP (willingness to pay) is not a determining factor for country-of-origin labeling. Some said COOL would increase the labeling cost, but it may only in the domestic market. In a foreign market, the issue is not that COOL of the main ingredient would **increase the labeling cost**, but COOL of main ingredient could **reduce the profit** that might be possible by disguised origin information.

As a matter of fact, in order to avoid the effect of adverse selection in the market, the producers of real origin foods may motivate to signal the main ingredient origin to consumers. On the contrary, the producers of disguised origin foods would not signal the ingredient origin. Therefore, under a voluntary COOL system only the producers of the foods with good quality ingredients can mark the country-of-origin of the main ingredient; consumers cannot have accurate origin information about foods made from low quality ingredients.

If COOL of the main ingredient is mandatory, the producers of traditional foods will be better protected, while the businesses of multinational foods will become less competitive and the manufacturers will need to revise their development strategy. Some big manufacturers may change from global sourcing and marketing to foreign investment in production; medium and small firms might produce foods with domestic ingredients. Therefore, the mandatory COOL of main ingredients will favor the development of the traditional food industry, and in the short term the import of food ingredients from other countries and the export of “multinational foods” will decrease.

However, for foods traded internationally, the importing country will decide if the COOL of main ingredients shall be mandatory or voluntary. This means the COOL

policy of the importing country would affect the production system of the exporting country: If COOL is voluntary, in the market there are real origin foods and disguised origin foods; if COOL is mandatory, the disguised origin foods will decrease in the market and maybe some foreign manufacturers will establish plants in the country to begin the production with local ingredients or imported from other countries. Obviously, the mandatory COOL will favor to control market order and the development of the national industry.

The mandatory COOL of the importing country of finished products will also affect the economy of the producing country of primary materials: Because of the reduction of exports to the manufacturing country, it may invite some manufactures to invest in the production of finished products and export primary materials to the importing country for its national production.

After reviewing these potential influences in the three countries, we can conclude that mandatory COOL may negatively influence the business of the manufacturers and importers of disguised origin foods, and the export of the producing country of primary material. But after a period of reorganization, mandatory COOL will positively impact the substantial development of the other two countries.

Therefore, from a short term point of view, **mandatory COOL of the main ingredient is “protectionism” in the sense of impeding international trade of disguised origin foods, but it can better protect the consumers. In the long term, mandatory COOL can promote not only the development of the food industry in domestically, but also in the partner countries.**

Moreover, by reducing the triangular trade, COOL has also the function of anti-circumvention.

In different countries the circumstances of agri-food production and supply are different, and different rules of origin may determine different necessity to state the country-of-origin of main ingredients. In formulating the policy concerning COOL, the government of each country should find equilibrium among the different interests of various parties and between the short-term and long-term tasks.

First, the COOL policy should be designed to protect consumers' rights and interests and prevent market inefficiency and unfairness. When commercial fraud by misinformation or disinformation on country-of-origin occurs, COOL should be mandatory. Therefore I proposed a general regulatory principle for the formulation of a policy on ingredient origin statement: **COOL of the main ingredient is generally made on a voluntary basis, but should be mandatory for the foods that could be subject to fraudulent practices on the origin statement.** Considering the fraudulent practices concerning origin declaration affect mainly high value foods, the mandatory COOL of main ingredient could be applied to high value foods (extra virgin olive oil, ham, etc.)

Whenever the COOL is voluntary or mandatory, the most important is that the origin statement is accurate and efficient. The two systems should also follow the same marking criteria.

For each kind of processed food, it is necessary to identify its main ingredient (or ingredients) and the main processing operations in the production. The origin-marking format should be defined according to the product characteristics. The basic criteria can be as follows (here: Country A – producing country of main ingredient; Country B – manufacturing country of finished food):

- **Origin Marking for Foods with Two or More Ingredients**

(1) If Country B is considered as the country-of-origin for applying trade policy:

Made in (Country B) from (adjective of Country A) (primary ingredient name),

Or: (Name of primary ingredient) produced in Country A

Final product (or its name) made in Country B

(2) If Country A is considered as the country-of-origin for applying trade policy:

Produced in Country A

Packed in Country B

- **Origin Marking for Mixed Foods**

Produced in Country A and Country B

Packed (or Bottled) in Country B

- **Origin Marking for Single Ingredient Foods**

If the processing operations are simple and change only the form of the primary material but not its character, the origin marking should indicate the processing operation. For instance, coffee can be labeled as below:

Produced in Country A

Roasted in Country B

If the processing operations changed the nature or character of the primary material, the format of origin marking can be that for foods with two or more ingredients.

Multiple countries of origin labeling is very clear and not misleading for consumers.

A general criterion for origin labeling is to reduce information asymmetry. The origin information should not be hidden or misleading, and should be easily understood by consumers. An accurate origin statement is a signal of safety and quality for consumers, and will enable them to make more informed choices. It can increase consumers' confidence in foreign foods.

The introduction of multiple countries of origin marking needs an ideological reform in customs administration: The basic concept of “only one country-of-origin” under the non-preferential system should be discarded. Therefore, the last substantial transformation criterion should not be adopted for the purpose of origin marking, but only for the application of trade policy. However, in defining the origin marking formats for various kinds of foods, the tariff shift rule, *ad valorem* rule and specific processing rule could be important referents.

In order to increase the **efficiency of origin marking** and reduce the “spaghetti bowl effect”, it is necessary to unify the “communication language” among various countries, ensuring the meaning of origin signal perceived by consumers is the same as that intended by the producer / importer, and favoring business collaboration among

importers and exporters. Therefore, to harmonize origin marking will be a great initiative. It will also simplify the works of public administration (e.g. Customs, food inspection agencies, etc.) and favor collaboration among governments.

Codex Alimentarius should be competent for the **worldwide standardization of origin marking**. By eliminating “information asymmetry”, standardization will promote fair trade in the world and favor substantial development in various countries.

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