Point de Vue

Wrapped in the Flag: Food Choice and Country of Origin Labelling

Iain Fraser and Kelvin Balcombe

Consumers are demanding ever more information about food. Research indicates that consumers value information that helps with making food choices (Messer *et al.,* 2017). For example, consumers appear willing to pay higher prices for organic meat, and meat produced satisfying high animal welfare standards (Lagerkvist and Hess, 2011). Research also reveals high levels of consumer interest in country of origin (COO) information (European Commission, 2014). Yet, there is a risk that consumers may neither trust nor be able to understand the information provided. These limitations were illustrated by the horsemeat scandal in 2013. In December 2014, the EU introduced the Food Information to Consumers (FIC) legislation (Regulation (EU) No. 1169/2011) extending the products requiring mandatory COO labelling (COOL). Ironically, at the same time as the use of mandatory COOL for many types of meat was being considered, the one type of meat covered by existing mandatory COOL prior to the horsemeat scandal, beef, was the meat being illegally substituted in the horsemeat scandal.

The article examines the provision of information through labelling, with a particular focus on COOL. We consider how COO might be provided to avoid food fraud such as origin misrepresentation, and what information needs to be given to consumers so that they know and trust what COO means.

What does COO actually indicate?

COO indicates the specific country a food item originates from. When compared to geographical indication (GI), protected designations of origin (PDO) and protected geographical indications (PGI) COO is much less specific as it does not detail information about geographical name nor specific production and agronomic conditions. Despite these limitations COOLs are applied widely.

A COOL is either provided voluntarily or is mandated by regulators. With regard to mandatory COOL, we have seen a steady increase in the number of food items requiring this information including beef, fruit and vegetables, olive oil, wine, eggs, imported poultry, honey and hops. In the case of beef, COOL needs to distinguish between place of birth, and rearing and slaughter where these differ. Since April 2015 via Regulation (EU) No 1169/2011, mandatory COOL has been introduced for fresh, chilled and frozen meat of swine, sheep, goats and poultry. For these products, unlike beef, COOL only needs to specify the place of rearing and slaughter, but not the place of birth.

Voluntary COOL can be used by a producer or retailer if they deem it appropriate. For example, a ready meal such as a chicken tikka does not need to indicate the COO of meat used but some retailers may see the use of a COO label as a potential marketing opportunity.

A decision to move from a voluntary to mandatory COOL has economic consequences. With a voluntary COOL the food industry is generally signalling quality differentiation for credence attributes. By contrast, mandatory COOL can be seen as a regulatory action correcting a market inefficiency resulting from asymmetric information (between producers and consumers) about attributes like food safety. But, there are significant costs incurred by moving from voluntary to mandatory COOL, faced by both regulators and industry and ultimately consumers (Messer *et al.,*

2017). As the complexity of food supply chains increase, these costs will grow. The link between primary production, the movement of food items through a supply chain and their resulting use in processed food products, mean that it is hard to track COO for all ingredients.

Of potentially greater significance is that the use of mandatory COOL does not mean that the public will necessarily be able to make more informed food choices. For example, when a manufacturer of lightly processed meat products indicates COO on a label, COO can be represented and/or interpreted in terms of:

(i) the meat (country of birth, rearing and slaughter); and/or
(ii) the product produced, in which case origin is considered to be the place of last substantial transformation.

As an example of the potential source of confusion that can flow from these definitions, a pack of bacon may be labelled as from the UK under (ii) because the bacon has been cured in the UK even though the bacon comes from Danish pigs. Alternatively it could have been labelled Danish under (i). Both COO definitions are allowed under the legislation. There is also evidence (European Commission, 2014) that consumers in different countries prefer one definition over the other when it comes to milk. However, there is no reason to assume that the introduction of a mandatory COOL would do anything to remove this confusion.

One may take the view that consumers are confused because they generally lack sufficient knowledge about the definitions of COO and what producers are doing. Alternatively one may take the view that they are being misled. Either way, the decision as to whether to employ voluntary or mandatory labels is ultimately motivated by the belief that they help consumers make more informed choices. The case above illustrates that the COOLs may not always serve this purpose.

Consumer use of COOL

The literature reveals high consumer demand for information about the goods they buy, including COO. But there is far less consensus when it comes to the amount of money consumers are prepared to pay for this information. Thus, although most consumers assign a positive value to COO this does not mean that they are always willing to pay for it (Food Chain Evaluation Consortium (FCEC): Agra CEAS Consulting, 2013). And, when it is reported that consumers value COO information, it usually means that they value a COOL indicating that an item originates from their country. For example, Carlsson *et al.,* (2014) report that Swedish consumers' value domestic origin positively but non-domestic origin negatively. Thus, the value of COO information may be highly origin dependent. There is clearly a strong home country bias. However, home country bias can be tempered by events like the horsemeat scandal. UK research found that the implicit value attached to COO information on beef increased for all countries after the horsemeat scandal (Hussein and Fraser, 2018).

It has also been established that the relative importance of COO information differs by product type. For example, Balcombe *et al.*, (2016) examined various fresh and processed meat products and found that although COO was positively valued for all products it was not the most highly valued product attribute for the majority. Interestingly, it was the most important attribute for most fresh meat products, but not for processed products. A similar result has been reported for EU consumers in all member states (European Commission, 2014). This result is somewhat unexpected as it might be assumed that consumers would be most concerned about the source of meat ingredients in processed products.

Another important issue is the interaction between COO and other forms of information. Take organic produce. Some studies (e.g., Xie *et al.,* 2016) indicate there is a strong preference in favour

of domestic over imported organic produce even when the products are identical. Consumers place a high level of trust in products produced domestically. But this does not mean that COO is the most highly valued food attribute. The European Commission (2015) report that COO is considered by consumers to be less important than price, taste, use by dates, convenience and product appearance. So a home country bias need not dominate consumer choice.

More generally, there is a lack of understanding of whether different forms of label information are complements or substitutes. As yet there are insufficient studies examining the interaction between types and sources of information and how this impacts upon consumer use and value of any one specific piece of information. Furthermore, consumers will not have full information at the point of purchase and in many cases after purchase and/or consumption. Attributes can be used directly and indirectly to infer quality and this brings us to our next point.

There are interactions between COO and product attributes that are inferred by the consumer. As observed there is evidence that the value attached to COO for some products stems from domestic bias. This is probably because consumers use COO to infer something about a product that may or may not be true such as quality and food safety. This is an example of the halo effect whereby COO is implicitly capturing consumer positive perceptions of other product attributes that are not explicitly detailed on food products. In this case COO is acting as a quality cue and being sought by consumers as a search cue. Consumers see the label and perceive that this indicates within a food search activity (rightly or wrongly) an increased or decreased level of quality.

COO and policy developments

The Single Market and COO

Following the introduction of the FIC in 2014 several countries including France, Italy and Spain introduced or intend to introduce this form of labelling for milk. An important and controversial issue is how COO is defined. In the case of France, which is currently undertaking a two year trial, any product that has more than 50 per cent milk must clearly state the country of collection and country of processing. Consequently, if either collection or processing did not occur in France the label must state EU (any EU state other than France) or non-EU if from outside the EU. Mandatory COOL for milk is described as a trial, because member states must be able to demonstrate that mandatory COOL results in an increase in the value that consumers attach to the product. In addition, because of the FIC legislation it appears that mandatory COOL of this type no longer needs to be brought to the attention of the World Trade Organization (WTO). This raises questions about the economic implications of mandatory COOL. Several industry groups have raised concerns about the way in which this approach to COOL may impact the functioning of the EU single market. In principle, these changes have the potential to allow COO legislation to become a form of gastro-nationalism and a barrier to trade.

Box 1: What is Gastro-Nationalism?

Gastro-nationalism was originally defined by Michaela DeSoucey (2010):

"Gastronationalism, in particular, signals the use of food production, distribution, and consumption to demarcate and sustain the emotive power of national attachment, as well as the use of nationalist sentiments to produce and market food. . .[it] presumes that attacks (symbolic or otherwise) against a nation's food practices are assaults on heritage and culture, not just on the food item itself. . . It strategically weds consideration of national identity to the idea of the nation as a protector of cultural patrimony."

Brexit and COO

There have been calls from UK politicians (House of Commons, 2018) for the extension of COOL in the UK post Brexit world as a means to help signal food safety and animal welfare standards to UK consumers. This demand is almost certainly bound up with the hope that consumers will buy domestic produce. The reason to support domestic producers can potentially go far beyond the need to ensure authenticity. Consumers displaying a preference for domestic production might also consider themselves to be acting ethically in terms of reducing food miles or supporting local producers. There are also active industry led marketing campaigns to induce consumer ethnocentrism: consumers making choices as a result of loyalty or patriotism. Therefore, what starts out as a vehicle for provenance and information can become a mechanism to address a very different agenda.

Trade and COO

When trade is subject to WTO rules the use of COO labels can become divisive. This is illustrated by the response of Canada and Mexico to US implementation of mandatory COOL for beef, pork and other food items in 2009. The dispute almost resulted in Canada and Mexico implementing hefty countermeasures on the US. To avoid this, the US Congress repealed COO labelling for beef and pork in 2015. This decision pleased many in the US livestock sector, but not consumer groups who strongly advocated the use of mandatory COO labels for these products.

The future of COOLs with increased digital transparency

It is perhaps in relation to information technology that we will see important developments in relation to how COO is provided and used by consumers in the future. Two uses of information technology that have attracted attention regarding COO are blockchains and the SmartLabels initiative.

Blockchains

A blockchain is a digital collection of records linked and verified with the use of cryptography. These records become a digital decentralised distributed ledger of all transactions on a network such that earlier entries cannot be modified. Blockchains have gained significant exposure as the technology underpinning crypto-currencies like Bitcoins.

The use of blockchains in food supply chains as a means to securely collect and convey information such as COO has already started. What blockchains can provide in combination with other digital

technologies is the information consumers may require if they wish to verify for themselves that a particular food item is from the country claimed. An example of the technology in practice is given by Provenance (https://www.provenance.org/). In collaboration with the Soil Association, bacon from an organic farm in Devon is traced all the way to a retail outlet in London (i.e., farm-to-fork). The blockchain collects all of the supply movement data. This data is then made available to consumers via the use of an app that reads a Quick Response QR code. Thus, there is, to use the emerging terminology, a 'chain of custody' that can in time help to build consumer trust in food supply chains.

Another application of blockchains to ensure authenticity is provided by the Swiss company Ambrosus (https://ambrosus.com/index.html). They consider how blockchains in combination with radio frequency identification (RFID) can be used to ensure the authenticity of COO of Swiss cheese and olive oil. There is also BeefLedger (http://beefledger.io/) being developed commercially in Australia. This application is specifically aimed at consumers in countries that import Australian beef such that they can be sure that the product they are consuming is authentic.

SmartLabels

An alternative approach to information provision is via third-party service providers and the use of smart technology. The key to this approach to information provision is that all parties in the supply chain are willing to provide information such that it can be aggregated and repackaged as specific consumers want. The SmartLabel Initiative (https://www.labelinsight.com/smartlabel) provides consumers via technology such as an app and a smartphone a landing page that provides the information a consumer might want including COO. The genesis of this approach to information provision can be traced back to the Consumer Information Transparency Initiative in 2014. (https://www.fmi.org/industry-topics/private-brands/smartlabel-implementation-recommendations)

Technologies and COO

The first thing to note is that a blockchain is not a COOL, but a transparency mechanism that could in principle, be used to establish COO. In contrast, the SmartLabel is a label, and the question would be whether it satisfies mandatory COOL requirements. Furthermore, in both cases COO information would be embedded within a potentially complex information environment and this may weaken the use of COO information by consumers. Depending on how a SmartLabel is designed, it may or may not prioritise some form of COO information over other product attributes.

Second, these technologies may alter the balance in terms of whether or not COO needs to be mandatory. This is because these technologies can enable information transparency that in turns has an impact on consumer trust. With the SmartLabel a service provider assists consumers in deriving the information they require. In contrast, blockchains have no explicit role for a third party information service provider. This is because, in principle, there is agreement across the network of participants about the state of the distributed ledger. For this reason a blockchain can be used to produce a record of financial transactions, supply agreements or the condition of goods as they move along a supply chain. So fundamentally, the need for more mandatory COO provision comes down to whether consumers trust digital sources of information and as result require less formal regulation by government.

COO and Convenience

So will consumers actually use information provided in this way? In a world of ever increasing demand for convenience it is unclear just how much demand there is for additional information. Potentially, with the development of digital technology it is possible to imagine that an app or online shopping preferences could be set to automatically search for the COO information contained on a blockchain or within a SmartLabel. In this way COO information can be customized to the demands of individual consumers. Therefore, it is conceivable that we will see the development and use of technology that can collect, collate and verify COO information, made available by increasing digital transparency efforts, such that it can be used by consumers in a simple and convenient manner.

Further Reading

Balcombe, K.G., Bradley, D., Fraser, I.M. and Hussein, M. (2016). Consumer Preferences Regarding Country of Origin for Multiple Meat Products. *Food Policy*, 64: 49-62.

Carlsson, C., Johansson, H., Lagerkvist, C.J., Sundstrom, K. and Wilhelmsson, F. (2014). *Origin Labelling of Food – Costs and Benefits of New EU Legislation for Sweden*, Report 2014:1, AgriFood Economics Centre, Lund, Sweden (www.agrifood.se).

DeSoucey, M (2010). Gastronationalism: Food Traditions and Authenticity Politics in the European Union, Michaela. *American Sociological Review* 75:3, 432-455

European Commission (2014). *Europeans, Agriculture and the Common Agricultural Policy (CAP)*. Special Eurobarometer 410 / Wave EB80.2 – TNS Opinion & Social.

European Commission (2015). *Report from the Commission to the European Parliament and the Council regarding the mandatory indication of the country of origin or place of provenance for unprocessed foods, single ingredient products and ingredients that represent more than 50% of a food*, COM(2015) 204 final (Brussels: European Commission).

FCEC: Agra CEAS Consulting (2013). *Study on the mandatory indication of origin or place of provenance of meat used as an ingredient*. Final Report for the European Commission. July 2013.

House of Commons (2018). Brexit: Trade in Food. House of Commons, Environment, Food and Rural Affairs Committee, Third Report of Session 2017–19. https://publications.parliament.uk/pa/cm201719/cmselect/cmenvfru/348/348.pdf

Hussein, M. and Fraser, I.M. (2018). Hedonic Analysis of Consumers' Valuation of Country of Origin of Meat in the United Kingdom. *Journal of Agricultural Economics*, 69(1): 182-198.

Lagerkvist, C.J. and Hess, S. (2011). A meta-analysis of consumer willingness to pay for farm animal welfare, *European Review of Agricultural Economics*, 38(1): 55–78.

Messer, K.D., Costanigro, M. and Kaiser, H.M. (2017). Labeling Food Processes: The Good, the Bad and the Ugly. *Applied Economic Perspectives and Policy*, 39(3): 407-427.

Xie, J. Gao, Z., Swisher, M. and Zhao, X. (2016). Consumers' preferences for fresh broccolis: interactive effects between country of origin and organic labels. *Agricultural Economics*, 47: 181–191.

Iain Fraser, University of Kent and La Trobe University, Australia. ***Email: I.M.Fraser@kent.ac.uk***

Kelvin Balcombe, University of Reading, UK. ***Email: k.g.balcombe@reading.ac.uk***

Acknowledgements
The authors would like to thank Alastair Bailey, the editors and two anonymous referees for providing very helpful and insightful comments on earlier versions of the manuscript.

Summary

The growth in country of origin (COO) food labelling is part of the ongoing proliferation of information provided to consumers. However, the implementation of COO labelling means that consumers can sometimes end up more confused than informed. This concern raises questions regarding how COO information should be provided, along with what information needs to be given to consumers. We begin by discussing what COO actually indicates. This is followed by a review of the evidence on consumer use of COO information. Then turning to current policy issues, we draw attention to how COO information can be used to promote consumer ethnocentrism as well as inadvertently causing trade tensions both between trading countries and within the EU single market. We then consider how developments in information technology like blockchains or smart labels might change how COO information is collated and used. In particular, we observe that any increase in the use of this technology will depend on whether or not consumers trust these new digital sources of information. Potentially, the convenience with which COO information could be verified by consumers using information technology is a logical development given consumer demands for convenience in general.

Pullquote

"There have been calls from UK politicians for the extension of COOL in the UK post Brexit"