Food Policy 49 (2014) 107–116

Contents lists available at ScienceDirect

Food Policy

journal homepage: www.elsevier.com/locate/foodpol

Differential impacts of country of origin labeling: COOL econometric evidence from cattle markets

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ARTICLE INFO

Article history:
Received 21 August 2013
Received in revised form 30 April 2014
Accepted 9 June 2014

Keywords:
Country of origin labeling
Livestock
Trade
WTO

ABSTRACT

Country of origin labeling (COOL) occurs routinely for many products in many places, but the US implementation of mandatory COOL for meat, whose purpose is to identify the origin of the livestock used to produce the meat, generated much controversy and a major WTO dispute that has yet to be settled. This paper estimates econometrically differential market impacts of mandatory COOL on cattle raised in Canada and imported into the United States. We find significant evidence of differential impacts of COOL through widening of the price bases and a decline in ratios of imports to total domestic use for both fed and feeder cattle.

Introduction

Many countries mandate country of origin labeling (COOL) for many food products. In most cases, labels listing country of origin are not controversial even when mandatory (WTO, 2011, p. 157). However, the recent implementation COOL for muscle cuts of beef and pork sold in the United States has raised international trade concerns. US import volumes of cattle and meat from Canada and Mexico are small relative to the size of the US market. However, US imports represent significant shares of Canada and Mexico productions of cattle and meat and thus the potential economic impacts of COOL on US neighbors are significant. For instance, the Canadian Cattlemen Association claims that COOL currently costs Canada cattle producers \$150 million per year in lost revenues (http://www.cattle.ca/what-is-mcool).

Less than three months after the United States released its interim final rule, Canada requested consultations at the World Trade Organization (WTO). Mexico joined the consultation in May 2009 and a WTO dispute panel was established in October 2009. The WTO panel determined that US implementation of COOL violated the provisions of the WTO agreement on Technical Barriers to Trade for cattle and hogs (WTO, 2011). A subsequent Appellate body ruling was accepted in July 2012 and the United States agreed to bring its regulations implementing COOL into compliance (WTO, 2012a). US policy changed the provisions of COOL in May 2013. Canada did not agree that the changes brought the United States into compliance and requested the establishment of a compliance panel in August in 2013. The panel is scheduled to issue a final report by the end of July 2014.

The resolution of the COOL dispute in favor of the United States could have paramount implications for food and agricultural trade. Countries have the right under the WTO agreement to implement country of origin labeling regulations. However, if the WTO panel rules that US latest implementation of COOL is acceptable, it could reshape agriculture and food trade for two major reasons. First, the US made very clear to the WTO panel that COOL is not motivated by food safety concerns. US imports of animals and food meet the same standards that apply to US domestic firms, as enforced by the FDA and the USDA. The stated motive for COOL was to inform consumers of the origin of meat, even though the US recognizes that imported meat does not present a greater risk of consumers' health than meat of US origin. A ruling in favor of the US opens the door to trade policies justified by claims that those policies respond to consumers' demands. Second, under the WTO agreement, rules of origin are country specific but it is generally recognized that the place where *substantial transformation* has taken place defines the origin of a product. However, under COOL, substantial transformation no longer determines origin. For instance, under COOL, the meat from cattle imported from Canada as feeder, fed and processed in the United States, is of Canada origin. This is unlike any previous rule of origin.

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http://dx.doi.org/10.1016/j.foodpol.2014.06.003
0306-9192/

This article estimates econometrically the impact of COOL, specifically on imports from Canada *relative* to US use and on prices differences between Canada and the United States for feeder and fed cattle. The objective is to measure whether the dispositions of the COOL legislation cause a *differential* treatment of livestock according to their origin as revealed through prices and import quantities. To this end, the article develops a method to measure the differential effects of regulation across borders. As economics now plays a preponderant role in the resolution of disputes at the WTO, our methodology can apply to the investigation of other trade disputes.

The WTO case brought by Canada and Mexico was the first to challenge the legality under the WTO agreement of country of origin labeling. An important piece of evidence was for Canada to show that COOL caused economic damage to Canadian cattlemen. Prior studies measure the effects of COOL on prices only and are of limited use as COOL should affect quantities are well as supply curves are not perfectly inelastic. This study is the first to estimate empirically the effects of COOL both on price and quantities, for the fed cattle and the feeder cattle markets. Our empirical results support the claim COOL provided a less favorable treatment to imports of live cattle, as it significantly altered cattle trade between Canada and the United States.

The next section provides background information regarding COOL regulation in the United States. The section that follows surveys relevant literature. We then motivate our empirical approach within an economic framework. The two sections that follow describe the data, describe the econometric model and discuss the results. The last section concludes.

COOL regulation background and WTO challenge

The market implications of labels depend on whether they are mandatory or market driven, the characteristics of the industry, including the role of imports, and how labeling rules are implemented. This section describes the rules of COOL that apply to livestock and why they are challenged by Mexico and Canada at the WTO.

COOL regulation summary

The Farm Security Act of 2002 (the 2002 Farm Bill) required COOL for selected food products sold in the United States. The law specified that retailers, other than very small outlets and food service operations such as restaurants, must notify consumers of the country of origin for muscle cuts of beef (including veal), lamb, and pork; ground beef, lamb, and pork; fish and shellfish; many perishable agricultural commodities; and peanuts.

The United States Department of Agriculture (USDA) completed implementation for fish and shellfish in 2005. For other products, USDA had difficulties establishing acceptable rules for the COOL legislation. Even as Congress began developing the 2002 Farm Bill, part of the US cattle industry raised concerns that implementation would raise their costs. After extended comment periods and withdrawal of the initial proposed rule, further implementation of COOL was delayed. The Food, Conservation, and Energy Act of 2008 (the 2008 Farm Bill) extended the list of covered commodities to include chicken, goat meat, ginseng, pecans and macadamia nuts and revised the 2002 provisions to facilitate rulemaking. On August 1, 2008, the USDA Agricultural Marketing Service (AMS) published the *final interim rule,* which became effective on September 30, 2008. The AMS published on January 15, 2009 the *final rule*, which was unchanged in its essentials. Full enforcement of COOL began on March 16, 2009 (AMS, 2012).

The regulations implementing COOL for muscle cuts of beef and pork provide for three labels. Label A applies to products of US origin only (Product of USA). Label B is for packages that may contain some imported livestock not entering the US solely at time of slaughter (e.g. Product of USA and Canada). Label B applies, for example, to muscle cuts from cattle born in Canada but fed and slaughtered in the United States. Label C is for products from imported livestock entering the United States for immediate slaughter (e.g. Product of Canada and USA). That label is used, for example, for muscle cuts from cattle raised in Canada but slaughtered in the United States. Two additional labels, not subject to dispute and not the subject of our econometrics, cover imported meat and ground meat.

As the date for COOL to become effective was approaching, US packing plants that sourced cattle of multiple origins believed that they could use label B or label C for all their production, therefore avoiding the cost of segregating cattle of different origins. However, in mid-September 2008, the Chair of the House Agriculture Committee, Congressman Peterson from Minnesota, met with representative of the US slaughter industry and made clear that he expected that cuts from US origin cattle and hogs would carry an A label and, if the industry did not comply with that expectation, new legislation would codify that requirement (Informa Economics Inc., 2008; The Food and Fiber Letter, 2008; Food and Drink Weekly, 2008). In late September, USDA updated its question and answer documents on COOL implementation to indicate that label A was to be used if only US products were slaughtered on a given day. These interpretations were reinforced early in 2009 in a letter from USDA Secretary Vilsack that discouraged the use of labels B and C when label A can be used. The result is that US feedlots and packers that accept livestock from multiple origins must segregate animals according to their origin and segregation by origin must be maintained at all stages of the supply chain.[1]

Key WTO issues in the context of North American cattle markets

The main economic issues in the WTO dispute revolved around the provision of the WTO Technical Barriers to Trade (TBT) agreement that "Members shall ensure that in respect of technical regulations, products imported from the territory of any Member shall be accorded treatment no less favorable than that accorded to like products of national origin and to like products originating in any other country (WTO, 2012b)." And, "Members shall ensure that technical regulations are not prepared, adopted or applied with a view to or with the effect of creating unnecessary obstacles to international trade (WTO, 2012b)."

Prior to COOL, cattle slaughter operations treated cattle from US feedlots that had been born in Mexico or Canada as interchangeable with US born cattle. Similarly, fed cattle from Canada were not differentiated and the cattle and meat was not segregated. Retailers purchased meat without regard to the geographic history of the livestock used to produce the meat products and did not apply country of origin labels. This fully integrated system reflected efficiencies in using facilities and in avoiding costs. Retailers did not perceive consumer demand for country of origin labeling as sufficient to cover the costs of segregation and separate labeling. Thus, the government mandate for country of origin labeling did change the behavior of the cattle and beef industry in North America.

[1] The new interpretations of how COOL would be enforced stimulated a letter from James Lochner, Senior Group vice President, Tyson Fresh Meats, Inc. to "Tyson Fresh Meats Cattle Supplier," dated October 14, 2008. Wesley M. Batista, President & CEO, JBS USA, Inc. sent a letter to Valued Customer dated October 23, 2008. The same response is documented in a Smithfield News Release, September 24, 2008, "Smithfield Foods Announces Use of American Born, Raised and Processed Label on All US Fresh Retail Products" and a CANFAX Update, April 24, 2009, "US Packer procurements policies for Canadian Cattle."