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Surf-n-Turf, but the Sustainable Kind? The Limits and Potential of Market-Driven Regulation in Food Production

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Surf-n-Turf, but the Sustainable Kind? The Limits and Potential of Market-Driven Regulation in Food Production

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Surf-n-Turf, but the Sustainable Kind? The Limits and Potential of Market-Driven Regulation in Food Production

Zdravka Tzankova[†] & Lauren Gwin[‡]

This article examines the dynamics and likely effects of NGO efforts at private, market-driven regulation of antibiotics use in US agriculture. Such NGO efforts aim to eliminate the routine feeding of antibiotics to healthy animals for the purposes of prophylaxis and growth promotion. To that end, NGOs are pressing large food retailers, who are some of the most powerful market actors, to demand antibiotic-free meat and to refuse selling meat produced with sub-therapeutic use of antibiotics.

Curbing agricultural overuse of antibiotics is critically important for public health because overuse erodes the curative power of antibiotics by creating antibiotic resistant animal and human pathogens. The NGO turn to the market as a source of private power and authority for curbing such overuse is motivated by the ongoing success of agricultural and pharmaceutical interests in blocking public regulatory controls.

This article evaluates the potential for retailer-targeting NGO initiatives to reform the use of antibiotics in US agriculture, drawing on insights from analyzing similar market-based initiatives by NGOs seeking to reform ecologically problematic practices in the fisheries sector.

This cross-sector comparison suggests that even if market-based antibiotic reform initiatives prove limited in their private regulatory achievements, they still have considerable transformative potential. Even if the market power and private regulatory authority of targeted retailers proves insufficient to change problematic antibiotic uses,

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for example, the NGO focus on retailers can still advance the public regulatory reform of antibiotics in agriculture by turning politically influential retailers into major beneficiaries and supporters of such reform.

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I. INTRODUCTION

In 2012, Thanksgiving and Christmas brought petitioners and press conferences to Trader Joe's stores in cities across the United States.¹ At these events, the Consumers Union (CU), joined by environmental and medical Non-governmental organizations (NGOs), urged Trader Joe's to stop selling "meat on drugs," i.e., meat² produced through the prophylactic and growth promoting use of antibiotics on agricultural livestock.³

It is a common practice in the United States to give food animals⁴ sub-therapeutic doses of various antibiotics in order to accelerate weight gain and prevent illness associated with the stress and crowding of intensive animal operations.⁵ As a result, most of the meat currently produced and sold in the United States is "meat on drugs."⁶ It is well documented that such pervasive and medically unnecessary agricultural use of antibiotics presents serious public health risks.⁷ This is primarily

1. Allison Aubrey, *Campaign For Antibiotic-Free Meat Targets Trader Joe's*, NPR (Oct. 2, 2012), <http://www.npr.org/blogs/thesalt/2012/10/02/162164502/campaign-for-antibiotic-free-meat-targets-trader-joes>. *Trader Joe's Urged to Get "Joe the Pig" Off Drugs for the Holidays*, CONSUMER REPORTS (Dec. 17, 2012), <http://pressroom.consumerreports.org/pressroom/2012/12/trader-joes-urged-to-get-joe-the-pig-off-drugs-for-the-holidays.html>.

2. In this article, "meat" refers to meat and poultry.

3. Amy R. Sapkota et al, *What Do We Feed to Food-Production Animals? A Review of Animal Feed Ingredients and Their Potential Impacts on Human Health*, 115 ENVIRONMENTAL HEALTH PERSPECTIVES no. 5, at 663-670 (May 2007). L Tollefson, & M.A. Miller, *Antibiotic Use in Food Animals: Controlling the Human Health Impact*, 83 JOURNAL OF AOAC INTERNATIONAL no. 2, at 245-254 (2000). Mary D. Barton, *Antibiotic Use in Animal Feed and Its Impact on Human Health*, 13 NUTRITION RESEARCH REVIEWS no. 2, at 279-299 (2000). HC Wegener, *Antibiotics in Animal Feed and Their Role in Resistance Development*, 6 CURRENT OPINION IN MICROBIOLOGY, no. 5, at 439-445 (2003).

4. "Food animals" refers to domestic livestock raised for slaughter and processing into food. NATIONAL RESEARCH COUNCIL, THE USE OF DRUGS IN FOOD ANIMALS: BENEFITS AND RISKS (The National Academies Press ed., 1999).

5. Sapkota et al, *supra* note 3.

6. *Situation Analysis of Antibiotic Misuse in U.S. Food Animals: APUA Background Paper*, APUA (2010), http://www.tufts.edu/med/apua/news/newsletter_33_3555326098.pdf.

7. WORLD HEALTH ORGANIZATION, THE EVOLVING THREAT OF ANTIMICROBIAL RESISTANCE: OPTIONS FOR ACTION (2012). *Guidance to Industry # 209: The Judicious Use of Medically Important Drugs in Food Producing Animals*, FDA (April 13, 2012), <http://www.fda.gov/downloads/AnimalVeterinary/GuidanceComplianceEnforcement/GuidanceforIndustry/UCM216936.pdf>. Mary J. Gilchrist et al, *The potential role of concentrated animal feeding operations in infectious disease epidemics and antibiotic resistance*, 115 ENVIRONMENTAL HEALTH PERSPECTIVES, no. 2, at 313 (2007). *Prescription for Trouble: Using Antibiotics to Fatten Livestock*, UNION OF CONCERNED SCIENTISTS, http://www.ucsusa.org/food_and_agriculture/our-failing-food-system/industrial-agriculture/prescription-for-trouble.html#.VPU-8LDF_Iw (last visited Spring 2015).

because it increases antibiotic resistance in animal and human pathogens, eroding the curative power of critically important antibiotics.⁸

Significant public risks and costs are thus associated with the private benefits that pharmaceutical companies and various agribusiness actors derive from the current agricultural practices of antibiotic overuse.⁹ Yet both public policy and the public regulatory process have repeatedly failed to reform such problematic agricultural practices, thwarted by political opposition from a powerful alignment of agricultural and pharmaceutical interests.¹⁰

NGO targeting of Trader Joe's, which has continued since 2012,¹¹ is part of a broader NGO effort to use market forces to advance long-elusive agricultural antibiotics reform. Specifically, NGOs aim to mobilize and deploy the buying power and private regulatory authority of powerful market actors.¹² To that end, CU and its allies are asking the thirteen largest US grocery retailers and the largest US fast food chains—major corporate

8. See also J.L. Rinsky et al, *Livestock-Associated Methicillin And Multidrug Resistant Staphylococcus Aureus Is Present Among Industrial, Not Antibiotic-Free Livestock Operation Workers In North Carolina*, 8 PLOS ONE 8 no. 7, at e67641 (2013). Michael Z. David et al, *Increasing Burden of Methicillin-Resistant Staphylococcus Aureus Hospitalizations at US Academic Medical Centers, 2003–2008*, 33 INFECTION CONTROL no.8, at 782-789. Joseph Stromberg, *Factory Farms May Be Ground-Zero For Drug Resistant Staph Bacteria*, SMITHSONIAN.COM (July 2, 2013), <http://www.smithsonianmag.com/science-nature/factory-farms-may-be-ground-zero-for-drug-resistant-staph-bacteria-6055013/?no-ist>.

9. See PEW ANTIBIOTICS RESISTANCE PROJECT, <http://www.pewtrusts.org/en/projects/antibiotic-resistance-project> (last visited Spring 2012). Fergus Walsh, *Antibiotics resistance 'as big a risk as terrorism' - medical chief*, BBC NEWS: HEALTH (Mar. 11, 2013), <http://www.bbc.com/news/health-21737844>. *Raising resistance: Industrial production of livestock—and antibiotic-resistant bacteria that threaten human health*, NRDC (Nov. 2014), <http://www.nrdc.org/health/files/raisingresistance.pdf>.

10. Avinash Kar, *Antibiotic resistance rising, but FDA can't resist letting industry have things its way*, SWITCHBOARD: NATURAL RESOURCES DEFENSE COUNCIL STAFF BLOG (Nov. 9, 2011), http://nrdc.org/blogs/akar/antibiotic_resistance_rising_b.html. Rep. Slaughter: Voluntary Regulation on Antibiotics Inadequate To Protect Public Health; No Enforcement Mechanism or Criteria for Success, CONGRESSWOMAN LOUISE M. SLAUGHTER (Dec. 11, 2013), <http://www.louise.house.gov/press-releases/rep-slaughter-voluntary-regulation-on-antibiotics-inadequate-to-protect-public-health-no-enforcement-mechanism-or-criteria-for-success/>. Mae Wu, *Breaking Down the President's Plan on Combating Antibiotic Resistance*, SWITCHBOARD: NATURAL RESOURCES DEFENSE COUNCIL STAFF BLOG (Sept. 18, 2014), http://switchboard.nrdc.org/blog/s/mwu/today_the_president_announced.html.

11. See *Consumers Union Ad Urges Trader Joe's To Help Curb a Major Public Health Crisis*, CONSUMERREPORTS.ORG (Sept. 24, 2014), <http://pressroom.consumerreports.org/pressroom/2014/09/campaign-calls-on-grocer-to-stop-selling-meat-raised-on-antibiotics-seattle-wa-in-a-full-page-adappearing-in-the-seatt.html>.

12. *Meat on Drugs: The Overuse of Antibiotics in Food Animals, and What Supermarkets and Consumers Can Do to Stop It*, CONSUMER REPORTS (June 2012), https://www.consumerreports.org/content/dam/cro/news_articles/health/CR%20Meat%20On%20Drugs%20Report%2006-12.pdf. See also Letter from Rep. Louise M. Slaughter to Fast Food Restaurants (Feb. 16, 2012), available at http://www.louise.house.gov/uploads/fast_food_letter.pdf.

actors with significant buying power and private regulatory authority within the food industry—to force change in antibiotic use by demanding antibiotic-free meat¹³ from their upstream suppliers and phasing out the sale of any meat produced by routinely administering antibiotics to healthy animals.¹⁴

As the latest salvo in a long and multi-front battle to reduce the use of medically important antibiotics in US meat production,¹⁵ these NGO initiatives for market-based private regulation seem to offer an important new reform strategy.

A growing body of scholarship and practical experience points to the increasing power of retailers to affect upstream actors along the food supply chain, and to the ways that retailers, sometimes acting under pressure from NGOs, have used their market power as a source of private regulatory authority, demanding and getting technical, labor, or environmental changes in the practices of agricultural producers and/or other upstream suppliers.¹⁶ Both scholarship and practical experience further point to the power of a well-structured, forceful, and sustained NGO campaign—a corporate targeting campaign that combines individualized and sector-wide pressure on closely competing and

13. In this article, “antibiotic-free” refers to meat produced without sub-therapeutic uses for prophylactic and/or growth promotion reasons. The focus of the CU campaign—and thus the present analysis—is on eliminating the sub-therapeutic—both prophylactic and growth promoting uses of antibiotics. The occasional veterinary use of antibiotics for properly therapeutic purposes—i.e., to treat sick animals—is not at issue in the CU campaign, and not of concern to the present analysis.

14. CONSUMER REPORTS, *supra* note 10. See also Letter from Rep. Louise M. Slaughter to Fast Food Restaurants, *supra* note 12.

15. See First Amended Complaint for Declaratory and Injunctive Relief, Natural Resources Defense Council Inc. v. FDA, 760 F.3d 151 (2d Cir. 2014) (No. 11 Civ. 3562), available at http://docs.nrdc.org/health/files/hea_11052501a.pdf. Kurt R. Karst, *In Litigation Over Animal Feed Antibiotic Withdrawals, District Court Says FDA Needs to Move Forward*, FDA LAW BLOG (Aug. 22, 2012), http://www.fdalawblog.net/fda_law_blog_hyman_phelps/2012/08/in-litigation-over-animal-feed-antibiotic-withdrawals-district-court-says-fda-needs-to-move-forward.html. See also *Newly Disclosed Documents Show FDA Allows Livestock Antibiotics Use Despite “High Risk” to Humans*, NATURAL RESOURCES DEFENSE COUNCIL, <http://www.nrdc.org/media/2014/140127a.asp> (last visited Spring 2015).

16. Gary Gereffi et al., *The NGO-industrial complex*, FOREIGN POLICY (Nov. 17, 2009), <http://foreignpolicy.com/2009/11/17/the-ngo-industrial-complex/>. Doris Fuchs et al., *Retail power, private standards and sustainability in the global food system*, in CORPORATE POWER IN GLOBAL AGRIFOOD GOVERNANCE 29-60 (J. Clapp and D. Fuchs, eds., 2009). Susanne Freidberg, *The Ethical Complex of Corporate Food Power*, 22 ENVIRONMENT AND PLANNING no. 4, at 513-532 (2004). David Burch & Geoffrey Lawrence, *Supermarket Own Brands, New Foods, and the Reconfiguration of Agri-Food Supply Chains*, in SUPERMARKETS AND AGRI-FOOD SUPPLY CHAINS: TRANSFORMATIONS IN THE PRODUCTION AND CONSUMPTION OF FOODS 100-128 (David Burch & Geoffrey Lawrence eds., 2007). Maki Hatanaka et al., *Third-Party Certification in the Global Agrifood System*, 30 FOOD POLICY 354 (2005).

reputationally-sensitive corporate retailers—to get such retailers to heed NGO demands.¹⁷

The CU-led campaign has several predecessors, which successfully used corporate targeting and reputational pressure on branded big buyers to mobilize and deploy their market power and private authority towards improving environmental and labor practices in food and commodities production.¹⁸ Spelling further promise, the targets of the CU-led NGO campaign collectively control most of the US retail market for meat.¹⁹

At the same time, however, the success of retailer targeting as a tool for private, market-based regulation of food production is dependent on the combination of retailer incentives to heed NGO demands and retailer capacity to project market power and private authority in the ways demanded by NGOs.²⁰ The success of this type of campaign depends on the structure and balance of power along a retailer's supply chain,²¹ which affects whether targeted retailers can actually force change. In addition, retailers are unlikely to take NGO-appeasing actions when such actions carry more competitive and profit risk than the potential reputational damage caused by disappointed NGOs.²²

Here we consider all of these dynamics to examine the potential of recently launched NGO initiatives to improve antibiotic use practices in US agriculture. Our analysis looks for direct as well as indirect regulatory and practical effects of this NGO campaign. In doing so, it draws on key insights from recent NGO experience with retailer targeting as a strategy for market-driven private regulation. Most importantly, we draw on the

17. Zdravka Tzankova, *Interactions Between Public and Private Resource Governance: Key Insights From The Fisheries Case*, WM. & MARY POLICY REV. (Fall 2015). Dara O'Rourke, *Market Movements: Nongovernmental Organization Strategies to Influence Global Production and Consumption*, 9 J. OF INDUSTRIAL ECOLOGY no. 1-2, at 115-128 (2005). Debora L. Spar & Lane T. La Mure, *The Power of Activism: Assessing the Impact of NGOs on Global Business*, 45 CALIFORNIA MANAGEMENT REVIEW no. 3, at 78-101 (2003). Paul A. Argenti, *Collaborating with Activists: How Starbucks Works With NGOs*, 47 CALIFORNIA MANAGEMENT REVIEW no. 1, at 91-116 (2004).

18. Lars H. Gulbrandsen, *Creating markets for eco-labeling: are consumers insignificant?*, 13 INTERNATIONAL J. OF CONSUMER STUDIES no. 5, at 477-489 (2006). Tzankova, *supra* note 17. O'Rourke, *supra* note 17. Gereffi et al., *supra* note 16.

19. Jean Halloran, CU Director of Food Policy Initiatives, Pers. Comm., Sept. 19, 2013; *see also* 2014 Top 75: *The clickable list*, SUPERMARKET NEWS, <http://supermarketnews.com/2014-top-75-clickable-list> (last visited Spring 2015).

20. Frederick Mayer & Gary Gereffi, *Regulation and Economic Globalization: Prospects and Limits of Private Governance*, 12 BUSINESS AND POLITICS no. 3 (2010). Argenti, *supra* note 17. Spar and La Mure, *supra* note 17.

21. Mayer & Gereffi, *supra* note 20.

22. Spar and La Mure, *supra* note 17. Argenti, *supra* note 17. Stefano Ponte, *The Marine Stewardship Council (MSC) and the Making of A Market for 'Sustainable Fish'*, 12 J. OF AGRARIAN CHANGE no. 2-3, at 300-315. Tzankova, *supra* note 17.

achievements of, and insights from, a similar set of NGO initiatives that have sought to reform environmentally problematic fishery practices by leveraging the buyer power, supply chain influence, and private regulatory authority of large retailers in the food markets of the global west.²³ We do so with careful attention to the specifics of the meat supply chain, especially the organization of the industry and the power relationships among US retailers and upstream actors in the meat supply chain. As noted, we draw on key insights from market-driven fishery reform efforts to evaluate the dynamics and potential of NGO efforts for market-driven, private regulation of antibiotic use in US agriculture.

The analysis presented in this article suggests that NGO efforts to mobilize and deploy the market power and private authority of retailers and other big buyers within the meat supply chain represent a promising approach to eliminating the problematic and persistent overuse of antibiotics in US animal agriculture. It further suggests that this is the case even if NGO efforts at private, market-driven regulation fall short of reforming antibiotic overuse in US agriculture. That is, even if their immediate private regulatory objectives are unsuccessful, market-based regulation initiatives can still shift the politics of public regulation of antibiotics in ways that facilitate the long-elusive strengthening of government regulatory controls on antibiotics in agriculture.

More specifically, our analysis suggests that retailer targeting, on its own, may well fail to generate private regulatory pressure sufficient to reform agricultural antibiotic use. That is, we anticipate that even if targeted retailers comply with NGO demands for exerting supply chain pressure, which many targeted retailers are quite likely to do, they may be unable to trigger antibiotic use reform by acting through the market alone. Still, we show how NGO-cornered retailers can nonetheless become significant contributors to agricultural antibiotics reform if they adapt their responses to NGO pressure by combining the private regulatory authority they have as big buyers with the political and public policy leverage they have as large corporate actors. Creating a public expectation for retailer exercise of market power and private regulatory authority on the antibiotics issue may thus prove a critical component of a broader, multi-front antibiotics reform strategy. Putting branded and closely competing retailers in the spotlight, creating a risk of reputational and brand damage for each of the NGO-targeted retailers, can motivate these retailers to use all their resources—private regulatory authority and public regulation

23. Tzankova, *supra* note 17.

influence alike—to advance the NGO reform agenda and avoid reputational damage.

The next section, Part II, introduces the longstanding problem of antibiotic overuse in US agriculture and highlights the challenges of addressing this problem through the public regulatory process. This background is important to underscore why consumer and health advocates have more recently turned to private, market-driven regulation. Part III discusses why retailer targeting, particularly a sector-wide targeting of all large retailers within a relevant national retail market, is a promising strategy for private, market-driven regulation. Part IV turns to retailer-focused NGO initiatives for market-driven regulation of fishing and fishery practices. The experience from these initiatives offers an important set of empirically-grounded insights on the potential and limits of retailer targeting as a regulatory and reform strategy. Part V applies these insights to the antibiotics case: it considers if and how retailer cooperation with NGO demands to flex market power and supply chain muscle can bring the desired reduction in antibiotic use in the US. Part VI concludes by reflecting on both the direct and indirect potential of retailer targeting, as a form of market-driven regulation, to reduce agricultural antibiotic use in the US.

II. ANTIBIOTIC USE IN US AGRICULTURE: THE RATIONALE FOR PRIVATE, MARKET-BASED REGULATION

The US Centers for Disease Control and Prevention (CDC) and its international counterparts identify antibiotic resistance as one of the most serious public health threats.²⁴ Over two million Americans each year become seriously infected with antibiotic resistant bacteria and twenty-three thousand die from the infections. Many more die from infection-related complications of other health conditions.²⁵ In its latest report on the devastation of antibiotic resistance and the urgent need for solutions, CDC unambiguously points to antibiotic overuse and misuse as the cause of this problem and holds up the judicious and sparing use of antibiotics as the most promising solution to the unacceptably high human toll of overuse. In CDC's own words:

Up to half of antibiotic use in humans and much of antibiotic use in animals is unnecessary and inappropriate and makes everyone less

24. *Antibiotic Resistance Threats in the United States, 2013*, CDC 11-13 (2013), <http://www.cdc.gov/drugresistance/pdf/ar-threats-2013-508.pdf>. *Antimicrobial Resistance At The G8 Summit*, GLOBAL JOURNAL, <http://theglobaljournal.net/photo/view/1789/> (last visited Spring 2015).

25. CDC, *supra* note 24.

safe. Stopping even some of the inappropriate and unnecessary use of antibiotics in people and animals would help greatly in slowing down the spread of resistant bacteria.²⁶

A. *The use of antibiotics in US animal agriculture*

The CDC is also emphatic that given the human health risks, antibiotics should only be used in livestock production to treat infectious disease and should only be used under strict veterinary oversight.²⁷ Yet oversight of antibiotic use in US agriculture is critically lacking.²⁸ Even the amount of antibiotics used in animal agriculture in the United States is disputed because there are no mandatory reporting requirements for much of the problematic sub-therapeutic use.²⁹ The Natural Resources Defense Council (NRDC) calculates that 80 percent of all antibiotics sold in the US are used in food animals,³⁰ with only a small portion of that amount used for the treatment of sick animals. The meat industry, through its trade associations and veterinary spokespeople, disputes these figures.³¹ In 2009, the U.S. Food and Drug Administration (FDA) reported that the industry used twenty-nine million pounds of antibiotics in 2009.³² Much of this use is not to treat illness, (therapeutic use) but to prevent illness and speed growth (sub-therapeutic use); the latter includes classes of

26. CDC, *supra* note 24, at 31.

27. *See Antibiotic Resistance Threats Report and Foodborne Germs*, CDC, <http://www.cdc.gov/narms/resources/threats.html> (last visited Spring 2015).

28. *Playing Chicken with Antibiotics*, NATURAL RESOURCES DEFENSE COUNCIL, <http://www.nrdc.org/food/saving-antibiotics/antibiotic-feed-fda-documents.asp> (last revised Jan. 27, 2014).

29. *See* Mary McKenna, *NEWS BREAK: FDA estimates us livestock get 29 million pounds of antibiotics per year*, WIRED (Dec. 9, 2010), <http://www.wired.com/2010/12/news-break-fda-estimate-us-livestock-get-29-million-pounds-of-antibiotics-per-year/>. Tom Philpott, *The FDA finally reveals how many antibiotics factory farms use — and it's a shitload*, GRIST (Dec. 11, 2010), <http://grist.org/article/food-2010-12-10-fda-reveals-amount-of-antibiotic-use-on-factory-farms/>. *Dr. Apley comments on the 80 percent number*, NATIONAL CATTLEMEN'S BEEF ASSOCIATION, <http://www.beefusa.org/videos.aspx?videoid=XKRO7QpPdLk> (last visited Spring 2015). Saptoka et al, *supra* note 2.

30. NATURAL RESOURCES DEFENSE COUNCIL, *supra* note 28. Lydia Zuraw, *CDC Acknowledges Role of Farms in Antibiotic Resistance*, FOOD SAFETY NEWS (Sept. 17, 2013), http://www.foodsafetynews.com/2013/09/drug-resistant-infections/#.VO4oFLDF_Iw. *See also Summary Report on Antimicrobials Sold or Distributed for Use in Food-Producing Animals*, FDA (2011), available at <http://www.fda.gov/downloads/ForIndustry/UserFees/AnimalDrugUserFeeActADUFA/UCM338170.pdf>.

31. *Antibiotic Use in Livestock Production: Ensuring Meat Safety*, AMERICAN MEAT INSTITUTE, <https://www.meatinstitute.org/index.php?ht=a/GetDocumentAction/i/56994> (last visited Spring 2015). *See also The Preservation of Antibiotics for Medical Treatment Act*, CONGRESSWOMAN LOUISE M. SLAUGHTER, <https://www.govtrack.us/congress/bills/113/hr1150/text> (last visited Spring 2015).

32. Philpott, *supra* note 29.

antibiotics critical for human medicine, such as tetracyclines, penicillins, and sulphonamides. Prophylactic and growth promoting uses of antibiotics often overlap, so it is difficult to distinguish between the two. The industry has, therefore, tried to reframe its antibiotic use as primarily prophylactic (i.e., helping animals stay healthy), without actually changing its antibiotics use practices.³³

Sub-therapeutic doses of antibiotics have been routine in US animal agriculture since the 1960s. Much of current US animal production is dependent on antibiotics, especially pork and beef production.³⁴ Discovered accidentally in the late 1940s, the growth-promoting effect of low-dose antibiotics routinely administered in animal feed has been widely utilized to improve the productivity and economic returns of animal farming.³⁵ The popularity of sub-therapeutic antibiotic use in agriculture is further increased by the fact that such low dose use has proven beneficial in controlling a number of chronic diseases typical for intensively-reared animals living under the stress of confinement conditions.³⁶ Intensive agriculture operations across Western countries use antibiotics for animal growth promotion, but the range of antibiotics registered for growth-promoting use is widest in the United States.³⁷

B. The problem with agricultural overuse of antibiotics

The biggest concern raised by the agricultural overuse of antibiotics is the fact that such overuse creates antibiotic resistance in animal and human pathogens.³⁸ Rapidly evolving animal pathogens continuously exposed to antibiotics are quick to develop antibiotic resistance, which is then transmitted to human pathogens, making a number of human

33. Interview: Michael Pollan, FRONTLINE: MODERN MEAT, <http://www.pbs.org/wgbh/pages/frontline/shows/meat/interviews/pollan.html> (last visited Spring 2015). *The FDA is cracking down on antibiotics on farms. Here's you should know*, WASH. POST, Dec. 14, 2013, <http://www.washingtonpost.com/blogs/wonkblog/wp/2013/12/14/the-fda-is-cracking-down-on-antibiotics-at-farms-heres-what-you-should-know/>.

34. "What's in the beef?" *Survey Results*, CONGRESSWOMAN LOUISE M. SLAUGHTER (July 2, 2012), <http://www.louise.house.gov/blog/content/survey-results-antibiotics-in-the-food-you-buy/>. *As July 4 Approaches, Slaughter Reveals "What's in the Beef"*, FIX FOOD (July 3, 2013), <http://www.fixfood.org/news/181/as-july-4-approaches-slaughter-reveals-whats-in-the-beef/>. *Putting meat on the table: Industrial farm animal production in America*, THE PEW COMMISSION ON INDUSTRIAL FARM ANIMAL PRODUCTION (2008), available at http://www.ncifap.org/_images/PCIFAPFin.pdf.

35. Barton, *supra* note 3. R. H. Gustafson, & R. E. Bowen, *Antibiotic use in animal agriculture* 85 JOURNAL OF APPLIED MICROBIOLOGY no. 5, at 531-541 (1997).

36. Barton, *supra* note 3. Gustafson & Bowen, *supra* note 35.

37. Barton, *supra* note 3.

38. CDC, *supra* note 24. WORLD HEALTH ORGANIZATION, *supra* note 7. UNION OF CONCERNED SCIENTISTS, *supra* note 7; Barton, *supra* note 3.

infections traditionally treated through antibiotics difficult to cure and control.

The continued rise in overuse-driven antibiotic resistance has become one of the top public health concerns internationally. Concern over the rise and spread of antibiotic resistance is heightened by the fact that development of new and more powerful classes of antibiotics is a slow and difficult process, so the rise of bacterial resistance to the currently available classes of antibiotics has outpaced our ability to develop new ones. The problems presented by growth in bacterial drug resistance and decreasing antibiotic effectiveness are significant enough to have taken center-stage at a recent G8 summit. A number of national health and science ministers used the 2013 G8 summit to raise awareness of the antibiotic resistance issue and make an urgent and very public call for rapid and rigorous policy and regulatory action to keep antibiotics working by ensuring their responsible use.³⁹

The US agriculture industry, however, continues to deny the public health hazards associated with its current practice of widespread sub-therapeutic use of antibiotics on livestock.⁴⁰ Instead of heeding the increasingly urgent calls for responsible and sparing use of antibiotics, the US agriculture industry has proceeded to defend its practices as necessary and therapeutic, putting the blame for antibiotic resistance on improper and excessive human use.⁴¹

39. Maryn McKenna, *G8 meeting begins: ag antibiotics on the agenda?*, WIRED (June 17, 2013), <http://www.wired.com/2013/06/g8-ag-abx/>. UK raises alarm on deadly rise of superbugs, THE GUARDIAN (Jun. 11, 2013), <http://www.theguardian.com/society/2013/jun/11/uk-urge-global-clampdown-antibiotics-g8>. Michael Fitzhugh, *G8 Science Ministers Spotlight Antibiotics Resistance*, THE BURRILL REPORT (June 13, 2013), http://www.burrillreport.com/article-g8_science_ministers_spotlight_antibiotics_resistance.html.

40. *Use Science In Regulating Antibiotics, Agriculture Coalition Says*, AMERICAN FARM BUREAU FEDERATION (June 13, 2012), <http://www.fb.org/index.php?action=newsroom.news&year=2012&file=nr0613.html>. See also Beth Mole, *MRSA: Farming up trouble: Microbiologists are trying to work out whether use of antibiotics on farms is fuelling the human epidemic of drug-resistant bacteria*, 499 NATURE 7459 (July 24, 2013), available at <http://www.nature.com/news/mrsa-farming-up-trouble-1.13427>. Dr. Apley answers the question, *is animal health the sole contributor to antibiotic resistance?*, NATIONAL CATTLEMEN'S BEEF ASSOCIATION, <http://www.beefusa.org/videos.aspx?videoid=cYNebNs6MEg> (last visited Spring 2015).

41. Dr. Richard Raymond, *Antibiotics and Animals Raised for Food: Lies, Damn Lies and Statistics*, FOOD SAFETY NEWS (Jan. 7, 2013), http://www.foodsafetynews.com/2013/01/antibiotics-and-animals-raised-for-food-lies-damn-lies-and-statistics/#.VPnkZLDF_Iw. See also Barton, *supra* note 3, at 290.

C. Public policy and regulatory attempts to control agricultural overuse of antibiotics

Public health concerns over the effects of sub-therapeutic animal uses of antibiotics first emerged in the U.S. in the 1970s.⁴² Prompted by these concerns and the underlying data, the FDA itself proposed to restrict agricultural uses of human antibiotics. The FDA's early and prescient regulatory effort was ultimately hindered by Congress: yielding to pressure from the agricultural and pharmaceutical industries, Congress declared that the FDA needed more data to justify its proposed regulatory restrictions on agricultural use of antibiotics.⁴³

In spite of mounting scientific evidence and growing international concern about the public health hazards caused by antibiotic overuse,⁴⁴ the United States has so far failed to curb such overuse through public policy and regulation.⁴⁵ Struggling against the chilling effect of industry resistance through lobbying and litigation, the FDA has made several significant attempts to control sub-therapeutic agricultural use of antibiotics. None has produced binding and comprehensive restrictions on the sub-therapeutic agricultural use of antibiotics, including antibiotics important in human medicine.⁴⁶ Facing ongoing industry opposition to

42. Federal Register Volume 76, Number 246 (Thursday, December 22, 2011); Maryn McKenna, *FDA Won't Act Against Ag Antibiotic Use*, WIRED (Dec. 23, 2011), <http://www.wired.com/2011/12/fda-ag-antibiotics/>. See also First Amended Complaint for Declaratory and Injunctive Relief, Natural Resources Defense Council Inc. v. FDA, 760 F.3d 151 (2d Cir. 2014) (No. 11 Civ. 3562), available at http://docs.nrdc.org/health/files/hea_11052501a.pdf.

43. *Guidance to Industry # 209*, *supra* note 7. Federal Register Volume 76, Number 246 (Thursday, Dec. 22, 2011).

44. *Guidance to Industry # 209*, *supra* note 7.

45. Laura Koontz, Staffer for Representative Louise Slaughter, Personal communication, September 24, 2013; See also Brian Krans, *Politics Stall Antibiotics Ban in Congress*, HEALTHLINE (2013), <http://www.healthline.com/health/antibiotics/politics-pork-and-poultry-why-legislation-has-not-passed>. Brent F. Kim et al., *Industrial food animal production in America: examining the impact of the Pew Commission's priority recommendations*, JOHN HOPKINS: CENTER FOR A LIVABLE FUTURE 7-9 (2013), available at http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-a-livable-future/_pdf/research/clf_reports/CLF-PEW-for%20Web.pdf.

46. Brent F. Kim et al., *supra* note 45, at 8-9. See also *Guidance to Industry # 209*, *supra* note 7. See also *Phasing Out Certain Antibiotic Use in Farm Animals*, FDA (Dec. 11, 2013), <http://www.fda.gov/forconsumers/consumerupdates/ucm378100.htm>. Sabrina Tavernise, *F.D.A. Restricts Antibiotics Use for Livestock*, N.Y. TIMES, Dec. 11, 2013, http://www.nytimes.com/2013/12/12/health/fda-to-phase-out-use-of-some-antibiotics-in-animals-raised-for-meat.html?pagewanted=all&_r=0. See also Kurt R. Karst, *Second Circuit Overturns Win for Nonprofit Groups in Litigation with FDA Over Subtherapeutic Uses of Penicillin and Tetracyclines in Animal Feed*, FDA LAW BLOG (Jul. 28, 2014), http://www.fdalawblog.net/fda_law_blog_hyman_phelps/2014/07/second-circuit-overturns-win-for-nonprofit-groups-in-litigation-with-fda-over-subtherapeutic-uses-of.html.

binding and comprehensive agricultural antibiotic regulation,⁴⁷ as well as growing NGO pressure in favor of such regulation,⁴⁸ the FDA most recently attempted to control the industry by issuing voluntary industry guidance. In this voluntary guidance, the FDA urged the pharmaceutical industry to refrain from marketing certain classes of antibiotics, particularly those important in human medicine, to the agriculture industry; it also emphasized the importance of self-restraint by agricultural producers when using antibiotics on livestock.⁴⁹ Unfortunately, this is the best that the politically beleaguered and litigation-targeted FDA has been able to manage. Perhaps unsurprising given the history and regulatory politics of this issue, the voluntary guidance approach to regulating agricultural use of antibiotics has failed to produce any appreciable change in problematic patterns of sub-therapeutic use.

An apparently promising litigation-based approach has so far failed as well: in 2012, the NRDC won a lawsuit against the FDA, getting a federal court to compel the agency to begin withdrawing approvals for all sub-therapeutic uses of penicillin and tetracyclines in animal feed. The federal court decision was reversed on appeal by the Second Circuit a mere two years later, however.⁵⁰

Finally, legislative efforts have fared equally poorly. Bills attempting to regulate the sub-therapeutic animal use of antibiotic classes that are important in human medicine—bills such as the Preservation of

47. Brandon Conrads, *Farm and Pharmaceutical Lobbies Push Back Against Antibiotics Legislation*, OPENSECRETS.ORG: CENTER FOR RESPONSIVE POLITICS (Oct. 25, 2013), <http://www.opensecrets.org/news/2013/10/farm-and-pharmaceutical-lobbies-pus/>. Mole, *supra* note 40. Krans, *supra* note 45.

48. See Letter from FDA to Citizen Petition, available at <http://cspinetorg/new/pdf/denial-of-2005-petition.pdf>. Letter from EPA to Ann Alexander, Esq., available at <http://switchboard.nrdc.org/blogs/aalexander/Shapiro%20to%20NRDC%20re%20Petition%202012-14-12.pdf>. See *Natural Resources Defense Council Inc. v. United States Food and Drug Administration*, 872 F.Supp.2d 318 (S.D.N.Y. 2014). First Amended Complaint for Declaratory and Injunctive Relief, *Natural Resources Defense Council Inc. v. FDA*, 760 F.3d 151 (2d Cir. 2014) (No. 11 Civ. 3562), available at http://docs.nrdc.org/health/files/hea_11052501a.pdf.

49. *Guidance to Industry # 209*, *supra* note 7. *Guidance to Industry # 213, New Animal Drugs and New Animal Drug Combination Products Administered in or on Medicated Feed or Drinking Water of Food Producing Animals: Recommendations for Drug Sponsors for Voluntarily Aligning Product Use Conditions with GFI #209*, FDA (Dec. 2013). See also *Phasing Out Certain Antibiotic Use in Farm Animals*, FDA (Dec. 11, 2013), <http://www.fda.gov/forconsumers/consumerupdates/ucm378100.htm#voluntary>. *FDA's Strategy on Antimicrobial Resistance – Questions and Answers*, FDA, <http://www.fda.gov/AnimalVeterinary/GuidanceComplianceEnforcement/GuidanceforIndustry/ucm216939.htm> (last updated Mar. 28, 2014).

50. Karst, *supra* note 46.

Antibiotics for Medical Treatment Act (PAMTA)—have been repeatedly introduced in Congress and have repeatedly failed.⁵¹

D. The turn to private, market-based regulation of antibiotics use in agriculture

Government and civil society efforts for public policy and regulatory reform of agricultural antibiotic use are still very much underway, the currently overwhelming political odds against them notwithstanding.⁵² In the face of such strong political resistance, reform advocates, including the most vehement and longest-standing Congressional champions of tightening public regulation, are also beginning to look to the market, supply chains, and the private regulatory authority of powerful large buyers within these supply chains for some private regulatory solutions to the public health problems presented by excessive agricultural use of medically important antibiotics. Quite notably, Representative Louise Slaughter, the leader of the ongoing legislative efforts to reform agricultural use of antibiotics, has herself recently focused her energies on working through the market—on mobilizing the buying power and private regulatory authority of large market actors within the meat supply chain, and on getting these actors to use their power and authority to stop the sub-therapeutic use of antibiotics in US livestock production. In 2012, Representative Slaughter took the unusual step of sending a highly publicized open letter to food retailers and fast food companies, demanding that these companies state whether and how they are using their significant market power to stop the dangerous overuse of antibiotics by the livestock producers who supply their meat.⁵³ More recently,

51. Laura Koontz, Rep. Slaughter staffer, Personal Communication, Sept. 24, 2013; *See, e.g.*, H.R. 1549, 111th Cong. (2009), available at <https://www.govtrack.us/congress/bills/111/hr1.549>. S. 619, 111th Cong. (2009), available at <https://www.govtrack.us/congress/bills/111/s.619>. H.R. 1150, 113th Cong. (2013), available at <https://www.govtrack.us/congress/bills/113/hr1150/text>. *Feinstein: Preserve Effectiveness of Medically Important Antibiotics*, DIANNE FEINSTEIN: UNITED STATES SENATOR FOR CALIFORNIA (Jul. 16, 2011), <http://www.feinstein.senate.gov/public/index.cfm/press-releases?ID=fd1d4254-b06f-4260-b7b2-352768237406>. Linda Larsen, *Legislators Reintroduce PARA, FOOD POISONING BULLETIN* (Mar. 3, 2015), <http://foodpoisoningbulletin.com/2015/legislators-reintroduce-para>.

52. First Amended Complaint for Declaratory and Injunctive Relief, *Natural Resources Defense Council Inc. v. FDA*, 760 F.3d 151 (2d Cir. 2014) (No. 11 Civ. 3562), available at http://docs.nrdc.org/health/files/hea_11052501a.pdf. *See also* *Natural Resources Defense Council Inc. v. United States Food and Drug Administration*; *Guidance to Industry # 209*, *supra* note 7. *Guidance to Industry # 213*, *supra* note 49. Larsen, *supra* note 51.

53. Letter from Rep. Louise M. Slaughter to Fast Food Restaurants, *supra* note 12.

Representative Slaughter has begun approaching individual companies directly, publicly asking McDonalds to switch to antibiotic-free beef.⁵⁴

In sum, having tried all the available public policy and regulatory venues, civil society and even government officials are turning to the market as a logical next arena for pursuing regulatory and management reform.

III. THE PROMISE AND POTENTIAL OF RETAILER TARGETING AS AN NGO STRATEGY FOR MARKET-BASED ANTIBIOTICS REGULATION

Market concentration and technology-enabled consolidation of retailer control over the product chain have made large grocery retailers one of the most powerful actors in the global food system.⁵⁵

A. *The market power and private authority of large retailers*

In the highly concentrated US grocery retail market, the four largest retailers (WalMart, Kroger, Costco, with Safeway and Target continuously vying for 4th place) control close to 50 percent of the national market. The thirteen largest retailers targeted by the Consumers Union “Meat without Drugs” campaign control more than 80 percent of the national grocery market.⁵⁶ Grocery retail market concentration can reach 80 percent on the regional level, meaning that the top four retailers in a number of US regions get up to 80 percent of all the consumer grocery dollars spent in that region.⁵⁷ This type of market concentration gives large

54. Chris Morran, *Rep. Slaughter Asks McDonald's To Switch to Antibiotic-Free Beef*, CONSUMERIST (May 19, 2014), <http://consumerist.com/2014/05/19/rep-slaughter-asks-mcdonalds-to-switch-to-antibiotic-free-beef/>. Press Release, Congresswoman Slaughter Says McDonald's Announcement on Antibiotics is "Encouraging," Shows Companies Respond When Public Demands Change (Mar. 4, 2015), available at <http://www.louise.house.gov/press-releases/congresswoman-slaughter-says-mcdonalds-announcement-on-antibiotics-is-encouraging-shows-companies-respond-when-public-demands-change/>; Maryn McKenna, *Your McNuggets: Soon without a side of antibiotics*, WIRED (Mar. 4, 2015), <http://www.wired.com/2015/03/mcdonalds-abx/>.

55. Burch & Lawrence, *supra* note 16. Fuchs et al., *supra* note 16. ANDREW SETH & GEOFFREY RANDALL, *THE GROCERS: THE RISE AND RISE OF THE SUPERMARKET CHAINS* (London, Kogan Page 1999); Steve W. Martinez, *The U.S. Food Marketing System: Recent Developments, 1997-2006*, U.S. DEPARTMENT OF AGRICULTURE, ECONOMIC RESEARCH SERVICE 42 (2007). Hatanaka et al., *supra* note 16.

56. Richard Volpe, ERS, pers. comm., April 16, 2013. See EUROMONITOR INTERNATIONAL, *GROCERY RETAILERS IN THE US 14* (April 2013). See also *2014 Top 75: The clickable list*, *supra* note 19. See also Barbara Farfan, *Largest Canada, U.S. Grocery Retailers - Walmart, Kroger, Costco, Target, Loblaw*, ABOUT MONEY, <http://retailindustry.about.com/od/worldslargestretailers/a/Top-US-Canada-Grocery-Retailers-Walmart-Kroger-Costco-Target-Loblaw-2013-Largest.htm> (last visited Spring 2015).

57. Timothy J. Richards & Geoffrey Pofahl, *Pricing Power by Supermarket Retailers: A Ghost in the Machine?*, CHOICES: THE MAGAZINE OF FOOD, FARM, AND RESOURCE ISSUES, available at <http://www.choicesmagazine.org/magazine/print.php?article=126> (last visited Spring 2015). Jason

retailers considerable, oligopsonistic power over upstream actors in the agri-food supply chain, including agricultural food producers and food processors, because both producers and processors are dependent on retailers to get products to market.⁵⁸

A new and increasingly apparent dimension of this oligopsonistic power is the capacity of such retailers to set and enforce product or process requirements, rules, and standards on upstream actors within their supply chain.⁵⁹ Prompted by the desire to enhance consumer confidence in the aftermath of numerous food crises experienced in recent decades, many retailers have developed private rules and standards focused on food safety and quality.⁶⁰ In addition to these product and process rules and standards, retailers or supermarket organizations have also generated some of their own quality assurance and safety schemes.⁶¹ In sum, retailers are using their buying power and associated private authority to require that suppliers and producers comply with not only safety and quality assurance standards, but also labor and environmental standards and practices.⁶²

Reform-minded NGOs who seek to improve the social and environmental performance of agriculture and the food industry more broadly are understandably interested in mobilizing the newly asserted regulatory authority of large retailers and using it to change ecologically and/or socially problematic practices in agriculture and food production.⁶³

Konefal et al., *Supermarkets and supply chains in North America*, in SUPERMARKETS AND AGRI-FOOD SUPPLY CHAINS: TRANSFORMATIONS IN THE PRODUCTION AND CONSUMPTION OF FOODS, 268-290 (D. Burch & G. Lawrence, eds., 2007). Hatanaka et al. *supra* note 16; Richard Volpe, ERS, pers. comm., April 16, 2013.

58. Burch & Lawrence, *supra* note 16. Fuchs et al., *supra* note 16. Martinez, *supra* note 55. Hatanaka et al., *supra* note 16. Lawrence Busch & Carmen Bain, *New! Improved? The transformation of the global agrifood system*, 69 RURAL SOCIOLOGY no. 3, at 321-346 (Sept. 2004).

59. Fuchs et al., *supra* note 16. Hatanaka et al., *supra* note 16.

60. Spencer Henson & Thomas Reardon, *Private agri-food standards: Implications for food policy and the agri-food system*, 30 FOOD POLICY no. 3, at 241-253 (2005). Busch & Bain, *supra* note 58.

61. A. Hughes, *Responsible retailers? Ethical trade and the strategic re-regulation of crosscontinental food supply chains*, in CROSS-CONTINENTAL AGRI-FOOD CHAINS: STRUCTURES, ACTORS AND DYNAMICS IN THE GLOBAL FOOD SYSTEM (N. Fold and B. Pritchard, eds. 2005). Susanne Freidberg, *Supermarkets and imperial knowledge*, 14 CULTURAL GEOGRAPHIES no. 3, at 321-342; Fuchs et al., *supra* note 16.

62. Fuchs et al., *supra* note 16. Hatanaka et al., *supra* note 16. Linda Fulponi, *Private voluntary standards in the food system: The perspective of major food retailers in OECD countries*, 31 FOOD POLICY no. 1, at 1-13 (2006). Benoit Daviron, & Isabelle Vagneron, *From Commoditisation to De-commoditisation... and Back Again: Discussing the Role of Sustainability Standards for Agricultural Products*, 29 DEVELOPMENT POLICY REVIEW no. 1, at 91-113 (2011).

63. Fuchs et al., *supra* note 16. Hatanaka et al., *supra* note 16.

B. Retailer vulnerability to NGO pressure

What ultimately gives reform-minded NGOs the ability to muster retailer market power and private regulatory authority in the service of social and environmental objectives is the fact that large retailers are quite vulnerable to NGO pressure. Using their position of expertise and moral authority, NGOs are in a position to damage a retailer's brand and undermine a retailer's competitive position by publicizing their sourcing practices, and arguing that any sourcing from environmentally destructive or labor-abusive agricultural and food producers makes retailers complicit in environmental destruction and labor exploitation.⁶⁴ It is the same market concentration that gives retailers their market power that makes them vulnerable. Most large retailers operating in the highly competitive environment of the concentrated grocery retail market can ill afford the competitive and financial risks associated with NGO-inflicted reputational damage.⁶⁵

This is because market concentration and the oligopolistic structure of the grocery retail market has not made the business environment any less competitive.⁶⁶ Grocery retail is a mature market whose growth is generally tied to growth in population. Given their thin operating margins, large retailers need a large number of customers to remain profitable,⁶⁷ meaning that they are constantly competing for the same finite and fairly static pool of grocery buyers and purchases. Brand development and differentiation through quality, variety, and convenience are the new core elements of staying competitive.⁶⁸ Large grocery retailers are now brands in their own right, and reputation in the realm of social and environmental responsibility is an important component of differentiation and brand building.⁶⁹ This is precisely the reputation—and the part of the retailer's

64. See, e.g., CASSON TRENOR & JAMES MITCHELL, GREENPEACE: CARTING AWAY THE OCEANS VII (May 2013) [*hereinafter* GREENPEACE VII]. See also Gereffi et al. 2001 *supra* note 16; O'Rourke, *supra* note 17; Gulbrandsen, *supra* note 18;

65. Spar & La Mure, *supra* note 17; O'Rourke, *supra* note 17. Argenti, *supra* note 17; see also *The Brand Vulnerability Index*, BURSON MARSTELLAR & SIG WATCH, available at http://burson-marsteller.eu/wp-content/uploads/2010/09/100916_BROCHURE_BVI_WEB.pdf (last visited Spring 2015).

66. Busch & Bain, *supra* note 58, at 329. Hatanaka et al., *supra* note 16.

67. Daniel Hanner et al., *Dynamics in a Mature Industry: Entry, Exit, and Growth of Big-Box Retailers* 13 (FTC Bureau of Economics Working Paper No. 308, 2011), available at <https://www.ftc.gov/sites/default/files/documents/reports/dynamics-mature-industry-entry-exit-and-growth-big-box-grocery-retailers/wp308.pdf>. Martinez, *supra* note 55. EUROMONITOR INTERNATIONAL, *supra* note 56.

68. Busch & Bain, *supra* note 58.

69. Thomas Miner, *Sustainable Brands Earth Day Round-up 2011: Safeway, Whole Foods & Mattel*, SUSTAINABLE BRANDS (Apr. 22, 2011), http://www.sustainablebrands.com/news_a

brand image—that NGOs are in a position to damage when a retailer refuses to use its market power in the public interest, or otherwise chooses to defy NGO demands.⁷⁰

Research has demonstrated that at least two-thirds of consumers in the global West form impressions of a company based on its ethics, environmental impact, and social responsibility,⁷¹ and that damage to one dimension of the brand has the potential to damage a company's overall reputation. NGO-targeted retailers thus have every reason to avoid the reputational risks of defying NGO demands and expectations. Particularly because the NGOs that target retailers as part of a broader strategy for market-driven regulation are highly skilled at translating their campaign goals and expectations into a much broader set of consumer, citizen, and societal expectations regarding retailer behavior and use of market power and supply chain leverage.

In sum, the same consolidation of the grocery retail market that has given retailers their market power has also made them vulnerable to the reputational consequences of negative interactions with NGOs. Perhaps paradoxically, the more retailers invest in building a green reputation, the more vulnerable they become to future NGO attacks threatening such reputation.⁷² A number of retailers have invested in building a green reputation, and have already worked to bolster and maintain such reputations by meeting various NGO demands.⁷³ Such retailers should be more likely to heed new NGO demands to make an earnest effort to use their market power and private authority in ways that advance NGO environmental and social reform objectives.

Indeed, corporate targeting in general, and the targeting of large, branded retailers in particular, has been one of the most important strategic innovations by NGOs and civil society actors engaged in advocating for the public interest. The value and anticipated transformative potential of this innovation was captured by a Greenpeace activist, who likened it to

nd_views/articles/sustainable-brands-earth-day-round-2011-safeway-whole-foods-mattel. Joao Fontes et al., *#SocialFootprint: How Understanding Your Products' Social Impacts Will Create Value for Your Business*, SUSTAINABLE BRANDS (Oct. 2, 2014), http://www.sustainablebrands.com/digital_learning/slideshow/new_metrics/socialfootprint_how_understanding_your_products_social_impact. Bart King, *Publix, Google, UPS Have Best CSR Reputations*, SUSTAINABLE BRANDS (Oct. 7, 2011), http://www.sustainablebrands.com/news_and_views/articles/publix-google-ups-have-best-csr-reputations.

70. Tzankova, *supra* note 17.

71. James Allen & James Root, *The New Brand Tax*, WALL ST. J., Sept. 7, 2004, <http://online.wsj.com/article/0,,SB109450902900410603,00.html>.

72. Busch & Bain, *supra* note 58. Hatanaka et al., *supra* note 16. O'Rourke, *supra* note 17.

73. *E.g.*, sustainable seafood sourcing, cruelty-free animal products sourcing, etc.

“discovering gunpowder for environmentalists.”⁷⁴ Recognizing the difficulty of sending market and regulatory signals by changing the buying habits of large numbers of individual consumers, many NGOs have shifted their emphasis to changing the sourcing practices of large and market-powerful food buyers, buyers such as large grocery retailers who have the authority and capacity to dictate production practices and conditions to their suppliers and producers. Consumers are now informed citizen-consumers who hold retailers responsible for their actions, especially their use of market power to fix social and environmental problems in food production.

The brand vulnerability and reputational sensitivity of retailers are what ultimately give NGOs the leverage to elicit retailer cooperation.⁷⁵ Acting from a position of social legitimacy and moral authority, NGOs have managed to position themselves as a credible threat to reputationally sensitive companies who defy their demands.⁷⁶ The proliferation of tools for corporate reputation management in the face of NGO threats, such as the Brand Vulnerability Index, is but one prominent indicator of the strength of NGO leverage. It is also an indicator of the promise of corporate targeting as a market-based strategy that uses supply chains to mobilize private regulatory authority in the service of social and environmental reform.⁷⁷

C. The promise of retailer targeting as a strategy for market-driven antibiotics reform

Several elements of the “Meat without Drugs” campaign suggest that it has particularly high transformative promise. First, its timing is quite auspicious: by the time retailers faced CU demands to phase out meat raised with sub-therapeutic antibiotics, many of them had already invested in building a “green” reputation.⁷⁸ They did so to differentiate themselves and be more competitive,⁷⁹ yet their success at building a green reputation

74. Gereffi et al., *supra* note 16. Allen & Root, *supra* note 71.

75. O’Rourke, *supra* note 17. Gulbrandsen, *supra* note 18. Michael Sutton & Laura Wimpee, *Towards Sustainable Seafood: The Evolution of a Conservation Movement*, in SEAFOOD ECOLABELING: PRINCIPLES AND PRACTICE 403-15, (Trevor Ward & Bruce Phillips eds., 2008). Maki Hatanaka et al., *supra* note 16. Tzankova, *supra* note 17.

76. BURSON MARSTELLAR & SIG WATCH, *supra* note 65. See also O’Rourke, *supra* note 17. Spar & La Mure, *supra* note 17. Jeff Frooman & AJ Murrell, *Stakeholder influence strategies: The roles of structural and demographic determinants*, 44 BUSINESS & SOCIETY no. 1, at 3-3 (2005).

77. Burson Marsteller & SIG Watch, *supra* note 65.

78. Note that we consider corporate “green-ness” broadly, as defined in Andrea Woolverton & Carolyn Dimitri, *Green marketing: Are environmental and social objectives compatible with profit maximization*, 25 RENEWABLE AGRICULTURE AND FOOD SYSTEMS no. 2, at 90-91 (June 2010).

79. Miner, *supra* note 69. Fontes et al., *supra* note 69. King, *supra* note 69.

is what makes them more vulnerable to reputational damage on “green” issues, and what ultimately makes them more susceptible to NGO pressure on the issue of antibiotics in meat production. If a “green” retailer fails to engage and work with NGOs on a “green” issue like antibiotics, NGOs like CU and its partners are perfectly positioned to publicize the contradiction between the retailer’s green image and its deficient action on the antibiotics issue. That is, NGOs are perfectly positioned to jeopardize a carefully built corporate reputation by exposing hypocrisy and hinting at “greenwash.”⁸⁰

There is some evidence that Trader Joe’s has already experienced some of this reputational pain. It was the first retail target singled out for broad publicity by the CU campaign due to its large share of own-brand products, which is presumed to give Trader Joe’s a lot of control over the practices of suppliers making these products.⁸¹ Trader Joe’s has seen its loyal customers surprised and disappointed by the revelation that the retailer was not already selling only antibiotic-free meat.⁸²

Another advantage for the CU-led antibiotics campaign is that previous retailer-focused efforts at market-based governance, such as those of the sustainable seafood movement, old-growth coalition, and fair-labor organizations before it,⁸³ had gone a long way towards establishing consumer expectations for socially and environmentally responsible retailer behavior. Those previous efforts focused on convincing people that they were not just consumers, but *citizen* consumers who should view a retailer’s market power as a source of responsibility to advance the social good. In other words, those campaigns went a long way in creating the consumer and societal expectation that retailers would lead rather than simply follow consumer trends or messages towards sustainability, all while meeting the more traditional customer demands and expectations about choice, variety, and pricing.⁸⁴ The leverage of CU’s “Meat Without Drugs” campaign is only increased by the fact that meat is a center-plate

80. Tzankova, *supra* note 17. Argenti, *supra* note 17. Spar & La Mure, *supra* note 17.

81. Meg Bohne, *Why Trader Joe’s, Why Now?*, CONSUMERS UNION - NOTINMYFOOD.ORG (Jan. 18, 2013), <http://notinmyfood.org/posts/3564-why-trader-joes-why-now>. Jean Halloran, Director of Food Policy Initiatives, Consumers Union, Personal Communication, Sept. 19, 2013. Burch & Lawrence, *supra* note 16.

82. See Meg Bohne, *Over half million signatures delivered to Trader Joe’s in NYC*, CONSUMERS UNION - NOTINMYFOOD.ORG (Sept. 28, 2012), <https://notinmyfood.org/posts/3378-over-half-million-signatures-delivered-to-trader-joes-in-nyc>.

83. See Tzankova, *supra* note 17. Gulbrandsen, *supra* note 18. Gereffi et al., *supra* note 16. O’Rourke, *supra* note 17. Christopher J. Chipello & Joseph Pereira, *Activists Shred Paper Retailers Over Use of Old-Growth Trees*, WALL ST. J., Sept. 9, 2002, <http://www.wsj.com/articles/SB1031516911642272715>.

84. Tzankova, *supra* note 17. GREENPEACE VII, *supra* note 64.

item, and a major weekly draw of customers for most of the targeted large retailers.⁸⁵

A third reason that the retailer-focused “Meat without Drugs” campaign should be particularly effective is the fact that agricultural antibiotic use affects human health, and consumers have already come to hold retailers responsible for health and safety aspects of the food they sell. Campaign NGOs are well positioned to help consumers see the connection between their own health concerns and the larger public health concerns related to antibiotic overuse in agriculture. A notable 55 percent of the consumers who purchased natural or organic meat in the US in 2013 cite positive long-term health effects for themselves as the rationale for such purchase. Of those consumers who purchased natural and organic meat, 46 percent said that those meats are free of substances they want to avoid.⁸⁶ At the same time, 69 percent of all consumers⁸⁷ say that price prohibits them from buying natural/organic meat. Enlisting the indignation and pressure of these consumers by reminding them that it is the retailer’s job to protect them from the public health risks can be a powerful tool in the hands of competent, strategic NGOs, such as CU, NRDC, and the public health NGOs supporting their efforts.

A fourth factor spelling the promise of current NGO initiatives for market-driven regulation of antibiotics in agriculture is the *structure* of these initiatives. The campaign is positioned to target the entire grocery retail sector and put pressure on all of the largest retailers, which represent the vast majority of the US grocery retail market. In other words, it is positioned to become one of the most encompassing and forceful among current market-based environmental reform efforts.

To accomplish the broader environmental and social goals behind their market-based governance efforts, NGOs need action by a critical mass of retailers simultaneously pressing suppliers to change environmentally and socially problematic practices in food production. But market-driven governance initiatives that target *all* large retailers in a national market have important strategic benefits as well: NGOs can compare and contrast retailer performance, periodically singling out a

85. *Power of Meat Remains Strong at Retail*, FMI NEWS ROOM (Feb. 24, 2015), <http://www.fmi.org/news-room/latest-news/view/2015/02/24/power-of-meat-remains-strong-at-retail>. *The Power of Meat 2015: An In-Depth Look at Meat Through the Shoppers’ Eyes*, FMI & NAMI (2015), http://www.meatconference.com/sites/default/files/uploads/POM_Report_2015_FINAL_0.pdf.

86. *The Power of Meat 2013: An In-Depth Look at Meat Through the Shoppers’ Eyes*, AMI FOUNDATION & FMI 18 (2013), <https://www.meatinstitute.org/index.php?ht=a/GetDocumentAction/i/85035>.

87. The same consumers surveyed for the *Power of Meat 2013* report. *Id.*

retailer for intensive pressure and publicity. This approach is especially suited to changing the market in the ways desired by NGOs because it uses the structure of the market and retail competition to create brinkmanship and further pit already competing retailers against each other in terms of their sustainable sourcing and sustainability performance.⁸⁸ Retailer compliance with NGO demands and the reputational consequences of such compliance (or non-compliance) then become another explicit element in market competition among retailers. When a few of the targeted retailers meet NGO demands, thus presumably demonstrating the practical feasibility and reasonableness of such demands, they are also helping to increase pressure on the rest. This increases the sense of vulnerability among the remaining targeted retailers who look especially bad if they fail to act when competitors have.

In sum, the growing market power, supply chain leverage and private regulatory authority of retailers, along with retailer vulnerability to reputational damage, makes NGO targeting of large food retailers particularly promising as a strategy for mobilizing and deploying market-driven regulatory pressure on the use of antibiotics in U.S. agriculture. The specific promise of the CU “Meat without Drugs” campaign is further amplified by the campaign’s structure and timing: it comes at a time when retailers are particularly conscious and protective of their laboriously built green reputations, while consumers, conditioned by a number of previous retailer-focused NGO initiatives for market-driven environmental reform, are particularly attentive to retailer behavior and the ways retailers choose to use their market power.

IV. THE DYNAMICS AND REGULATORY OUTCOMES OF RETAILER TARGETING: INSIGHTS FROM MARKET-DRIVEN FISHERY REFORM INITIATIVES

When confronted by forceful, sustained, and well-designed NGO initiatives, many targeted retailers have strong incentives to cooperate. However, the actual ability of retailers to solve societal problems through the exercise of private authority varies across issues and situations.⁸⁹ The nature and structure of relevant supply chains, particularly the power relationships among nodes in the chains, affect the change-making capacity of even the most cooperative set of retailers.⁹⁰

88. See Tzankova, *supra* note 17. See also GREENPEACE VII, *supra* note 64.

89. Mayer & Gereffi, *supra* note 20. Peter Dauvergne, & Jane Lister, *Big brand sustainability: Governance prospects and environmental limits*, 22 GLOBAL ENVIRONMENTAL CHANGE no. 1, at 36-45 (Feb. 2012).

90. Mayer & Gereffi, *supra* note 20. Tzankova, *supra* note 17.

The literature on corporate power and private regulation offers a variety of examples of branded corporate actors, retail brands, and grocery retailers in particular, that successfully used their buying power, under NGO pressure, to change on-the-ground labor and environmental practices in apparel and food production.⁹¹ But, the literature also offers examples where NGO-targeted large retailers have been unable to change problematic production practices by acting through the market alone, despite retailers' desire to do so.⁹²

A. The limits of market-driven private regulation as revealed in the fisheries context

NGO-led efforts for fisheries reform provide a compelling example of how adaptive and effective market-based regulation initiatives may well succeed in changing the market for seafood (by creating a massive new demand for sustainably caught fish in the seafood marketplace), yet still fall short of generating the intended improvements in actual fishing and fishery management practices.⁹³

In the case of NGO initiatives for market-driven reform of fishing and fishery management practices, large US retailers—key market actors in the seafood supply chain—have faced NGO demands very similar to those made of them by the NGOs seeking market-driven reform of antibiotic use practices in agriculture. Marine conservation NGOs expect and publicly urge retailers to use their buying power to press for reform and/or elimination of ecologically problematic fishing and fishery resource use and management practices. The majority of NGO-targeted Western retailers, including those in the U.S., have made serious and public commitments to sustainable seafood sourcing, thus effectively committing to use their market power, supply chain leverage, and private regulatory authority for changing ecologically problematic practices in the fisheries that supply their seafood. As part of their sustainable seafood commitment, retailers have worked to understand the environmental impacts and sustainability status of the seafood they sell. They have eliminated some of the most problematic fish species from their seafood inventory and imposed a new set of product specifications on their processor and wholesaler suppliers. Retailers are increasingly pressing

91. Gereffi et al., *supra* note 16. Busch & Bain, *supra* note 58. Susanne Freidberg, *Cleaning up down South: supermarkets, ethical trade and African horticulture*, 4 SOCIAL & CULTURAL GEOGRAPHY no. 1, at 27-43 (2003). Freidberg, *supra* note 16.

92. Ponte, *supra* note 22. Mayer & Gereffi, *supra* note 20.

93. Ponte, *supra* note 22. Tzankova, *supra* note 17.

their suppliers to deliver only seafood produced in ecologically appropriate manner.⁹⁴

Even after such flexing of market power and private regulatory authority, most seafood retailers have been unable to transition to a fully or even mostly sustainable seafood supply.⁹⁵ This is because the supply of sustainable seafood available on the global and US markets remains seriously constrained by the still limited prevalence of sustainable fishery practices. In other words, many of the fishing industry actors whose ecologically problematic practices are the ultimate target of the NGO retailer-focused campaigns are not changing such practices in response to retailer, wholesaler, and processor demands for sustainably caught fish from sustainably managed fisheries. Sustainable sources of supply are particularly scarce for some of the seafood species most popular with consumers—species such as shrimp and tuna—which means that large retailers are unable to make credible threats about ceasing to source these species from non-compliant producers. Without enough sustainable sources for popular seafood items, refusing to do business with unsustainable non-compliant producers would mean eliminating or greatly reducing the amounts of popular seafood on offer.⁹⁶ However, most retailers are poorly positioned to make such dramatic gestures, given that they operate in a competitive context where even a temporary stockout of popular merchandise can send customers to better stocked retail competitors, possibly permanently.⁹⁷ In that market environment, discontinuing the sale of ecologically problematic but popular seafood for which there is no sustainable replacement is too big of a competitive risk, one greater than the risk of reputational and brand damage from NGO

94. See Tzankova, *supra* note 17. See also GREENPEACE VII, *supra* note 64. JAMES MITCHELL, GREENPEACE: CARTING AWAY THE OCEANS VIII (2014) [*hereinafter* GREENPEACE VIII]. *Are the World's Retailers and Restaurants Delivering on their Sustainable Seafood Promises?*, SEAFOOD INTERNATIONAL (Jul. 22, 2014), <http://seafoodinternationaldigital.com/are-the-worlds-retailers-and-restaurants-delivering-on-their-sustainable-seafood-promises/>.

95. At least not without foregoing most of the variety and volume of popular seafood items currently on sale, which few retailers are in a position to do, given the serious competitive consequences of eliminating or reducing the availability of a popular, high-demand product such as tuna, shrimp, or salmon: even temporary stockouts are known to send a retailer's customers to competitors, possibly permanently, and no retailer can risk eliminating ecologically problematic seafood in the hope that his competitors would do the same. See Eric T. Anderson et al., *Measuring and Mitigating the Costs of Stockouts*, 52 MANAGEMENT SCIENCE 52 no. 11, at 1751-1763 (2006).

96. Tzankova, *supra* note 17. Zdravka Tzankova. Presented paper, Annual Convention of the International Studies Association (ISA), San Diego, CA, Private regulation triggers for public regulation demand? Insights from sustainable seafood campaigns that target US grocery retailers (April 1-5, 2012).

97. See Anderson et al, *supra* note 95 and accompanying text.

action against non-compliant retailers.⁹⁸ Within the seafood supply chain, retailers have, in other words, simply lacked the leverage that comes with a ready set of alternative suppliers who are eager to meet retailer demands if the current suppliers will not.⁹⁹

Retailers' considerable motivation and effort to meet NGO demands and their overall position as oligopsonistic buyers in the broader food system have not been enough to demand upstream changes. Powerful as they are, they lack sufficient market power and private authority within the seafood supply chain itself. Reforming problematic fishery practices apparently cannot be done through the market alone.

B. The unexpected broader potential of market-driven reform efforts

Limits on their direct effects and effectiveness notwithstanding, NGO initiatives in private market-driven fisheries regulation have significantly improved the prospects for attaining sustainable management and use of currently problematic fisheries. By creating "sustainable seafood" as a marketing category and convincing retailers in the global West to publicly commit to sustainable seafood sourcing, these NGOs have turned retailers and other big buyers¹⁰⁰ into major, active stakeholders in fishery management and sustainable fishery practices. The serious and pervasive conservation problems that NGOs are working to solve, including overfishing, bycatch, and destructive fishing practices, have also become a serious business problem for retailers and other big seafood buyers struggling to meet sustainable sourcing commitments. The violation of these commitments threatens corporate reputations, brands, and competitiveness. Thus, the sustainability (or lack thereof) in fishery practices has become a business problem that big buyers in the seafood sector are newly motivated to solve.

Within this new strategic context—a context created by NGO efforts at private, market-driven fisheries regulation—marine conservation NGOs have the unprecedented opportunity to advance better fishery management and stronger marine conservation by mobilizing the political and policy influence of business stakeholders for seafood sustainability and using this influence to advance public regulatory reform in fishery management. NGOs, including a number of the NGOs whose market-focused work was instrumental in getting sustainable sourcing commitments from big

98. Tzankova, *supra* note 17.

99. Tzankova, *supra* note 17.

100. Such as the wholesalers and processors, like HighLiner foods that supply retailers. *See, e.g., The High Liner Sustainability Report Card*, HIGH LINER FOODS, <http://highlinersustainability.com/resources/video/the-high-liner-sustainability-report-card/> (last visited Spring 2015).

seafood buyers, appear to be seizing this new opportunity. With NGO urging, guidance, and rewards, retailers and the big seafood buyers and processors who have contracts to supply those retailers are beginning to find themselves working, directly or indirectly, to strengthen the public regulatory government of problematic source fisheries (i.e., working to attain the kind of regulatory government that can ensure a sustainable seafood supply by reforming ecologically problematic fishery resource use and management).¹⁰¹

In light of difficulties with using market pressure to improve fisheries management, marine conservation NGOs have set a modified new agenda for seafood buyer engagement in fishery sustainability: they are urging seafood buyers to flex their political and policy muscle as well as their supply chain muscle in pursuit of improved fishing and fishery management practices in their source fisheries. As stated during an NGO panel at the annual industry-NGO sustainable seafood meeting:

More and more businesses are taking steps towards sustainability. However . . . many forward-thinking companies are concerned that some steps that would be good for the environment and long-term sustainability may not be currently competitive. Engaging in advocacy to reform fishery and aquaculture laws can be a powerful avenue to extend sustainability measures to the entire sector, ensuring that steps that would be good for the environment will be good for business as well.¹⁰²

In sum, extensive recent experience from NGO initiatives in private, market-driven fisheries regulation suggests that well-designed and well-run NGO initiatives for market-driven private regulation—initiatives that combine sector-wide appeal to retailers and other big buyers with a periodic singling out of individual food retail corporations for public scrutiny and pressure—can have significant regulatory and transformative potential, even if they do not work as originally planned.

Intriguingly, and perhaps unexpectedly, the NGO experience with private, market-driven fisheries regulation suggests that even if private regulatory initiatives fail to directly produce the desired improvements in

101. Indeed, even the most confrontational and brand-attack centered NGOs, such as Greenpeace, have explicitly acknowledged retailer and other big buyer efforts at strengthening the public regulatory process, encouraging retailers and seafood buyers to undertake such efforts, and rewarding them reputationally when they do. *See, e.g.*, GREENPEACE VII, *supra* note 64. *See also, e.g.*, GREENPEACE VIII, *supra* note 94.

102. *Seafood Summit: Sharing Responsibility For Real Change*, SEAFOOD CHOICES ALLIANCE 16 (Feb. 2009), available at <http://seafoodchoices.com/seafoodsummit/documents/programwcover.pdf>.

environmental and resource practices, they may still do so indirectly by creating important new business demand and support for improved government regulation of ecologically problematic environmental and resource practices. This gives NGOs an opportunity to mobilize and direct the political and policy influence of such new business stakeholders towards sustainability-focused public policy and regulatory change.

V. RETAILER RESPONSES TO NGO ANTIBIOTICS-IN-MEAT DEMANDS: WHAT WE COULD EXPECT AND WHY

NGO experience with efforts to use the market to reform fisheries shows that the relative success of harnessing buying power to change the environmental practices of food producers depends on the structure of the relevant markets, the organization of the relevant supply chains, and, particularly, the relative power of big corporate buyers within these supply chains.

What, then, are the prospects of private, market-based governance of antibiotic use in US agriculture? What is the likelihood that large retailers, under pressure from NGOs, will stop the sub-therapeutic use of antibiotics in US agriculture by exerting buyer power over upstream actors in the meat supply chain? How easy or difficult would it be for these retailers to make the NGO-demanded shift to sourcing and selling only meat produced without sub-therapeutic doses of antibiotics?

A. The Regulatory Promise of Markets-Focused NGO Antibiotics Initiatives

In several respects, market-based NGO campaigns related to antibiotics appear to have more regulatory and practical promise than their fisheries counterparts. First, the changes in agricultural practice sought by consumer and medical NGOs should be easier and more straightforward to implement than the scientifically complex task of managing naturally fluctuating fish stocks to avoid overfishing. A comprehensive agricultural transition away from sub-therapeutic antibiotics would involve certain changes to the protocols and daily routines of the currently dominant intensive animal farming operations and likely an increased cost of production, at least in the short term.¹⁰³ This kind of technical and practical

103. The production (and food) cost implications of eliminating sub-therapeutic animal uses of antibiotics are a subject of considerable debate. *See, e.g.*, Richard Raymond, *supra* note 41. *NRDC Case Study: Going Mainstream: Meat and Poultry Raised Without Antibiotics*, NRDC (Oct. 2014), <http://www.nrdc.org/food/files/antibiotic-free-meats-CS.pdf>. *See generally*, NATIONAL RESEARCH COUNCIL, *supra* note 4. Nigel Key & William McBride, *Antibiotics Used For Growth Promotion Have a Small Positive Effect on Hog Farm Productivity*, USDA ECONOMIC RESEARCH SERVICE (Jul, 7,

transition, however, has already succeeded in agricultural contexts similar to the US one, such as Denmark, where government regulation has driven a phase-out of sub-therapeutic antibiotic use from animal production with no appreciable long-term impacts on farming operations and meat costs.¹⁰⁴

Second, the relevant meat supply chains are not as lengthy, complex, and geographically dispersed as the global seafood supply chains. Much of the meat sold and consumed in the U.S. is produced and processed in the U.S.,¹⁰⁵ and it is U.S. agriculture's use of antibiotics that NGO market initiatives aim to reform.

A third factor suggesting the potential success of NGO efforts to affect market-driven regulation of antibiotics is the fact that when the NGO market campaigns began, most of the targeted retailers were already sourcing and selling a number of antibiotic-free meats in response to consumer demand and willingness to pay a premium for various types of "sustainable" meats. Sustainable meat sales (which can be broadly defined to include natural, organic, grass-fed, free-range, and other categories) have continued to grow in market share.¹⁰⁶ Most of the meat across this

2014), www.ers.usda.gov/amber-waves/2014-july/antibiotics-used-for-growth-promotion-have-a-small-positive-effect-on-hog-farm-productivity.aspx#_U9rL3GOWKGx.

104. *Impacts of Antimicrobial Growth Promoter Termination in Denmark*, WORLD HEALTH ORGANIZATION (Nov. 2002), http://apps.who.int/iris/bitstream/10665/68357/1/WHO_CDS_CPE_ZFK_2003.1.pdf?ua=1.

105. *Poultry & Eggs: Overview*, UNITED STATES DEPARTMENT OF AGRICULTURE: ECONOMIC RESEARCH SERVICE, <http://www.ers.usda.gov/topics/animal-products/poultry-eggs.aspx> (last updated Nov. 7, 2012). *Hog & Pork: Overview*, UNITED STATES DEPARTMENT OF AGRICULTURE: ECONOMIC RESEARCH SERVICE, <http://www.ers.usda.gov/topics/animal-products/hogs-pork.aspx> (last updated Jun. 27, 2014). *Cattle & Beef: Overview*, UNITED STATES DEPARTMENT OF AGRICULTURE: ECONOMIC RESEARCH CENTER, <http://www.ers.usda.gov/topics/animal-products/cattle-beef.aspx> (last updated May 26, 2012). As one of the largest meat producers in the world, the US is also a significant exporter of meat. See, e.g., Kenneth Mathews & Mildrey Haley, *Livestock, Dairy, and Poultry Outlook*, UNITED STATES DEPARTMENT OF AGRICULTURE: ECONOMIC RESEARCH SERVICE (Feb. 17, 2015), available at <http://www.ers.usda.gov/media/1783484/1dpm248.pdf>. U.S. CENSUS BUREAU, TABLE 1375: FISHERIES – COMMERCIAL CATCH BY COUNTRY: 1990 TO 2008 (2012), available at <https://www.census.gov/compendia/statab/2012/tables/12s1377.pdf>. *Leading Markets for U.S. Beef and Veal*, NATIONAL CATTLEMEN, <http://www.beefusa.org/CMDocs/BeefUSA/Resources/Statistics/November/leading%20markets.pdf> (last visited Spring 2015).

106. See, e.g., Bill Greer & Janet Riley, *New Consumer Research Unveiled at the Annual Meat Conference: Conventional Supermarkets Wield the Power of Meat Sales to Compete; Demand for Natural and Organic Meat Increasing*, FMI (Feb 20, 2007), <http://www.fmi.org/news-room/news-archive/view/2007/02/20/new-consumer-research-unveiled-at-the-annual-meat-conference-conventional-supermarkets-wield-the-power-of-meat-sales-to-compete-demand-for-natural-and-organic-meat-increasing>. *Purchasing Behavior in the Meat Department Reaching New Balance*, FMI (Feb 22, 2011), <http://www.fmi.org/news-room/latest-news/view/2011/02/22/purchasing-behavior-in-the-meat-department-reaching-new-balance>. *2012 Power of Meat Executive Summary*, AMI & FMI 3 (2012), <http://www.fmi.org/docs/complimentary-research/2012-power-of-meat-exec-summary-final.pdf?sfvrsn=2>. *The Power of Meat 2015*, *supra* note 85.

category comes from animals raised without the sub-therapeutic use of antibiotics.¹⁰⁷

Further, a large percentage of consumers go to large grocery retailers—the NGO-targeted retailers—for their sustainable meat purchases. Traditional supermarkets, like Safeway, Kroger, and Stop-and-Shop, are the primary source of organic meat purchases for 50 percent of organic-buying consumers. Supercenters and warehouse clubs like Walmart and Costco are the primary source of organic meat purchases for an additional 22 percent of consumers.¹⁰⁸

Whole Foods is the only large retailer that exclusively sells antibiotic-free meat from animals raised in accordance with a minimum animal welfare standard (or higher) typically at a considerable price premium. Whole Foods' sales of sustainable meat (along with those of small and independent grocers) contribute to the viability of its supplier farms, which often have higher costs associated with their more humane and environmentally-attuned production methods.¹⁰⁹

Practically all of the NGO-targeted large retailers, however, offer a wide array of antibiotic-free and antibiotic-light alternatives to conventional meat, sold under both manufacturer and store brands, spanning several sustainable meat categories, such as natural, organic, and grass-fed.¹¹⁰ Introduced in 2011, Safeway's "Open Nature" store brand

107. Organic meat, for example, is by definition produced without the use of any antibiotics, and many grass-fed and natural meat producers and brands also do not allow the use of antibiotics (although such use is not specifically prohibited by the use of those two terms on meat labels). See *USDA National Organic Program*, UNITED STATES DEPARTMENT OF AGRICULTURE: AGRICULTURAL MARKETING SERVICE, <http://www.ams.usda.gov/AMSV1.0/ams.fetchTemplateData.do?template=TemplateN&navID=OrganicStandardsLinkNOPOrganicStandards&rightNav1=OrganicStandardsLinkNOPOrganicStandards&topNav=&leftNav=&page=NOPOrganicStandards&resultType=&acct=nopgeninfo> (last modified Apr. 4, 2013). See also *Our Standards*, AMERICAN GRASSFED ASSOCIATION, <http://www.americangrassfed.org/about-us/our-standards/> (last visited Spring 2015) (The production standards of the American Grassfed Association, which prohibit the use of antibiotics).

108. *2012 Power of Meat Executive Summary*, *supra* note 106, at 3. *The Power of Meat 2015*, *supra* note 85.

109. Geoff Green, PITMAN FAMILY FARMS, Pers. Comm. Shannon Lamoreaux, *Koch's Turkey Farm Carves Out Niche Supplying Whole Foods*, SMALL BUSINESS TRENDS (Dec. 13, 2014), <http://smallbiztrends.com/2014/12/kochs-turkey-farm-whole-foods.html>. Eileen Brady & Caitlin O'Brady, *Consumer Considerations and Agriculture of the Middle*, in *FOOD AND THE MID-LEVEL FARM: RENEWING AN AGRICULTURE OF THE MIDDLE* 103-118 (T. Lyson et al., eds., 2008). G. W. Stevenson & Rich Pirog, *Values-Based Supply Chains: Strategies for Agrifood Enterprises of the Middle*, in *FOOD AND THE MID-LEVEL FARM: RENEWING AN AGRICULTURE OF THE MIDDLE* 119-146 (T. Lyson et al., eds., 2008).

110. "Organic" and "grass-fed" are terms of law: labeling a product as organic or grass-fed indicates producer compliance with specific sets of government and industry standards of organic and grass-fed production. As noted in FN 107, however, "grass-fed" as a legally defined marketing claim refers only to the animal's diet, not to the use of antibiotics. "Natural," on the other hand, is largely a

features beef, poultry, and pork products from animals raised with no sub-therapeutic use of antibiotics.¹¹¹ Kroger's "Simple Truth" private label offers similar attributes, as does Ahold's "Nature's Promise." These "better meat" sales by mainstream retailers are helping generate environmental and animal welfare improvements, even if arguably marginal ones,¹¹² in the conventional meat industry.¹¹³

Indeed, it is this capacity for market-driven transformation that NGO retailer targeting is intended to mobilize. NGOs view the market-driven transformation of problematic antibiotic use practices as being within the power of targeted large retailers.¹¹⁴

B. Retailer responses to the demands of markets-focused NGOs

Similar to the fisheries context, however, we can expect retailers to have trouble shifting entirely to antibiotic-free meats as long as there is limited US supply of such meats—i.e., as long as producers continue their unwillingness to shift away from sub-therapeutic uses.¹¹⁵ The question,

term of art on fresh meat labels, because its legal definition (no additives or preservatives) has no relevance to raising practices. It is used in the marketplace to stand for a wide variety of actual as well as putative product and process attributes associated with a food item; its use on food products is thus quite controversial. *See, e.g.*, Andrew Gunther, *Let's Kill Natural*, ANIMAL WELFARE APPROVED (Jul. 3, 2014), <http://animalwelfareapproved.org/2014/07/03/lets-kill-natural/>; Only Organic, *The Natural Effect*, YOUTUBE (Jan. 28, 2014), https://www.youtube.com/watch?v=AftZshnP8fs&list=PLznAU92Y_6gGki1IuUX-vriFQuczGXw; The term, or its derivatives (e.g. Safeway's "Open Nature" label which includes antibiotic-free meat), is nonetheless appropriately used in a number of cases to signify antibiotics-free meat—*see, e.g.* *Where to Buy*, COUNTRY NATURAL BEEF, <http://www.countrynaturalbeef.com/where-to-buy.html> (last visited spring 2015).

111. *Safeway Announces Open Nature™ Line of 100% Natural Foods*, SAFEWAY: INVESTOR RELATIONS, <http://investor.safeway.com/phoenix.zhtml?c=64607&p=irol-newsArticle&ID=1520268> (last visited Spring 2015). Robert Vosburgh, *Safeway's Strategy Behind Open Nature*, SUPERMARKET NEWS (Jan. 28, 2011), <http://supermarketnews.com/blog/safeway-s-strategy-behind-open-nature>

112. Temple Grandin, *Special report: Maintenance of good animal welfare standards in beef slaughter plants by use of auditing programs*, 226 JOURNAL OF AMERICAN VETERINARY MEDICAL ASSOCIATION 370-373 (2005), http://americanradioworks.publicradio.org/features/mcdonalds/temple_print.html. Keith Kenny, *McDonald's: Progressing Global Standards in Animal Welfare*, in ANIMALS, ETHICS, AND TRADE: THE CHALLENGE OF ANIMAL SENTIENCE 166 (Jacky Turner & Joyce D'Silva eds., 2006).

113. Jonathan Kaplan, NRDC, Pers. comm.; the McDonalds shift to humanely slaughtered beef, and the positive ripple effects that had on the whole industry—given the size of McDonalds as a buyer, humane slaughter became widespread in the US thanks to its requirements. *See, e.g.*, Grandin, *supra* note 112. Gregory G. De Blasio, *Understanding McDonald's Among the "World's Most Ethical Companies"*, 13 ELECTRONIC JOURNAL OF BUSINESS ETHICS AND ORGANIZATION STUDIES no.1, at 5-12 (2008), available at http://ejbo.jyu.fi/pdf/ejbo_vol13_no1_pages_5-12.pdf. Kenny, *supra* note 112.

114. Jean Halloran, CU, pers. comm.; Andrew Gunther, ANIMAL WELFARE APPROVED, pers. comm.

115. Lisa Baertlein & P.J. Huffstutter, *McDonald's antibiotic-free move could prompt U.S. chicken squeeze*, REUTERS (Mar 4, 2015), <http://www.reuters.com/article/2015/03/05/usa-mcdonalds-antibiotics-industry-idUSL1N0W62AX20150305>. *See also Drive-thru review: All-Natural Burger at*

then, is how retailers can persuade their upstream suppliers—and particularly those most responsible for production decisions—to make that shift. Retailers either have to be able to offer sufficient price incentives or they need to have enough market power to force upstream supply chain actors to make changes even without price increases. Neither of these scenarios seems likely, however.

First, the use of price premiums to expand the US production and supply of antibiotic-light meat does not seem viable for most of the targeted retailers because most would not be able to pass such premiums onto their customers. Raising meat prices is competitively too risky for most any individual retailer,¹¹⁶ unless the retailer could be sure that their relevant regional competitors would do the same. No such assurances are possible or forthcoming in the current climate of the US grocery market.¹¹⁷

The latest consumer research points to pervasive, recession-driven frugality among many grocery shoppers, suggesting that cost is the largest concern for many consumers, and that recession-driven frugality in grocery purchasing habits is poised to remain the new norm for many consumers.¹¹⁸ For meat in particular, the most recent annual surveys

Carl's Jr. is good but not much. THE GAZETTE (Dec. 29, 2014), <http://gazette.com/drive-thru-review-all-natural-burger-at-carls-jr.-is-good-but-too-much/article/1543757> (Carl Jr's antibiotics free burgers of recent Superbowl ad fame are made from Australian beef). See also Stephen McDonnell, *Supply And Demand: Changing the Economics of Antibiotic-free Meat*, HUFFINGTON POST (Apr. 17, 2014), http://www.huffingtonpost.com/stephen-mcdonnell/supply-and-demand-changin_b_5167313.html. Lynne Peebles, *Superbug Fear Meets Super Bowl with Sexy Antibiotic-Free Burger*, HUFFINGTON POST (Jan. 31, 2015), http://www.huffingtonpost.com/2015/01/31/super-bowl-ad-antibiotic-resistance-_n_6582866.html. Peter Rosset, *Here's the Beef! Factory-farming practices have been linked to human illnesses, but alternative sources for meat and poultry are rapidly shrinking*, SFGATE (Jan. 7, 2001), <http://www.sfgate.com/news/article/Here-s-the-Beef-Factory-farming-practices-have-2968007.php>. And note Chipotle's various sourcing woes as it struggles to ensure a sufficient supply of humanly produced, antibiotics-free meat. Leslie Patton, *Chipotle May Allow Some Antibiotic-Treated Beef*, BLOOMBERG BUSINESS (Aug. 13, 2013), <http://www.bloomberg.com/news/articles/2013-08-12/chipotle-to-allow-some-antibiotic-treated-beef> (stating that Chipotle considers changing beef standard amid shortage). Dan Charles, *Chipotle's Pulled Pork Highlights Debate Over Sow Welfare*, NPR (Jan. 19, 2015), <http://www.npr.org/blogs/thesalt/2015/01/16/377760603/chipotles-pulled-pork-highlights-debate-over-sow-welfare>. Candice Choi, *No Carnitas? Chipotle stops service pork at hundreds of restaurants*, THE CHRISTIAN SCIENCE MONITOR (Jan. 14, 2015), <http://www.csmonitor.com/Business/Latest-News-Wires/2015/0114/No-Carnitas-Chipotle-stops-serving-pork-at-hundreds-of-restaurants>.

116. So much so that retailers have absorbed some of the recent high commodity and wholesale prices for meat. See, e.g. Amy Mayer, *High Prices Aren't Scaring Consumers Away From The Meat Counter*, NPR (Aug. 26, 2014), <http://www.npr.org/blogs/thesalt/2014/08/26/3434037/57/high-prices-arent-scaring-consumers-away-from-the-meat-counter>.

117. Nicholas Hodson et al., *Four Forces Shaping Competition in Grocery Retailing*, BOOZ & Co (2012), available at http://www.strategyand.pwc.com/media/uploads/Strategyand_Four-Forces-Shaping-Competition-in-Grocery-Retailing.pdf.

118. *2012 Power of Meat Executive Summary*, supra note 106. See also Hodson et al., supra note 117.

conducted by the American Meat Institute (AMI) and the Food Marketing Institute (FMI) find that *before* shopping for meat and poultry, 45 percent of consumers regularly compare meat and poultry prices across stores, while another 31 percent of consumers engage in such cross-store meat price comparisons some of the time.¹¹⁹ The same surveys find 86 percent of consumers comparing prices within the meat department once they are in the store, and a number of consumers substituting kinds or cuts of meat as a way to control their meat spending.¹²⁰ 60 percent of the surveyed meat consumers were found to use a variety of additional money-saving strategies, such as the use of meat-stretching meal types like pastas and casseroles and reliance on sales and promotions.¹²¹

Retailers who are able to pass the higher costs of antibiotic-free or other sustainable meat to their customers have a different customer base than the mainstream retailer—a customer base both willing *and* able to pay often significant price premiums for higher sustainability (and health) attributes of meat and other products.

Given the remarkably small profit margins in traditional grocery retail, however,¹²² and given the importance of meat as a grocery retail category, retailers like Safeway, Kroger, HEB, and Ahold,¹²³ where the majority of US grocery consumers buy most of their meat for at-home consumption,¹²⁴ cannot absorb the cost of price premiums they would have to pay suppliers to abandon sub-therapeutic antibiotic use. It would certainly be unrealistic to expect retailers like HEB, for which beef is the largest retail category and worth \$700 million in annual sales, to meet NGO demands by absorbing the costs of such premiums.¹²⁵

Ultimately, however, it is precisely because large retailers have succeeded in forcing upstream actors to change their practices, and at those

119. 2012 *Power of Meat Executive Summary*, *supra* note 106. *The Power of Meat 2013*, *supra* note 86.

120. *The Power of Meat 2013*, *supra* note 86, at slides 12, 13.

121. *The Power of Meat 2013*, *supra* note 86. 2012 *Power of Meat Executive Summary*, *supra* note 106.

122. Lawrence Busch, *The private governance of food: equitable exchange or bizarre bazaar?*, 28 AGRICULTURE AND HUMAN VALUES no. 3, at 345-352 (2011). Burch & Lawrence, *supra* note 16. EUROMONITOR INTERNATIONAL, *supra* note 56. See also Tiffany Wright, *What Is the Profit Margin for a Supermarket?*, AZCENTRAL, <http://yourbusiness.azcentral.com/profit-margin-supermarket-17711.html> (last visited Spring 2015).

123. Ahold operates several major retail banners, including Stop & Shop, Giant Foods, Martin's Food Market, and Peapod.

124. 2012 *Power of Meat Executive Summary*, *supra* note 106. *The Power of Meat 2013*, *supra* note 86.

125. Burt Ruterford, *A Retailer Speaks On Beef, Consumers & The Future*, BEEF MAGAZINE (Nov. 8, 2012), <http://beefmagazine.com/retail/retailer-speaks-beef-consumers-future>.

actors' own expense,¹²⁶ that NGOs have chosen to focus on retailers to fix ecological or social problems with food production. If price incentives are beyond the reach of most targeted retailers, what of retailer capacity to force change in the antibiotic use practices of upstream actors responsible for production decisions?

The capacity of retailers to force environmental, labor, or other changes in the production practices of their suppliers is rooted in their oligopsonistic buyer power. It has usually depended on having a ready array of alternative suppliers, which allows retailers to make the credible threat that suppliers reluctant to comply with retailer product or process requirements will be replaced by others who comply.¹²⁷ This is, for example, the dynamic behind the success of NGO-pressured European retailers in reforming the labor practices of Zambian horticultural producers,¹²⁸ or the success of US retailers and large produce buyers in forcing California leafy greens growers to change their field management practices in ways perceived¹²⁹ to reduce the threat of food borne illness.¹³⁰

Yet in the case of the US market for meat, the large retailers targeted by NGOs are hardly supply chain Goliaths dictating product and process terms to a sea of producer and processor Davids. Rather, in seeking a shift to a supply of meat produced without the prophylactic and growth promoting use of antibiotics, retailers are dealing with a highly

126. CHARLES FISHMAN, *THE WAL-MART EFFECT: HOW THE WORLD'S MOST POWERFUL COMPANY REALLY WORKS--AND HOW IT'S TRANSFORMING THE AMERICAN ECONOMY* (Penguin Press, 2006). Freidberg, *supra* note 91. Freidberg, *supra* note 16. SHERMAN D. HARDESTY & YOKO KUSUNOSE GROWERS' COMPLIANCE COSTS FOR THE LEAFY GREENS MARKETING AGREEMENT AND OTHER FOOD SAFETY PROGRAMS, UC SMALL FARM PROGRAM BRIEF (Sept. 2009), available at <http://sfp.ucdavis.edu/files/143911.pdf>. Melanie Beretti & Diana Stuart, *Food safety and environmental quality impose conflicting demands on Central Coast growers*. 62 CALIFORNIA AGRICULTURE no. 2, at 68-73. Hatanaka et al, *supra* note 16. Fuchs et al., *supra* note 16.

127. Freidberg, *supra* note 91. Freidberg, *supra* note 16. Busch & Bain, *supra* note 58. Hatanaka et al, *supra* note 16. Fuchs et al., *supra* note 16. Mayer & Gereffi, *supra* note 20.

128. Freidberg, *supra* note 84. Freidberg, *supra* note 16.

129. The demands that leafy green buyers imposed on producers were based on the incorrect and factually unsupported perception that *E. coli* contamination of California leafy greens was the result of wildlife presence on agricultural fields. Leafy green buyers thus demanded a number of grower measures to discourage wildlife presence, prompting many growers to eliminate vegetation buffers, biodiversity breaks, and other agricultural conservation measures designed to protect water quality and biodiversity on California agricultural land. See, e.g., Sasha Gennet et al., *Farm practices for food safety: an emerging threat to floodplain and riparian ecosystems*, 11 FRONTIERS IN ECOLOGY AND THE ENVIRONMENT no. 5, at 236-242 (2013). RICK GELTING, INVESTIGATION OF AN *EXCHERICHIA COLI* O157:H7 OUTBREAK ASSOCIATED WITH DOLE PRE-PACKAGED SPINACH (2006), available at http://www.cdc.gov/nceh/ehs/Docs/Investigation_of_an_E_Coli_Outbreak_Associated_with_Dole_Pre-Packaged_Spinach.pdf. See also Beretti & Stuart, *supra* note 126.

130. Beretti & Stuart, *supra* note 126. Varun Shekhar, *Produce Exceptionalism: Examining the Leafy Greens Marketing Agreement and Its Ability to Improve Food Safety*, 6 J. FOOD L. & POL'Y, 267 (2010).

concentrated meatpacking sector with a small number of powerful actors just upstream of them in the supply chain.¹³¹ Often controlling key production decisions (including decisions on antibiotic use) within the context of contract farming or vertical integration,¹³² the meatpacking companies are the critical link between targeted retailers and the US agricultural producers. Their market power directly influences the antibiotic use decisions of their own upstream suppliers: feedlots and livestock producers.

While retailers have tried to balance some of this power through the development of own-brand meat lines and products,¹³³ retail brand meats are still supplied by the same few packers behind the national brands, while the national meat brands controlled by the packers are still quite popular among US meat consumers. These dynamics suggests retailer dependence on the large US meat companies, the same companies that NGOs want the retailers to influence.¹³⁴ As meat-loving US consumers continue to seek out their favorite meat products and brands, dire competitive consequences are likely to befall mainstream retailers whose concern over sustainability or public health implications of the available meat supply prevents them from fully meeting their customers' meat demand.¹³⁵

The supply chain leverage and attendant private regulatory capacity of large meat retailers, including both large grocers and fast food chains, could be considerably boosted by a ready availability of a competitively priced imported supply of "antibiotic-free" meat. A credible threat of even a temporary switch to foreign suppliers who use no sub-therapeutic doses of antibiotics in the rearing of food animals could potentially get the attention and cooperation of US meat companies in the antibiotic-reduction endeavor. Indeed, the recent Carl Jr's experience suggests that

131. Alan Barkema et al., *The new US meat industry*, 86 ECONOMIC REVIEW: FEDERAL RESERVE BANK OF KANSAS CITY no. 2, at 33-56 86 (2001). MARY HENDRICKSON & WILLIAM HEFFERNAN, CONCENTRATION OF AGRICULTURAL MARKETS, DEPARTMENT OF RURAL SOCIOLOGY – UNIVERSITY OF MISSOURI (2007), available at <http://www.foodcircles.missouri.edu/07contable.pdf>. WILLIAM HEFFERNAN ET AL., REPORT TO THE NATIONAL FARMERS UNION, CONSOLIDATION IN THE FOOD AND AGRICULTURE SYSTEM 5 (Feb. 5, 1999), <http://www.foodcircles.missouri.edu/whstudy.pdf>. JAMES MACDONALD & WILLIAM MCBRIDE, THE TRANSFORMATION OF U.S. LIVESTOCK AGRICULTURE: SCALE, EFFICIENCY, AND RISKS, USDA ERS, ECONOMIC INFORMATION BULLETIN No. (EIB-43) (Jan. 2009).

132. MACDONALD & MCBRIDE, *supra* note 131. THE PEW COMMISSION ON INDUSTRIAL FARM ANIMAL PRODUCTION, *supra* note 34. TAD WILLIAMS, THE CORRUPTION OF AMERICAN AGRICULTURE, available at <http://www.adaction.org/media/TadFinal.pdf> (last visited Spring 2015).

133. Burch & Lawrence *supra* note 16. Seth & Randall, *supra* note 55.

134. Burch & Lawrence *supra* note 16. Seth & Randall, *supra* note 55.

135. Anderson et al., *supra* note 95.

large US meat buyers interested in shifting to antibiotic-free or other sustainable meat sourcing are already shifting to an imported supply of antibiotic-free meat.¹³⁶

The viability of a broader shift by a larger number of retailers and other big buyers to an imported supply of antibiotic-free meat remains to be seen. If retailers attempt such a shift, they will need an imported meat supply that is not only competitively priced but does not carry any more social and environmental liability than it relieves (e.g., an antibiotic-free beef supply that raises serious labor or animal welfare concerns). However, anything but a very short-term, leverage-generating shift to an imported meat supply would be a Pyrrhic victory, because it is the practices of US meat suppliers that the NGO initiatives in market-driven private regulation are trying to reform.

C. The Uncertain Yet Broad Potential of Private Market-Based Regulation

In the end, the real extent and limits to the private regulatory power and transformative influence of targeted retailers may only be revealed in the course of a strong and sustained NGO campaign of grocery and fast food retailer targeting. Individual retailers, who understandably hold their cards close to their chest in the face of building civil society expectations and NGO pressure, are the best judges of their own willingness and capacity to exercise buyer and bargaining power, and exert private regulatory authority over the antibiotic use practices of suppliers and producers.

As a lead strategy in a broader effort at private, market-driven reform of antibiotics in agriculture, retailer targeting may well turn out to have limited regulatory and practical effect on the practices of US livestock producers. Despite the remaining uncertainty about its regulatory value and practical outcomes, however, pursuing such forceful and sustained initiatives in market-driven private regulation through the targeting of retailers and other big buyers is well worth the effort.

Recent NGO initiatives in market-driven fisheries regulation have clearly suggested that even if such campaigns fail to perform as intended—i.e., even if they fail to improve production practices through the successful exercise of private regulatory authority via the supply chain—they may still be of significant regulatory and conservation value. They

136. *Drive-thru review: All-Natural Burger at Carl's Jr. is good but too much*, *supra* note 115. Peeples, *supra* note 115.

can hasten the broader reform effort that originally motivated them, and do so in unexpected but fruitful ways. Importantly, they can turn targeted retailers and other big buyers into major beneficiaries and of expanding sustainable production practices as well as influential proponents of government regulatory interventions to attain such expansion. As observed in the fisheries context, NGO initiatives in market-based private regulation can shift the politics of public environmental regulation by turning retailers and other big buyers into key beneficiaries and proponents of strengthening such regulation.

Even if NGO initiatives in market-driven governance end up bumping against the limits of retailer capacity to exert buyer power and project private regulatory authority via the meat supply chain, the NGOs behind such initiatives can follow the example of their marine conservation counterparts and turn these limitations into an advantage for the broader reform effort: they can offer hard-pressed and reputationally-exposed retailers the opportunity to advance antibiotic use reform by raising their political and policy voice.

Even if they don't completely succeed in attaining their original private regulatory goals, NGO initiatives in private, market-driven environmental regulation can, therefore, still boost the public regulatory control of environmentally problematic industry practices.

VI. CONCLUSION

NGO targeting of large meat retailers (grocery and fast food corporations alike) appears to be a viable strategy for pursuing long-elusive reform of antibiotic use in US meat production. Even if retailer-focused initiatives are ultimately unable to generate private regulatory pressure through the market, they could still serve to motivate a new and important source of business support for stricter government regulation of antibiotic use in agriculture. This, at least, was the dynamic observed in the case of market-driven fisheries reform efforts.

The extent to which mobilizing the political power and policy influence of large retailers in favor of legislative and regulatory reform of antibiotic use in agriculture will be effective in counterbalancing the strong opposition of agricultural and pharmaceutical industries to such reform remains to be seen. Because NGOs have already tried just about everything else in their efforts to reform the excessive agricultural use of antibiotics, the retailer-focused market-based approach is more than worth the try.

