The Rebirth of Direct Farm Marketing and the Rethinking of Food Safety Regulation: A View from the Ground in Oregon

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Abstract

Consumers are increasingly turning to farm direct foods for personal reasons, such as fresh and healthy food, and for public reasons, such as supporting local and rural economies and reducing the environmental impact of their food choices. As a result, farmers' markets and other direct farm marketing has increased substantially in recent years despite current laws and regulations regarding food processing and sales to the public. Government regulation is justified in conventional food markets due to the high costs of food borne illness and the "market for lemons" that results from incomplete information regarding the safety of food. On the other hand, government regulation of direct farm marketing of food is more difficult to justify due to (1) the lower risk of food borne illness and higher cost of regulation; (2) the presence of trustworthiness and redressibility inherent in direct farm marketing transactions that provide adequate information for consumers to make informed choices about their exposure to food risk; and (3) the policy choice to lift barriers to entry for small local farm direct marketing and generating accompanying public goods. Oregon's Direct Farm Marketing Bill, currently in the state legislature, clarifies Oregon law on the regulation of direct farm marketing venues and eases regulation of some low-risk types of small-scale food processing for direct farm marketers using economically and politically justifiable means.

Keywords: Oregon direct farm marketing local economy embeddedness food safety

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I. Direct Farm Marketing Grows Amid Renewed Scrutiny of Food Safety Regulations

Consumers are increasingly turning to farm direct foods for a variety of personal reasons such as fresh and healthy food, and a variety of public reasons, such as supporting local economies and reducing the environmental impact of their food choices. As a result, farmers' markets and other direct farm marketing has increased substantially in recent years despite the current laws and regulations regarding food processing, safety and sales to the public (Boutard, February 2, 2011). In 1994, there were 1,755 farmers' markets in the United States. Ten years later, the number of markets almost doubled to 3,400. In 2005 (the last year for which this data has been taken), those farmers' markets were generating an estimated $1 billion in sales, and about 25% of vendors surveyed reported that the farmers' market was their sole source of farm income (USDA Agricultural Marketing Service [USDA AMS], 2006). By 2009, USDA counted 5,274 markets in the US, which then increased another 16% in just one year to 6,132 markets in 2010 (USDA AMS, August 4, 2010). In Oregon alone, the number of farmers' markets more than tripled in 12 years, from 18 in 1993 to 68 in 2005 (Stephenson, Lev & Brewer, 2008, p. 1). By 2010, USDA reported 111 farmers' markets throughout Oregon, another 63% increase in just 5 years (USDA AMS, "Farmers Market Search," 2010).

However, farmers' markets are not the only means of direct farm marketing, and are likely not the largest outlet for direct farm products, particularly in Oregon (Lev and Gwin, 2010, p. 2). Farmers sell directly to consumers through other arrangements as well, such as farm stands, community supported agriculture (CSA) enterprises, U-pick operations, specialty food processors, and others. In 2007, Oregon had the fifth highest total direct-to-consumer sales volume in the US, valued at $56 million, while in 2002, Oregon was not even in the top 10 states

in terms of sales volume (USDA Agricultural Marketing Service [USDA AMS], 2009, Chart 4a & 4b). As a result, Oregon had the greatest percentage growth for direct-marketing sales from 1997 to 2007, a 259.1% increase. Meanwhile, total direct farm sales in the US grew by 104.7%, while total agricultural sales growth in the same period was 44.4% (USDA AMS, 2009, Chart 5). Although these growth numbers are impressive, it is worth noting that farm direct sales only make up about 1% of total farm gate sales, a number that has not changed appreciably since 1982 (Lev & Gwin, 2010, p. 1).

Concurrent with the growth in direct farm marketing, the US has suffered several high-profile outbreaks of food poisoning in recent years. Everything from pre-prepared beef patties to peanut butter (and myriad products containing the tainted peanut butter), cookie dough, eggs, spinach, parsley, hot peppers and green onions have been the subject of food recalls and lawsuits (Leavitt Partners & PricewaterhouseCoopers, 2011, p. 2; Stearns, 2010). The Centers for Disease Control estimates that 1 out of 6 Americans will suffer from food poisoning per year, totally 48 million cases of food borne illnesses from 31 known pathogens, leading to 128,000 hospitalizations and over 3,000 deaths (Centers for Disease Control, 2011, Table 1). As a result, national attention has been focused on food safety regulation, culminating in the passage of the FDA Food Safety Modernization Act (2011), the first overhaul of food safety regulation since 1938. Although the national legislation tightened food safety regulation in general, after much debate the bill included the Tester-Hagan Amendment, which created exemptions for certain producers that sell less than $500,000 per year and other exemptions from record keeping and traceability requirements for farmers that sell directly to consumers or retailers within the state or 275 miles of the state line (Bottemiller, 2010). The national debate over the Tester-Hagan

Amendment was a mirror of the debate in Oregon over food safety regulation for direct farm marketers, which is the focus of this paper.

For a variety of reasons, from food safety to environmental and other policy concerns, farmers and consumers have embraced direct farm marketing, in the US at large but particularly in Oregon. However, farmers' markets and other direct farm marketers have reached the conclusion that they do not fit into any food safety statutory or regulatory definition that applies other retail food establishments. This "lack of fit" had led to confusion (an no small part fear) about licensing and inspection requirements for direct farm marketers in Oregon (Boutard, February 2, 2011). The main conflict that gave rise to an examination of food safety laws that apply to direct farm marketing surfaced when the Oregon Department of Agriculture (ODA) suggested that farmers' markets must obtain a license as a "retail food establishment" under Oregon law (Landis, et al., December 10, 2007). In addition, local food advocates also expressed the view that some food safety regulation is both unnecessary to protect the public from potential dangers associated with their products and burdensome to small farmers and local economies (Landis, et al., December 10, 2007). Direct farm marketers argue that these licensing requirements do not make their products safer, particularly when applied to foods otherwise defined as not potentially hazardous or are generally consumed after significant cooking time (Landis, February 2, 2011; Landis, R. & Boutard, A., 2010). A group of direct farm marketing advocates wrote legislation to deal with the regulatory issues, Oregon House Bill 2336 (HB 2336), the Direct Farm Marketing bill, which is now working its way through the Oregon legislature, as discussed in Section III.

Unfortunately, *E. coli* is *E. coli*, no matter what the source. At its core, food borne illness is caused by mishandling and contamination of food anywhere on its route from farm to plate.

Although food contamination at local, small-batch food growers and processors are not likely to be a significant portion of the 48 million Americans sickened by food borne pathogens each year, there are reports of food poisoning that originates from sources that are close to home (Magkos, 2006, p. 37). The government has an interest in preventing food borne illness to serve society as a whole, but each individual consumer suffering the effects of food poisoning bears the brunt of the problem. When one is suffering from food poisoning, it is small comfort that others are suffering as well.

Therefore, it is important to explore the assertion of local food advocates that federal or state food safety regulation is unduly burdensome and unnecessary to protect the public from potential dangers associated with some farm-direct products. Although some studies have found (Taylor, 2008; Alali, 2010) and local food advocates assert (Salatin, 2007) that small-batch and/or organic food handling practices are safer than conventional food processing methods, there is scant research in this area and any mishandling can lead to food borne illness. However, even if there is not a technical difference in food handling per se, government regulation of direct farm marketing may not be justified for a variety of reasons that will be explored below. In attempting to address these multiple interests in policy goals, we are searching for scale-appropriate regulation that does not compromise food safety (Landis, February 2, 2011).

II. Rethinking Food Safety Regulations for Direct Farm Marketing: Economic and Policy Considerations

Underlying all discussion of the justification for government regulation is the economic assumption that the free market creates the most socially efficient allocation of resources. In neoclassical microeconomic terms, the term "free" is synonymous with the term "unregulated" or "self-regulated," where sellers and buyers engage in self-interested transactions, with the assumption of full knowledge of market prices and product attributes. The essential theoretical argument is whether proposed regulations interrupt the invisible hand of the free market, creating inefficiencies to the detriment of society, or whether the regulations are necessary to correct inherent "market failures," allowing the market to operate properly and deliver near-optimal social welfare (Sterns, 2010, 245). Any government regulation which interrupts the free market then requires a justification, usually by showing that regulation is necessary to reach a public goal that the market cannot provide (Breyer, et. al, 2002, p. 5). The strongest arguments are typically based on correcting "market failures," such as averting monopoly power, correcting inadequate or asymmetric information, or internalizing externalities, but other non-economic justifications based on overriding public goals support a wide variety of government regulation of markets (Breyer, et. al, 2002, p. 5-13).

New branches of economic analysis have criticized the basic assumptions of traditional neoclassical microeconomics and have built new theories to describe a more nuanced view of consumers, producers, transactions and markets. Institutional economics shifts the unit of analysis from aggregate supply and demand to the details of an individual transaction, including transaction costs, the organization structure of the economic actors and the relationship between the parties to the transaction (Coase, 1960; Williamson, 1975). Institutions are also an essential

part of the analysis, as they create constraints on the choices available to the parties (North, 1990, p. 4). Furthermore, economic sociology posits that economic actions are inherently "embedded in ongoing networks of personal relationships" (Swedberg & Granovetter, 1992, p. 8; *see generally* Granovetter, 1985). By bringing in evidence from sociology and anthropology, we can explore the networks that give rise to farm-direct markets and how social economic actors can acquire information and mitigate risk using these networks. The following discussion will consider the attributes of farm-direct transactions and the formal and informal institutions that create structure to mitigate risks in the transaction.

Note that the analysis of food safety regulation must be situated in the context of the particular type of food transaction. Most literature in the field analyzes the mainstream conventional food system in the US. Demsetz (1969) would criticize the foundational premise of most of these articles as taking the "nirvana" approach that "implicitly presents the relevant choice as between an ideal norm and an existing 'imperfect' institutional arrangement" (p. 1). Instead, this paper seeks to use a "comparative institution approach in which the relevant choice is between alternative real institutional arrangements" (Demsetz, 1969, p. 1). Whether there are significant differences between a conventional regulated food transaction and the direct marketing food transaction will be critical in determining whether the same regulatory structure is appropriate in each situation.

In analyzing the concept of food safety, there seems to be an issue of scope and perspective of the problem that colors the characterization. With respect to society at large, food borne illness can be said to impose an externality: society as a whole suffers when companies forego investments in food safety, pushing amplified costs of illness (including medical costs, loss of productivity, and ultimately loss of life in the most dire circumstances) onto society at

large. Regulation is viewed as an imperfect but acceptable method of forcing companies to internalize these external costs otherwise imposed on society. In the broadest terms, we can analyze the costs of food safety regulation versus the benefits of foregoing food borne illness, as discussed in Section II.A.

With respect to the individual suffering from food borne illness, each food transaction carries a risk of food borne illness. Each consumer must evaluate the risk associated with a particular food, which will be expressed in the price she is willing to pay for the combined attributes of the food. Of course, "no rational person will knowingly purchase something that he knew would make him sick, or even kill him" (Stearns, 2010, p. 248). While that statement is irrefutable, the choice to buy safe food is never made with such certainty. The seller may know the level of care and safety that went into the production of a food product (although in the conventional food system, the retailer is unlikely to have such knowledge, as processed foods contain many ingredients and there are many steps along the supply chain that could cause contamination), but the consumer does not have credible information on the actual safety of the food product at the time of purchase. The problem becomes one of risk management in a regime of incomplete information. Various sources have attempted to analyze this choice in terms of an individual's "demand for risky food" (arguably an oxymoron)[1], or willingness to pay for "safe" food (*see, e.g.*, Antle, 1999, p. 608). While economists attempt to quantify the discount for risky foods or the premium paid for perceived "safe" food, the discussion is appropriately framed as a

[1] An MIT History professor, Harriet Ritvo, provides a stunning example of the "demand for risky food" in an essay regarding her experience living in Great Britain in March 1996, during the discovery of bovine spongiform encephalopathy, BSE, a.k.a. Mad Cow Disease (p. 300):

> [A]lthough the beef coolers at my local Sainsbury's were completely empty only a few days after the official bombshell of March 1996, the first explanation that occurred to me turned out to be completely wrong. I guessed that the unpurchased meat had spoiled and been returned whence it had come. But instead, in response to shoppers' initial shocked avoidance, Sainsbury's (along with the other large supermarket chains) had simply cut beef prices in half. Many consumers eagerly stocked their freezers with meat that had seemed too dangerous at regular rates.

market choice made under incomplete or asymmetric information, as described in Section II.B.

These two main analytical lenses will be employed to examine the justifications for regulating food safety in direct farm marketing channels: using a cost-benefit approach to internalize the externalities created by food borne illness, and an examination of whether direct farm marketing channels provide adequate information for consumers to mitigate the individual risk of food borne illness. In addition, I will consider whether easing food safety regulations for direct farm marketers may be justified as a tool for advancing public policy goals that may accompany a flourishing the direct farm marketing sector. Finally, I will analyze HB 2336, the proposed Direct Farm Marketing bill that is currently moving through the Oregon Legislature, in Section III.

A. Food Borne Illness as an Externality: Cost-Benefit Analysis

In much of the economic literature, food borne illness has been characterized as an externality. It is rare for an illness to be traced to the source, so the firm that is responsible for the illness does not pay the full cost that it has imposed on the ill individual or on society as a whole (Stearns, 2010, p. 249). Government regulation is generally justified to force firms to internalize these externalities, taking the cost burden off of society and shifting it back on to the firm. Conventional economic wisdom holds that government regulation of food safety is justified if the benefits of avoiding food borne illness outweigh the cost of imposing regulations on the industry, maximizing total social welfare. Cost-benefit analysis is now commonplace for regulatory agencies; however, economists still question both the efficiency and efficacy of food safety regulation (Antle, 1999, p. 606-607). Although government regulation of food safety is justified as an attempt to correct externalities as a type of market failure, economists have made the case that the cure is sometimes worse than the disease, in economic terms. From the direct

farm marketing perspective, when food safety regulations that were crafted for the conventional high-volume food industry are applied across the board, they could have disproportionate impacts on smaller operations, undercutting the benefits (real or perceived) of local food production.

1. Quantifying the Benefits of Food Safety Regulations

Government regulation seeks to force the industry to implement preventative measures to reduce the incidence of food contamination, creating benefits for society that can be measured as the avoided costs of food borne illness. Numerous studies have attempted to quantify the negative externalities of food borne illness (*see, e.g.*, Frenzen, 2007; Pretty, et. al., 2000; Scharff, et. al, 2009). Using a cost of illness approach, the USDA Economic Research Service cost calculator estimates that the 1.4 million cases of *Salmonella* from all sources imposed a total cost on society of $2.6 billion (in 2009 dollars), resulting in an average cost of $1,896 per case (2010, "Cost Calculator"). The researchers estimate that there were 73,480 cases of *E. coli*, imposing a total cost of $478 million (in 2009 dollars), or $6,510 per case.[2] Cost of illness includes medical costs, loss of productivity, and premature death (USDA ERS, 2010, "Cost Calculator").[3] Economists have also used willingness to pay methods employing contingent valuation studies. It is difficult to use these studies for a cost-benefit analysis because they are rarely generalizable: they cover sub-sets of the consumer population and measure willingness to pay to avoid

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[2] Note that these estimates are not based on the most recent CDC estimates of total cases of food borne illness. However, the most recent estimates come with large confidence intervals, and based on the inherent uncertainty in every parameter of these estimates I chose to use the default statistics displayed by the USDA ERS website.

[3] Cost of illness calculations are based on multiple assumptions and methodologies for a description of the assumptions for salmonella, see http://www.ers.usda.gov/data/FoodBorneIllness/salmAssumptionDescriptions.asp?Pathogen=Salmonella&p=1&s=239&y=2009&n=1397187. For E. coli, see http://www.ers.usda.gov/data/FoodBorneIllness/ecoliAssumptionDescriptions.asp?Pathogen=EColi&p=3&s=240&y=2009&n=73480.

particular risks. Some studies indicate that willingness to pay to avoid food borne illness could be several times larger than cost of illness estimates, but also do not count costs such as medical expenses that are not paid by the respondent (Antle, 1999, p. 609).

Both cost of illness and willingness to pay to reduce the risk of food poisoning are imperfect measures of the cost borne by society. Most cases of food borne illness are not reported, so public health officials have to make estimates about the true incidence and distribution of illness in the population. The presence of some small amount of *Salmonella* may not make a healthy adult ill, but will be life-threatening to the very young, very old, and other immune-compromised individuals (Graff Zivin, 2006, p. 1). Therefore, estimates of illness caused by particular contaminants are statistically uncertain, with large confidence intervals (USDA ERS, 2010, "Cost Calculator"). The associated dollar amounts assigned to particular outcomes are also based on multiple assumptions. As a result, the calculated benefits of food safety regulation can vary widely due to the distributional effects of food borne illness and the difficulty in measuring improvements in food safety (Antle, 1999, p. 608). The processes required to protect against food contamination will never reduce the risk of food borne illness to zero. FSIS estimates the benefit from eliminating food borne illness at $1 to $3.7 billion, while ERS estimates include more pathogens and a higher value of a statistical life, pushing up the total estimate to $6.7 to 19.1 billion (1995 dollars for all figures) (Antle, 2000, p. 320). Various studies consider different levels of risk reduction in order to draw general conclusions about the benefits of regulation, but it is impossible to know with any certainty how many fewer cases of food poisoning could result from any given regulation (Antle, 2000, p. 311). Antle (2000) bases his analysis on the FSIS estimates and finds for a 20% effective regulation, the benefits of regulation are $198 to 738 million dollars; using ERS estimates for a regulation that is 20%

effective, the estimates of benefits are $1.34 to 3.82 billion (1995 dollars) (p. 320). Considering the wide range of the dollar amounts, the estimation of benefit to society from government regulation of food safety is fraught with uncertainty.

2. Quantifying the Costs of Food Safety Regulation

The policy focus of this paper concerns direct farm marketing from small local farms, but it is exceedingly difficult to find generalizable studies that focus on the safety of foods from this sub-sector of food production. To explore the costs of regulation on this sub-sector, we can draw on studies of overlapping sectors, but have to be careful not to conflate the findings from these studies and apply it generally to the small local direct farm marketing sector. First, not all direct farm marketing is "small." Direct sales per farm average only $8,000 per year, with 59% of direct farm marketers reporting less than $10,000 in total sales (Lev & Gwin, 2010, p. 3). However, "very small farms with gross sales below $10,000 account for only 11% of all farm-direct sales revenue while the 5% of farms with more than $250,000 in gross sales account for 43% of all direct farm sales revenue" (Lev & Gwin, 2010, p. 3). Therefore, we must keep in mind that not all direct farm marketing comes from small farms, but a great number of direct marketers are small farms and will be affected by the design of food safety policies.

We must also be careful not to conflate "organic" or "natural" practices with direct farm marketing or "small." While most direct farm marketers state a preference for organic or natural practices because of consumer demand, few are certified organic through USDA's third party certifiers (and hence cannot use the word "organic" to describe their products, but instead represent their products as "no spray" or using "organic practices"). In fact, 93% of organic products are not direct-marketed, but flow through conventional supply channels (Lev & Gwin, 2010, p. 3). However, "a far higher percentage of organic products pass through direct markets

as compared to nonorganic products": 7% of certified organic products flow through direct marketing channels, while only between 0.4% to 1% of all agricultural products are direct marketed (Lev & Gwin, 2010, p. 3).

Finally, we must recognize that not all direct farm sales are local. Although there are no estimates available for the percent of direct farm sales that go to "local" consumers (and no fixed definition of "local,"), Lev and Gwin (2010) sum up the issue:

> It is rare to come across anything similar to this statement from the Polyface Farms website: "We do not ship anything anywhere. We encourage folks to find their local producers and patronize them." Recognizing that farm-direct includes both local and nonlocal components is crucial for effective design and targeting of appropriate technical assistance and policy interventions (p. 3).

When we move to the cost of regulation, the calculations are no more certain than the benefits. In general, the most studied sector of the food industry has been meat and poultry processing because it is a sector that carries a higher risk of food contamination. Some studies are available for organic versus conventional practices. The discussion here will be based on primarily those studies, but will bring in examples for other products where they exist, then will draw general conclusions about the conventional food industry at large and the direct farm marketing sector where possible.

Costs of regulation naturally include the industry's cost of compliance, which is the component of cost most studied and contested by economists. Generally, costs of implementing the regulatory scheme include licensing, planning, process modification, recordkeeping and reporting. Economists have created more complex models that include dynamic components, such as changes in plant operating costs and productivity losses, or equilibrium effects from changed prices and demand for the product (Antle, 2000, p. 311). In addition, public sector costs include administrative cost borne by taxpayers and the deadweight loss associated with taxation

(Antle, 1999, p. 610). Consumers will ultimately bear the cost of regulation in the price of the food, as industry passes along the increased investment in food safety, and the regulatory agencies are supported through general taxes.

Looking only at the costs of food safety licenses in Oregon, it is easy to see the disproportionate impact on small operations. A small meat processor with $50,000 in gross sales pays $216 per year for a license in 2010-11, 0.4% of gross sales, while a large operation grossing more than $10 million pays just $704 per year, or 0.007% of gross sales. A food processor grossing up to $50,000 pays $325 in 2010-211, 0.65%, while a food processor grossing over $10 million pays $920, or 0.0092% (ODA Licensing and Inspections, 2010, "License Fee Schedule"). Consider that many of the direct farm marketing operations will gross less than $50,000 on their food processing activities, which drives their proportionate payment of fees even higher. These small operations pay a substantially higher percentage of their profit in fees than a large corporation.

The USDA's Food Safety Inspection Service cost-benefit analysis of the Hazard Analysis Critical Control Points (HACCP) regulations for meat processors estimated the cost of regulation at $100 million (Antle, 2000, p. 321). Antle's study estimated much higher costs, finding that HACCP regulations that were 20% effective could increase total variable plant cost by $500 million if plants were already 90% safe prior to new regulations, and up to $5 billion if plants were only 50% safe prior to new regulations (1995 dollars) (Antle, 2000, p. 319). When regulatory costs were calculated as cost per pound of product produced, very small plants were likely to have larger increases in variable costs due to regulation, while impacts are fairly similar for other sized plants (Antle, 2000, p. 320). However, it was also acknowledged that there could

be differences in economies of scale between large and small plants that were not included in the study, so the proportionate costs to small plants could be higher as well (Antle, 2000, p. 320).

Research on the voluntary Leafy Greens Marketing Agreement that was initiated after the outbreak of illness associated with contaminated spinach from California found that compliance costs were significantly higher for small and mid-sized growers when calculated on a per-acre basis. In addition, small to mid-sized growers would be less able to absorb the extra costs per acre and do not have the personnel already in place to implement food safety regulations and the associated administrative costs (Hardesty & Kusunose, 2009, p. 11).

To explain the cost differences for small and large producers, note also that the current food safety regulations were not created to deal with risks posed by small producers, or tailored to be efficient for small producers. Nestle (2003) explores the relationships between the public, food industry, and government to explain our current system of food safety regulation. The government structure is somewhat based on historical accident, with both USDA and FDA split in authority at the federal level, and states filling in the gaps where federal regulation does not preempt state action. In essence, she concludes that it is the conventional food industry that has the greatest influence on food safety regulations, a conclusion that can naturally be extended to state-level food safety regulation as well. The small farmers are only the recipients of regulations that are based on perceived food safety concerns and solutions that are based on large-scale production.

3. Weighing the Costs and Benefits of Regulation for the Direct Farm Marketing Sector

It becomes clear that the cost of risk reduction is not uniform across sectors or sub-sectors of an industry, even while assuming an equal base level of risk from all products

regardless of how they were produced. However, also consider that the marginal cost of reducing pathogens increases as regulations become more stringent. If an industry already had a low level of contamination, reducing the pathogen level any more will incur higher costs for the next unit of pathogen reduction, or the regulation may just be adding paperwork and recordkeeping in an effort to increase transparency. This is one factor that is not quantified for some sub-sectors of the meat industry, such as organics or producer-processed meats.

Some studies have made the case that food safety benefits are a natural outcome of the small producer's value systems and methodology. Nestle (2003) makes the case that recent changes in agricultural practices, such as highly concentrated animal operations that rely heavily on antibiotics, are connected to newer, more virulent strains of bacteria that cause food poisoning (e.g., *E. coli* O157:H7). One recent study tested for *Salmonella* in chickens at both conventional and organic farms, finding that "chickens from the organic farms had a 4.3% rate of *Salmonella* prevalence. The conventional chickens, on the other hand, were affected 28.8% of the time—nearly seven times more" (Vanhoose, 2011). The authors noted that organic chickens have more room to move in the houses, with a lower concentration of animals so the *Salmonella* does not spread horizontally as readily as in conventional practices. But the result was attributed mainly to the absence of *Salmonella* in organic food, while conventional chicken feed contains animal by-products, which is "full of" *Salmonella* (Vanhoose, 2011, citing Alali (in press)). If animals are raised in such a way as to reduce pathogens on the farm, there will be a smaller chance that the finished product contains pathogens (McCrea, 2006, p. 137).

The critical point to evaluate food borne pathogens is in the finished product, where the consumer will be exposed to the pathogens. The conventional US food supply is now more vulnerable to food contamination because of growing dependence on imported food and

continued centralization of food production and distribution (Leavitt Partners & PricewaterhouseCoopers, 2011, p. 2). Various studies have looked at organic versus natural production of many food products, and have found mixed results: some have found that there are no statistically significant differences between conventional and niche products while some have found higher prevalence of pathogens in the niche products (Fox, et. al., 2006, reviewing organic versus natural dairy, swine, poultry and produce; Magkos, et. al., 2006, for organic versus conventional produce). On the other hand, in one case study, a lab test of small-scale on-site processed poultry had fewer bacteria than a supermarket sample (Taylor, 2008). Based on these few studies of different practices, different products, and different sized operations, it is difficult to conclude that organic or natural methods lead to fewer cases of food borne illness in the general population.

Even if we cannot detect significant differences in the rate of food borne pathogens resulting from different production practices, changes in human behavior have also made us more susceptible to food borne illness: we are eating away from home more often, and eating more pre-prepared foods (Nestle, 2003). These considerations may lead to the conclusion that direct farm consumers as a group are less likely to suffer from food borne illness because of lower-volume agricultural practices, decentralized and domestic sourcing of food, and by eating unprocessed, home-cooked foods.

Although there is very little research comparing the safety of conventional foods with direct farm marketed foods, and neither can claim absolute absence of pathogens at all times, we can draw several conclusions from the above studies to illustrate the higher costs of regulation and lower risk of food borne illness in direct farm marketed food from small-scale, local farms. First, there is a lower probability of on-farm contamination due to lower housing densities. Most

direct farm marketers also state a preference for natural or organic practices that are demanded by their consumers. If they are processing on-site or at a niche processor, there are fewer hands involved along the supply chain and a lower chance of cross-contamination. Finally, they are offering less-processed foods that consumers cook at home, which is the final step in eliminating any remaining food pathogens before consumption.

We can also assume that these small producers are facing proportionately higher variable costs per pound of product than conventional producers, and with an already lower risk of pathogens, will face higher costs for further reductions and if regulations require more planning and record keeping procedures. Overall, it seems reasonable to conclude that farm-direct producers will face higher costs with increased regulation, while creating negligible reductions in food borne contamination.

The overall lesson of cost-benefit analysis is to regulate high-risk operations that have low marginal costs of risk reduction. On balance, it is difficult to say with any precision that the benefits of food safety regulation outweigh the costs, either in the conventional or direct farm marketing context. Antle's study of the conventional meat processing industry concluded that "the costs of food safety regulation could plausibly exceed the benefits estimated by FSIS and ERS" (2000, p. 231). If economists question whether the costs justify the benefits in the conventional food industry, there is even a stronger argument that the costs do not justify the benefits when regulation is applied to small direct farm market producers, imposing significant costs and creating barriers for local food (Hardesty, 2010, p. 5).

Even though food borne illness is often (as here) framed as a problem of externalities, the theoretical framework of externalities does not exactly fit the problem of food borne illness. One

definition of externalities illustrates the point: "An externality is a cost or benefit affecting somebody other than those involved in an action or transaction" (Jaeger, 2005, p. 76). Even in Coase's (1960) seminal paper on the topic, the example given was a steel company whose pollution affects the neighboring community, but not necessarily the buyers of the steel (Coase, 1960). When the buyers of the product are faced with the negative externality, they can express their preferences through the market mechanism, paying a higher price for risk reduction. By shifting unit of analysis to the individual food transaction, where the buyers of the good bear the burden of the "externalities," we can also analyze whether there is a Coasian solution to this problem: if attributes of the direct farm marketing transaction exhibit lower transaction costs for acquiring information than conventional food transactions, this could be a situation where parties can bargain to an efficient solution without government regulation. In this way, the risk for food borne illness can be characterized in terms of the individual market transaction made in the face of incomplete or asymmetric information, a different type of market failure within neoclassical economics.

B. A Market for (Safe) Lemons: Incomplete Information on Food Safety

Competitive markets function properly and produce efficient outcomes when consumers have complete information about relevant product attributes and prices. Consumers are then able to signal their preferences for product attributes by their willingness to pay a higher price for that attribute. Nutrition, taste, and safety are the relevant food product attributes today, rather than food availability as in the past (Antle, 1999, p. 605; Magkos, et. al., 2006, p. 23). However, food safety is a product attribute that is not readily discernible by a consumer, except in a few limited circumstances such as mold (which sometimes is not inherently unsafe). Food safety is therefore a credence attribute (Stearns, 2010, p. 248-249). Consumers cannot see, smell or test for

Salmonella or *E-coli* before they purchase a product. They can only evaluate the safety of the food that they purchase through indirect means, such as safety certification labels, producer safety claims, reputation, and individual risk-benefit analysis of food products that are available. Individual experience with particular foods and food sources are also an important source of perceptions about food safety. Therefore, consumers can build up trust relationship with particular foods and food producers, and conversely the reputation of certain foods or food producers can fall from grace through just one high-profile incident of food borne illness.

In this sense, food is an example of a "market for lemons," (figuratively as well as literally, including more than actual lemons). Akerlof (1970) employs a used-car example to illustrate the point that consumers cannot distinguish between a good used car and a "lemon," therefore buyers substitute their impression of all used cars to determine their willingness to pay a particular price for a given used car. This creates an incentive for used car sellers to market poor quality cars, or in our example, risky food. In a modified version of Gresham's Law, the "risky" food drives out the "safe" food because all sells at the same price. Food producers have no incentive to invest in food safety technology to eliminate food risks. Stearns (2010) terms this the "credibility crisis" of the food industry (p. 256).

There seems to be agreement that consumers suffer from incomplete information about food safety. However, there is great disagreement and divergent proposals about how to "correct" this market failure. Demsetz (1969) proposes a valuable framework for analyzing the problem: "the relevant question for society is what real institutional arrangements will be best suited to produce risk reduction" (p. 6). I propose that two very different institutional arrangements exist in the food market today: the conventional food industry, and a small but growing direct farm marketing industry. Because consumers use both institutions to acquire

food, but under very different organizational models, I will explore the implications and solutions to the incomplete information problem for each institution.

1. Remedying Incomplete Information in the Conventional Food Industry

Akerlof suggests two general ways to eliminate the problems created by the market for lemons: (1) government intervention, and (2) private institutions, which include guarantees, brand names, chains, and private licensing or certification (pp. 488, 499-500). In the conventional food industry, we see examples of each of these strategies in play, from FDA, USDA and state regulation of every category of food product to private institutions such as brand names, food chains, and third party certification of food attributes (Stearns, 2010, p. 256-257).

Perceptions of food safety come from many sources and vary for different people, but in general, society receives food safety messages from the media and from government officials, and arguably sees the government and third-party groups as more trustworthy than the food industry (Stearns, 2010, p. 256). Nestle (2003) concludes that the consumer-citizen is ill-prepared to judge the efficacy of the food safety system, so when exposed to media reports of outbreaks of food borne illness and food recalls, consumers simply require that the government is "doing something" and only wants to "feel safe." Hall (2001) criticizes the flow of food safety information and perceptions that move between the public and FDA: "The FDA's priorities are driven more by irrational public fear than by rational appraisal of over-arching public health issues" (Hall, pdf p. 3). The irrationality flows from the public's general lack of knowledge about how food is produced: "It is almost as if the public believes that milk departs a healthy cow hopelessly contaminated with germs. If contamination does happen, it comes from sick cows or after the milk leaves the cow" (Hall, 2001, pdf p. 3). The information flows from both the consumers who want the government to "do something" and the food industry that needs

consumer trust to operate (Stearns, 2010, p. 265-266). However, the only perceived way for consumers to mitigate their food safety risks vis-à-vis the conventional food industry is through government action. Consumers cannot "vote with their dollars" because food safety is imperceptible in the conventional food system. Both consumers and the conventional food industry have worked together to construct our current system of food safety regulation that was created to regulate large-scale, disembedded production, sales, and consumption of food.

Although it has been demonstrated that conventional food consumers suffer from incomplete information regarding food safety and that government regulation is both justified and demanded, we are also painfully aware that the current regulatory system also fails. Stearns (2010) finds that "the market for food, as currently regulated, is in many ways as bad as an unregulated market" (p. 267). He suggests four "core values" of a food safety scheme, whether implemented by the market or through regulation. First, increase visibility to decrease irresponsibility: increased inspections, video feed from inside food plants, or other ways to let the public "in" to food processing facilities will add information to consumer's perception of a food company's reputation (Stearns, 2010, p. 267-269). Second, increase accountability to decrease externalities: shifting liability to one player in the food transaction, such as the retailer, creates incentives to internally certify food safety rather than allowing parties in the supply chain to look the other way on food safety issues (Stearns, 2010, p. 269-271). Third, increase reliability to decrease fraud: creating meaningful food safety certifications will allow consumers to choose between "levels" of food risk, which will also be reflected in the price (Stearns, 2010, p. 271-272). Finally, increase traceability to decrease anonymity: food producers are able to avoid liability for food borne illness if the product cannot be traced back to the source of the

contamination. Traceability has been included in the FDA Food Safety Modernization Act to provide more market incentive for reducing food risks.

We have not yet, nor with we ever, eliminate the risk from food contamination. Preventative regulations and reactive liability rules will never eliminate food safety threats if there is market incentive to under-invest in food safety. Until food producers can profit from safety, food safety risks will remain.

2. Direct Farm Marketing as a Remedy for Incomplete Information in Food Transactions

Direct farm marketing is a small but growing sector of the food industry in the last several years. Advocates assert that one major reason is the public's mistrust of the conventional food industry and government regulation. Although some consumers may be increasingly shifting their food dollars to direct farm marketers, the purpose here is to explore whether there are aspects of the direct farm market that correct the incomplete information about food safety. If the characteristics of the direct farm marketing transaction complete consumer information about food safety as well or better than government regulation, then applying government regulation to the direct farm marketing context may not be justified.

A useful organizing principle is to inquire whether the suggested solutions to the "market for lemons" and incomplete information inherently exist in the direct farm marketing context, thus providing imperfect but reasonably complete information to mitigate food risks. Akerlof (1970) summarizes his inquiry into a market for lemons as exploring "economic models in which 'trust' is important" (p. 500). Key characteristics from his transaction examples include personal knowledge of the character of the other party and easy means of enforcing a contract; in other words "trustworthiness" and "redressibility." One is a preventative measure, and the other is

remedial. Both are described by the concept of "embeddedness," which stresses "the role of concrete personal relations and structures (or 'networks') of such relations in generating trust and discouraging malfeasance" (Granovetter, 1985, p. 490). To further explore whether these characteristics exist in the direct farm marketing context, we can also describe them in terms of Stearns's four "core values" of a food safety scheme: visibility, reliability, accountability and traceability.

a) Trustworthiness: Preventative measures to ensure food safety

On the preventative side, Aklerlof's concept of "trustworthiness" can be created through increased visibility of the food production process and building in reliability mechanisms, as suggested by Stearns. In addition, economic sociology brings in "embeddedness" as another way to describe a trustworthy relationship that Stearns and other commentators do not reach because they are analyzing the conventional food system. The pertinent question is whether the concept of "trustworthiness" adds sufficient information to the direct farm market transaction to mitigate the risk of food borne illness. There are two important dynamics at work: whether there is indicia of trust on the part of the direct farm market consumer, and whether the direct farm marketer is "worthy" of that trust. In other words, does this trust relationship actually result in more care by the direct farm marketer to ensure that the food products are safe?

(1) Embeddedness of the Direct Farm Marketing Relationship

Karl Polanyi (1957) critiqued formal neoclassical economics by noting that "the human economy … is embedded and enmeshed in institutions, economic *and* non-economic" (reprinted in Swedberg & Granovetter, Chapter 1, p. 34). In economic sociology, embeddedness is used to describe a transaction based on social connection, reciprocity and trust. Embeddedness is "often seen as the hallmark (and comparative advantage) of direct agricultural markets" (Hinrichs,

2000, p. 296). However, all markets are more properly described on an embeddedness continuum (Hinrichs, 2000, p. 297). Even transactions that we think of as highly embedded, such as direct agricultural markets, are influenced by purely economic motivations, termed the "marketness" of the transaction. Therefore, high marketness is characterized by a free-market ideal of buyers and sellers setting a price based on supply and demand, where price is the prevailing characteristic of market transactions and is fully "disembedded" from social and cultural. Alternatively, low marketness is characterized by the "embeddedness" of market transactions in social and cultural concerns where participants in the market consider many factors simultaneously, rather than price alone (Hinrichs, 2000, p. 297). Therefore, market participants can choose where they want to locate themselves along the continuum of embeddedness and marketness by choosing their market forums and particular transactions.

The first dynamic to explore is whether consumers perceive the direct farm marketer as offering a unique and safe product, so that they are willing to pay a price premium for the local food and go out of their way to source local foods. Hunt's study (2006) used a customer survey which found that the top reasons to shop at the farmers' market (in order), were freshness, quality, specialty products, and helping farmers. Notably, price was consistently the lowest or second-lowest reason to shop at the farmers' market (Hunt, 2006, p. 59). Although Hunt does not specifically address food safety risks in his study, he stresses that social interactions and trust relationships help economic actors to mitigate risk (2006, p. 55). The study demonstrates that consumer expectations of freshness and quality were central to their decision to shop at the farmers' market, and notably, talking with vendors about seasonal products had a greater marginal effect on consumer spending than consumer household income alone (Hunt, 2006, p. 62). For consumers, shopping at the farmers' market had strong indications of embeddedness.

An ethnographic study by McGrath, et al. (1993) of a Midwestern urban farmers' market identified several themes in the consumer-farmer relationships, such as community, purity, health and personalized service. They found that customers demonstrate loyalty to particular vendors and express more trust in the products that they provide, illustrated by field notes such as: "You know people haven't urinated on your tomatoes, like in Mexico." and "There is a trust here that you don't have in stores" (McGrath, et. al., 1993, pdf p. 17). The interaction between vendors and customers drive the behavior of both: vendors perceive that customers are educated and more interested in quality than in price, and customers see vendors as educators that guide the customers' choices. The study concludes that the market itself is highly embedded, as "its principle function appears to be one of community building" (McGrath, et. al., 1993, pdf pg. 19).

Thilmany, Bond and Bond (2008) found that the trust relationship between producers and consumers creates demand for the "local" characteristic. Consumers believe that they have the power to influence environmental quality and food safety through their purchases. As a result, if farmers want to maintain that consumer confidence and increase demand for their products, they must ensure that they are delivering those characteristics and maintaining consumer trust. The consumers in this study were willing to pay more for these safety-related characteristics of their food, showing that they considered more than price alone when making food decisions (Thilmany, et. al, 2008, p. 1308). The "local" characteristic with its embedded notions of food safety creates expectations for consumers to pay more for the desired qualities and for producers to provide the perceived qualities.

Overall, these studies use varying methods but all find that consumers use non-price characteristics of "local" or direct farm marketed food as information-gathering sources to make their purchasing decisions, including social interactions with direct farm marketers. More

importantly, consumers trust that the direct farm marketers are providing those perceived characteristics; the "local attribute tends to affect demand through enhancement of the trust of consumers" (Thilmany, et. al, 2008, 1308, citing Moser, et. al, 2008). Although price does enter their considerations, from a consumer's perspective the direct farm marketing relationship exhibits low marketness and high embeddedness.

The above discussion demonstrated that direct farm consumers are willing to pay a higher price for their food because they perceive higher quality and safety attributes based on their trust relationship with the direct farm marketer. But the other side of the relationship must still be demonstrated: does this trust relationship actually result in more care by the direct farm marketer to ensure that the food products are safe? Farmers who sell directly to the public will argue that their risk management is more properly based on their relationship to the land, animals, farm products, and ultimately the consumer, particularly if the farmer is selling directly to the consumer, rather than on a relationship to government regulators (Salatin, 2007, p. 336).

Although direct farm marketers have a social and geographical connection to their customers and a personal interest in their customer's interests and needs, Hinrichs (2000) points out that from a small farmer's perspective, a farmers' market transaction exhibits a high degree of marketness (p. 299). Farmers' motivations for selling at the farmers' market rest largely on the price premium in order to make a living wage and continue to farm. Hunt's (2006) survey indicated that the most important motivation for vendors at a farmers' market was to have a direct relationship with consumers (62%) with "more profits at farmers' markets" a second motivation (26%) (p. 59). He does note that no attempt was made to determine if the direct relationship was desired for social or economic reasons (p. 59). Of course, to stay in business a

farmer must maintain his or her customer base; therefore, maintaining highly embedded social ties with customers may serve purely economic goals. Related research that surveyed representative markets found that almost 80% of vendors obtained business experience and improved their customer relations skills as a result of participating in the farmers' market, compared to other marketing outlets (Brown & Miller, 2008, p. 1298, citing Feensta, et. al., 2003). Hunt (2007) also found that farmers felt that interaction with customers improved their overall product visibility (58%) and "farmers (41%) changed their products due to consumer demand, demonstrating that there is direct customer feedback for farmers" (p. 60). More telling, each additional year that a farmer participated at the market was found to increase farmer income by 7.6% (with an effect of diminishing returns reducing income by 0.3% per each additional year squared at the market) (Hunt, 2007, p. 61). One could conclude that there is a cumulative economic benefit to maintaining long-term social ties through market interaction and being responsive to consumer demands, among other factors.

But that is not to say that the social ties are not genuine, or that direct farm marketers are not engaged in embedded economic transactions. Instead, it is the very possibility that farmers' economic actions can be pushed by the social ties of trust and human relationships that provides evidence that direct farm marketing is an embedded transaction. Furthermore, maintaining economic considerations in the relationship is crucial to concluding that farmers are motivated by customers' demands. If direct farm marketing transactions were fully embedded, where price and quality are not considerations in the transaction, then farmers would not be beholden to provide high quality, safe food at the "local" price premium. If direct farm marketers could be assured that customers would return regardless of price, quality and safety, we could not conclude that the direct farm-consumer relationship could mitigate food safety concerns.

Although direct farm marketers seem to be higher on the marketness and lower on the embeddedness continuum than consumers, this seems appropriate in context. As Hinrichs (2000) observes: "Social ties, personal connections, and community good will are often appropriately seasoned by self-interest and a clear view of prices. It is true that too much … marketness can sour the embedded market. But a dash of … marketness might well ensure a more substantial, nourishing meal" (p. 301).

The relationship between a direct farm marketer and the consumer is an essential component to understanding mitigation of food risks. From both the consumers' and the direct farm marketers' perspective, the farmers' market transaction is embedded in the social fabric of the community while appropriately retaining a degree of marketness. If the market is appropriately embedded in social interactions and trust relationships, economic actors can mitigate risk without additional government intervention. If consumers trust that direct farm marketers are using appropriate food handling techniques and direct farm marketers feel accountable to consumers through social ties and economic pressure, government regulation adds nothing to the perception or reality of food safety.

(2) Increase Visibility to Decrease Irresponsibility

This concept of the embeddedness and trust that is built into the direct farm marketing context speaks to Stearns' (2010) food safety prescription to increase visibility as a way to decrease irresponsibility (p. 267-269). When the person that handles the food is visible, the consumer can form judgments about the person's level of trustworthiness and responsibility. The consumer can ask questions and gauge the amount of knowledge that the direct farm marketer possesses about the product and production process. It is also common for direct farm marketers to invite consumers to the farm to view the land, animals, and production processes. Even though

every consumer will not to go such great lengths to verify the messages sent by the direct farm marketer, even the invitation implies that some consumers have personally verified the information. Economic sociology has developed a social structures approach to market creation and persistence that postulates the importance of social contacts and networks of relations in relaying market information to individual consumers and producers (Odorici, 2004, p. 152). Personal verification is not a prerequisite to obtaining complete information about product attributes in any market. It is true that some direct farm marketers have been exposed as frauds (Etter, 2010), but because of the small scale of the operation, absence of a long supply chain for the end product, and increased opportunities to verify the veracity of the representations, there is an increased chance of exposing the fraud and irresponsibility. In addition, the true direct farm marketers have an incentive to expose fraudulent sellers to protect their price premium and avoid the consequences of "the market for lemons." The possibility of reaping higher profits in a direct farm marketing context will draw in fraudulent sellers, but if there is a high chance of exposure, we could expect fewer people to attempt such fraudulent actions. Furthermore, organizations such as farmers' markets provide an additional level of quality and source control, as discussed below. The various ways that the direct farm marketing transaction and institutions increase visibility seems to decrease irresponsibility both on the part of individual direct farm marketers, and within the aggregate direct farm market.

One way that firms can increase their visibility and signal to costumers that they take responsibility for their products is to create brand names, as suggested by Akerlof (1970, p. 499-500). Firms use the brand name as a signal for ongoing reputation, while the reputation of brand names can be hurt by just one high-profile incident of food contamination. However, direct farm marketers do not have to create an artificial "brand" to achieve this affect. It is inherent; there is

no distinction between the person and the fictional "firm" in the direct farm marketing context. It is even more trustworthy than building a "brand name" as suggested by Akerlof (1970, p. 499-500). If the product is defective, the consumer can go back to the source. Through their repeated transactions with direct farm marketers and their social networks, consumers build up a reputation for the producer's products and practices.

(3) Increase Reliability to Decrease Fraud

This concept of trustworthiness can also be characterized as increasing reliability to decrease fraud as preventative measures to ensure food safety (Stearns, 2010, p. 271-272). Specifically, Stearns is suggesting certified safety labels for the conventional food industry, which he sees as a role for the government. The certification process would justify a price premium, as in the certified organic market. But as we have already seen, direct farm marketed food already carries a price premium, which implies some kind of unofficial certification process for multiple product attributes is present in the mind of the consumer.

In a sense, the farmers' market itself can act as this kind of third-party certifier. Studies have considered the importance of intermediary actors "who act as brokers between supply and demand" (Odorici, 2004, p. 150). Some intermediary actors give explicit information about quality by sampling and ranking products, as in the wine industry (Odorici, 2004). Farmers' markets do not make such qualitative decisions, but nonetheless establish structural conditions that constrain decisions by both sellers and buyers of direct farm products: most markets have internal rules that require vendors to be local (as defined by the market), allow a maximum level of consignment or resale products, and require vendors to have any necessary government licenses and liability insurance (Speier & Krueger, 2006). Even if consumers are not consciously aware of the internal market rules, they perceive that the farmers' market provides the organized

structure of an institution that is reflected upon the vendors themselves. The farmers' market is not directly selling food, but as with a brand name or a chain store, may be sending the message of an "average quality" of goods that are qualified to be sold at the farmers' market, as differentiated from the "average quality" of foods sold in the conventional food market (Akerlof, 1970, p. 500). Indeed, supermarkets and other food processors have attempted to co-opt the "farmers' market" label and its associated messages, to the protest of farmers' markets, their loyal customers and advocates of local food (Radil, 2010; Wingfield, 2010).[4]

Even if consumers are unaware of the exact requirements placed on farmers' market vendors, the market acts as an intermediary and substitutes for some forms of personal social networks, providing more information to the consumer's food purchase decision (Odorici, 2004, p. 150). This is a plausible explanation for the price premium for produce at the farmers' market as well as mitigation of food safety risks. When sellers subject themselves to the market structure, this creates "important implications for the management of products' quality, which implies not only investing in the production process but also positioning products with respect of [sic] different definitions of quality, and managing relationships with intermediary actors" (Odorici, 2004, p. 151). Indeed, when direct farm marketers choose to join the market, they also become invested in enforcing the market's rules for other vendors (*see* Etter, 2010). Even if the management of the market is run on a shoestring budget, the other vendors support the institution to protect their own indicia of trustworthiness and the perceived higher "average quality" of farmers' market products as compared to the conventional food industry.

Critics point out that separate markets and tiers of food that demand a price premium create a disadvantage for those who are unable to pay the premium, leaving the "safe" food for

[4] Examples of "farmers' market" brand names: Sunflower Farmers Market (http://www.sfmarkets.com/), Farmer's Market (http://www.farmersmarketfoods.com/)

the rich and the "risky" food for the poor (see Allen, 2004, p. 110-111). Although this brings up a valid equity issue, there is social value in providing a safer alternative for people who are willing to pay for it. Setting low uniform standards leaves vulnerable populations at risk for food borne illness, but allowing for a higher standard of food safety allows some members of the population to decrease their personal risk of food borne illness, improving "both consumer and producer welfare since individuals that prefer higher quality products can tailor their consumption to accommodate their preferences and producers can extract rent from providing these higher quality items" (Graff Zivin, 2006, p. 2). Sensitive populations, such as families with small children, the elderly, and people with compromised immune systems, reportedly make up 20% of the US population, and this proportion will grow as the baby boomers age (Graff Zivin, 2006, p. 1). Creating a "safer food" option will deliver social benefits, although the value of those benefits will depend on many variables such as the distribution of food borne illness vulnerability, consumers' perception of risk, and the distribution of food borne health risks. Graff Zivin (2006) examines many scenarios, finding that when the majority of consumers choose the food produced under the lower quality regulatory tier and underestimate their risk level, the benefits from multi-tiered approach to food safety are the greatest (p. 3). In any case, "the establishment of multiple standards can be viewed as a tool to improve the efficiency of a market characterized by asymmetric information. Absent a clear quality signal, firms have little incentive to invest in improving their products and the heterogeneous consumer class is forced to consume goods that just satisfy minimum quality standards" (Graff Zivin, 2006, p. 2).

Can we expect a "market for lemons" to develop in the direct farm marketing context? Should risky food creep into the direct farm market? To illustrate the question, we will use the

farmers' market context to analyze the "market" for direct farm products: a place where sellers and buyers can come together and observe prices and other relevant product attributes, including food safety indicators. If product quality information is missing, Akerlof (1970) predicts that if individual vendors allow food safety to fall, consumers will associate bad quality with the farmers' market and the market will shrink or fail. Thus far, all metrics indicate that farmers' markets have grown dramatically in recent years in both size and number (see above). Although many still fail, a study of farmers' market failures does not list low quality or food safety as reasons for market failure. Rather, there are various reasons that markets seem unable to establish an institutional presence, such as a low supply of products and inability to maintain administrative functions (Stephenson, et. al., 2008), suggesting the importance of the institutional aspects of farmers' markets for their functioning. Supporting that conclusion, Hofmann, Dennis and Marshall (2008) found that a market established by community members for the purposes of economic development was likely to be larger (by 135 customers) than an identical market organized by farmers alone (p. 10-11). The hypothesized reasons for this difference were related directly to managerial experience and strength. When organized by civic or government groups, the market manager would be more likely to have expertise in marketing, as opposed to a farmer organized market that would not emphasize the institutional aspects of the market itself (Hofmann, et. al, 2008, p. 14).

The argument could also be made that consumers don't just buy from "the farmers' market," they buy from individual vendors and develop loyalties, reputation and trust. Consumers are not forming judgments based on "average" quality at the farmers' market—instead they are forming judgments about the particular quality of the vendor. Indeed, researchers have found that "personal interaction with producers at markets may make the need

for third-party certifications, like the USDA organic seal, less important" (Thilmany, et.al., 2008, p. 1305). If the vendor's food quality and safety is found to be lacking, either through general appearance or a bad experience, that vendor's reputation will suffer. In direct farm markets comprised of individual transactions that are based on trust, it is less likely that a "market for lemons" will develop.

b) Redressibility: Remedial measures to ensure food safety

Akerlof's (1970) second proposal for avoiding the "market for lemons" is redressibility, or easy enforcement if one side of a transaction fails to live up to his side of the bargain (p. 499). In the food safety context, one basic assumption of a food transaction is that it is safe to consume. If a consumer finds that a food product is unsafe (usually an unpleasant surprise), the consumer is able to seek compensation if the food contamination originated with the producer. Stearns (2010) suggests two ways to make it easier to impose liability for food borne illnesses in the conventional food industry: creating a simpler system of accountability through tort law reforms and increasing the traceability of contaminated food. If imposing liability for food borne illness is easy, it creates a deterrent effect, such that the food producer invests more resources in ensuring that the product is safe to eat (Resende-Filho, 2008, p. 2-3).

In the context of the industrial food system, a long supply chain with little accountability at each step encourages firms along the chain to "look the other way" on food safety issues because it is unlikely that an outbreak of food borne illness could be attributed to their part of the process. It is expensive to monitor the food safety of other upstream firms, in addition to being impossible to verify with the basic senses of sight, smell or taste (Resende-Filho, 2008, p. 2). The UK's 1990 Food Safety Act is a model for tort reform in the food safety context, by assigning retailers primary responsibility for food safety (Stearns, 2010, p. 255). In reaction to

their potential liability, some retailers have taken steps to demand quality assurance from their suppliers all along the supply chain and have created product traceability programs (Stearns, 2010, p. 255). In the direct farm marketing context, this is already the status-quo. The very definition of the direct farm marketer is that the grower is the retailer. If there is an additional processing step, it is either done by the grower or by a third party, but in any case the direct farm marketer is the final retailer. From the customer's perspective, there is little ambiguity about who is responsible for food borne illness. Therefore, there is no problem with accountability in the direct farm marketing context.

Furthermore, the direct farm marketer is also acutely aware of her own potential liability. Government agencies, small and direct farm organizations and legal advisors recommend that direct farm marketers get product liability insurance (see, e.g., Hamilton, 1999, chapter 4 (Farmers' Markets), chapter 10 (Insurance and Liability)). Internal rules at farmers' markets may require vendors to show proof of liability insurance before securing a place at the market (Speier & Krueger, 2006). Institutions that buy farm direct products may also require producers to show proof of liability insurance. This highlights the awareness that the direct farm marketer is ultimately responsible for contamination of their products.

Traceability is the second component proposed by Stearns, and increased traceability measures have already been incorporated into the FDA Food Modernization Act (2011). Although traceability does not directly impact food safety investments by firms, it "makes it possible to identify the source of food safety problems with some chance of success, reducing anonymity. Hence, traceability may mitigate suboptimal results due to asymmetric information amongst buyers and suppliers by allowing for the use of explicit and implicit incentives along the food supply chains" (Resende-Filho, et. al., 2008, p. 3). In studies based on the conventional

food system, traceability is characterized by the probability of pinpointing the source of contamination in the final food product. The studies seeking to model the success of traceability have to build in probabilistic terms for several actors along the chain. However, in the direct farm marketing context, the origin of the contamination is much more certain, as the food has not changed hands and changed forms several times along a supply chain. Small direct farm marketers also understand how to ensure food safety within the context of their operations and because they directly participate in the farm operation, they personally prevent contamination of their products (Hall, 2001, pdf p. 1).

When a direct farm marketer sells her product to a consumer, a bargain is struck such that the consumer pays a price (usually at a premium) for a product that is safe, nutritious, and delicious. If the direct farm marketer fails to deliver on a product attribute such as safety, the consumer has the right to hold the direct farm marketer accountable under tort law. The direct nature of the transaction makes it much easier to hold the direct farm marketer responsible because accountability and traceability are inherently present. This basic relationship is widely understood to decrease anonymity and increase responsibility in all manner of transactions, and serves to reinforce the relationship and ensure that the producer is providing a safe product.

Regulating the direct farm marketing of food may make sense if the regulation adds to consumer information about food attributes, but I would argue that the characteristics of the direct farm marketing transaction provide substantial additional information and that additional government regulation adds little more. This information from one's own dealings (and the one's social networks) is "better" information than generalized notions of food safety based on government regulation because:

> (1) it is cheap; (2) one trusts one's own information best—it is richer, more detailed, and known to be accurate; (3) individuals with whom one has a continuing relation have an economic motivation to be trustworthy, so as not to discourage future transactions; and (4) departing from pure economic motives, continuing economic relations often become overlaid with social content that carries strong expectations of trust and abstention from opportunism (Granovetter, 1985, p. 490).

Even though we would prefer to live in a world of absolute food safety, that lofty goal will never be achieved via regulation or the free market. With or without government regulation, food safety information can never be complete because it is a credence attribute, and "while social relations may indeed often be a necessary condition for trust and trustworthy behavior, they are not sufficient to guarantee these" (Granovetter, 1985, p. 491). If the direct farm marketer does not exhibit trustworthy behavior, the reputation of that seller will fall in the eyes of the direct consumer and their social network. In addition, the tort law system provides a back-up mechanism to rightly place liability on the direct farm marketer for food borne illness.

There is a valuable argument that government must limit involuntary exposure to unacceptable risks, and voluntary risk-taking requires reasonably complete information to make individual choices. The personal risk-benefit analysis in food choices properly lies with the consumer, who has gathered information about particular choices from the government, media, social networks, and personal experience. Some studies have even termed direct farm marketed food as "credence-differentiated food products" (Thimany, et. al, 2008, p. 1308). Consumers can both evaluate their own susceptibility to food risks and take the final steps in safe food handling before the food moves to the plate. Consumer sovereignty recognizes that there are everyday tradeoffs between product safety and price (Graff Zivin, 2006, p. 2).

Recognizing that consumers have less uncertainty about the production practices of direct farm marketed products, "a substantial level of perceived (quasi)-public goods production can occur even in the absence of government regulation" (Thilmany, et. al, 2008, p. 1304), The

benefits of the direct farm marketing relationship can flow both between consumer and producer, and create other positive externalities or quasi-public goods that flow to the rest of society.

C. Indirect Benefits of Direct Farm Markets: Provision of Public Goods

Although economic justifications for government regulation are valuable and persuasive, only thinking about regulation in economic terms is a type of "category mistake" (Breyer, 2002), p. 11-12). Policy choices are understood as a forum where society through government "legitimately engages in a degree of preference-shaping" (Breyer, 2002, p. 12). Supporting direct farm marketing of food can be seen as a policy choice intended to achieve the direct and indirect policy goals of society. Indeed, agricultural law scholar Susan Schneider (2010) calls for a reformation of agricultural law, shifting from an institution that supports commodity farming to an institution that supports the production of healthy foods in a sustainable manner. In doing so, "[t]he new food-focused agricultural law must incorporate support for the production of healthy foods, a food policy that assures the safety of those foods, and the ready availability of healthy foods to all segments of society" (Schneider, 2010, p. 948). All three prongs provide reasons to support small local and regional farms, and a strong direct farm marketing sector.

Moreover, an analysis of changes in direct farm marketing regulation would be incomplete without a look at the dynamic role of institutions in the process. "Institutions are a creation of human beings. They evolve and are altered by human beings; hence our theory must begin with the individual" (North, 1990, p. 5). Now the foundation for individual interactions in the direct farm marketing context has been built, we can move on to examine the structural impacts of the current economic and policy institutions on direct farm marketing, and in turn how the direct farm marketing sector has the potential to impact existing institutions. Finally, I

examine the dynamic relationship between the current economic and legal institutions and the direct farm marketing sector.

1. Structural Burdens on the Direct Farm Market Sector

Farming is an inherently risky business; weather, commodity prices, costs of inputs and technology, interest rates, government regulation, land prices, and foreign and domestic competition all combine to affect a farm's success each growing season. In addition to economic forces and natural forces, federal policy has supported the notion that "bigger is better" in the agricultural industry for the last century. The number of farms in the United States has plummeted from more than 5.6 million, with an average of 215 acres per farm in 1950 (USDA National Agricultural Statistical Service [USDA NASS], 1964, p.1) to just over 2.2 million farms, with an average of 418 acres per farm in 2010 (USDA NASS, 2011, p. 5). As much as 75% of all agricultural production occurs on large-scale family and non-family farms (Schneider, 2010, p. 944). Just looking at changes from 2009 to 2010, there are some interesting dynamics. Farm numbers in the lowest sales class ($1,000-$9,999) actually increased 0.1 percent, to 1.23 million farms. As might be expected, farms in the highest sales class (over $500,000) increased by 1.6 percent, to 126,720 farms (USDA NASS, 2011, p. 5). Higher commodity prices and sales value contributed to changes in the number of farms within these sales classes. Meanwhile, land in farms increased in the largest sales class while decreasing in all other sales classes (USDA NASS, 2011, p. 5). Although many of those changes are in line with the general trend in agriculture, considering federal subsidies for commodity crops and sustained USDA extension service promotion of economies of scale and technology-based industrial farming, there is some evidence that smaller farms run by part-time farmers is on the rise (Schneider, 2010, p. 944).

Whether that trend continues will depend on natural and economic forces generally, but particularly on government agricultural policy. Federal policy, state policy, and research institutions such as land grant universities have emphasized volume production, but small farmers are seeking to maximize value per acre, rather than yield per acre (Hunt, 2006, p. 55; Hardesty, 2010, p. 2). The willingness to pay literature has shown that there is consumer demand for the products produced by these small farmers, and the economic research has emphasized the characteristics that farmers must provide to capitalize on those consumer dollars (Hunt, 2007; Darby, et. al., 2008).

There are many reasons why small alternative farms can't compete in the conventional or organic retail food markets: contract issues, space and delivery preferences, the cost of organic certification and various government regulations (including food safety), and more (Hardesty, 2010, p. 2). The market consequences of the shift to industrial conventional agricultural production means that large retail outlets are not willing to accept products from small-scale operations who cannot promise to deliver large quantities at regular times (Gwin & Hardesty, 2008, p. 15). Large retailers may also be unwilling to accept many small deliveries for logistical reasons, in addition to dealing with non-uniform products that have a short shelf life (Gwin & Hardesty, 2008, p. 15 (regarding meats); Masumoto, 1995 (regarding fruit); Lev, September 12-15, 2007). Some small farmers have reported selling to large local retail food outlets in the past, but after a bad experience (such as refusal to accept a delivery when no formal contract existed), they shifted to a direct farm marketing strategy (Lev, September 12-15, 2007). A shift to large-scale production also has left few small-scale meat processors or butchers, creameries, or other value-added food processing facilities in rural communities (Hardesty, 2010, p. 2; Hunt, 2006, p. 55; Lev, September 12-15, 2007). Some small farmers are determined to use sustainable methods

at higher costs than conventional methods, or raise heirloom varieties that are not welcome in the conventional retail food market (Masumoto, 1995). Hall's (2001) case study of a small dairy farm and cheese maker concludes that the one-size-fits-all nature of food safety rules was developed for large operations with different food safety risks, and disproportionately impacts the bottom line of small operations. "The key to survival for a small [] farmer lies not in competing with the giants, but in becoming a niche farmer" (Hall, 2001, p. 1).

Those small farmers who perceive their niche and have the entrepreneurial skills have taken advantage of the market for their farm direct products. However, it has been postulated that the rate of entry into the market "may be economically suboptimal if there are barriers to entry" (Hunt, 2006, p. 55). The size of the direct farm market economy may be suboptimal not just from an economic perspective (that there is more demand available than supply), but because the optimal level of indirect public goods supplied by the direct farm marketing sector is also not achieved due to these institutional and infrastructural barriers to entry.

2. *Public Goods and Positive Externalities of Direct Farm Marketing: Generating Benefits to Society*

In a world of economies of scale and global food markets, small-scale farming and direct sales to consumers have been touted as a way to reduce the environmental impact of food production; enhance rural communities through job creation, farmer support, and retention of local dollars; secure the food supply from political, economic, and environmental vulnerabilities, bridge urban-rural differences, and preserve agricultural open space (See, e.g., Onozaka, et. al., 2010; Hardesty, 2010; Darby, et. al, 2008; McGrath, et. al, 1993; Hunt, 2006, Brown & Miller, 2008; Thilmany, et. al., 2008). Schneider (2010) suggests that small-scale direct farm marketing can contribute to three elements of healthy and sustainable food production: (1) production of

healthy food, (2) food safety via safe and sound production practices, (3) connecting healthy food to consumers (p. 948-956).

Direct farm marketing produces healthy food. The bulk of the products at any farmers' market in the US are unprocessed or minimally processed fruits and vegetables, the very things that are consistently absent in the American diet (USDA Food and Nutrition Service, 2010, p. 1). A national survey of 1,052 shoppers found that the vast majority (82%) had bought locally grown fresh produce, and also reported that "proven health benefits" was assigned the most important factor for buying fresh produce (Onozaka, et. al, 2010, p. 2). Most consumers in that survey also indicated that local produce is perceived as superior in freshness (~70%), quality (~60%), food safety (~50%), and nutritional value (~50%) (Onozaka, et. al, 2010, p. 3). Consumers go to the farmers' market for the purpose of buying this healthy food (Darby, et. al, 2008, p. 485; Thilmany, et. al, 2008, p. 1305; Hunt, 2006, p. 59). For all consumer groups in Hunt's study, 94% of the "lifestylers" group, 89% of the "seasonal shoppers" group, and 100% of the "utilitarians" group bought vegetables at the farmers market, while freshness was the most important reason stated for shopping at the farmer's market for all groups (Hunt, 2006, p. 59, Table 2). People perceive that the produce at the farmers' market is fresher and tastes better than food shipped long distances to reach a supermarket, and nutritional tests show that produce that is consumed shortly after harvest retains more nutrients than produce that is not consumed soon after harvest (Schneider, 2010, p. 950). In addition, the focus on high-yield and long shelf-life varieties of fruits and vegetables has resulted in a reduction in nutrition content over the last fifty years (Schneider, 2010, p. 950). Direct farm marketers and their customers show a preference for fresh produce and heirloom varieties with unique taste and high nutritional content (Hunt, 2006, p. 59; Hinrichs, 2000, p. 297; Brown & Miller, 2008, p. 1298 (discussing studies of CSA

members)). Delivering more of this type of produce to America's plates is in the national interest in an era of an obesity epidemic (USDA Food and Nutrition Service, 2010, p. 2-4).

Healthy food is also safe food and the main focus of this paper. Looking at society's interest in supporting various agricultural practices, conventional industrial-style food production leads to externalities that are not well quantified in the cost-benefit analysis discussion above. Concentrated livestock operations result in public health concerns beyond individual instances of food borne illness, including:

> …the high rate of pathogens, the potential for transmission of pathogens for animal to animal and from animal to human, the development of particularly virulent pathogens, and the development of pathogens that are antibiotic resistant…particularly when the antibiotics used are those needed for combating human disease and infection, serious public health issues are raised (Schneider, 2010, p. 952-953, citing Pew Commission, 2008, 13-16).

As one antidote for food safety concerns, Schneider suggests that strong government regulation of food safety should be scaled appropriately for small farming operations and regional food processing centers, which are "key to achieving better food transparency, higher quality products, and better connections between consumers and their food" as argued above (Schneider, 2010, p. 951). Economists have found that consumers value these quasi-public attributes of food production processes, ascribing a higher value to claims of "no hormone" and "no antibiotic" on natural meat than claims of "organic" (Thilmany, Umberger, & Ziehl, 2006). Studies looking at environmental and food safety attributes have found that consumers are not acting only on their self-motivated interest when evaluating their food options, but also incorporate an altruistic aspect, such as reducing the external consequences of heavy antibiotic use and confined animal operations that contribute to larger public health problems (Thilmany, et. al, 2008, p. 1304). Whether these consumers are *actually* making an appreciable difference in environmental or

food safety quality, they are demonstrating that they place a value on these overarching public health aspects of food production.

Direct farm marketed food is also a means to connect healthy food to consumers (Schneider, 2010, p. 952-954). In an America that battles both obesity and food security, agricultural policy must support getting the healthiest, safest food to consumers at a reasonable price. Consumers with the means now have access to direct farm marketed food that is healthy and safe, but there are ongoing government projects that attempt to connect the most needy with this outlet for healthy food (USDA Food and Nutrition Service, 2010, p. 7-10: Supplemental Nutrition Assistance Program (SNAP, formerly known as Food Stamps) can be redeemed at farmers' markets, with some matching grants available to increase funds for fresh produce; USDA Food and Nutrition Service, 2010, p. 14: WIC Farmers Market Nutrition Program, which provides WIC participants with funds to be used at farmers markets)). However, direct government support of direct farm marketing and indirect support such as lowering barriers and costs for direct farm marketers would also help the industry grow and keep down prices for consumers. Citing local food outlets closer to low income neighborhoods is also an important policy choice, as studies have implied that transaction costs, including transportation and timing, "may play a significant role in the decision to 'go local' or not" (Thilmany, et. al, 2008, p. 1307; Lev, September 12-15, 2007).

There are other indirect positive externalities associated with a strong local direct farm marketing sector, which is recognized by consumers as well. Onozaka's (et. al., 2010) national survey of over 1,000 consumers (82% of whom had bought local produce) found that the most important factor for buying local food was "proven health benefits," but that public attributes dominated the next 3 factors: "supporting local economy," "farmers receiving fair share of

economic returns" and "maintaining local farmland" (p. 2). One willingness to pay study concluded that "consumer demand does indeed exist for locally produced foods and that this demand is independent of other attributes that are often naturally associated with locally produced foods such as greater freshness and affiliation with 'less corporate' production" (Darby, et. al, 2008, p. 485).

Thilmany, Bond and Bond (2008) studied a consumer's maximum willingness to pay for a melon identified as "locally produced and sold direct by producer." Respondents were asked to explain their "local" premium as either "economic support for agriculture and the community," "relationships with perceived produce quality and safety," "relationship with land and environmental benefits of local farms," and "minimizing food miles/energy dependency." Some types of consumers (the groups called "Urban Assurance Seekers" and "Quality and Safety Consumers") believed that there was a correlation between direct farm sales and pesticide-free methods, safety, and organic production (Thilmany, et. al, 2008, p. 1305). For the pooled model, "economic support for agriculture" and "relation with land and environment" were the two public good dimensions of local foods that were significant at the 1% level (Thilmany, et. al, 2008, p. 1307, Table 1). Hunt (2007) found the largest segment (72%) of the surveyed farmers market consumer population to be "lifestylers," who had the highest level of concern for non-productions aspects of the direct farm marketing purchase. They valued visiting farms, talking with vendors, supporting agricultural space and rural landscape (p. 57; Table 1).

Beyond the stated reasons for buying direct farm products, Onozaka, et. al., (2010) also measured "perceived customer effectiveness," to determine the degree to which consumers believe that their choices are actually making an impact on producing the public goods that they value (p. 4). Interestingly, they found that "consumers who primarily shop in direct

channels…report stronger influences from people in their life, stronger belief that their actions matter, and higher perceived availability of local food, when compared to non-direct shoppers" (Onozaka, et. al., 2010, p. 4). This difference was also detected between "niche" market shoppers, such as natural food markets and direct marketing, versus supermarket shoppers. The researchers conclude that the greater transparency between buyers and sellers and the ability to track progress on outcomes, such as the strength of the local economy, explains the differences in perceived consumer effectiveness (Onozaka, et. al., 2010, p. 4). As discussed above in the context of the direct farm marketing relationship and embeddedness, "the confidence consumers associate with certain venues to achieve both private and public outcomes is affected by the opinion of peers, which often instills trust in a product or product attribute" (Onozaka, et. al., 2010, p. 4). The same mechanisms that instill confidence in food safety attributes are reinforced by the public good attributes of direct farm marketing. McGrath, et al. (1993) concludes that the farmers' market should be examined as a public policy tool to support the local farming community and to re-connect urban dwellers with the natural world and their own community (pdf p. 19).

A review of the literature by Brown and Miller (2008) documents several studies that measure the real impact of farmers markets on local economies and support for farmers, two of the most important reasons that customers cite for shopping at farmers' markets. Impacts on local economies found that market shoppers spend between $4,400 and $38,400 outside of the market on a single market day in Oregon (Brown & Miller, 2008, p. 1296, citing Lev, Brewer & Stephenson, 2003). Studies on total annual market revenue in Maryland yielded $192,000 and indirect economic benefits of $307,249 from the market alone, and almost $1 million in benefits for neighboring businesses (Brown & Miller, 2008, p. 1296-7, citing Myers, 2004). A 2001 study

in Oklahoma estimated total statewide impact of $1.9 million and 795 jobs generated by farmers markets (Brown & Miller, 2008, p. 1297, citing Henneberry, et. al., 2008). Iowa farmers markets generated an estimated $31.5 million in economic impact statewide, including 471 full time jobs generated from direct and indirect impacts Brown & Miller, 2008, p. 1297, citing Otto and Varner, 2005). A 2008 study by Hughes calculated statewide impacts of farmers markets, but also netted out estimated negative impacts on other food stores, truck transportation, wholesale trade, and garden stores. Even considering the diverted economic activity, farmers markets still generated a $1.075 million positive net impact on the West Virginia economy, creating 43 additional full time jobs (Brown & Miller, 2008, p. 1297, citing Hughes, et. al, 2008). The research shows that farmers' markets are indeed generating the additional public goods that are important to consumers, reflecting an important feedback mechanism for consumers to continue to grow their demand for direct marketed farm products.

In light of these public benefits, food localization appears to be a promising policy objective in its own right, and consumers are "voting with their dollars" for these public goods (Onozaka, et. al., 2010, p. 4; Thimany, et. al, 2008, p. 1303-1304). Fostering the direct farm marketing sector seems like a natural complement to efforts to preserve farmland and local economies (Onozaka, et. al., 2010, p. 4). The direct farm marketing advocates are also using their political strength to see support for local foods enacted through the formal legislative process and legal institutions.

3. Direct Farm Marketing as a Movement to Transform Farm Policy into Food Policy

An analysis of regulation in the direct farm marketing context is incomplete without recognizing the role of organizations and institutions. The change in the direct farm marketing sector has come about through a dynamic interface between the individual farmers and individual consumers, organizations of direct farm marketers and organizations of consumers, and their relationship to established institutions of the conventional food system and legal institutions. The economic growth in direct farm marketing would not have been possible without the interactions between all of these levels, and the continued growth of direct farm marketing will be dependent upon the evolution of the organizations and institutions that are affected by the changes.

In response to the negative externalities associated with conventional agriculture and food production, just one of which is food safety issues, scholars have documented the rise of the sustainable agriculture and community food movements, collectively called the alternative agrifood movement in the US (Allen, 2004, p. 52; *see generally* Schneider, 2010). Out of this movement have evolved a number of organizations, such as farmers' markets and direct farm marketing, which could be described as "new social forms" or "organizations." North (1990) formalizes the concept of organizations in economic theory:

> [Organizations] are groups of individuals bound by some common purpose to achieve objectives, … created with purposive intent in consequence of the opportunity set resulting from the existing set of constraints (institutional ones as well as the traditional ones of economic theory) and in the course of attempts to accomplish their objectives are a major agent of institutional change (p. 5).

As discussed above, direct farm marketing was formed as a "niche" opportunity to take advantage of discontent with the externalities of conventional food production, in response to the opportunity to capture "local" consumers' dollars and as a reaction to constraints placed on small farmers such as an inability to contract with conventional food retail businesses. Farmers'

markets also formed in response to the same set of opportunities and constraints as an organizational structure for both direct farm marketers and consumers to gather for economic, social, and political purposes. Farmers' markets and direct farm marketers have created viable alternatives to the conventional food system in response to the inability of small alternative agriculture to compete with large conventional or certified organic farms in conventional wholesale or retail food sales. And the alternative agrifood consumers have met the alternative agrifood producers in the middle, creating a tremendous boom in the direct farm-marketing sector (Allen, 2004, p. 71). The creation of new social forms or organizations is considered one of the most effective ways for social movements to create change in society (Allen, 2004, p. 52 (citing Kloppenburg, et. al, 1996, p. 38)).

Now that we can convincingly argue that direct farm marketers have "hollowed out" a small but symbolically significant space in the US food system, we see the next step suggested by Allen (2004): "'succession'—forming new relationships that slowly move the old food system to a new one. This gradual approach of developing new agrifood institutions outside the traditional system has been a major thrust of contemporary alternative agrifood movements" (p. 52). The story of forming these new relationships reflects that institutional change is complex because the changes at the margin result from changes in (1) informal constraints, (2) kinds and effectiveness of enforcement, and (3) laws and regulations (North, 1990, p. 6). For example, informal constraints such as consumer preferences and shopping habits have changed enough to support a growing direct farm marketing industry. Irregular enforcement of laws and regulations that apply to direct farm marketing have at times allowed direct farm marketing to grow, while threats of future enforcement or reinterpretation of laws have spurred political action by direct farm marketing advocates. Finally, Oregon's direct farm marketing sector is now pushing for

laws that not only fit their operations, but that also recognize some of the positive externalities that arise from the relationship between direct farm marketers and consumers. Direct farm marketers are now using their perceived power and influence to change the law, the ultimate embodiment of society's formal institution.

III. Searching for a Regulatory Structure: Oregon Crafts Food Safety Laws for Direct Farm Marketing

One of the main points that has been made by direct farm marketing advocates in recent years is the perception that farmers' markets and other direct farm marketing has increased substantially in recent years *despite* the current laws and regulations regarding food processing, safety and sales to the public. Through discussions with the Oregon Department of Agriculture (ODA), farmers' markets and other direct farm marketers have reached the conclusion that they do not fit into the existing food regulatory scheme that applies to conventional food processors, grocery stores and other retail food establishments.

This "lack of fit" primarily means that current methods of direct farm marketing are not addressed in any statutory or regulatory definition of retail food establishments, leading to confusion (an no small part fear) about licensing and inspection requirements for direct farm marketers (Landis, February 2, 2011). The main conflict that gave rise to the confusion was the ODA assertion that farmers' markets must obtain a license as a "retail food establishment" under Oregon regulations (Landis, Malloy, Boutard, December 10, 2007; ODA Food Safety 2010; Oregon Department of Agriculture—Farmers' Market Meeting Minutes [ODA-FM Meeting], March 28, 2007). In 2007, ODA and representatives of the farmers' markets and vendors formally met to discuss licensing requirements for farmers' markets in Oregon. ODA indicated

that there were three reasons for taking up the issue: (1) the Attorney General's office indicated that Oregon law could be interpreted to require farmers' markets to be licensed directly as "retail food establishments;" (2) the Legislature had asked ODA about how farmers' markets were currently regulated; and (3) the grocery industry had indicated to ODA that they wanted to operate like farmers' markets, or that farmers' markets should have to pay license fees like a grocery store (ODA-FM Meeting, March 28, 2007). There was also some confusion over direct licensing and inspections of vendors at farmers' markets, as some direct farm marketing regulations apply only to a "farm stand" that is on a farmers' own land (ODA-FM Meeting, March 28, 2007). Together, I will refer to these as "venue" conflicts.

In addition, direct farm marketers and the supporting local food community expressed that some food safety regulation is both burdensome and unnecessary to protect the public from the low risk associated with their products. For example, in order to sell pickles or jams made from their own produce, farmers must obtain a food processor or domestic kitchen license (see discussion in Section III.A.3). These requirements are a concern to direct farm marketers because of the increased costs associated with licensing and inspection, and some question whether these licenses are necessary to meet food safety goals for low hazard foods in the context of direct farm marketing (Landis, Malloy, Boutard, December 10, 2007).

After the 2007 meetings with the Oregon Department of Agriculture, it became clear that a change in statute was needed to clarify the regulatory status of farmers' markets. Although the conversations originally revolved around the venue conflict, it was clear that other direct farm marketing issues needed to be addressed and that it would be politically feasible to address several issues concurrently (Boutard, April 2, 2007). During 2008, there was "zero progress" in discussion with ODA (Landis, October 18, 2010). In fall of 2009, a legislative workgroup was

formed to address these issues and shortly thereafter three direct farm marketing advocates who were also on the workgroup began drafting new legislation (Landis, March 22, 2010; "Proposed Farmers' Market Concept"). By going directly to the legislature, direct farm marketers and their allies have more effectively driven the discussion and ultimate result than they could have by directly dealing with ODA. They are using their political power to directly move the legal institutions toward social and economic change.

In August 2010, the legislative counsel's office released a draft of proposed legislation and an accompanying memo addressing legislative counsel's concerns with the draft (LC 1051, August 23, 2010). The direct farm marketing advocates made comments on that draft, and a redraft and accompanying memo was released on October 6, 2010 (LC 1051, October 6, 2010).

The Direct Farm Marketing Bill, HB 2336, was passed by the Oregon House of Representatives on February 16, 2011 by a vote of 45-13. As of this writing, it is in the Senate Environment and Natural Resources committee, where it had its first hearing on May 3, 2011 (The Oregonian, "Your Government").

A. Oregon's Direct Farm Marketing Bill: Clarifying Food Safety Regulation for Direct Farm Marketers

Oregon is not the only state that is recognizing and codifying the differences between conventional and small-scale, direct-marketed foods. On the federal level, direct-marketed produce is already exempt from USDA grading standards (Hardesty, 2010, p. 3). The federal Food Safety Modernization Act (2011), through the Tester-Hagan amendment, exempts some types of small direct marketing producers from federal food safety requirements as long as they meet the requirements of state and local laws. Several other states have already passed or introduced legislation under the monikers "Cottage Food Bill," "Home-based Food Processor

Bill," "Pickle Bill," or in Oregon, "Direct Farm Marketing Bill" (Love, April 19, 2011).[5] In Oregon, there are two main purposes to The Direct Farm Marketing bill, HB 2336: to resolve the "venue" conflicts about licensing and inspection ambiguity in current laws, and to deregulate certain low risk direct farm marketed products (Or. HB 2336-A).

1. Venue Conflicts

The venue conflict arose from the ambiguity in current law about ODA's inspection and licensing of the physical places where food is offered for sale to the public. HB 2336 clarifies that the spaces where direct farm marketed sales take place are not subject to the food establishment or commodity licensing laws (Or. HB 2336-A, Section 2(1)(a)). This applies particularly to farmers' markets, CSA drop sites, some farm stands, or other places where the sale of direct farm products take place. This part of the law makes it clear that the physical space is not regulated, but the direct farm marketer's activities may still be regulated. Furthermore, ODA has the power to inspect and enforce licenses required regardless of where the direct farm marketer is offering products for sale. It is the sale and product itself that is regulated, not the physical space where the sale takes place.

This kind of regulatory clarification is sensible in practice. A farmers' market, church parking lot, public street, or other place where food and money physically change hands are not a proper regulatory target. The operators of those physical places do not own the food, handle the food, or sell the food. The person who grows, processes, and handles the food is the proper

[5] States with similar bills introduced or current laws include: Alabama, Arizona, Arkansas, Florida, Illinois, Indiana, Iowa, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Pennsylvania, South Dakota, Tennessee, Utah, Vermont, Virginia, Washington, Wisconsin, Wyoming. List breaking down different types of laws and different stages of the process at http://texascottagefoodlaw.com/Facts.htm

regulatory target, and it is only sensible that ODA can follow that seller to any physical venue where the product is sold to the public.

2. Produce Dealer Licensing Exemptions for Direct Farm Marketers

The Direct Farm Marketing bill also defines "farm direct marketer" specifically as "an agricultural producer that sells directly to the retail purchaser the agricultural products grown, raised and harvested by that producer," where an agricultural producer is defined as the person primarily responsible for the "growing, raising and harvesting" of the product that is ready for direct sale (Or. HB 2336-A, Sec. 1(5); Sec. 1(2)). There leaves little ambiguity that only direct farm marketers, who are actual producers of the food, are the subject of the bill's exemptions.

The farm direct marketers, as defined, are exempted from ORS 585.010 to 585.220, retail and wholesale produce peddlers' licenses (Or. HB 2336-A, Sec. 2(1)(b)). These provisions of Oregon law generally apply to the sale of produce that is not grown by the seller, either in retail or wholesale markets. The purpose is to protect growers of perishable produce from abuses by retail or wholesale dealers, require prompt payment, and allow the ODA to monitor and resolve violations by wholesale or retail dealers. When farm direct marketers are selling their own produce, the retail produce peddler license does not apply in any case (ORS 585.010(5)).[6] The definition of a wholesale produce dealer is more ambiguous, because the direct farm marketer is not acting "exclusively as a grower, retailer, or warehouseman," but is by definition taking on at

[6] ORS 585.010 (5) "Retail produce peddler" means any person who sells or offers for sale or exposes for sale produce *which the person has not grown or produced*, from any vehicle at any dwelling house, restaurant, eating house, hotel or any other public or private place where food is prepared for consumption and not resold in its original form and condition, and any person who sells to or offers for sale to the general public any produce, *which the person has not grown or produced*, from a vehicle in any place within this state (emphasis added).

least two of those roles (ORS 585.010(6)).[7] The definition is simply too broad and potentially captures an inappropriate regulatory target.

When a farmer is selling produce grown by another producer, whether as resale or consignment, the wholesale producer dealer license is required by the statutory language (ORS 585.010(6); ODA "Keeping Food Safe," 2008). ODA food safety publications from 2008 are consistent with the statute, indicating that no licenses are required to sell fresh produce sold on your own farm, but an ODA Commodity Inspection Division produce dealer license (the wholesale dealer license) is required to sell any produce not grown on your own farm (ODA "Keeping Food Safe," 2008). In 2010, ODA guidelines indicate that beginning in the 2009 season, a direct farm marketer may sell up to $2,000 of fresh produce from another producer (or combination of other producers, but no third party sales), and no licenses are required to sell produce from your own farm (ODA "Food Safety," 2010, p. 4). These exemptions do not appear anywhere in the statute or Oregon Administrative Rules.[8] The guidelines seem to be communicating ODA's intent use its discretion to not enforce the wholesale produce dealer license requirement in this very particular circumstance, rather than creating a formal rule to that effect. However, the cumulative effect of the ambiguity in the statute and ODA's power to reinterpret the definitions and use its enforcement discretion creates uncertainty for direct farm marketers and for ODA inspectors. This uncertainty results in inefficiency for both ODA and direct farm marketers, neither of which can depend on a fixed regulatory scheme. It creates a waste of government resources and inhibits farmers from innovating and growing their business.

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[7] ORS 585.010 (6) "Wholesale produce dealer" means any person who deals in, handles or trades in produce and who does not operate exclusively as a grower, retailer or warehouseman; but this definition does not include any person who is a cash buyer. [Amended by 1959 c.64 §1; 1959 c.431 §1]

[8] Search of Oregon Administrative Rules for "$2000, "exemption," "produce," and "wholesale," and various combinations of the search terms. The guidance document does not refer to any statute or OAR creating the exemption. Other direct farm market advocates agreed that they were unaware of any rule or statute creating the exemption.

The Direct Farm Marketing bill, HB 2336, creates a statutory exemption from the wholesale produce dealer license for farm direct marketers selling another grower's produce under a narrower definition of consignment:

> "an agreement under which an agricultural producer sells to the retail purchaser the agricultural products of another agricultural producer that is located in the same county as the agricultural producer, or in any county adjoining a country in which the agricultural producer is located, without representing that the products were grown or raised by the seller" (Or. HB 2336-A, Sec. 1(4)).

Therefore, the only consignment allowed under the bill is "local" consignment—within the geographic boundaries of the counties surrounding the seller. Interestingly, a national consumer study found that over 40% of respondents considered food produced within one's county as "local," while in-state production was considered "regional" by a majority (Onozaka, et. al, 2010, p. 2). On a scale of miles, over 70% considered production within 50 miles as "local," while 25% thought that production within 100 miles was "local" and over 60% thought it was "regional" (Onozaka, et. al, 2010, p. 2). This provides strong support for the "local" design of HB 2336. A situation akin to the wholesale produce dealer would be taking place, but HB 2336 substitutes regulation under the wholesale produce dealer with a provision that requires title to remain with the consigning agricultural producer until the products are sold to consumers, clearly labeled with the name and address of the consignor (Or. HB 2336-A, Sec. 2(5)). It also restricts consignment without a wholesale produce dealer license to fresh fruits, vegetables, unshelled nuts, eggs (if the consignor is licensed) and honey (Or. HB 2336-A. Sec. 2(3)). The consigning producer does lose some of the protections of the wholesale produce dealer statute, which requires recordkeeping and delivery of payment within 10 days after the sale of the products if sold on commission, "unless otherwise agreed in writing" (ORS 585.130).

By exempting farm direct marketers from obtaining the wholesale produce dealers license, more farm direct marketers may be willing to take consignments from neighbors, and the underlying law of contract and torts still applies to these transactions to protect the seller. The exception created by HB 2336 is narrower than the exemption created by the ODA guidelines by keeping it local, but the big advantage is that it provides clarity about the status of farm direct marketers who do take consignments, and does not leave them wondering if the wholesale produce dealers license is required before they agree to sell a neighbor's produce, or if ODA has changed its enforcement guidelines.

3. Food Safety License Exemptions for Direct Farm Marketers

The more controversial portion of the bill is the deregulation of some kinds of food processing and preparation licensing requirements. The bill specifically exempts some small direct farm marketing from ORS 616.695 to 616.755: Sanitary regulations for food and food establishments. The direct farm marketing community argues that some types of food processing regulated by state law and ODA regulations pose little to no threat to food safety, particularly in the direct farm marketing context.

a) Licensing Requirements under Current Oregon Law

The current regulatory definition of food processing is quite broad:

> "cooking, baking, heating, drying, mixing, grinding, churning, separating, extracting, cutting, freezing or otherwise manufacturing a food or changing the physical characteristics of a food, and the packaging, canning or otherwise enclosing of such food in a container, but does not mean the sorting, cleaning or water-rinsing of a food" (OAR 603-025-0010(10)).

If a direct farm marketer is doing any of these activities, they are operating a food processing establishment and an ODA food processing license is required (ORS 616.695(2)(a); OAR 603-025-0020 & 603-025-0150; ODA "Keeping Food Safe," 2008). However, there is some

ambiguity for farmers and ODA inspectors, as many processing activities were considered unregulated if they are done by machinery in the field, but if taken indoors would be considered processing (Landis, February 2, 2011). “There have been problems…Sometimes inspectors weren't sure what was legal and what wasn’t” (Terry, February 16, 2011, quoting Anthony Boutard of Ayers Creek Farm in Gaston, OR). Typical applications would be shelling nuts, grinding grains, making jams, drying fruit, and processing honey (if over 20 colonies). This kind of uncertainty creates a burden on direct farm marketers who may be reluctant to produce some kinds of foods for fear of regulatory costs.

ODA also inspects and licenses domestic kitchens to process foods that will be sold to the public (ORS 616.706; OAR 603-025-0200). A domestic kitchen can be used for small-batch processing that will take a small amount of time, in other words, in the time between normal domestic purposes such as cooking family meals. If a direct farm marketer were making jams, dried fruits, shelling nuts, or doing other processing in a domestic kitchen, this license is lower cost but also more limited in scope.

Any building where prepared foods intended for sale to the public are stored requires a food warehouse license (ORS 616.695; OAR 603-025-0140). If the same facility also holds a food processing license, a separate food warehouse license is not required. However, if a direct farm marketer sent some produce to a licensed co-packer to make jam and the direct farm marketer wants to store the finished jars at the farm, a food warehouse license would be required to hold any on-farm inventory of the product.

Finally, a food retail establishment license is required of any business that prepares, packages, stores, handles, or displays food for retail sale. This was the source of the farmers’ market licensing conflict in 2007. ODA’s 2010 food safety guidance indicates that farmers’

market management does not need to obtain a food establishment license at this time, but notes that "depending on the interpretation of "food establishment' in ORS 616.695…that licensing determination might change" in the future (ODA "Food Safety," 2010, p. 3). Produce stands that are on the property where the produce is grown have long been exempted from licensing as a food establishment (OAR 603-025-0030(2)(a)). However, a food establishment license is required for produce that is not grown on the farm ((OAR 603-025-0030(2)(a); ODA "Keeping Food Safe," 2008). This exemption was also a source of regulatory ambiguity for ODA and farmers in recent years. If a farmer did not have a food establishment license for a farm stand, it was unclear whether they needed a license to sell their own produce at the farmers' market (Boutard, February 2, 2011). ODA did not have clear statutory authority to require a food establishment license in the case of a farmer selling only their own produce, and indicated in guidance documents that no license was required in that instance (ODA "Keeping Food Safe," 2008; ODA "Food Safety," 2010, p. 4).

For a final example of ambiguity in enforcement of these multiple license requirements, the 2010 ODA Farmers Market Food Safety guidance document creates another exemption, but again by way of suggesting non-enforcement rather than formally through regulation. The document states that if farmers "maintain an 'at market' inventory of $2,000 or less" of non-potentially hazardous foods that have been processed and packaged at a licensed facility, the vendor does not need "an ODA license" to sell the products at the farmers' market. This exception does not seem to exist in any statute or regulation. Moreover, it is not clear which ODA license the vendor would normally have to obtain. The "inventory" portion suggests that a food warehouse license may be required for "storing" the products before sale. The 2008 ODA guidance only suggests that a food processor license or domestic kitchen license would be

necessary to sell "non-potentially hazardous" foods such as jams, but the 2010 guidance maintains that the jams must still be made at a licensed facility. A food establishment license may also otherwise be required, as the only clear exemption for that license seems to be for fresh produce grown on the direct farm marketer's own land. It is also interesting that ODA is anticipating the non-potentially hazardous food exemption that would later be introduced as part of HB 2336, the Direct Farm Marketing bill. This is a clear example of the problem with the current Oregon statutes and regulations that do not seem to fit these emerging and growing direct farm marketing businesses. Providing a clear statutory framework gives valuable guidance to both ODA and the direct farm marketing community to improve the efficiency and efficacy of food safety regulation.

b) Applications of Current Food Safety Laws to Direct Farm Marketing Activities

Oregon direct farm marketers who grow garlic, beans and grains have been told by farmers' market management and ODA that they may need a food processing license before selling their products to the public (Landis, February 2, 2011), but point out that minimal food processing is required of these products. For example, garlic is dried for storage. Dried beans hang on the vine to dry, but then can be separated from the shells, leaves and stems before sale to the public. If that process is interpreted as "sorting" or "cleaning," then no food processing license is required. However, if it is considered "drying" then "separating," a food processing license would be required. Farmers who want to avoid the licensing for cost or other reasons may sell the beans co-mingled with the shells, stems and leaves, but that presentation may not be attractive to retail buyers who would have to do the sorting at home and the beans would fetch a lower price. Note also that "packaging" is considered a form of processing, so selling beans in

bulk from containers is not processing, but pre-measuring bags of beans is a form of processing. In the small direct farm marketing context, this is a distinction without a difference. Finally, dried beans cannot be consumed raw, but require at least 20 minutes of cooking time in boiling water. The drying and separating of the beans is itself low-risk, but any residual food safety concerns are essentially eliminated by the required cooking time before consumption.

An example of processed grain products is Ayers Creek Farms, which has been featured in Mix Magazine for its polenta: "the Boutard family grows the organic heirloom corn, dries it on the husk, shucks it, then stone grinds it days before selling it to their loyal customers" (Gelber, February 2011). But that drying, shucking and grinding is a form of food processing that requires a license. It is understandable that there are food safety concerns whenever human processes change the character of a food, but these processes are very low risk compared to other food processing, and the food can only be consumed after a substantial cooking time: "fresh polenta (Ayers Creek) needs to cook at least 1½ hours to get the best results" (Gelber, February 2011). Any conventional microbe introduced in the drying or processing would be killed through cooking.

Preserving foods through pickling or making jam is another value-added process that requires a food processing license, and must happen in a licensed and inspected domestic or commercial kitchen, as described above. A direct farm marketer may be interested in turning berries or other fruit into jam for the higher profit margin that can be expected from value-added foods, but there may also be practical business motivations for turning berries into jam. After berries are harvested, they are sorted and some may not be perfect enough for fresh sale to consumers, but are still perfectly safe and edible. During the summer harvest season, the farmer may also harvest more berries than can be sold at market, but cannot hold them long because

they are highly perishable. A farmer may use these for her own household in a variety of forms without a license. However, if she is making jam for home use, she may also consider selling jam at the market as well. With the licensing requirements, she must make a substantial investment in inspections and licensing before attempting to sell jams at the market, or pay a licensed co-packer to process the berries, which probably does not make economic sense if the farmer is producing small or uneven quantities of fruit, and will result in a high-price to the consumer.

These kinds of preserves, grains and dried foods are a frontier for the local food movement. Fresh fruits and vegetables are the mainstay of farmers' markets and other forms of direct farm marketing, but they are perishable and limited in seasonality. For a small farm to have a steady stream of income, expanding to some non-perishable options such as dried beans, grains and preserves extends the market season. As an indication of the demand for year-round access to direct farm products, USDA reported in 2010 that there were 898 winter markets (operating from November to March) in the US, up 17% from 2009 (Jones-Ellard, December 8, 2010). Many of these markets exist in cold-winter states as well, with New York (Ranked first, with 153 markets, ahead of California), Ohio (34), Massachusetts (32), Connecticut (20) and Michigan (20) all in the top 11 states with winter markets. From the perspective of the dedicated "localvore," it is difficult to eat local throughout the year in many parts of the country, and staple foods such as grains and beans are scarce from local sources. These kinds of products are both demanded by the local consumer and are ways to expand and increase revenue for the direct farm marketer. Some of these types of "processed" foods have been unregulated in practice through ODA's lack of enforcement, but creating statutory exemptions that makes sales of these foods clearly legal would remove uncertainty of future enforcement and regulation (ODA "Food

Safety," 2010, p. 5). If regulatory burdens make it difficult for direct farm marketers to expand in these directions, these barriers can be lifted without sacrificing food safety.

c) Direct Farm Marketing Bill Exceptions are Narrowly Drawn to Lift Barriers on Small Local Direct Farm Marketers without Sacrificing Food Safety

Direct farm marketing advocates maintain that the food safety concerns are not rational in the context of these types of food processing, and HB 2336 makes rational distinctions that exempt only non-hazardous foods from regulation. The provisions regarding non-hazardous foods were carefully defined in consultation with federal law and ODA food safety officials. ODA currently has regulations defining potentially hazardous foods, and some specified exceptions to that definition (OAR 603-025-0030(1)(B)(61).[9] The foods that can be producer processed without ODA licensing and inspection are spelled out in HB 2336 and are by definition non-potentially hazardous, as they are all outside the definition of potentially hazardous in Oregon and FDA regulations.

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[9] Potentially Hazardous Food.
(a) "Potentially hazardous food" means a food that is natural or synthetic and that requires temperature control because it is in a form capable of supporting:
(i) The rapid and progressive growth of infectious or toxigenic microorganisms;
(ii) The growth and toxin production of Clostridium botulinum; or
(iii) In raw shell eggs, the growth of Salmonella Enteritidis.
(b) "Potentially hazardous food" includes an animal food (a food of animal origin) that is raw or heat-treated; a food of plant origin that is heat-treated or consists of raw seed sprouts; cut melons; unpasteurized juices; and garlic-in-oil mixtures that are not modified in a way that results in mixtures that do not support growth as specified under Subparagraph (a) of this definition.
(c) "Potentially hazardous food" does not include:
(i) An air-cooled hard-boiled egg with shell intact;
(ii) A food with an Aw value of 0.85 or less;
(iii) A food with a pH level of 4.6 or below when measured at 24°C (75°F);
(iv) A food, in an unopened hermetically sealed container, that is commercially processed to achieve and maintain commercial sterility under conditions of non-refrigerated storage and distribution;
(v) A food for which laboratory evidence demonstrates that the rapid and progressive growth of infectious or toxigenic microorganisms or the growth of S. Enteritidis in eggs or C. botulinum can not occur…; or
(vi) A food that does not support the growth of microorganisms as specified under Subparagraph (a) of this definition even though the food may contain an infectious or toxigenic microorganism or chemical or physical contaminant at a level sufficient to cause illness.

Under HB 2336, foods that are normally dried as part of post-harvest handling such as garlic and potatoes, dried fruits and vegetables, shelled and unshelled nuts, and whole, hulled, crushed or ground grains, legumes and seeds that are normally cooked before consumption can all be sold directly to consumers without a food processor license and can be processed in a non-licensed kitchen (Or. HB 2336-A, Sec. 2(2)(a) to (d), (h) to (j)). Shell eggs were already exempt from regulation if produced and sold from the grower's farm, so HB 2336 only extends the exemption to direct sales from any venue (ODA "Keeping Food Safe," 2008; Or. HB 2336-A, Sec. 2(2)(f)). Likewise, direct sales of honey required a food processor license if the grower has 20 or more colonies, now under HB 2336 direct sales of honey are exempted regardless of number of colonies, if not combined with other food ingredients (ODA "Keeping Food Safe," 2008; Or. HB 2336-A, Sec. 2(2)(g)).

The "acidic foods" category in HB 2336 allows direct farm marketing of bottled, packaged or canned foods that have a natural pH level of 4.6 or less, are lacto-fermented, or have acidity and water activity levels that meet federal non-potentially hazardous food standards (Or. HB 2336-A, Sec. 1(1); 21 C.F.R. 114.3). This is a technical definition based on food safety standards, but it essentially means that direct farm marketers can create jams, fruit syrups, preserves and canned fruits and vegetables that meet these standards without getting a food processor license or domestic kitchen license. However, in addition to the non-potentially hazardous food definition, there are other safeguards to ensure that the product is a "local" food product. Acidic foods must be "producer-processed products," which means that the principal ingredients are grown, raised and harvested by the same producer that processes the food (Or. HB 2336-A, Sec. 1(6)); furthermore, the principal ingredients may not be co-mingled with ingredients from a different producer (Or. HB 2336-A, Sec. 1(3) and 2(4)). Non-principal

ingredients do not have to be raised by the producer, but are limited to standard food preservation ingredients: “herbs, spices, salt, vinegar, pectin, lemon or lime juice, honey and sugar” (Or. HB 2336-A, Sec. 1(6)). In addition, the exemption is only available if the producer sells under $20,000 of preserved foods in the preceding calendar year (indexed to inflation) (Or. HB 2336-A, Sec. 2(2)(e)(D) and (Or. HB 2336-A, Sec. 3(2)). This assures that only small-batch processes are exempt, and is argued to be a way to incubate new business lines for direct farm products by keeping down the cost of small-scale production (Terry, 2/16/11). After the $20,000 in sales is met, the processor is subject to standard ODA food processor and kitchen licensing.

To complete the information given to consumers and enhance traceability of these foods, all preserved acid foods, eggs, honey and grains would require a label with the statement: “This produce is homemade and is not prepared in an inspected food establishment” or an equivalent statement required by ODA regulations that would also meet any federal requirements of the product (Or. HB 2336-A, Sec. 2(6)). Preserved acid foods must also be labeled with the name and address of the producer and a list of ingredients (Or. HB 2336-A, Sec. 2(2)(e)(C)). Essentially, consumers are given a warning that the only food safety assurances are those given by their relationship with the producer, because the government is not overseeing the production of this particular food.

As a final safeguard against improper food handling, ODA is given the power to require licenses of any space or farm direct marketer that fails to keep the space in a “clean, healthful and sanitary condition” or for failure to ensure “the condition and safety of the food the farm direct marketer provides to retail purchasers” (Or. HB 2336-A, Sec. 2(7)). “Oregon retains the right to remove the exemption to any bad actor in the state,” said Rep. Matt Wingard, R-Wilsonville, who chaired the yearlong legislative working group that drafted the legislation

(Terry, February 16, 2011). The legislature would not strip ODA of any enforcement powers over direct farm marketers, only direct its preventative enforcement efforts toward potentially hazardous and large-scale processors of non-local foods.

To the direct farm marketing community, HB 2336 achieves two major goals: settling venue licensing disputes that had been brought up every few years without a satisfactory resolution, and deregulating the sale of some local small-scale low-risk direct marketed foods. Even the list of qualifiers required to describe HB 2336's exemptions shows that the bill is narrowly drawn. By clarifying ODA's role in statute, there is less regulatory uncertainty for the direct farm marketers in addition to lifting some cost burden on the small but growing sector (Terry, February 16, 2011). But we must also looks at the public interest in these statutory changes: does HB 2336 support the direct farm marketing sector and its concomitant public goods while still ensuring the public interest in food safety?

It is instructive that HB 2336 came about through a deliberative process, including a year-long legislative work group where all interested parties were at the table. The exemptions were crafted carefully following FDA and ODA guidelines about hazardous foods. As a result, "state epidemiologists, who investigate food poisoning, are not worried about the exemption to inspections" (Terry, February 16, 2011). ODA's food safety administrator, Vance Bybee, who has been involved with these issues for several years has stated: "We're not expecting folks will be doing anything different….We think they still will follow the standards. The only difference is we won't require a license and we won't be out to inspect their facilities" (Lies, May 4, 2011).

Lifting regulations also lifts some regulatory burden for ODA, which is normally thought of as a trade-off between foods safety and public funds. As pointed out by Dr. Paul Cieslak, head

of the communicable disease program at the Oregon Public Health Division: “The risk of getting sick from any single portion of food is probably small, and there are fixed costs with doing an inspection…At some point, the inspection doesn't become worth it anymore" (Terry, February 16, 2011). The government has limited resources to spend on food safety regulation, so HB 2336 is also efficient in its use of public funds. It allows ODA to focus enforcement effort at the high-risk food safety issues, such as large processors who take ingredients from many sources and potentially hazardous foods and processing methods. Clarifying the law for ODA is an equally important policy consideration.

Oregon’s Direct Farm Marketing Bill fulfills many public policy concerns using economically and politically justifiable means. It exempts the low-risk, high-cost food processing and sales activities; the direct farm marketing transaction itself and the bill’s requirements provide adequate information for consumers to make informed choices about their own exposure to food risk; and it strikes a balance between supporting small local farms and their accompanying public goods while protecting the public from high-risk food processing and sales. After a year-long deliberative process that included state regulators, farmers’ market representatives and small local direct market farmers, the bill is on its way through the legislature. All parties seem to agree: "It's a good bill … It does what everybody wanted it to do—clarify what the law is" (Terry, February 16, 2011).

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