

# Organic Order<sup>1</sup>

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## Abstract

This paper develops a theory of how Community Supported Agriculture (CSA) arrangements ensure commitment on the part of farmers in the absence of explicit contracts or third-party certification. Due to the unique payment timeline of CSAs, where members pay for their produce before the growing season commences, and the lack of formal, legal protections it is possible for farmers to engage in opportunism. This opportunism could include shirking, employing objectionable growing practices, or decreasing the size of members' weekly share of produce. I find that CSAs foster commitment by augmenting the power of the repeat purchase mechanism. Their community-building efforts create relational bonds and enable effective multilateral punishment. Additionally, farmers choose to grow crops with low monitoring costs. The CSA demonstrates how commitment can be ensured through private, informal mechanisms.

Keywords: commitment, informal norms, reputational incentives, agricultural economics

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The members of the CSA cannot be considered *Homo economicus* as in mainstream neoclassical economics. Their production and consumption behaviours are not based upon interest-seeking, self-centred behaviour.  
- Bloemmen et al. 2015

If indignant reformers still complain of the chaos of economic affairs, insinuating a complete absence of order, this is partly because they cannot conceive of an order which is not deliberately made, and partly because to them an order means something aiming at concrete purposes which is, as we shall see, what a spontaneous order cannot do.  
- F. A. Hayek 1973

## **1. Faith in the Farmer**

Imagine paying one bill for all your groceries at the beginning of the year and trusting your grocer to deliver them to you every week without any explicit contract. Further, suppose that the grocer will select the weekly groceries you receive with no requirement he honors your preferences. How would you ensure that your grocer provided you with consistent, high-quality groceries? A variation of this hypothetical scenario is played out in Community Sponsored Agriculture (CSA) arrangements. CSA members pay for fresh produce at the beginning of the growing season which the CSA farmer then agrees to supply on a weekly basis. These transactions nearly always take place in the absence of any formal, legal commitment on the part of the farmer to honor the agreement. As CSA farms have increased in popularity, their unique institutional arrangement has come to the fore. CSA farms exhibit a preference for informal, privately devised means of ensuring the appropriate quantity and quality of vegetables and fruits are provided to members. The overwhelming majority of CSAs in the United States have opted out of the use of both explicit contracts and third-party certification of their growing practices. The lack of such formal, legal mechanisms for ensuring commitment raises the potential for opportunism by farmers. The persistence of CSAs, however, suggests that CSAs have devised effective private means of ensuring commitment and mitigating opportunism. This paper looks to explain how privately devised commitment mechanisms work to ensure that the implicit agreement between CSA farmers and CSA members is honored. I find that investments in relational bonding and growing of crops whose quality is easily ascertained (i.e. they exhibit low measurement costs)

augments the strength of the repeat purchase mechanism, effectively mitigating against the possibility of opportunistic behavior.

Contributors to the literature on the economics of agriculture have analyzed numerous special farming arrangements, such as sharecropping (Newbery, 1977), Kenyan dairy cooperatives (Casaburi and Macchiavello, 2015), and the Israeli *kibbutz* communes (Nye, 2020), but have yet to examine the CSA. This is despite the fact that CSAs exhibit many unique characteristics that make their behavior worthy of analysis.

The CSA's unique up-front payment timeline creates a special need for farmers to guarantee they will fulfill their end of the agreement. To this point, there is an extensive literature on the issue of credible commitment. George Akerlof (1970), for example, discusses the importance of "informal unwritten guarantees" in facilitating exchanges in certain markets like the market for used cars. In a seminal paper on the issue of credible commitment Oliver Williamson (1983) discussed how parties will offer "hostages" who can be killed in the event of one party reneging on the terms of their agreement. Additionally, the efficacy of bilateral punishment and the function of brand name capital investments as a Williamsonian hostage in exchange has been expertly discussed by Benjamin Klein and Keith Leffler (1981).

Relatedly, the self-governance literature is germane to the CSA arrangement. This literature discusses how parties choose to devise private governance mechanisms rather than relying on the existing legal framework (Leeson and Coyne, 2012). As far back as 1973, F. A. Hayek observed that spontaneous order can be generated by human action, it doesn't require intentional orchestration. Since then, economists have explored how private parties generate order, knowingly or otherwise, apart from government. Williamson has observed that private parties devise their own ways of settling or avoiding many disputes which could otherwise be resolved in

a formal court setting (Williamson, 1984: 208). A specific case of such non-government means of dispute avoidance and resolution was examined by Robert Ellickson (1991) in Shasta County, California. This community had devised an elaborate and effective structure of norms to punish ranchers who let their cattle wander on their neighbor's land. Similarly, Terry Anderson and Peter Hill (2017) have examined how private parties devised governance schemes in the so-called "wild west" independent of government. Harkening back to the previously mentioned literature, credible commitments often serve as the basis for private governance. For example, Brinig (1990) discusses the emergence of the diamond engagement ring as a hostage used to constrain the behavior of one's betrothed. Specifically, in lieu of the ability to take legal action against fiancés who broke off engagements, these rings could be employed to discourage such behavior. Others like Leeson and Coyne (2012) offer a helpful overview of the copious literature on preventing conflict through privately created norms.

CSA's present an intriguing case study of the issues of commitment and self-governance but have yet to receive attention from the economics profession. Cooley and Lass (1998) have described the potential economic and non-economic benefits of CSAs to consumers such as fresh food or cheaper produce. Additionally, numerous non-economic explanations for CSAs' unique organization have been offered, including that CSAs are examples of "degrowth economics" and self-exploitation (Galt, 2013; Bloemmen et. al., 2015). No one, however, has analyzed the institutional structure and behavior of CSAs through an economic lens.

This paper contributes to three literatures. First, it adds to the literature on the economics of agriculture by offering the first rigorous economic explanation of CSAs' operation in the United

States.<sup>3</sup> Second, my analysis contributes to our understanding of commitment. Relatedly, I expand the self-governance literature, deepening our understanding of how private parties can discipline behavior that violates implicit contracts independent of the formal, legal structure. This paper also helps to explain the conditions that give rise to direct selling. I begin in Section 2 by describing the CSA farm model. Section 3 examines the dilemma CSAs face without formal commitment mechanisms. In Section 4 the informal mechanisms utilized by CSAs are explicated. Section 5 examines the implications of this analysis. Finally, Section 6 concludes.

## **2. The Community Supported Agriculture (CSA) Arrangement**

The roots of the Community Supported Agriculture arrangement go back to the 1960s. During this time, early precursors of the CSA emerged in Germany, Switzerland, and Japan (DeMuth, 1993: 1; Melanson, 2008). For example, in the early 1970s, Japanese consumers who wanted to avoid food with pesticides formed buying clubs called *teikei* which would purchase directly from farmers (Schnell, 2007: 552; Kondoh, 2015: 145). The *teikei* partnership was predicated on trust<sup>4</sup> built through repeated dealings between the farmer and consumer (Kondoh, 2015: 144). Around the same time, in the United States, agricultural professor at Tuskegee University, Booker T. Whatley, was advocating for so-called Clientele Membership Clubs to support agriculture. The Clientele Membership Club would charge an annual membership fee and members would then have the right to harvest directly from the farm for themselves. These clubs would also need to be in close proximity to metropolitan centers to ensure a steady consumer base (Bowens, 2015; Biodynamic Association, n.d.).

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<sup>3</sup> While there are CSAs in numerous other countries, such as Canada, this paper focuses on explaining the operation of CSAs in the United States. The reason for this concentration is that the most rigorous data on CSAs is limited to the United States.

<sup>4</sup> This is reflected in how *teikei* participants referred to these buying clubs. While literally translated “partnership,” *teikei* has often been translated more colorfully by its Japanese participants as: “food with the farmer’s face on it” (Schnell, 2007: 552; Melanson, 2008).

Finally, around 1986, the first farms explicitly using the title “community support agriculture” emerged in the United States in New England (McFadden, 2004; Biodynamic Association, n.d.). These first two farms, Indian Line Farm in Massachusetts and Temple-Wilton Community Farm in New Hampshire drew significantly on European influences. These influences included Austrian philosopher Rudolf Steiner who advocated direct consumer-producer relationships and local production (McFadden, 2004). Additionally, one of the farmers responsible for starting the Indian Line Farm, Vander Tuin, had traveled Europe working at numerous farms engaged in direct selling models that were the precursors to the CSA (McFadden, 2004). The guiding *ethos* of these farmers was the focus on community. Anthony Graham, one of the founders of Temple-Wilton Community Farm, went so far as to claim: “*When we started the Temple Wilton Community Farm [...] one thing we were sure of was that we were not selling anything – we were far more interested in community and in the ‘culture’ in agriculture*” (Henderson, 2017: 6).

The CSA arrangement, as it has come to exist in the United States today, is a business run by a farmer<sup>5</sup> who makes an agreement with a local consumer base. The precise nature of that agreement is as follows. At the beginning of the growing season, the farmer sells “shares” in the CSA.<sup>6</sup> Shareholders, or CSA members, are then entitled to a regular allotment of the farmer’s harvest (Bruch and Ernst, 2010: 1; Ernst and Woods, 2013: 2). It is understood, however, that on occasion the farmer may not be able to provide the expected produce due to inclement weather,

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<sup>5</sup> CSAs have taken a couple forms including the unique “shareholder CSAs” in which a group of consumers hire a farmer and guide the operational decisions of the CSA. Today, however, this CSA model has largely faded into obscurity, with surveys revealing that sole proprietorships guided by the farmer are by far the dominant model (Woods et al., 2009: 21; Bruch and Ernst, 2010: 1).

<sup>6</sup> Traditionally this was paid as one lump sum, though some farmers now offer payment plans. Importantly, even these payment plans constrain consumers’ ability to jump ship after the growing season starts. Under these payment plans, consumers submit checks for the entire growing season and the farmer waits to deposit the checks. The farmer can charge a fee to members who request the return of checks (Endres, Galey, and Armstrong, n.d.: 14).

pests, or other unforeseen circumstances (Farnsworth et al., 1996: 91; Ernst and Woods, 2013: 2; Galt, 2013: 4-5).

Critically, the “share” should not be construed as conferring any of the rights that economists associate with ownership (Hansmann, 1988: 269). Rather, a CSA “share” refers to the bundle of produce members pick up on a weekly basis from the farm or a designated drop point (Ernst and Woods, 2013: 3). As a result, the farmer retains ultimate decision-making authority (Biodynamic Association, n.d.).

CSAs in the United States tend to be relatively small. The average size of a CSA was 140.9 members in 2014, however, this number is not reflective of most CSAs. Rather, a handful of larger CSAs skew the average. The median size was 60 members and most CSAs reported fewer than 80 members (Woods, Ernst, and Tropp, 2017: 1, 12).

There is a consensus that CSAs have grown significantly in the United States since their inception (Galt, 2011: 132-133). However, exact numbers on how many CSAs exist are difficult to pin down due to imprecise definitions of CSAs in the literature. The 2012 Census of Agriculture indicates that 12,617 farms market through CSAs, while others have estimated the number of CSAs to be in the six-thousands (Woods, Ernst, and Tropp, 2017: 2). The exact number lies somewhere in between these two disparate statistics (Galt, 2011: 139).

While CSAs are dispersed across the country, there are a number of areas where there are particularly large numbers of these arrangements. New England and the more urban areas of the Northeast are home to the largest number of CSAs. Other areas where CSAs are concentrated include the upper Midwest, the Front Range of the Colorado Rockies, northern New Mexico, the Puget Sound area, the Willamette Valley, and northern California (Schnell, 2007: 552).

### **3. The Dilemma of Commitment Under the CSA Model**

Perhaps one of the most interesting characteristics of CSA farms is farmers' rejection of formal, legal mechanisms of commitment. This is significant considering parties must be able to credibly commit themselves in order for exchanges to take place (Akerlof, 1970; Williamson, 1983; Boettke, 2011). In the absence of commitment, there is the potential for opportunism which will constrain trade.

### ***3.1 Eschewing of Explicit Contracts***

Many would expect explicit contracts to be the means whereby farmers demonstrate their commitment. Writers specifically commentating on agricultural contracts have observed that such contracts can serve as a means of ensuring a steady flow of products, obtaining a certain variety of goods, guaranteeing certain methods of production, and making it easier to hold farmers accountable for health hazards posed by their produce (MacDonald et al., 2004: 62). Supermarkets often contract directly with farmers to guarantee a consistent and high-quality flow of goods. This is especially true for fresh fruits and produce (Ogutu et al., 2020: 1).

Despite the seeming appeal of contracts as a commitment device, CSAs conspicuously lack such explicit contracts. Surveys have found only 42% of CSA farms make use of contracts (Woods et al., 2009: 9). It is also intriguing that newer CSAs were more likely to require members to sign a contract. How long a CSA had been in operation and the probability of a CSA requiring a contract are inversely related (Woods et al., 2009: 9).

There are several ways in which it would appear the lack of a contract would enable CSA farmers to behave opportunistically. Without any formal commitment to the quality of produce, farmers could include bug-infested produce or produce that doesn't meet organic growing standards in consumers' shares. Farmers may shirk and fail to mitigate against the effects of bad weather and pests. Additionally, farmers might not time the planting of crops so that consumers

receive a steady stream of produce in their weekly shares. Finally, farmers could further maximize their profits by giving CSA members smaller-sized shares. The surplus of produce could then be sold to farmers' markets or local restaurants. Surveys have shown that CSA farmers do indeed sell to additional outlets like farmers' markets and local restaurants (Woods, Ernst, and Tropp, 2017). The existence of these additional selling outlets raises the possibility that farmers could indeed divert produce away from CSA members to earn greater profits.

Farmers have ample opportunity to disguise such shirking and opportunism as merely the effects of nature that are outside of their control. The seasonality and randomness associated with agriculture have been noted to create problems of moral hazard. For example, Allen and Lueck (1998) identify the seasonality and randomness of agriculture as the key aspect distinguishing it from industrial organization. The moral hazard problems arising from seasonality are then used by Allen and Lueck as the key to their explanation of the persistence of the small family farm which is said to mitigate such problems (Allen and Lueck, 1998: 346). In short, seasonality makes monitoring for shirking or opportunism on the part of farmers very difficult for CSA members. The lack of a contract to hold farmers accountable, paired with farmers' ability to shift blame to the vicissitudes of nature creates a serious principal-agent problem between the members and farmer.

### ***3.2 Absence of Third-Party Quality Assurance Mechanisms***

Another unique attribute of the CSA model is the absence of third-party assurances of quality. Most non-CSA farmers do not sell their produce directly to consumers. Instead, they sell it to grocery stores or other retailers who act as a middleman. Economists have long noted that middlemen serve an important function of assuring quality and reducing information asymmetries (Biglaiser, 1993; Biglaiser and Friedman, 1994; Li, 1998; Klein, 2001; Biglaiser et al., 2017).

Third-party retailers gather information about product quality that is not readily available to consumers, including keeping track of customer complaints, how well a given product sells, and performing their own tests (Klein, 2001: 4). CSA farmers eschew this third-party assurance by selling directly to consumers. In short, direct selling cuts out the quality insurance mechanism of middlemen, increasing monitoring costs for consumers.

Additionally, economists have noted that companies utilize labels, “seals of approval,” or other forms of certification to signal quality (Klein, 2001: 8). However, CSA farms also appear to reject this means of signaling commitment. Specifically, most CSA farmers are not officially organically certified. One of the most comprehensive surveys found that 66% of CSA farmers are not organically certified but claim to produce according to “organic standards” (Woods et al., 2009). Another more recent survey found that 73% of CSAs are not organically certified (Woods, Ernst, and Tropp, 2017). In other words, most CSA farmers market themselves as organic without formally committing to organic growing standards. This is interesting, considering multiple surveys have found the most prominent reason people join a CSA is because of their desire for high quality or organic produce (Cooley and Lass, 1998: 229; Woods et. al., 2009: 7; Pole and Gray, 2013: 9). As with contracts, the lack of third-party certification opens the door for opportunism. Without the government certification, farmers are not legally bound to any specific growing standards and could engage in any number of conventional farming practices, including the excessive use of pesticides.

### ***3.3 The Cost of Formal Commitment***

The process of obtaining organic certification imposes many burdens upon farmers. To become organically certified, farmers have to bear the cost of the initial certification, annual renewal fees, and the costs of various inspections (Chait, 2019). Studies have found that the

percentage cost of organic certification to small farmers is higher than for larger farms and that small farms have a difficult time affording the fees (Ferguson, 2004: 3; Czarnezki, Homan, and Jeans, 2014: 288). Farmers also have to dedicate significant resources to come into compliance with the regulation. This includes drafting an “organic farm plan” that exhaustively describes the farm’s procedures from when crops are planted to the date they are sold, water management and pesticide buffer zone plans, the farm’s record-keeping practices, and more (Ferguson, 2004: 2).

Similarly, there is a cost to using market contracting (Coase, 1937). Drafting and enforcing contracts can be expensive especially for small farmers. A group of researchers that published advice for CSAs admitted as much (Goeringer et al., 2015: 10). Furthermore, for consumers, the costs of the farmer not living up to their agreement is at worst the loss of the several hundred dollars spent on their share. In short, the costs of contract enforcement are high relative to the potential benefit of enforcing a contract.

These costs can help explain why farmers eschew third-party certification. The existence of the aforementioned costs, however, offers only an incomplete picture of the incentives behind the behavior of the CSA. Such a surface-level observation fails to answer the question of how CSA farmers offer assurances of commitment in absence of explicit contracts and third-party certification. Surveys find that most members are very satisfied with their shares and have more than enough produce, suggesting CSAs have found a way to mitigate abuse without contracts or third-party certification (Cooley and Lass, 1998: 229). It is these alternative commitment mechanisms that CSAs have employed that are the primary interest of this paper.

#### **4. Informal Commitment Mechanisms**

In the absence of formal means of signaling their commitment, CSA arrangements ensure commitment through multiple informal mechanisms. We know the specific mechanisms

discussed here are relevant to CSAs located in the United States. CSA arrangements in other countries range in their similarity to the U.S. model. Canadian CSAs, for example, are modeled similarly to CSAs in the United States and require pre-purchase of produce (Si et al., 2020: 74). Meanwhile, Chinese CSAs radically depart from the traditional version of the CSA, offering customized boxes of produce and eliminating the need for consumers to pay ahead (Si et al., 2020: 74). Certain aspects of our analysis are still relevant to the Chinese model. For example, CSAs in both China and Canada act similarly to their U.S. counterparts in opting out of formal third-party quality assurance and focus heavily on member engagement by doing things like hosting on-farm events (Si et al., 2020: 78-79). Our analysis, however, should be taken as pertaining specifically to CSAs in the United States and CSAs within other countries that follow a similar model. This focus leaves fertile ground for further research as CSAs exhibit many unique forms across countries that raise interesting economic questions. For example, Chinese CSAs rent out plots of their land to families that want to grow food of their own, and Canadian CSAs use workshare agreements (Si et al., 2020: 79).

#### ***4.1 Community Building Investments as a Williamsonian Hostage***

The first of the mechanisms utilized to ensure commitment by CSAs in the United States is extensive community engagement. A brief illustration of this community engagement is fruitful to our analysis. Farmers routinely host special activities and events on the farm, including tours of the farm grounds, potlucks, pick-your-own produce days, and educational programs (Bruch and Ernst, 2010: 9; Samoggia et al., 2019: 2). Beyond merely having members tour the farm or hosting special events, CSA farmers also make an effort to regularly educate CSA members. This includes educating them about the farms' growing practices, teaching them how to preserve surplus produce, demonstrating how members can start composting food scraps, and

hosting cooking classes aimed at helping members utilize the fresh produce they receive (Samoggia et al., 2019: 2-3; Biodynamic Association, n.d.). Beyond these special events, framers also encourage regular interaction between them and CSA members at weekly share-pickups. At an extreme, farmers may even have members assist them in weeding, harvesting, or other chores (Samoggia et al., 2019: 2). Even farmers' newsletters are highly community-oriented, including farm news and recipe suggestions (Biodynamic Association, n.d.). A 2019 study that surveyed 35 CSA farms<sup>7</sup> confirmed that CSA farmers prioritize building community (Samoggia et al., 2019: 9). In short, commitment to community is central to the CSA.

CSA's investments in building relational ties (i.e. community) may be understood as an investment in branding. Investments in brand name capital, sometimes referred to as "selling assets," help ensure a firm's commitment. Any such investments are highly specific and, hence, non-salvageable in another line of production, raising the cost of opportunism (Klein and Leffler, 1981; Dnes, 1993). Resources and time spent in community building are hyper-specific to the given CSA and the value of such investments depreciates to zero in the event of opportunism. Building a tight-knit community around CSA farms' operations significantly increases the reputational costs of opportunism, strengthening the repeat purchase mechanism. For one thing, the farmer will not be able to recoup any of the costs they have entailed in building communal ties. Additionally, the creation of community enhances members' ability to engage in collective punishment. CSA members already have similar goals in terms of product quality, and the community the farmer has created connects them so they could easily collaborate to punish opportunism by withdrawing their patronage in unison. Put another way, the networking facilitated

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<sup>7</sup> The study surveyed a total of 35 CSA farms from the United States and Hungary. Of these CSA farms, 21 were from the United States. Specifically, the CSA farms from the United States were located in Rhode Island, Massachusetts, Vermont, and Georgia (Samoggia et al., 2019: 4).

by CSAs enables more efficient multilateral punishment. Many of these community-building efforts also decrease the costs of monitoring for CSA members. Regular visits to the farm, education on the growing practices, tours, etc. make CSA members more informed monitors and bring them into close contact with the farmer. If farmers were shirking or behaving opportunistically, customers would notice. Poorly tended fields would be an eye-sore if farmers were shirking. Due to the communal and informal nature of CSAs, customers could drop by the farm at any time, making it very difficult to hide the use of pesticides. Finally, if the farm was producing plenty of vegetables but giving members minimal shares, members would know because they would have seen how much was growing in their visits to the farm. Finally, opportunism would destroy the farmer's personal friendships, not simply exchange relationships. In short relational bonds function as a hostage (Williamson, 1983).

Examining this first trait of CSAs leads to some interesting pattern predictions. First, one would expect that if CSAs prioritize community, they would be located near population centers. If CSAs were located in more rural areas where there are many miles between all the members in the CSA, it would be much more difficult to facilitate community engagement. Consistent with this prediction, studies have found that CSAs tend to be concentrated in more populated, fast-growing urban or suburban areas (Schnell, 2007: 554). Over 80% of farms that engage in direct-to-consumer sales, including CSA farms, sell their food within a 100-mile radius (United States Department of Agriculture, 2016). Conversely, large commercial farms (the antithesis of CSA farms) tend not to engage in direct-to-consumer sales at all, preferring to sell to grocery stores. Consequently, their "consumer base" is so dispersed it is unidentifiable (United States Department of Agriculture, 2015: 11).

The next pattern prediction this analysis suggests is that CSA contracts would be more likely among newer CSA farms because new farms have had less time to foster communal bonds. In lieu of such bonding, farmers must resort to more formal guarantees. Surveys have confirmed this fact revealing that the more experienced a CSA farmer is, the less likely he is to require a contract (Woods et al., 2009: 9). Ernst and Woods (2013: 4) have rightly hypothesized that this may be because more established farmers do not have to worry about capturing a loyal consumer base. My analysis is consistent with this suggestion.

Additionally, we would expect CSA farms to be small as the strongness of communal bonds would lessen as more members are added. Sure enough, CSAs do tend to be small (Woods, Ernst, and Tropp, 2017: 1, 12). Not only do we expect CSAs to be smaller, but we would also expect large farms to differ from small farms like CSAs by utilizing contracts more frequently. Smaller farms will find it easier to build relational ties which can serve as an alternative form of commitment due to the size of their consumer base. Smaller farms may be less likely to delegate responsibility for managing sales to employees, consequently, the farmers will interact more directly with their consumers. Additionally, the smallness of a farm enables more extensive networking. Consistent with this prediction, we see that contract use is much more likely for large farms. Farms who reap sales of \$500,000 or greater are more likely to have use contracts than farms with sales of less than \$500,000, with farmers who generate sales of \$1 million or more comprising the lion's share of agricultural contracts (MacDonald et al., 2004: 9).

#### ***4.2 Enhancing Multilateral Punishment Through Crop Selection***

The second informal means of signaling commitment is farmers' voluntary choice to grow crops whose quality is easier to monitor. The type of produce they grow is consequently a commitment to transparency. While consumers are not able to assess the quality of CSA farmers'

produce through a formal certification, they don't need to, as they can easily judge its freshness for themselves. If farmers are growing lots of leafy greens or other vegetables with greenery on them, consumers will quickly be able to judge the freshness and quality of produce. If pests have plagued your produce, you will be unable to disguise mangled leaves. If plants have received insufficient water, the leaves will show this as they will be wilted. If you are attempting to sell produce that isn't fresh and was instead harvested much earlier, the passage of time will be evident in the greenery. And if you have been clumsy in your handling of the produce, this will be evident in bruising and other deformities. These problems do not exist to the same degree, if at all when dealing with staple crops like potatoes, corn, wheat, oats, or other grains.

This analysis yields the prediction that CSA farms would focus their farming efforts on the provision of fresh, often leafy produce rather than staple or storage crops like grains or certain varieties of potatoes. The evidence seems to suggest that CSA farmers do prioritize fresh produce over storage crops or other farm products whose freshness cannot be easily ascertained (Bruch and Ernst, 2010: 1). Fresh fruits and vegetables comprise the primary "product offering" of CSAs (Vasquez et al., 2017: 84; Samoggia et al., 2019: 2). This is consistent with a 2019 survey of CSA farmers which revealed that farmers believe one of the distinct benefits a CSA confers to its members is the freshness of the farm's produce (Samoggia et al., 2019: 6). The United States Department of Agriculture has found that fresh food products make up the majority of direct-to-consumer sales by farms (United States Department of Agriculture, 2016). Farmers often augment this signaling of freshness by including herbs and flowers in their shares whose freshness is easily judged (Cooley and Lass, 1998: 230; Biodynamic Association, n.d.). Furthermore, qualitative evidence seems to suggest that CSAs specialize in fresh, leafy produce to signal their crops' quality to consumers. Consider this illustrative description of how to choose which crops to grow from

one CSA farmer in his book: “*We favor root vegetables that can be sold with their leaves, demonstrating that the crops are fresh. We avoid storage vegetables (potatoes, parsnips, winter squash, rutabagas, etc.), which [...] cannot be marketed as fresh*” (Fortier, 2014: 15). In short, farmers can signal the quality of their produce by growing crops that make multilateral punishment easier to implement in the event of opportunism.

## **5. Implications**

There are a couple of implications of my analysis. First, it affords the first economic explanations for the form and activities of CSAs. Previous attempts have appealed to simple changes in consumer tastes or have more radically posited that CSAs transcend the maximizing principle that underpins economics. Such explanations suggest that CSA farmers and members do not base their behavior on interest-seeking whatsoever (Bloemmen et al., 2015). This paper explains the form and operation of CSAs without appealing to such radical departures from the assumptions economists make.

Second, this paper contributes to our understanding of the costs and benefits of direct selling. It suggests that direct selling is more likely where relational bonds can augment commitment. For example, we could expect to see more direct selling to chefs, instead of chefs getting their food through third parties like grocery stores. Piano has observed that chefs tend to spearhead the acquisition of ingredients themselves rather than delegating this responsibility to subordinates (Piano, 2021: 177). This direct involvement in the ingredient buying process would seem to make direct selling schemes more practicable as chefs would be able to form direct relationships with their sellers if they so desired.<sup>8</sup> My analysis also suggests that direct selling will be more likely where monitoring costs are low. Hence, parties that voluntarily enable easier

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<sup>8</sup> Interestingly, CSA farmers also sell to restaurants (Woods, Ernst, and Tropp, 2017: 1). It would appear possible that even in this case farmers may avoid the use of contracts, or at least highly specified contracts.

monitoring of their behavior, as CSAs do with regular farm visits, education, and selection of monitorable crops, can increase the feasibility of direct selling.

Along similar lines, contracts are less pertinent when relational bonds exist. This should not be construed as implying that contracts will never be used when relational bonding is possible. Instead, relational bonding can augment the power of contracts to ensure commitment. Thus, in cases where relational bonding is strong, we can expect parties to avoid the use of explicit contracts or utilize less highly specified contracts.

Additionally, my analysis contributes to the literature on how communities keep opportunism in check without reliance on explicit contracts (Ellickson, 1991; Anderson and Hill, 2017). Among other things, the tight bonds built in a community enable more efficient punishment of parties that renege on their promises through the repeat purchase mechanism. The networking within a community enables multilateral enforcement in the form of all of the members of a business withdrawing their patronage simultaneously. This takes the bilateral enforcement discussed by Klein and Leffler (1981) to a new level of efficacy. As with CSAs, parties can commit themselves by enabling more efficient punishment of renegeing via the repeat purchase mechanism. Parties may augment the power of this repeat purchase mechanism is by enabling multilateral punishment through networking within their clientele.

My analysis leads to multiple other questions about CSAs beyond the scope of this paper. For example, why aren't CSAs normally run by shareholders as would be the case in a community garden,<sup>9</sup> and why are consumers willing to allow farmers to choose what produce is in their weekly share. Additionally, CSAs exhibit variation across different countries and regions. There are

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<sup>9</sup> A small number of CSAs have been organized by a group of consumers who want fresh produce and then hire a farmer. In such an arrangement the crop selection, planting, and care are dictated by this core group of consumers (Bruch and Ernst, 2010: 1).

opportunities for research exploring the reasons for this variation and examining some of the other unique forms of CSAs.

## **6. Conclusion**

In summary, CSA members are confronted with a unique risk of opportunism since they pay for their share at the beginning of the growing season without any contract. Furthermore, nature's unpredictability makes it possible for farmers to easily disguise opportunism. This opportunism could be as simple as shirking or as elaborate as reducing the size of CSA members' shares of weekly produce and selling the excess to farmers' markets and restaurants. Surprisingly, however, CSAs have been able to effectively use the threat of multilateral punishment through the repeat purchase mechanism to check farmers' behavior. The effectiveness of this punishment is augmented by CSA's investments in creating relational bonds through community building and their crop choice. CSA's community-building efforts both function as a hostage as well as enable coordinated multilateral punishment of opportunism. Meanwhile, CSA farmers' choice of crops signals their transparency and, hence, quality. The patterns of CSA's geographic location, size, and contract use bear out this explanation of how CSA arrangements ensure commitment.

While this analysis creates a solid framework for understanding CSAs' use of informal private governance mechanisms, it leaves other unique attributes of CSA's unexplained, such as, why consumers are willing to accept a share with a random selection of produce and why CSAs aren't run communally. Furthermore, as has been mentioned, this paper focuses on CSA arrangements within the United States. This leaves room for expanding this analysis to encompass the diversity of different CSA forms across the globe.

My analysis expands the literature on the economics of agriculture, complementing those papers that have been written on unique institutional arrangements in the agricultural sector. I also

suggest that direct selling will be more likely in cases where relational bonds can substitute for, or augment other commitment mechanisms. In such cases, contracts will either be less necessary or less specified. Furthermore, this paper presents a unique case study of how communities devise private governance mechanisms rather than relying on formal, legal institutions. For example, parties can signal their commitment by creating hostages (such as relational bonds). Particularly unique in the case of the CSA, parties can make investments that help facilitate multilateral punishment or specialize in offering products whose quality is easy to monitor. All of this further affirms the literature that private parties can safeguard against opportunism without reliance on formal governmental mechanisms.

## References

- Akerlof, George A. 1970. "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism." *The Quarterly Journal of Economics* 84, no. 3: 488–500. <https://doi.org/10.2307/1879431>.
- Allen, Douglas W., and Dean Lueck. 1998. "The Nature of the Farm." *The Journal of Law and Economics* 41, no. 2: 343-386.
- Anderson, Terry L., and Peter Jensen Hill. 2017. *An American Experiment in Anarcho-Capitalism: The Not So Wild, Wild West*. Routledge.
- Biglaiser, Gary, and James W. Friedman. 1994. "Middlemen as Guarantors of Quality." *International Journal of Industrial Organization* 12, no. 4: 509-531.
- Biglaiser, Gary, Fei Li, Charles Murry, and Yiyi Zhou. 2017. *Middlemen as information intermediaries: Evidence from used car markets*. Working Paper.
- Biglaiser, Gary. 1993. "Middlemen as Experts." *The RAND Journal of Economics* 24, no. 2: 212–23. <https://doi.org/10.2307/2555758>.
- Biodynamic Association (BDA). n.d. "Community Supported Agriculture." Accessed October 10, 2021. <https://www.biodynamics.com/content/community-supported-agriculture>.
- Bloemmen, Marjolijn, Roxana Bobulescu, Nhu Tuyen Le, and Claudio Vitari. 2015. "Microeconomic Degrowth: The Case of Community Supported Agriculture." *Ecological Economics* 112: 110-115.
- Boettke, Peter J. 2011. "Institutional Transition and the Problem of Credible Commitment." *Annual Proceedings of the Wealth and Well-Being of Nations*: 41.
- Bowens, Natasha. 2015. "CSA Is Rooted in Black History." *Mother Earth News*, February 13, 2015. <https://www.motherearthnews.com/organic-gardening/csas-rooted-in-black-history-zbcz1502/?fbclid=IwAR33z2BOv1RYJ4NhcJKfWotnN05iApwNSHGztCKnS97kCPARbdptVJyCVi4>.
- Brinig, Margaret F. 1990. "Rings and Promises." *Journal of Law, Economics, and Organization*. 6: 203.
- Bruch, Megan L., and Matthew D. Ernst. 2010. "A Farmer's Guide to Marketing Through Community Supported Agriculture (CSAs)." *University of Tennessee Extension*.
- Casaburi, Lorenzo, and Rocco Macchiavello. 2015. "Loyalty, Exit, and Enforcement: Evidence from a Kenya Dairy Cooperative." *The American Economic Review* 105, no. 5 (May): 286–90. <http://www.jstor.org/stable/43821894>.

- Chait, Jennifer. 2019. "How Much Does Organic Certification Cost?" *The Balance: Small Business*. Accessed October 11, 2021. <https://www.thebalancesmb.com/how-much-does-organic-certification-cost-2538018>.
- Coase, Ronald H. 1937. "The Nature of the Firm." *Economica* 4, no. 16: 386–405. <https://doi.org/10.2307/2626876>.
- Cooley, Jack P., and Daniel A. Lass. 1998. "Consumer Benefits from Community Supported Agriculture Membership." *Applied Economic Perspectives and Policy* 20, no. 1: 227-237.
- Czarnezki, Jason, Andrew Homan, and Meghan Jeans. 2014. "Creating order amidst food eco-label chaos." *Duke Environmental Law & Policy Forum* 25: 281.
- DeMuth, Suzanne. 1993. *Community Supported Agriculture (CSA): An Annotated Bibliography and Resource Guide*. United States: National Agricultural Library.
- Dnes, Antony W. 1993. "A Case-Study Analysis of Franchise Contracts." *The Journal of Legal Studies* 22, no. 2: 367-393.
- Ellickson, Robert C. 1991. *Order Without Law: How Neighbors Settle Disputes*. Harvard University Press.
- Endres, A. Bryan, Megan Galey, and Rachel Armstrong. n.d. "Model CSA Member Agreement and Guide." *North Central Risk Management Education Center and the USDA National Institute of Food and Agriculture*. Accessed October 9, 2021. <https://douglas.extension.wisc.edu/files/2013/01/CSA-Model-Member-Agreement-v-1-Univ-IL.pdf>.
- Ernst, Matt, and Timothy Woods. 2013. "Community Supported Agriculture." *UK Department of Agricultural Economics: Lexington, KY, USA*.
- Farnsworth, Richard L., Sarahelen R. Thompson, Kathleen A. Drury, and Richard E. Warner. 1996. "Community Supported Agriculture: Filling a Niche Market." *Journal of Food Distribution Research* 27, no. 856-2016-56416: 90-98.
- Ferguson, James J. 2004. "Organic Certification Procedures and Costs." *EDIS* 2004, no. 7.
- Fortier, Jean-Martin. 2014. *The Market Gardener: A Successful Grower's Handbook for Small-Scale Organic Farming*. Canada: New Society Publishers.
- Galt, Ryan E. 2011. "Counting and Mapping Community Supported Agriculture (CSA) in the United States and California: Contributions from Critical Cartography/GIS." *ACME: An International Journal for Critical Geographies* 10, no. 2: 131-162. Accessed October 9, 2021. <https://www.acme-journal.org/index.php/acme/article/view/892/748>.
- Galt, Ryan E. 2013. "The Moral Economy is a Double-edged Sword: Explaining Farmers' Earnings and Self-exploitation in Community-Supported Agriculture." *Economic Geography* 89, no. 4: 341-365.

- Goeringer, Paul, Ashley Newhall, Sarah Everhart, and Wele Elangwe. 2015. "Understanding A Community Supported Agriculture Agreement: What Should Be Included In A Good CSA Membership Agreement?" *University of Maryland*.
- Hansmann, Henry. 1988. "Ownership of the Firm." *Journal of Law, Economics, & Organization* 4, no. 2: 267-304.
- Hayek, Friedrich August. 1973. *Rules and Order*. Vol. 1 of *Law, Legislation and Liberty*. Chicago: University of Chicago Press.
- Henderson, Elizabeth. 2017. "A Brief History of CSA." *The Natural Farmer*. [http://www.nofa.org/tnf/2017\\_WinterSectionB.pdf](http://www.nofa.org/tnf/2017_WinterSectionB.pdf).
- Klein, Benjamin, and Keith B. Leffler. 1981. "The Role of Market Forces in Assuring Contractual Performance." *Journal of Political Economy* 89, no. 4 (August): 615–41. <http://www.jstor.org/stable/1833028>.
- Klein, Daniel B. 2001. "The Demand for and Supply of Assurance." *Economic Affairs* 21, no. 1: 4-11.
- Kondoh, Kazumi. 2015. "The Alternative Food Movement in Japan: Challenges, Limits, and Resilience of the Teikei System." *Agriculture and Human Values* 32, no. 1 (March): 143-153. <https://doi.org/10.1007/s10460-014-9539-x>.
- Leeson, Peter T., and Christopher J. Coyne. 2012. "Conflict-Inhibiting Norms." *The Oxford Handbook of the Economics of Peace and Conflict*: 840-860.
- Li, Yiting. 1998. "Middlemen and Private Information." *Journal of Monetary Economics* 42, no. 1: 131-159.
- MacDonald, James M., Janet Perry, Mary Clare Ahearn, David Banker, William Chambers, Carolyn Dimitri, Nigel Key, Kenneth E. Nelson, and Leland W. Southard. 2004. "Contracts, Markets, and Prices: Organizing the Production and Use of Agricultural Commodities." *USDA-ERS Agricultural Economic Report* 837.
- Matzembacher, Daniele Eckert, and Fábio Bittencourt Meira. 2019. "Sustainability As Business Strategy in Community Supported Agriculture: Social, Environmental and Economic Benefits for Producers and Consumers." *British Food Journal*.
- McFadden, Steve. 2004. "The History of Community Supported Agriculture." *Rodale Institute*, January 1, 2004. <https://rodaleinstitute.org/blog/the-history-of-community-supported-agriculture/>.
- Melanson, Jennifer. 2008. "Community Supported Agriculture: The CSA Guide for Atlantic Canada." Atlantic Canadian Organic Regional Network. Accessed October 9, 2021. <https://www.acornorganic.org/media/resources/CSAmanual.pdf>.

- Newbery, David M. G. 1977. "Risk Sharing, Sharecropping and Uncertain Labour Markets." *The Review of Economic Studies* 44, no. 3 (October): 585–94. <https://doi.org/10.2307/2296910>.
- Nye, John V. C. 2020. "The Limits of the Commune: A Review of The Mystery of the Kibbutz." *Journal of Economic Literature* 58, no. 2: 488-97.
- Ogutu, Sylvester Ochieng, Dennis O. Ochieng, and Matin Qaim. 2020. "Supermarket Contracts and Smallholder Farmers: Implications for Income and Multidimensional Poverty." *Food Policy* 95: 101940.
- Piano, Ennio E. 2021. "Organizing high-end restaurants." *Economics of Governance* 22, no. 2: 165-192.
- Pole, Antoinette, and Margaret Gray. 2013. "Farming Alone? What's Up With the "C" in Community Supported Agriculture." *Agriculture and Human Values* 30, no. 1: 85-100.
- Samoggia, Antonella, Chiara Perazzolo, Piroska Kocsis, and Margherita Del Prete. 2019. "Community Supported Agriculture Farmers' Perceptions of Management Benefits and Drawbacks." *Sustainability* 11, no. 12: 3262.
- Schnell, Steven M. 2007. "Food with a Farmer's Face: Community-Supported Agriculture in the United States." *Geographical Review* 97, no. 4: 550-564.
- Si, Zhenzhong, Theresa Schumilas, Weiping Chen, Tony Fuller, and Steffanie Scott. 2020. "What Makes a CSA a CSA? A Framework for Comparing Community Supported Agriculture with Cases of Canada and China." *Canadian Food Studies/La Revue canadienne des études sur l'alimentation* 7, no. 1: 64-87.
- United States Department of Agriculture. 2015. "Report to Congress: Trends in U.S. Local and Regional Food Systems." [https://www.ers.usda.gov/webdocs/publications/42805/51173\\_ap068.pdf](https://www.ers.usda.gov/webdocs/publications/42805/51173_ap068.pdf).
- United States Department of Agriculture. 2016. "Highlights: Direct Farm Sales of Food: Results from the 2015 Local Food Marketing Practices Survey." Accessed November 10, 2021. [https://www.nass.usda.gov/Publications/Highlights/2016/LocalFoodsMarketingPractices\\_Highlights.pdf](https://www.nass.usda.gov/Publications/Highlights/2016/LocalFoodsMarketingPractices_Highlights.pdf).
- Vasquez, Angie, Nancy E. Sherwood, Nicole Larson, and Mary Story. 2017. "Community-Supported Agriculture as a Dietary and Health Improvement Strategy: A Narrative Review." *Journal of the Academy of Nutrition and Dietetics* 117, no. 1: 83-94.
- Williamson, Oliver E. 1983. "Credible Commitments: Using Hostages to Support Exchange." *The American Economic Review* 73, no. 4: 519-540. <http://www.jstor.org/stable/1816557>.
- Williamson, Oliver E. 1984. "The Economics of Governance: Framework and Implications." *Zeitschrift Für Die Gesamte Staatswissenschaft / Journal of Institutional and Theoretical Economics* 140, no. 1 (March): 195–223. <http://www.jstor.org/stable/40750687>.

Woods, Timothy, Matt Ernst, Stan Ernst, and Nick Wright. 2009. "2009 Survey of Community Supported Agriculture Producers." *Agricultural Economics Extension Series* 11.

Woods, Timothy, Matthew Ernst, and Debra Tropp. 2017. *Community Supported Agriculture: New Models for Changing Markets*. United States Department of Agriculture, Agricultural Marketing Service.