Business Ownership by Workers: Are Worker Cooperatives a Viable Option?

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I. Introduction

Business development and retention are an ongoing challenge for rural communities in Iowa and throughout the United States. Low population density and remoteness of rural areas limit local demand and make it difficult for start-ups to access sufficient capital, infrastructure, and educated labor (Reynolds et al. 1995). Firm entry rates are typically lower in rural areas than urban areas and the types of firm start-ups in rural areas tend not to be high growth enterprises (Henderson 2002; Plummer and Headd 2008).

Business succession, a key piece of retention, is likewise difficult in rural areas. The grown children of rural family-owned operations often have established careers and little interest in succeeding their parents in running a ”small-town” business. Selling a rural firm may also prove challenging; there are typically fewer potential buyers in smaller markets. Some firms report that potential buyers are primarily interested in purchasing customer lists and certain firm assets without much or any intention of keeping the business open in its current location (Logue 2006).

One possible strategy for both succession and new business development is employee ownership. Fueled by research linking entrepreneurship and regional economic growth (Acs and Armington 2003; Johnson 2007), policies to foster small business development are an increasingly popular rural development strategy (Hoy 1996). Employee ownership, particularly in the form of worker cooperatives or 100% employee-owned businesses, can be viewed as a form of collective entrepreneurship. New business formation as an employee-owned firm or cooperative may have some advantages over formation as a sole proprietorship or partnership. Pooling financial resources can raise a substantially greater portion of funding required for start-up and shares the risk among many partners, rather than one or two. In addition, acting collectively combines the various knowledge and skills of the members involved. In the case of business succession, selling to employees provides a tax benefit to the owners (the Internal Revenue Code Section 1042 rollover). More importantly, it increases the probability that the business will continue to exist in its current location, benefitting both the employees themselves and the local community (Reynolds 2009).

While worker cooperatives (or employee-owned cooperatives) are currently rare in the United States, examples of successful worker cooperatives are frequently cited in the literature, suggesting potential for future development of this type of organization. The majority of worker cooperatives identified in this research are located in urban areas. Yet the nature of worker cooperatives, typically small numbers of employees and requiring relatively low capital investment, may make them a good fit for a variety of rural businesses. Foremost, cooperative developers and other practitioners stress that a commitment to the cooperative ideology is a necessary ingredient for successful worker cooperatives. Given the strong tradition of agricultural and consumer cooperatives in rural America, worker cooperatives would seem to be a logical extension of this proven business model in rural areas.

This paper reviews the literature on worker cooperatives and presents data on the extent and nature of worker cooperatives in the United States. It concludes with a discussion of the implications for employee-owned cooperative development in Iowa and provides suggestions for future research and outreach programming on this topic.

II. Worker cooperative basics[1]

A worker cooperative is "a business entity that is owned and controlled by the people who work in it" according to the United States Federation of Worker Cooperatives (USFWC). As such, it is a type of employee-owned firm as well as a type of cooperative and shares features of both. While there is not one universally accepted definition of a worker cooperative, three defining characteristics emerge: 1) ownership shares[2] are purchased by member-employees and the membership owns assets collectively; 2) it is operated by the "one person, one vote" principle; a member's control of the cooperative is not proportionate to the member's investment; and 3) members provide their labor as a production input and share the profits of the cooperative based on their labor input (USFWC 2008; Northcountry Cooperative Foundation 2006; Padgham 2002).

The objectives of worker cooperatives typically differ from those of traditional for-profit firms. Whereas, conventional firms are assumed to maximize profits, worker cooperatives have an explicit purpose to provide employment for their members. Historically, worker cooperatives have tended to emerge in times of economic downturn and social upheaval in response to high unemployment as a means of preventing plant closings and creating new jobs (Dickstein 1991; Horowitz and Horowitz 1999).

In many cases, the focus of worker cooperatives on providing employment extends beyond current membership to future generations. A third generation member of a worker cooperative in Italy explained, "'Part of our mission is intergenerational mutuality. What we see here is the fruit of generations of work. We receive wealth from past generations, and we create it for future generations of members. Our objective isn't just to generate jobs for this generation but also for future generations.'" (quoted in Corcoran and Wilson 2010).

Worker cooperatives are viewed as pursuing broader goals than conventional firms. While clearly cooperatives must be economically viable in order to persist, they also adhere to cooperative principles which include democratic control and self-management, open and voluntary membership, and an emphasis on worker education (Dickstein 1991). Creation of worker cooperatives has often been driven by factors other than expected economic returns, particularly social and economic justice concerns. When asked to define success, respondents to a survey of worker cooperatives in Canada listed: longevity, living wages, meaningful work, personal development, financial success and profitability, and provision of values-driven products (Hough, Wilson and Corcoran 2010).

Employee ownership is not a simple, one-dimensional concept (Kruse and Blasi 1995). A firm might be 100% employee-owned by 30% of the employees or 30% of the employee-owned business might be owned by all employees. The definitional lines for what constitutes a cooperative are similarly blurry, as rapid evolution in cooperative models has occurred in recent years (Chaddad and Cook 2004). There is certainly not one model of a worker cooperative. A worker cooperative might employ non-member workers or involve non-worker members (for

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[1] For a comprehensive overview of worker cooperatives characteristics as well as a number of current case studies, see Northcountry Cooperative Foundation (2006). In Good Company: A Guide to Cooperative Employee Ownership, available online at http://www.ncdf.coop/documents/worker_coop_toolbox.pdf.

[2] This is usually called common stock. Common stock is distinguished from preferred stock which has limited control rights. Nonmember investors can have preferred stock.

example, external investors who by virtue of their financial stake in the company have some say in company decision making, but who do not work for the firm). Worker cooperatives vary in their policies regarding who may become a member and how membership is attained; in the ways in which they allocate profits among members; in their governance structure; and in their policies regarding non-member investment. These characteristics are discussed briefly below.

Initial Investment: To become a member, eligible workers purchase an initial share. The share price can be very low (for example, $50) in service related cooperatives like home care and taxi services that do not require large capital investments. Keeping membership share prices low also encourages broader membership. In other industries, membership requires a more substantial financial investment. A membership share in Isthmus Engineering, a worker cooperative in Madison, Wisconsin, costs $10,000, which must be financed by the member (Northcountry Cooperative Development Fund 2006, 40). Other cooperatives in essence provide financing by allowing members to purchase shares over time. Collective Copies, a worker-owned collective in Florence, Massachusetts, allows members to pay their $250 membership fee through payroll deduction, $5 at a time (Northcountry Cooperative Development Fund 2006, 32).

Allocation of profits: In cooperatives, members share in the profits of the firm according to patronage, rather than investment. In a worker cooperative, patronage is based on the amount of labor each employee-member provides to the firm. This may be determined by the number of hours worked, by earnings, or by a combination of the two. In addition, seniority can be a factor in determining patronage allocations.

Membership Eligibility: Some worker cooperatives allow every employee to become a member, while other cooperatives may restrict the membership opportunity. For example, a cooperative may only allow full-time, year-round employees to join as members. The process for obtaining membership in a worker cooperative varies as well. Some cooperatives require a probationary period, ranging from a few months to multiple years. Other cooperatives allow employees to join as members from their first day. In some worker cooperatives, new members must be approved by a vote of the current members; other cooperatives grant membership to any employee meeting the probationary period requirements. Worker cooperatives also have different rules regarding whether CEOs or managers can be members in the cooperative.

Governance: The member-employees in a worker cooperative control the firm democratically (one-member, one-vote). The way in which decisions are made varies across cooperatives. Worker cooperatives with few members may have a very “flat” governance structure, in which all members make decisions collectively. In essence, all members serve on the cooperative’s board of directors. Other worker cooperatives may adopt a hierarchical structure, more like larger farmer-owned cooperatives, delegating decision making authority to a board of directors elected by the membership and employing managers to handle the day-to-day operations of the firm.

Managers may be appointed from among the current membership or hired externally. Some cooperatives do not allow managers or CEOs to be members because they view their roles in the cooperative (such as scheduling workers and paying bills) as fundamentally different from the roles of members.

Formation: Worker cooperatives have been formed in a variety of ways. A few formed as worker cooperatives from the beginning. A number of cooperatives cited as success stories in the literature on worker cooperatives formed with assistance from government agencies and/or non-profit organizations as a way to achieve economic development or social goals. Other worker cooperatives have formed due to a conversion from a conventional firm or non-profit.

The formation of a worker cooperative from inception can occur autonomously, as in the case of Union Cab Cooperative of Madison, Wisconsin (Lawless and Reynolds 2004). Experienced workers raised start-up funding and operate the worker cooperative. In the case of Union Cab Cooperative, the workers established the cooperative to overcome low wages and poor working conditions.

More commonly, the formation of a worker cooperative occurs with assistance from cooperative developers, governmental agencies, or non-profit organizations. A cooperative developer can assess business feasibility before organizing a new cooperative, and provides organizational and financial consulting. Some examples of cooperative developers who have assisted with the development of worker cooperatives are Cooperative Development Institute, South Deerfield, Massachusetts;[3] Northwest Cooperative Development Center, Olympia, Washington;[4] Women's Action to Gain Economic Security (WAGES), Oakland, California (Todd 2007); and Evergreen Cooperative, Cleveland, Ohio (Alperovitz, Howard, and Dubb 2009). Government agencies can also play the role of cooperative developer. In the case of Cooperative Care, the Department of Human Services in Waushara, Wisconsin, assisted with writing a business plan and helped to incorporate the new worker cooperative (Bau 2003). A more recent example involves the role of the USDA Forest Service in helping facilitate the purchase of one of the largest sawmills in the western United States, Intermountain Resources, LLC. In a meeting to discuss options for keeping the mill operational, Under Secretary Harris Sherman highlighted the role UDSA's Rural Development Office can play by providing financial assistance through its Business & Industry Loan Guarantee Program as well as technical assistance in forming a cooperative through its partners, in this case Rocky Mountain Farmers Union Cooperative and Economic Development Center (USDA 2010). In many cases, funding providers such as community development funds or charitable foundations, play a big role by providing start-up capital in the form of a loan to the new cooperative. One example is the Northcountry Cooperative Development Fund in Minnesota (*Rural Development* January/February 2007).

Worker cooperatives have also formed as a result of conversion from other business types. The rationale for conversion varies. Rainbow Grocery Cooperative (RGC), San Francisco, California, converted from non-profit to a worker cooperative due to difficulty obtaining bank financing. When RGC tried to borrow money from banks to finance an expansion, they found banks were

[3] For an example of CDI's role in forming a worker cooperative, see http://www.cooperationworks.coop/success-stories/worker-ownership/building-co-ops-through-timebanking

[4] See NWCDC's website for examples of their role in developing two home care worker cooperatives: http://www.nwcdc.coop/projects.htm

uncomfortable dealing with a business without owners.[5] RGC decided to convert to a cooperative in 1993 (Lawless and Reynolds 2004).

Conversion to a worker cooperative may also occur because a business owner desires to give current employees an ownership stake in the company. The owners of Burly Design Cooperative in Eugene, Oregon, converted their firm to a worker cooperative to fulfill their vision of a more democratic workplace with employee involvement (Thompson 2006; Lawless and Reynolds 2004). Other cooperatives converted from partnerships as a way to share ownership with employees. Isthmus Engineering, Madison, Wisconsin, converted to a worker cooperative in the early 1980s and Pelham Auto Service, Amherst, Massachusetts, was transformed in 1977 (Northcountry Cooperative Development Fund 2006).

Finally, a business may be transformed to a worker cooperative in order to ensure business succession, for example, in the event of the owner's retirement. Owners in Select Machine in Brimfield, Ohio, chose to convert their business to a worker cooperative instead of selling to potential buyers. They were concerned that outside buyers were mainly interested in their customer list and some select assets and would close the plant soon after purchasing the firm (Northcountry Cooperative Development Fund 2006).

Hybrid forms: Solidarity cooperatives, also called worker-community cooperatives, are multiple-stakeholder cooperatives that have more than one class of patron-owners. Employees, consumers, and other interested parties have joint ownership in the solidarity cooperative. Examples of these cooperative forms include grocery stores, early childhood education, and home health care businesses. For example, the Weaver Street Market in Chapel Hill, North Carolina, is a grocery store which has a board of directors consisting of two worker owners and two consumer owners (www.weaverstreetmarket.coop). In the United States, a number of multiple stakeholder cooperatives have emerged in the sustainable food movement (Lund 2011).

A relatively new organizational innovation that allows cooperatives to raise capital from non-member investors has created a different hybrid cooperative form, the limited cooperative association (LCA). A handful of states (Iowa, Minnesota, Nebraska, Oklahoma, Tennessee, Utah, Wisconsin, and Wyoming) have enacted legislation enabling the formation of these entities. Each state has somewhat different rules regarding the scope of the operation (for example, some states limit these to agricultural related ventures), allocation of voting rights, composition of the board of directors, and allocation of profits (Pittman 2008). Table 1 summarizes the differences between traditional worker cooperatives and those formed as limited cooperative associations.

[5] This episode is from Rainbow Grocery Cooperative (www.rainbow.coop/history2/).

Table 1. Comparison between traditional worker cooperative and LCA worker cooperatives.

Item	Description	Traditional worker cooperative	LCA worker cooperative
Shares	Type of shares	Common stock	Common stock Investor stock
	Amount held by one person	One share per member	Varies
	Transferability of shares	No	Yes, if in the bylaws
	Redeemability of shares	Yes	Common stock is redeemable, but investor stock is not
Control	Hold voting rights	Yes	Yes
	Assignment	By one member, one vote	One person, one vote if it is going to be a true worker cooperative. Patrons must retain at least 50% voting control on the board of directors
Returns	Allocation	Based on hours worked or wages earned	Based on shares held

Source: Northcountry Cooperative Development Fund (2006)

III. The current state of worker cooperatives in the United States

Worker cooperatives are rare in the United States. A recent study on the economic impact of cooperatives by the University of Wisconsin's Center for Cooperatives identified 223 worker cooperatives in the United States, comprising only 1% of all U.S. cooperatives. Among cooperative types, they have the lowest average revenue, membership, and employment levels as shown in table 2.

Table 2. Number, average revenue, and average membership of cooperatives by type.

Cooperative Type	Number of Firms	Percent of Firms	Average Revenue (in thousands of dollars)	Average Membership[1]	Average Number of Employees[2]	Average Annual Employee Compensation[3]
Workers	223	1	983	247	11	$23,282
Producers	1,494	5	43,793	478	49	$40,724
Purchasing	724	2	218,083	8,471	180	$22,263
Consumer	26,844	92	10,844	12,814	24	$29,332
Total	29,285	100	17,573	11,981	29	$29,210

Note: The numbers in the table are calculated from data in Table 2.2 in Deller et al. (2009, 11).
[1]One member can belong to multiple cooperatives, so these numbers do not necessarily represent unique individuals.
[2] Employment is reported in terms of full-time employees.
[3] Compensation reported is a sum of wages and benefits, and does not include patronage refunds. Data on patronage refunds are not available.

On average, worker cooperatives have relatively few employees in terms of full-time equivalents. The average U.S. worker cooperative has just 11 employees. This is comparable to data from a survey of Canadian worker cooperatives that reports the average employment at 12 workers (Hough, Wilson, and Corcoran 2010). Comparing the employment figures with membership numbers, however, suggests that worker cooperatives have a large number of part-time employees. Alternatively, the worker cooperatives in this sample may have a significant number of non-worker members, suggesting that these are not "pure" worker cooperatives, but rather cooperatives with more than one class of members.

Based on these data, average compensation for employees in the average worker cooperative is larger than that of purchasing cooperatives, but smaller than that of producer and consumer cooperatives (see table 3). It is important to note that reported compensation does not include patronage refunds; therefore, total employee compensation is understated for worker cooperatives in particular. While the Wisconsin study did not report data on patronage refunds, case study evidence shows that in some cooperatives, patronage can be substantial. For example, the typical annual refund to an employee-member of Pelham Auto Service is $1,500 (Northcountry Cooperative Development Fund 2006, 36). Annual bonus payments reported in a sample of European worker cooperatives ranged from the equivalent of one week's wages to as much as eight week's wages (Bonin, Jones, and Putterman 1993). In addition, case study

evidence suggests that worker cooperatives are more likely to provide employee benefits than similar conventional firms in their industries (Northcountry Cooperative Development Fund 2006; Whitaker, Schneider, and Bau 2005; Todd 2007). Without data for individual cooperatives, it is difficult to make comparisons to non-cooperative firms, especially given that worker cooperatives are found in a variety of economic sectors. However, note that 2008 County Business Patterns statistics report average employment across all sectors at 16 employees per establishment.[6] While the average compensation in worker cooperatives is much lower than that reported in County Business Patterns across all sectors ($42,435), it is similar to, or higher than average compensation reported in sectors which contain a number of worker cooperatives: for example, retail trade ($23,650), other services ($26,250) which includes a variety of maintenance and repair businesses and personal care services, and accommodation and food services ($15,363).

Types of industries: Table 3 presents the number of worker cooperatives by industry sector, compiled from a 2008 United States Federation of Worker Cooperatives directory. [7] Worker cooperatives exist mainly in the retail and service sectors. Retail and service worker cooperatives include small bicycle shops, bookstores, coffee shops and bakeries, fair-trade coffee roasters, and taxi companies. They are rare in the manufacturing sector. Roughly 15% of the worker cooperatives listed in the USFWC directory are in the arts and media industry. Worker cooperatives in books and printing account for 14% of the total, as do food and beverage (including bakery) cooperatives. The top five categories account for over 45% of all worker cooperatives, collectives, and democratic workplaces listed in the directory. One reason why these categories may have organized in greater numbers than other industries is they have relatively low capital requirements for start-up and require similar skill levels for all employees in the firm. These two characteristics are cited in the literature as potentially important factors for success in many worker cooperatives.

[6] County Business Patterns data are available online at http://www.census.gov/econ/cbp/index.html). CBP covers most of the country's economic activity. Notable exclusions are self-employed individuals, employees of private households, railroad employees, agricultural production employees, and most government employees.

[7] The directory gives the approximate number of worker cooperatives since the directory includes collectives and democratic workplaces which may or may not be worker cooperatives. As such, these numbers may serve as an upper bound.

Table 3. Worker cooperatives, collectives and democratic workplaces[8] by industry and location.

Industry	Urban	Rural	Total
Arts and Media	30	2	32
Books	17	0	17
Food and Beverage	16	1	17
Information Technology	15	0	15
Building, Construction and Carpentry	12	2	14
Printing	12	0	12
Bakery	10	1	11
Crafts and Textiles	4	4	8
Grocery	8	0	8
Healthcare	7	1	8
Janitorial	8	0	8
Wellness	7	1	8
Bicycles Sales and Service	6	0	6
Education and Childcare	5	1	6
Energy	6	0	6
Engineer and Manufacturing	6	0	6
Agriculture, Forestry and Landscaping	4	1	5
Courier and Delivery	5	0	5
Environmental Restoration	4	0	4
Professional and Contract Service	4	0	4
Graphic and Web Design	3	0	3
Taxi	3	0	3
Shipbuilding and Repair	2	0	2
Auto Repair	0	1	1
Imports	1	0	1
Total	195	15	210

Source: United States Federation of Worker Cooperatives (2008). Industries are defined by the USFWC.

[8] Refer to the meaning of collective and democratic workplace in United States Federation of Worker Cooperatives at www.usworker.coop/aboutworkercoops. Collective is a general term for groups with democratic decision-making. Collectives can be anything from businesses incorporated as regular corporations on paper but with democracy in practice to all or partly volunteer-run groups. Often they do not have ownership buy-in or profit-sharing. Democratic workplaces are businesses and workplaces that are controlled by-and/or share profits among-their workers, that are not formally worker cooperatives.

Location: The addresses provided in the USFWC directory were used to classify cooperatives' locations as rural or urban. The classification of urban and rural areas follows the 2004 County Typology by the United States Department of Agriculture Economic Research Service (www.ers.usda.gov/Data/TypologyCodes). Worker cooperatives tend to be more prevalent in urban areas than in rural area (see table 3), but worker cooperatives in crafts and textiles exist in urban and rural areas equally. Like conventional firms, market demand may affect the location of worker cooperatives.

Figure 1 displays the distribution of worker cooperatives by state. The map labels the number of worker cooperatives identified in each state; for example, 56 worker cooperatives are located in California. Seventy percent of the worker cooperatives listed in United States Federation of Worker Cooperatives directory are located in just seven states: West Coast states California, Oregon, and Washington; Midwestern states Minnesota and Wisconsin; and Northeastern states Massachusetts and New York. There are 20 states where no worker cooperatives are located (shaded grey in figure 1), including Iowa.

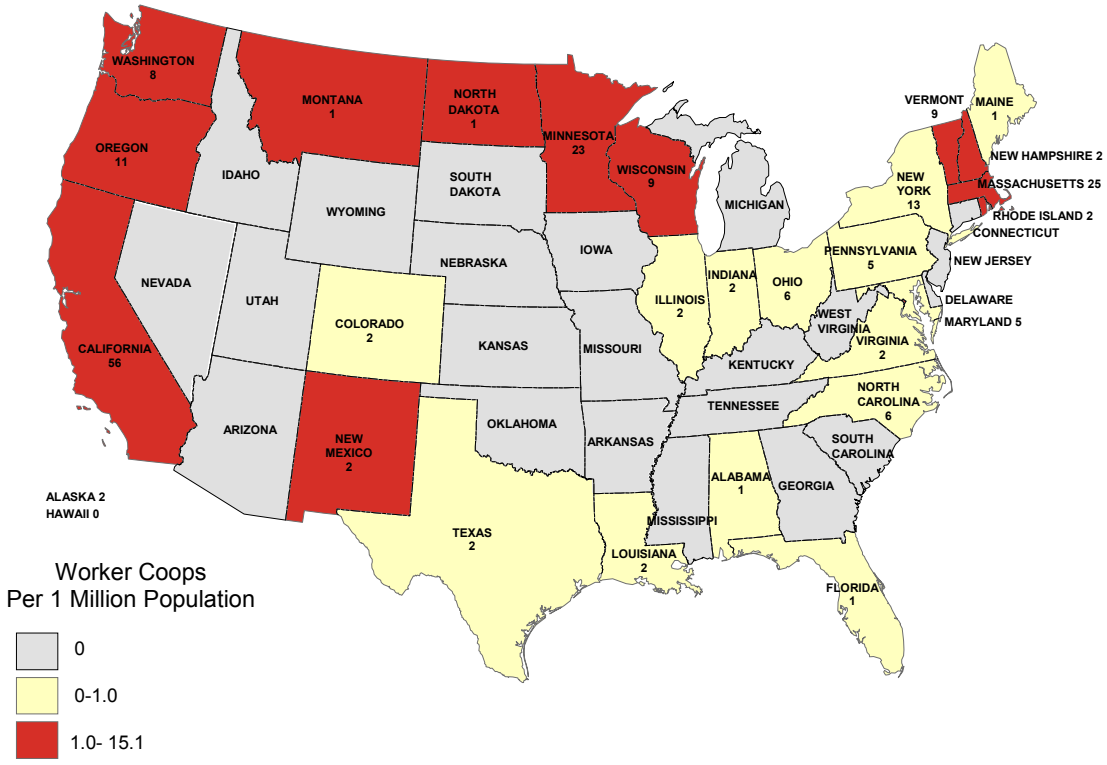

Figure 1. Distribution of Worker Cooperatives by State[9].

The numbers of worker cooperatives were divided by state population to provide a per capita measure. These figures are used to generate the shading in the map; red-shaded states have the

[9] Figure created by the authors using data from the University of Wisconsin's Center for Cooperatives.

highest incidence of worker cooperatives per 1 million people. Accounting for population, several New England states have relatively high concentrations of worker cooperatives.

For comparison purposes, figure 2 displays data on the distribution of all cooperatives identified in the University of Wisconsin's Center for Cooperatives study. The locations of worker cooperatives differ somewhat from all cooperatives. Notably, Midwestern states with higher numbers of total cooperatives per capita, like Iowa, Nebraska, Kansas, and Arkansas, have no known worker cooperatives.

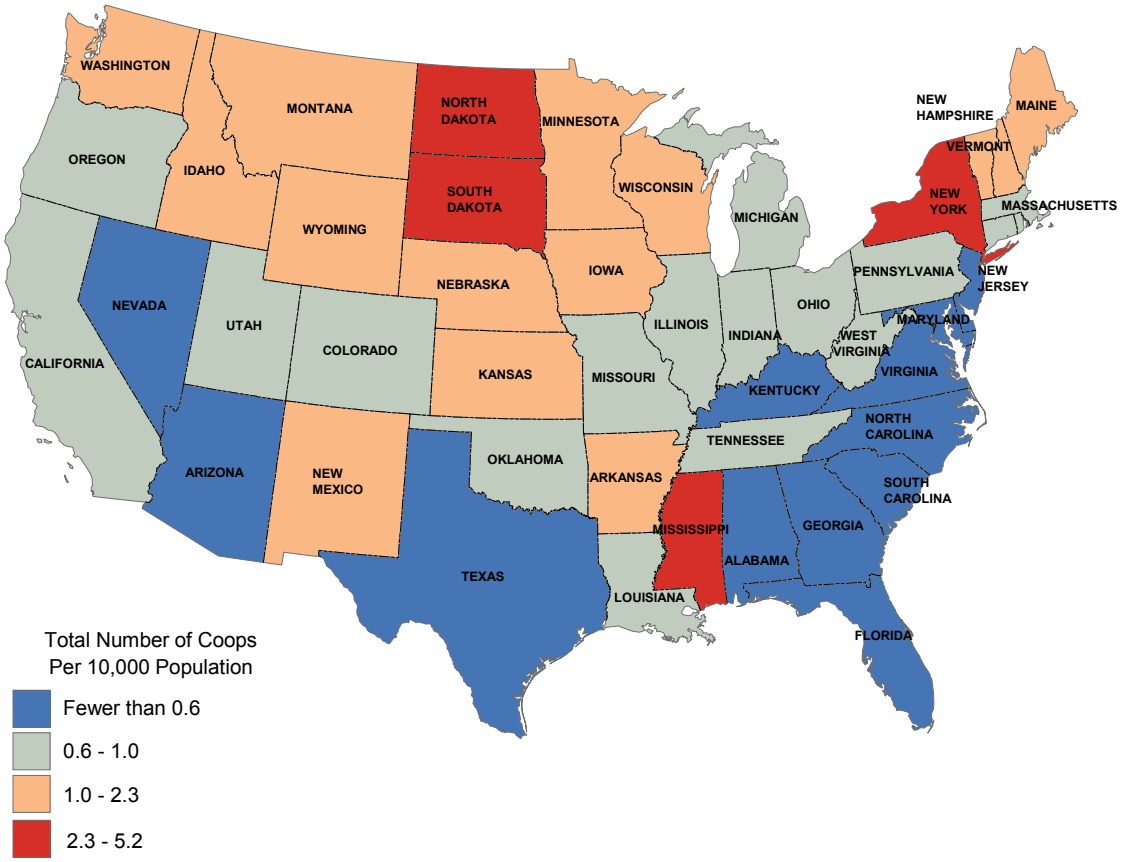

Figure 2. Distribution of Total Cooperatives by State. [10]

IV. Distinguishing characteristics of worker cooperatives

This section explores the similarities and differences between worker cooperatives and other business organizations, focusing particularly on a comparison with other employee-owned firms.

There has been substantial growth in employee ownership in the United States over the past 30 years due largely to legislative changes in the 1970s that created and gave favorable tax treatment to Employee Stock Ownership Plans (ESOPs) and a change in 1984 that eliminated capital gains taxes for business owners who sold at least 30% of their firm to their employees, the "1042 rollover" (Blasi et al. 2003). Kruse (2002) estimates that one-fifth of American

[10] Figure created by the authors using data from the University of Wisconsin's Center for Cooperatives.

workers participate in some form of employee ownership. This growth has helped enhance the wealth of U.S. workers and has been an important factor in broadening the distribution of capital (stock) ownership in our society (Buchele et al. 2009).

While employee ownership is growing, relatively few employee-owned firms are majority-owned by their employees. In the vast majority of public companies, which account for 80% of all employee-owned assets, employees have only a small share of their firm's stock. Ninety-six percent of public company ESOPs owned less than 30% of company stock. In contrast, significant and majority employee ownership is primarily found in small, privately held family and independent businesses. Forty-five percent of private company ESOPs held at least 31% of company stock (Blasi et al. 2003).

The size of employee stakeholding is important. Having a financial stake in a company through an ESOP, for example, does not necessarily increase employee motivation when the share is very small (Kruse and Blasi 1995). Employee share is also important because it partially determines the extent of employee participation and control in company decision making. Greater employee participation in workplace decisions is linked to better firm performance and enhanced employee motivation, commitment, and job satisfaction in a number of empirical studies (Kruse and Blasi 1995). Traditional worker cooperatives, by definition, are 100% employee-owned and characterized by a high degree of employee participation.

Thus there are two important dimensions of employee ownership: financial stake in the firm (return rights)[11] and ability to make decisions regarding management and future direction of the business (control rights)[12] (Hansmann 2000; Ben-Ner and Jones 1995). There is a great deal of variety in the extent to which employees have either or both of these types of ownership rights, even among firms that are considered "employee owned."

Firms with ESOPs illustrate the range of variation in the degree and type of employee ownership according to employee rights to returns and control. There are approximately 10,000 ESOPs in

[11] Return rights grant owners the authority to determine how profits are distributed and to whom. Returns can be distributed as dividends, wages, or even improved working conditions (Ben-Ner and Jones 1995). The decision making authority implied by this ownership criterion is important in order to distinguish from situations in which employees may share in the profits of the firm (e.g., cash bonus plan, profit sharing plans) but have no rights to decide on the allocation. In cash profit sharing, employees receive money depending on overall company performance in addition to their wages; they share in the returns, but do not have ownership. Alternatively, stock profit sharing (or employee share ownership) plans give employees profit-sharing bonuses in the form of company shares, which does constitute ownership (Perotin and Robinson 2002).

[12] Hansmann makes an important distinction between formal control and effective control. In many organizations, such as publicly traded corporations and large cooperatives, the firm's owners (the shareholders or the members) elect a board of directors and participate directly only in a limited set of fundamental decisions such as acquisitions, mergers, and dissolution of the firm. In these situations, managers have a great deal of decision making autonomy. Another important distinction relevant to employee ownership is the difference between control and participation; participation does not necessarily equate with control. For example, employees may have opportunities to provide input to management, but their opinions may not be reflected in final decisions (Levine and Tyson 1990). By Hansmann's definition, employee ownership requires that workers have formal rights to control, for example, voting rights or employee representation on company boards of directors.

the United States.[13,14] The Iowa-Nebraska Chapter of The ESOP Association reports approximately 200 ESOP firms in these two states. ESOPs are typically structured as deferred compensation plans in which the employer deposits stock in a trust fund that holds the stock for the benefit of the participating employees, often as the reserve for the employees' pensions (Hansmann 2000). In a typical ESOP firm, employees may not have formal control rights since they cannot appoint the trustees of the ESOP trust (Hansmann 2000; Padgham 2002; Dickstein 1991). Stock in the ESOP firm is owned by the ESOP trust, and as such, the voting rights rest with the trust, rather than the employees. In fact, Pitegoff (2004, 245) argues, "Much of the activity in the world of employee ownership … has little to do with worker control of the enterprise and involves little or no employee influence in corporate decision-making."

However, some ESOP firms are more democratic, allowing employees to elect the ESOP trustee(s) and vote through the trustees. According to the ESOP Association,[15] the number of majority-owned ESOP firms is roughly 4,500, while 100% owned ESOP firms number 3,000. As noted above, these firms are primarily a phenomenon of small and medium-sized independently owned businesses. Firms that are 100% ESOP-owned (the ESOP owns 100% of the shares) are similar to worker cooperatives since employees hold all the stock, and therefore, all the voting power on the board of directors. In contrast to a worker cooperative, however, voting power in an ESOP firm is not necessarily based on one person, one vote (see table 4).

[13] The National Center for Employee Ownership reports the number of ESOPs, stock bonus plans, and profit sharing plans primarily invested in employer stock is approximately 10,500 (The National Center for Employee Ownership, www.nceo.org/main/article.php/id/2/).

[14] On average, 53% of the shares in Iowa/Nebraska ESOP firms are held by employees and 16% of the ESOP firms are 100% employee-owned firms (The Iowa-Nebraska Chapter of The ESOP Association, www.iane-esop.org/index.php?section=root&t=chapterFactSheet).

[15] Refer to the web page at www.esopassociation.org/media/media_statistics.asp.

Table 4. Comparison between worker cooperative and ESOP firm.

	Worker Cooperative	Employee Stock Ownership Plan
Ownership structure	One share per person of common stock. Can also have preferred stock (voting rights are limited).	Very flexible. Predetermined formula ranging from equal distribution to a complex formula based on salary, years of service, and hours worked. Can be full or partial ownership.
Voting rights	One person, one vote.	One person, one vote or one share, one vote. One share, one vote on supermajority issues.
Allocation of profits	Based on hours worked or wages earned. May take into account other factors, such as seniority.	Based on shares held.

Source: Northcountry Cooperative Development Fund (2006, 18).

V. Literature Review

As employee ownership has grown in the United States, so has the literature evaluating the performance of employee-owned firms relative to firms without employee ownership. Much of the academic research on this topic has analyzed ESOPs, and in particular, public company ESOPs. This is due both to ESOPs' relative prevalence in the U.S. economy and data availability. The main focus of many of these studies has been the effect of employee ownership on firm profitability, and to a lesser extent, firm survival and longevity.

Few studies have examined worker cooperatives in the United States; the main empirical studies have evaluated a set of plywood cooperatives operating in the Pacific Northwest. More research has examined outcomes for worker cooperatives in Europe, notably, France, Italy and Spain, as well as Latin America. Undoubtedly the most well-known example of successful worker cooperation is the highly unique experience of the Mondragon cooperatives in the Basque region of Spain. A number of papers analyze the origins, growth, and performance of these cooperatives.

Empirical analysis of the impacts of employee ownership is plagued by lack of data, especially data on firms with the type of majority employee ownership and dominant employee control characterized by worker cooperatives. Many studies lack longitudinal data and good comparisons with conventional firms (Dickstein 1991). Methodological shortcomings of existing studies limit the extent to which the findings can be generalized to other settings (Bonin, Jones, and Putterman 1993).

This section reviews the theoretical and empirical literature on employee-ownership focusing when possible on assessments of the performance of worker cooperatives.

A. Impacts on firms

Productivity and Performance. A large portion of the literature on employee ownership, and the more specific form, worker cooperatives, focuses on analyzing the impacts of ownership structure on firm productivity and performance. Studies have examined firm-level productivity effects of both key dimensions of employee ownership – return and control rights,– individually and in combination.

Giving employees an ownership stake in the success of the firm through profit sharing, ESOPs, or more directly as seen in worker cooperatives does in general seem to improve, or at least not reduce, firm productivity relative to comparable firms without employee ownership. Having rights to the returns of the firm provides employees an incentive to increase their efforts to enhance performance of the firm since part of their pay will depend on the profits of the firm. Profit sharing may lead to heighted morale or company spirit, which motivates employees to produce more and better work. It can improve the flow of information in the firm, leading to better production methods and it can lower employee turnover, facilitating accumulation of firm specific knowledge and skills, which in turn enhance firm performance (Bonin, Jones, and Putterman 1993; Park, Kruse, and Sesil 2004).

However, the size of employees' stake matters, however. Russell (1988, 384) argues that in many cases "…profit sharing and employee stock ownership create too small and diluted an incentive to give employees a meaningful material stake in the profitability of their firm." The greater the employee share of ownership, the bigger the effect on motivation and performance, and therefore the greater the impact on firm productivity (Ben-Ner and Jones 1995; Pendleton and Robinson 2010). The size of the stake refers both to proportion of ownership (e.g., stock) held by employees as well as to any individual employee's share. Kruse and Blasi (1995) report that, in a sample of cooperatives, the percent of employees who are members in the cooperative, individual capital stakes per worker, and the size of employee bonus (or patronage refund) were all strongly correlated with increased firm productivity.

Some theorists have cautioned that when the incentive plan is such that the reward to any individual employee depends on the performance of the group, a free rider problem can emerge. Under performance pay programs, if an employee's incentive pay depends solely on his or her effort, the incentive is clear: he works harder (or smarter) and he earns more. But when the performance pay depends on a group's productivity, incentives are diluted. Furthermore, the larger the group, the weaker the incentive (Kruse 2002).

Consider an example of a salesperson who earns a bonus of $100 for every new customer she acquires for her company. Here the incentive is direct; she recruits a new customer, she receives $100. But recruiting new customers requires extra effort on her part, to identify prospective customers, to convince them of the value of the company's products or services, and to cultivate a new relationship. Furthermore, it often involves cold-calling, which many people find extremely uncomfortable. Yet as long as the salesperson perceives that the $100 bonus is worth the additional effort, she will strive to earn new customer business.

Now suppose she is part of a sales team with 10 members. In this case, for each new customer the team recruits, the team receives $100 which is divided equally among team members. For

each new customer she recruits in the team setting, her bonus is now only $10. Clearly her incentive is reduced, in large part because the reward she receives does not justify the additional work she must do to bring in new customers.

If the team bonus was $1,000, so each individual received $100 for each new customer recruited by the team and if she felt the $100 bonus justified the extra work, she might try harder to find new customers. Or, she might realize that as long as the other team members were finding and recruiting new customers, she could still receive a bonus without any additional effort, effectively "free riding" on the efforts of co-workers.

The free riding result rests on fairly strong assumptions about the inability of co-workers to observe one another's efforts. In reality, one likely can tell how much effort co-workers are putting forth (although imperfectly), so some amount of "horizontal monitoring" or informal policing through peer pressure is possible and effective at preventing free riding. Shirking has not been reported as a concern in empirical studies of worker cooperatives. Furthermore, there are other factors at play in group settings with profit sharing, notably a spirit of cooperative problem solving, higher work norms, and heightened morale stemming from a sense of ownership in the firm (Bonin, Jones, and Putterman 1993; Kruse 2002).

By itself, worker participation in decision making can promote greater commitment and motivation from workers. The idea is that workers who have greater authority to make decisions about how they do their work, the type of work they do, and the products they develop will work more effectively and will be more invested in the fate of their employer (Smith 2006). Worker participation can improve information flow between front line workers and upper level management. It can also bring diverse perspectives and generate more ideas, particularly from those employees closest to the production process, the shop floor (Appelbaum and Berg 2000). Greater control over working conditions may be increasingly important in the context of rising education levels – more highly educated workers may desire greater responsibility in their work and greater challenges.

Just as the level of financial stake held by employees appears to impact the magnitude of productivity effects at the firm level, so may the level of employee participation in decision making. The empirical evidence on the success of worker participation programs varies widely depending on the context in which the programs are implemented (Conyon and Freeman 2004; Smith 2006). On one hand, there must be enough opportunity for decision making to be meaningful. Workers must perceive that participation programs do give them some authority to make changes and decisions if they are to enhance worker motivation and performance (Ben-Ner and Jones 1995).

On the other hand, some authors caution against "too much participation." Employee involvement in decision making, introduces inexperienced or unqualified personnel to decision making, slowing the decision process and potentially resulting in poor decisions. It may bring an excessive focus on grievances and complaints which can reduce morale (Pendleton and Robinson 2010).

Collective decision making can make it more difficult to reconcile employee differences. For example, in a worker cooperative younger members may prefer to allocate profits in the form of higher wages, while older members may prefer increasing returns to capital or accelerating

payments on loans (Hansmann 2000). Furthermore, the more time spent in meetings and on governance issues, the less time spent on the "productive work" of the business. In the long-run, Hansmann (2000) contends that conflicts of interest and inefficiency of collective decision-making can prevent quick responses to rapid changes in market conditions, leaving worker cooperatives at a marked disadvantage to conventional firms where decision making is more concentrated.

Meyers (2006) argues, that while democratic processes in the work place are time consuming, they are perhaps not any more so than in non-democratic workplaces. She notes that managers spend a great deal of time on issues of employee retention, discipline, grievances, etc. She also contends that allowing members to choose which tasks they perform provides a sorting mechanism in which workers will gravitate toward those tasks more closely aligned with their skills and interests, or provide opportunities to take on new tasks and learn new skills. In her case study work, she observed this having an added effect of reducing "the number of responsibilities seen as undesirable" (p. 215).

Hansmann (2000) suggests that conflicts in decision making can be mitigated when jobs are similar overall and the number of workers is small in worker cooperatives. In these cases, workers' interests are roughly similar and conflicts of interest are less common.

Several authors contend that combining employee ownership or profit sharing with decision making rights is critical for determining the magnitude of impacts on firm productivity. If employee participation is not combined with some share in the firm's profits, they may focus more on improving their working conditions than on decisions that improve organizational performance, and therefore, profitability of the firm (Ben-Ner and Jones 1995; Bonin, Jones, and Putterman 1993). Financial rewards, being more tangible, may improve or ensure employee participation (Kato and Morishima 2002). Management in a firm in which employees have return rights can have more interest in developing and protecting the human capital of the employees, which can have a positive effect on productivity even if few employees participate in decision making (Robinson and Zhang 2005).

Existing empirical evidence provides somewhat mixed results regarding the effects of worker ownership and decision making rights on firm productivity. Research focused on worker cooperatives tends to find positive productivity effects. For example, Bartlett et al. (1992) compared the performance of worker cooperatives to private firms using a set of Italian worker cooperatives in light manufacturing matched with similarly sized private firms in the same region and sector. They reported higher value-added per worker in the cooperatives relative to the private firm, indicating that the worker cooperatives were more productive. Craig et al. (1995) showed that worker cooperatives in the U.S. plywood industry are 6-14% more efficient than conventional mills in terms of output, holding input constant. Doucouliagos (1995) found that labor-managed firms, which are similar to worker cooperatives, have stronger positive correlation with productivity than firms where workers only participate in control.

Studies analyzing worker ownership and control in ESOPs tend to report more variation in firm productivity impacts than do studies focused on worker cooperatives. This is perhaps due to greater variability in the extent of both employee ownership and participation in decision making in these firms relative to worker cooperatives.

Kato and Morishima (2002) showed that Japanese firms with highly participatory human resource management practices (HRMPs) enjoyed productivity gains of 8% to 9% over firms with no HRMPs. The positive effect occurs only when both financial participation (ESOPs) and employee involvement (joint labor management councils and shop floor committees) exist and when employee involvement/participation exists at both the top and grassroots levels of the firm. For firms with an intermediate level of HRMPs (only financial or participation but not both, or participation only at one level of the firm), they found no significant positive effect on productivity. In fact, they reported a productivity loss after four years, but this negative impact dissipated over time. In contrast, Conyon and Freeman (2004) found positive productivity effects for some forms of shared compensation in British firms, and showed that shared compensation plans are more likely to have communication and information sharing systems in place. They did not find an added effect of communication above the positive effect of the shared compensation plan.

The magnitude of the positive productivity impact rises with the level of membership in the ESOP for a given level of employee participation in decision making (Jones and Kato 1993; Pendleton and Robinson 2004). At the same time, there is some evidence that increased employee participation in company decision making lowers firm productivity in British and Japanese ESOP firms. The authors of these studies interpret this result as consistent with assertions that the presence of an ESOP, by virtue of its voting power on the board of directors, can reduce executives' authority and power, hinder managerial decision making, and dilute managerial incentives, which in turn, harms firm performance (Jones and Kato 1993; Pendleton and Robinson 2004).

There may be additional factors that explain the difference between the productivity effects of worker ownership between cooperatives (or labor managed firms) and ESOPs. Self-selection might be present. That is, employees who choose to work in a cooperative may have different attitudes or abilities relative to those who choose to work in conventional firms (Williamson 1973).[16] The organizational culture may be different. There might be differences in hierarchical organization and in the relationship between employees and management (Bonin, Jones, and Putterman 1993). The timing at which employee ownership and participation is implemented may also contribute to observed differences. There may be different "learning curves" for firms that are employee-owned from inception and those that adopt it at some point in their history. Kato and Morishima (2002) find there is a substantial time lag in the productivity payoff of ESOPs (they estimate seven years) in Japanese firms.

Longevity and survival: Another performance outcome analyzed in the theoretical and empirical literature is the rate of firm survival and longevity. Some authors have hypothesized that worker cooperatives will be shorter-lived than conventional firms. Vanek (1977) claims that dependence on internal financing from profit leads to under-investment. Members have an incentive not to

[16] Williamson (1973, 317) writes, "Modes of organization or practices which would have superior productivity consequences if implemented within, and thus would be adopted by, a group of expected pecuniary gain maximizers may be modified or rejected by groups with different values. For one thing, favorable productivity consequences may no longer obtain. In addition, preferences for atmosphere may induce individuals to forego material gains for nonpecuniary satisfactions if the modes of practices are regarded as oppressive or otherwise repugnant. This does not lead to a uniform preference for one mode of organization over another, however…" Individuals should be allowed to sort into organizational forms according to their preferences."

re-invest the profit in the cooperative, but rather to claim higher wages. This ultimately leads to failure. Ben-Ner (1984) argues that worker cooperatives will tend to degenerate into conventional firms because of a tendency to replace retired member workers with non-member workers in order to increase the remaining member workers' compensation. Another degeneration theory suggests that successful worker cooperatives will tend to convert to investor-owned firms over time. Business success increases the net worth of the firm making it subject to takeover attempts and the temptation for worker-owners to sell in order to "cash out" their investment in the cooperative. Higher individual capital stakes also make it more difficult for potential new worker-members to buy out retiring or exiting members.

Empirical research does not lend much support to the degeneration hypotheses. Estrin and Jones (1992) report that more than 30% of worker cooperatives across a variety of industries were more than 30 years old in France in 1979, demonstrating that many worker cooperatives can survive for long periods of time. They found no evidence that worker cooperatives are less productive, less profitable, or less capital-intensive than conventional firms, and showed that the exit rate of worker cooperatives between 1970 and 1979 was not significantly different from private firms. Perotin (2006) indicates that the creation of worker cooperatives has been higher than French firms in general, and the exit rate of worker cooperatives has been the same or slightly lower, using data for the years 1979-1998.[17] Burdin and Dean (2009) tested the degeneration hypothesis in their data for Uruguayan worker cooperatives by examining the relationship between the ratio of non-member to member workers and output price. They found no positive relationship between these two measures.

Park, Kruse, and Sesil (2004) suggest a number of reasons why employee-owned firms might survive longer than their conventional counterparts. Employment stability (lower quit rates and fewer layoffs) can facilitate increased investment in firm-specific training, which improves firm performance. Robinson and Zhang (2005) echo this notion, adding that employee ownership helps protect investments in firm-specific knowledge and skills for both the firm and the employees. In fact, they argue that employee ownership can be a competitive advantage, "ESO (employee stock ownership) enables firms to build and sustain their competitive advantage by rewarding and protecting employees, who, along with shareholders, make valuable investments" (2005, 484). To the extent that employee ownership improves firm performance and productivity, employee ownership may reduce the chances of bankruptcy or liquidation. Employee ownership may increase employee commitment to the firm, making employees more resistant to mergers and acquisitions. Their empirical analysis used Weibull survival models to analyze firm survival in a set of U.S. public companies from 1988 through 2001. They report that companies with employee ownership stakes of 5% or more were only 76% as likely to disappear (merge, be acquired, or fail) compared with all public companies and with a control group of similar firms. For 100% employee-owned firms, the relative rate of failure falls to 33.5%. Furthermore, their analysis finds that the difference in survival rates is not explained by increased productivity, financial strength, or compensation flexibility, but rather linked to greater employee stability in employee-owned firms.

Product Quality: A less examined issue is the effect of employee-ownership on product and service quality. Case studies report that provision of higher quality goods and services are a

[17] The increase in the number of worker cooperatives is small since the initial population is small.

motivating factor for formation of some worker cooperatives. Improved information sharing characteristic of worker cooperatives and employee-owned firms can directly impact product quality. Horowitz and Horowitz (1999) present a theoretical model that compares quality and quantity choice in labor-managed and profit-oriented firms. Their analysis reached no firm conclusions, but rather implied that the outcomes for quality provision vary by which workers (in their model either production workers or quality–enhancing workers) comprise the membership of the cooperative, as well as whether quality and quantity are substitutes or complements in firm production.

B. Impacts on employees

Pay and benefits: A common argument made to explain the rarity of worker cooperatives is that risk averse workers are unwilling to trade fixed salaries for earning a portion of their wages in the form of more variable, and thus riskier, profits. The underlying assumption appears to be that the expected pay would be the same in either case; that is, workers in employee-owned firms sacrifice some wages and other benefits in exchange for a share of ownership. Yet, comparisons of pay levels in employee-owned and conventional firms find that company stock (earned through the ESOP) is provided in addition to, rather than in place of, other forms of employee compensation (Kruse 2002; Kruse, Freeman, and Blasi 2010). For example, Blasi et al. (1996) document 8% higher average compensation levels in public companies with broad-based employee ownership plans (at least 5% of stock) compared with similar public companies. This study also found that relative compensation levels increased as the percent of stock held by employees rises.

Case evidence of successful worker cooperatives often report higher pay and benefits relative to conventional firms in the same industry. For example, Hochner et al. (1988) describe a worker cooperative grocery in Philadelphia that maintained higher levels of full-time jobs at higher wages than competitors without decreasing profits. Similarly, Meyer (2006) reports average compensation for employees of a worker-owned grocery in the San Francisco Bay area was 40% more than the average for unionized grocery workers in California. In addition, the cooperative provided healthcare coverage for all members averaging at least 24 hours per week, a benefit typically not given to part-time retail workers.

Financial Risk: Another potential downside of employee ownership is increased financial risk for employees. Compensation of employees can be more variable when part of it depends on firm profits (Hansmann 2000). Furthermore, with stock ownership or stock purchase plans, employees bear greater risk should the firm fail, as now both their salary (and their human capital) and their savings (or retirement plans) are tied up in the same firm (Ben-Ner et al. 2000). Speaking to this point, Kruse (2002) argues that employees need to be educated about the financial risk of having a large proportion of their retirement savings in employee stock, but likens the risk of employee ownership of employer stock to owning a farm or small business. Bonin Jones and Putterman (1993, 1309) contend that the risk of committing personal wealth may be the cost employee-members bear to acquire decision making rights.

Job security: Worker cooperatives may offer greater job security relative to conventional firms. Research finds that worker cooperatives are more likely to adjust wages rather than employment levels compared to conventional firms since member workers can participate in decision-making about management.

Member-workers may be compensated for temporary wage cuts today by their claim on future profits. Empirical results have supported this argument. Craig and Pencavel (1992) indicate that worker cooperatives in the Pacific Northwest plywood industry were more likely to change wage levels than employment levels compared to other types of mills (non-unionized mills and unionized mills) using data for the years 1968-1986. In a subsequent paper, the same authors conclude that earnings, hours and employment are all important factors for cooperatives, but employment considerations tend to outweigh earnings.Burdin and Dean (2009) found that worker cooperatives in Uruguay were more willing to raise wages when output prices increased, and the wage increase was larger than that in conventional firms for the years 1996-2005. While employment levels tend to rise with output price in both conventional firms and worker cooperatives, the effect is statistically significant only in the conventional firms. The authors concluded that demand for labor in worker cooperatives is more inelastic than in conventional firms; that is, worker cooperatives tend to adjust wages more than employment levels. Pencavel, Pistaferri, and Schivardi (2006) show similar results using data on Italian firms for the years 1982-1994.

Case study evidence also supports this idea. In a case study of a worker-owned recreational equipment manufacturer in the United States, Schoening (2006, 303) reports that the sentiments expressed by interviewed members suggest they were not comfortable hiring a new employee unless they could ensure stable employment. Worried about the consequences of layoffs on the affected employees and their families, one member described a preference for everyone accepting lower wages over layoffs, "…we all move down a little bit. It's like everyone is affected a little." Schoening provides the following interpretation, "The reason for being in business as a cooperative is to protect co-members, and to attempt to distribute both burdens and rewards equally."

Bartlett et al. (1992) found cooperatives had lower quit rates, relative to similar conventional firms, but only among member-workers. When non-member workers of the cooperatives were compared with employees of conventional firms, no significant differences in quit rates were found. Lower quit rates facilitate skill accumulation and learning, which can improve firm productivity and profitability, translating to higher earnings for worker cooperative members.

Worker cooperatives may mitigate unemployment in recessions. Perotin (2006) found that worker cooperatives were likely to be created more counter-cyclically than conventional firms, using data on French firms for the years 1979-1998. She also found that the formation of worker cooperatives is more positively associated with risks related to unemployment than expected profits. This result is supported by research on worker cooperatives in Israel and the United States (Russell and Hanneman 1992; Russell 1995; Conte and Jones 1991).

Job quality and satisfaction: Worker cooperatives may improve job quality relative to conventional firms. In worker cooperatives, workers can have discretion to adjust daily work flow and change working circumstances, such as the layout of machines (Cornforth et al. 1988). As noted above, they may have discretion in choosing which tasks they perform, which can have the effect of minimizing the number of tasks viewed as undesirable (Meyers 2006). They may even have some say in choosing their colleagues.

In general, employee ownership can enhance job satisfaction and employee motivation which benefits both the individual employees and the firm through enhanced productivity. In a number

of studies, greater satisfaction has been reported among employee-owners who perceived increased influence or participation in workplace decisions (Kruse and Blasi 1995). The positive effect of employee ownership on job satisfaction might stem from increased training, freedom from supervision, and job security (Kruse et al. 2010). This may be especially important in the services industry where employees' direct stake in business success can improve job satisfaction, and therefore, the quality of service (Pitgoff 2004). Trevor (2007) cautions that improved job satisfaction may hinge on person-organization fit; that is, those workers who find employee-owned or worker cooperative work environments to be a good fit for their skills and personalities are more likely to report greater job satisfaction and commitment.

The flip side to these arguments is that greater employee participation in decision making may reduce job quality and satisfaction. One reason is that it can greatly increase the workload of individual employee-members since collective decision making involves additional time and responsibilities. Some employees may dislike the responsibilities associated with participation, viewing it as a burden rather than a positive benefit of ownership (Dickstein 1991). In the case of one worker-owned grocery, employee-members view participation as part of their regular work. This policy is explicit; members are paid the same wage to attend meetings as they receive for their other (revenue-generating) work (Meyers 2006).

As the number of supervisors or managers is reduced and reliance on horizontal or peer monitoring increases, there is the potential for excessive peer pressure in worker cooperatives that can increase interpersonal frictions (Eccles 1981; Whyte 1986). If the peer monitoring is excessive, it can increase worker stress levels, which in turn decreases productivity and job satisfaction.

Skill accumulation and training: Worker cooperatives can facilitate increased accumulation of skills and on-the-job training for employees. A basic cooperative principle is to provide training and education to members, managers, and employees to help them contribute more effectively to the development of the cooperative (Northcountry Cooperative Foundation 2006). Participatory work environments require employees to learn interpersonal and decision-making skills in order to carry out their jobs effectively (Appelbaum and Berg 2000). These skills can have value to employees outside of their work environment as well. Job stability in employee-owned firms and cooperatives increases workers' incentives to invest time and money in additional training that will benefit the firm as well as themselves. Having a say in company decisions and a stake in the profits helps insure that both employees and the firm are committed to a long-term relationship (Robinson and Zhang 2005).

C. Impacts on communities

Vehicle for community economic development: Worker cooperatives can contribute to community economic development, which includes creating stable and quality jobs, driving change in distressed regions and economic sectors, and personal enhancement. Community economic development is characterized by an explicit agenda "for broader benefit and accountability and for building local resources, capacity, and power among low and moderate-income constituencies" (Pitegoff 2004). Because worker cooperatives are controlled by the workers rather than an outside corporation or absentee-owner, these firms are more likely to stay where the workers live and retain jobs in the community (Dickstein, 1991). A comparison of worker cooperatives with similar conventional firms in Italy found that cooperatives more

readily hired workers who had suffered long periods of unemployment (Bartlett et al. 1992). This pattern, the authors suggest, "…may reflect the nature of the cooperatives' link with the local community, and indicate a willingness to exert positive discrimination in favor of workers disadvantaged in the local labor market" (1992, 115). Evergreen Cooperatives (ECs) in Cleveland, Ohio are examples of worker cooperatives formed, in part, to achieve community economic development goals (Alperovitz, Howard, and Dubb 2009).

VI. Why are worker cooperatives so rare?

Worker cooperatives are rare in the United States. Only about 200 U.S. worker cooperatives were identified for this project,[18] putting the ratio of worker cooperatives to total firms at approximately 0.004% in 2007, and the ratio to all cooperatives at 0.48%. The rarity is somewhat puzzling. Worker cooperatives have many potential benefits and under certain conditions the possible challenges raised in the literature can seemingly be mitigated. Firms with ESOPs are considerably more common than worker cooperatives, although ESOP firms, particularly democratic ESOPs, have a similar structure to worker cooperatives. We can divide explanations for the rarity of worker cooperatives into two main camps: 1) worker cooperatives may fail at a higher rate than other types of firms and 2) barriers to start-up may prevent firms from forming as worker cooperatives in the first place.

A. Worker cooperatives may fail at higher rates*:* Explanations for higher failure rates of worker cooperatives include degeneration hypotheses, internal incentive problems, and external environmental factors.

Degeneration hypotheses: As described above, some authors have hypothesized that worker cooperatives will be shorter-lived than conventional firms. One argument is that dependence on internal financing from profits leads to under-investment because members have an incentive to claim higher wages rather than re-invest in the cooperative (Vanek 1977). Another explanation reasons that worker cooperatives will degenerate into conventional firms because of a tendency to replace retired member workers with non-member workers in order to increase the remaining member workers' compensation (Ben-Ner 1984). A third hypothesis is that success ultimately leads to "failure" or conversion of worker cooperatives to investor-owned firms. A cooperative's success increases the net worth of the firm, raising the temptation for worker-owners to sell in order to "cash out" their investment in the cooperative. Higher individual capital stakes also make it more difficult for potential new worker-members to buy out retiring or exiting members.

[18] A handful of organizations have compiled lists of worker cooperatives in the United States.

Source	Number of worker cooperatives	Note
U.S. Federation of Worker Cooperatives (2008)	210	Includes collectives and democratic workplaces as well as worker cooperatives
Deller et al. (2009)	223	No list of worker cooperatives
National Cooperative Grocers Association, www.go.coop	303	Contains related organizations such as cooperative developers

External Environmental Factors: A second set of explanations for increased failure of worker cooperatives implicates unfavorable conditions in the economic and institutional environment in which the cooperative exists.

Worker cooperatives may have difficulty obtaining external financing (Dickstein 1991). Debt financing can be problematic because investors think worker cooperatives have high risk, perhaps due to a general lack of familiarity with the structure of worker cooperatives. They may not know how to evaluate the risk and profitability of worker cooperatives. Obtaining external equity financing may also be difficult. Traditional cooperative statutes prohibit non-member investment in cooperatives and limit the amount of return on equity, favoring returns based on use (USDA 1997). In cases where outside investors are allowed to purchase equity, the problem remains that the external investors may not have a safeguard to guarantee a certain level of return. Elster (1989, 103) notes "Why would outside investors be attracted to a firm over which they have no control? For all they know, the cooperative might pay zero dividends year after year." In other words, it is possible that workers would increase their wages to decrease the profits and dividends to outside investors. Elster continues, "A counterargument is that the cooperative would be kept in line by the knowledge that it may need to attract capital in the future. Unless present shareholders are paid satisfactory dividends, future investors will not be forthcoming. Knowing this, present investors will not be deterred by the fact that the cooperative is formally free to reduce dividends to zero." More recently, limited cooperative associations, like Iowa 501A cooperatives, have emerged in response to this problem of access to external financing. The cooperative statute contains provisions that allow for some degree of investor voting rights and participation on boards of directors. These statutes also remove the limits on investor returns. Some government programs have been established to help address this issue as well. Worker cooperatives can take advantage of the Business and Industry (B&I) Guaranteed Loan Program from USDA Rural Development. The B&I loan guarantee decreases a bank's risk to only 20% of the loan principal in the case of default on loans of $5 million or less (Reynolds 2009).

Problems of obtaining external financing are mitigated when large amounts of firm-specific capital is not required (Hansmann 2000). For example, cars in a taxi worker cooperative can be easily sold; they are not firm-specific. Assets that can be readily sold in a secondary market have more collateral value and concerns of external financers may be decreased (Ben-Ner et al. 2000).

Elster (1989, 97) presents a more pessimistic view, suggesting that worker cooperatives may face a form of discrimination on the part of banks and suppliers, "If a supplier believes that the bank will discriminate against the cooperative, he will accept only cash on delivery. If the bank believes that suppliers discriminate, it will offer credit on less favorable terms. What a firm may not do out of ill-will, it may do out of (possibly unfounded) suspicion of the ill-will of others." In support of his argument Elster cites the historical example described by John Stuart Mill, in which a cooperative lock-making firm was the victim of collusive underselling and other discriminatory practices by its capitalist rivals.

Internal Incentive Problems: A final group of explanations focuses on problems related to internal incentives in the cooperative. Some purported reasons for cooperative failure point to lack of internal incentives to provide financing or make long-term investments. Others blame misaligned incentives for managers and workers to contribute effectively to the productivity of the organization.

Given a lack of external financing, worker cooperatives are forced to rely on internal funds to finance growth. However, it may be difficult to raise funding through member loans in a worker cooperative (Dickstein 1991; Bowles and Gintis 1996). Members may not possess substantial amounts of savings. In addition, lending money to the cooperative increases their risk since they lose the opportunity to moderate income fluctuations by investing in other assets. Their additional investments in the cooperative are exposed to the same pattern of risk as their wages. Bonin, Jones, and Putterman (1993, 1309) suggest that the "risk of committing personal wealth may be the cost employee-members bear to acquire decision making rights." Furthermore, it is not clear why a worker-member who invests in his/her cooperative is different from a small business owner who invests savings in a firm and derives living expenses from its earnings.

The problem of internal financing may not be too severe in firms and industries with low capital requirements (Hansmann 2000). For example, worker cooperatives are being created in labor-intensive industries such as home care and housecleaning services.

Another finance-related explanation for failure of worker cooperatives is known as the horizon problem (Dow 2003). Worker cooperatives can suffer from underinvestment because ownership is not transferrable in a capital market; in other words, workers typically cannot sell their share of the cooperative. Consider a case in which the cost of a long-term investment is upfront or immediate, while the payoff to the investment occurs only gradually or relatively far into the future. Members looking to leave or retire from the cooperative in the near future, would not realize the returns from the long-term investment. They would potentially not vote to approve the project investment, preferring to increase their benefits today. An example given in the literature is machinery maintenance. If some members plan to leave in the near future, they would have an incentive to maintain the machinery with minimal repair or replacement costs.

The horizon problem is lowered when the tenure of workers is long (Hansmann 2000). As noted above, member-employees in worker cooperatives have lower quit rates and generally longer tenure relative to conventional firms. In addition, worker cooperative culture tends to place significant value on the future generation of workers (Corcoran and Wilson 2010). As a result, disagreements over long-term investments may not be severe. However, Cheney (2006) suggests the culture may be changing based on his study of the Mondragon cooperatives in Spain. Cooperatives may be more likely to fail as younger recruits, who have different cultural views and values, enter the cooperatives. A danger arises when the value commitments of the founding generation are come to be seen as outdated by younger recruits. Cheney reports there is evidence such a shift is beginning to occur at Mondragon. Younger worker-members have more individualistic conceptions of career, which may pose a threat to the continued existence of this cooperative movement.

A somewhat different line of reasoning for why worker cooperatives might not persist focuses on the incentives and abilities of the employees. Member-workers in the cooperative may lack managerial skills, which can lead to inefficient management. In principle, each member may be eligible to serve as a manager or on the board of directors. These positions require sufficient knowledge of management and finance and an understanding of the firm's market situation. A completely different set of skills may be needed in these positions relative to the skills required for a non-managerial position in the cooperative. Members may know how to make products, but not how to craft an appropriate business strategy to survive in a changing market. A lack of

managerial skill among cooperative members can result in inappropriate responses to market change (Hansmann 2000).

Many worker cooperatives hire external managers to obtain this type of expertise. However, worker cooperatives can also have difficulty attracting managers from the outside (Dickstein 1991). Often managers require higher wages than the wages earned by members and members may not readily accept this wage difference. Most managers are more familiar with hierarchical structures than cooperative structures, which can be more "flat." Managers may need to be educated about the operation of the cooperative, which can entail a significant learning curve for managers.

The problems of limited managerial experience of workers and recruiting managers are less severe, or even irrelevant when worker cooperatives exist in industries with relatively slow changes in technology and market competition. Under these conditions, when the organization size is small and the pace of decision making is not fast, workers can obtain managerial skills and experience in a learning-by-doing manner.

B. Barriers to entry prevent worker cooperative formation: As noted above, empirical research, although limited in its scope, finds worker cooperatives tend to survive as long or longer than their conventional counterparts, providing little or no support for the arguments described in the previous section. This section reviews a number of proposed barriers thought to explain why worker cooperatives may be less likely to form in the first place.

Difficulty attracting entrepreneurial talent: Dickstein (1991) cites difficulty in attracting entrepreneurial talent as an additional barrier to formation. She summarizes the theoretical arguments made in the existing literature as, "a cooperative simply doesn't provide enough material reward to attract an entrepreneur" (pg. 25). She notes that some view entrepreneurship as highly individualistic and not readily transferrable to the cooperative model.

Insufficient rewards for high ability workers: Kremer (1997) presents a theoretical model to demonstrate that redistribution among members can distort incentives to work hard. In conventional firms, workers' income is based on their productivity, but in worker cooperatives, earnings are often decided by voting. Workers with low ability are likely to agree with egalitarian earning schemes, while workers with high ability are not. When workers with low ability outnumber workers with high ability, egalitarian earning schemes are chosen by voting. This structure will lead higher ability workers to leave the cooperative in favor of greater returns to their abilities, or perhaps, prevent them from joining the cooperative in the first place. "Workers who believe their ability is greater than the average ability in cooperatives will be reluctant to join the cooperative because they will expect the cooperative to redistribute away from them." Of course this line of reasoning assumes that workers value pay above all else. It may be the case that workers join cooperatives for other reasons; they may value job stability, participatory decision making in the firm, and having a stake in the profits.

Lack of institutional support: Lack of institutional support may deter formation of worker cooperatives in the United States. Worker cooperatives are somewhat more common in Europe, where a more extensive institutional structure supportive of cooperative development has grown (Dickstein 1991). Only a handful of U.S. states have cooperative statutes specific to worker cooperatives.

Tax policies and legislative statutes may favor other organizational forms. A notable example is the case of employee-buyouts of retiring small-business owners. Owners of a business corporation can receive a tax deferral on capital gains from stock sales when they sell their firm to employees. The tax benefit from a "1042 rollover," as this is called, is more easily realized through conversion to an ESOP than a worker cooperative (Reynolds 2009). The conversion to a worker cooperative must be finished in a much shorter time period than conversion to an ESOP under cooperative incorporation statutes. Logue (2006) explains, "ESOPs' stock structure enables owners to sell part of their companies to employees, while retaining enough equity to make financing easy. The typical 1042 rollover ESOP is done as a two or three stage transaction over a five to 10 year period. By contrast, co-ops are conventionally structured as 100% employee-owned. Financing a 100% leveraged transaction is extraordinarily difficult, especially if the owners are leaving and taking their management skills with them." An additional advantage is that commercial lenders who make loans to ESOPs are permitted to deduct half the interest from their earnings as long as the firm is at least 50% employee owned (Martin 1994).

However, conversion to an ESOP has been estimated to be more costly. Northcountry Cooperative Development Fund (2006) estimates the cost to establish an ESOP ranges from $20,000 to $35,000 in addition to an annual maintenance cost between $7,500 and $15,000. ESOP firms are regulated by the Employee Retirement Income Security Act (ERISA) which requires annual reporting. In contrast, establishment costs for worker cooperatives are typically less, estimated to be $5,000 to $20,000, and are not subject to the reporting requirements of ERISA. Worker cooperatives also have access to the Business and Industry (B&I) Guaranteed Loan Program from USDA Rural Development, which decreases a bank's risk to 20% of the loan principal in the case of default on loans of $5 million or less (Reynolds 2009).

The short time horizon for converting to a worker cooperative can be extended if the owners become members of the newly formed worker cooperative. This approach was taken by Select Machine (Logue 2006). Owners qualify for a tax-free rollover as long as at least 30% of the owner's stock is sold to the worker cooperative. The owners' remaining shares are redeemed by the worker cooperative in several steps, which eases the financial burden on the employees buying the firm. An additional benefit of this multi-stage cooperative purchase is that the employee-members of the worker cooperative can receive management training from the retiring owners (Northcountry Cooperative Development Fund 2006; Briton and Stewart 2002).

Table 5. Difference between worker cooperatives and ESOP firms in conversion to employee-owned firms.

	Worker Cooperative	Employee Stock Ownership Plan
Legal structure	Simple, but not familiar to all attorneys. Can be organized as an LLC or a C corporation if articles and bylaws are structured appropriately.	Relatively complex, but familiar to many attorneys.
Costs:		
Set up	$5,000-$20,000	$20,000-$35,000 (more if complex)
Annual maintenance cost	None	$7,500-$15,000
Bank financing	Cooperatives are not well understood by banks. Fewer options for bank financing.	Well understood by banks.

Source: Northcountry Cooperative Development Fund (2006), Worker Cooperative Toolbox, pp.18-19.

Lack of awareness of cooperative form: A last set of explanations contends that worker cooperatives do not form, precisely because they are so rare. There is a widespread lack of awareness of the worker-owned cooperative as a legitimate option for business organization. Perotin (2006) describes the concept of density dependence; the size of the existing population of cooperatives affects future development. As the number of labor-managed firms increases, the organizational form is seen as more legitimate. Elster (1989) also suggests that the rarity of worker cooperatives may be due to interactions with environment rather than intrinsic characteristics. He uses the notion of "endogenous preference formation," in which the presence of worker cooperatives is a necessary condition for creating them. This condition arises in part because workers will be more willing to join a cooperative when they are more common and because they may affect the culture and desire of workers to live in a more cooperative economy.

C. A worker cooperative by any other name...: Finally, it may be the case that worker cooperatives are not particularly rare, they are just extremely difficult to identify. That is, they exist in "non-cooperative" forms. While in theory one can make distinctions between worker cooperatives and other forms of employee ownership, in practice these distinctions are very blurry. Worker ownership is itself an ambiguous term. As Pitegoff (2004, 244) notes:

> *Nominally, it [worker ownership] refers to ownership of a business by those people who work in the enterprise. By this definition, many personal, family, and small businesses are worker-owned. Some are sole proprietorships, partnerships, or limited liability companies, and others are incorporated as business corporations, but few are self-identified as "worker-owned."*

Employee-owned firms might operate like a worker cooperative, but not identify themselves as such. Worker cooperatives may be formed as a business corporation, a limited liability company, a statutory cooperative, or even a non-profit,[19] but structure themselves internally to operate on a cooperative basis (Pitegoff 2004).[20]

An example from one of the author's previous research projects illustrates this point. The research involved a series of 10 case studies of machinery and labor sharing arrangements among Midwestern farmers. One of the cases (Panhandle Farms), describes how six former employees of a local grain elevator in western Nebraska formed a farming partnership when they were laid off by the regional company that purchased the elevator. The excerpt provided from the case study below describes how their farming partnership began:

> *When the regional company took over the local elevator, it elected to staff the business with its own employees and to drop the local elevator's farm and land management enterprise. Needing to find new employment in an area with few job opportunities, the men decided to form a partnership and build a farming operation around the land holdings and other clients of the orphaned land management activity. One of the men served as the Farm Manager for the local elevator and had gained experience in budgeting and working with lenders. Under his leadership, the initial six members of the group developed an operating budget for a farming partnership and succeeded in obtaining operating credit to start farming under the partnership agreement they had developed* (Artz, Colson, and Ginder 2007).

This group operates as an ordinary partnership with equal shares in the business. All members provide equal amounts of labor and capital to the enterprise. In addition, the group jointly owns about 1,300 acres of land in a separate LLC. Each partner receives an equal portion of net profit for personal expenses with the excess amount remaining in the business to retire debt and finance growth. They make decisions jointly, meeting on a daily basis to discuss not only the day's activities but also any strategic or longer term management issues that may arise.

Although not incorporated as a cooperative, this group operates according to cooperative principles, with all members participating in management decisions and profit sharing based on roughly equal contributions of labor. Panhandle Farms is a good example of collective entrepreneurship and demonstrates the potential for employee ownership to save or create rural jobs.

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[19] A number of worker cooperatives identified in this research operate in industries in which non-profit organizations are common (e.g., childcare, healthcare, education). Some organizations included in the USFWC directory operate as non-profits. Non-profit organization statutes prohibit the distribution of profit; as such, non-profits do not have owners, and by our definition would not be considered a worker cooperative. However, an employee-controlled organization might be regarded as a worker cooperative when the profit is given to workers in the form of higher wages or benefits. In certain situations, there may be tax-related or other advantages to forming a worker cooperative as a non-profit.

[20] Pitegoff (2004) notes that in most states this precludes use of the term cooperative in the business name.

VII. Feasibility of Worker Cooperatives in Iowa

While no existing worker cooperatives were identified in Iowa through this research, the question remains whether, where, and how future development might occur. As noted in the introduction, the worker cooperative form may be well suited for small, rural businesses and the institutional and cultural environment for cooperatives is particularly strong in Iowa.

One approach for determining the types of industries or firms that might be conducive for cooperative development is to examine similar, but non-cooperative employee-owned firms in Iowa and similar states. Majority- and 100% employee-owned ESOPs share many characteristics with worker cooperatives. Most are privately-held small- and medium-sized businesses (Blasi et al. 2003). Given the similarities between worker cooperatives and ESOP firms, examining the prevalence of ESOPs by industry and location may provide some clues for areas conducive to development of worker cooperatives.

In this section, the relationship between the number of ESOP firms and that of worker cooperatives is examined. Note that because we have identified no worker cooperatives in Iowa, we use Minnesota and Wisconsin data. Each of these states has more than 10 worker cooperatives[21] and geographic and industrial properties similar to Iowa.

The form 5500 with schedule E from the U.S. Department of Labor was used to collect data on ESOP firms. Schedule E is attached to form 5500 for ESOP firms. We exclude firms having a plan in which the number of active participants is zero, regarding them as firms with inactive plans. Table 6 reports 2007 data for Minnesota, Wisconsin, and Iowa.[22] Ideally, we would like to compare worker cooperatives and majority-owned ESOP firms,[23] but we cannot reliably determine the percentage of employee ownership based on the data in form 5500.

[21] Seven states have 10 or more worker cooperatives, collectives and democratic workplaces: California, Massachusetts, Minnesota, New York, Oregon, Washington, and Wisconsin (United States Federation of Worker Cooperatives 2008).

[22] There are limitations on the data for ESOP firms and worker cooperatives. The ratio of ESOP participation in each firm is unknown. It would be preferable to compare ESOP firms with high employee participation rates to worker cooperatives. It is expected that their properties, in terms of industry or location, are similar to each other. In addition, the exact number of worker cooperatives is unknown. The number of worker cooperatives varies somewhat depending on the information source. Those limitations dilute the relationship between ESOP firms and worker cooperatives. These limitations need to be considered when interpreting the results.

[23] In a majority ESOP firm, over half of employees participate in the ESOP.

Table 6. Number of ESOP firms by state.

State	Year	Total Plans	Firms	Firms with an inactive plan	Firms with an active plan
Minnesota	2007	342	297	14	283
Wisconsin	2007	191	159	0	159
Iowa	2007	306	224	8	216

Note: Values are derived from the form 5500 with schedule E from the U.S. Department of Labor, www.dol.gov/ebsa/foia/foia-5500.html.

Worker cooperatives tend to exist in the same industries as ESOP firms in Minnesota and Wisconsin with the exception of educational services in Minnesota (see table 7). There are 24 two-digit industries in the 2002 North American Industry Classification System (NAICS). ESOP firms in Minnesota are found in 17 industries and 15 industries in Wisconsin. There are eight industries which have ESOP firms but no worker cooperatives in Minnesota and Wisconsin: finance and insurance, agriculture, forestry, fishing and hunting, wholesale trade, utilities, management of companies and enterprises, other services (except public administration), real estate and rental and leasing, and administrative and support and waste management and remediation services. This may be because other forms of cooperatives are more appropriate in these industries. For example, cooperatives in finance, insurance, and utilities are typically consumer cooperatives. Cooperatives in agriculture, forestry, fishing, and hunting are more likely to be farmer-owned cooperatives. Nevertheless, the existence of ESOPs in these industries raises the question of the suitability of employee-owned cooperatives and points to an area for future research.

Approximately 50% of worker cooperatives are distributed in the top six industries in terms of ESOP firms in Minnesota and Wisconsin. In Minnesota, 80.6% of ESOP firms exist in the top six industries, and 47.1% of worker cooperatives are distributed in the top six. In Wisconsin, 81% of ESOP firms are in the top six industries, and 71.4% of worker cooperatives are in the top six. Industries that have more ESOP firms may have more worker cooperatives. Future research could check this relationship at a more detailed (three-digit) industry classification level.

The table also shows the number of ESOPs in Iowa by industry. Based on the comparisons between ESOPs and worker cooperatives in Minnesota and Wisconsin, industries such as manufacturing to healthcare and social assistance may have favorable conditions for the existence of worker cooperatives in Iowa.

Table 7. Distribution of ESOP firms and worker cooperatives in Minnesota and Wisconsin by industry.

Industry (two-digit)	Minnesota		Wisconsin		Iowa
	ESOP firm (%)	Worker co-op (%)	ESOP firm (%)	Worker co-op (%)	ESOP firms (%)
Accommodation and Food Services	0.4	11.8	0.6	0	0.4
Administrative and Support / Waste Management and Remediation Services	0.4	0	0	0	1.3
Agriculture, Forestry, Fishing and Hunting	0.4	0	5	0	6.6
Arts, Entertainment, and Recreation	0.4	17.6	0	0	0.9
Construction	7.8	11.8	8.2	0	8.8
Educational Services	0	5.9	0	0	0
Finance and Insurance	16.3	0	16.4	0	19.9
Health Care and Social Assistance	1.4	0	4.4	14.3	7.5
Information	2.1	17.6	1.3	0	1.8
Management of Companies and Enterprises	1.8	0	1.9	0	5.3
Manufacturing	27.9	16	31.4	30	13.7
Other Services (except Public Administration)	2.1	0	0.6	0	3.5
Professional, Scientific, and Technical Services	12.7	4	14.5	10	9.3
Real Estate and Rental and Leasing	1.1	0	0.6	0	5.8
Retail Trade	10.2	32	6.3	30	8.4
Transportation and Warehousing	1.1	0	1.3	14.3	1.3
Utilities	0.7	0	2.5	0	0
Wholesale Trade	13.4	0	5	0	5.3
Total	100	100	100	100	100

Note: Number ESOP firms were obtained from form 5500 with schedule E from the U.S. Department of Labor, www.dol.gov/ebsa/foia/foia-5500.html. Numbers of worker cooperatives are from Democracy at Work Directory 2008 by USFWC.[24] Two-digit industry classification codes were used following the 2002 North American Industry Classification System in the United States Census Bureau (/www.census.gov/cgi-bin/sssd/naics/naicsrch?chart=2002).

[24] Organizations deemed not to be worker cooperatives, but rather non-profits or other volunteer organizations by checking their web pages were removed from the USFWC list (2008). In the end, 17 worker cooperatives in Minnesota and seven in Wisconsin were retained.

VIII. Discussion and further research and outreach

Many of the arguments for why worker cooperatives will not succeed or will not form in the first place seem to be predicated on a notion that the worker-members who would form or join a worker cooperative are relatively uneducated or unskilled. They are "labor," not management, and as such do not have the necessary management skills or experience to run a complex business in an ever-changing environment. For example, authors have suggested that allowing worker participation introduces inexperienced or ill-qualified participants into decision making which results in bad, slowly made decisions. Others suggest that granting employees ownership may give them justification to challenge managers' decisions or authority (and that this is undesirable). Finally some authors hypothesize that workers will not be motivated to work hard or produce quality work unless they are monitored. A century ago this may have been the case, but in the current context of generally rising education levels in developed societies and a greater recognition of the multi-dimensional nature of human capital, this assumption seems more tenuous. All this suggests that the time may be right for development of employee-owned cooperatives.

Some general strategies for promoting worker cooperative development in the United States have been offered in the literature. Dickstein (1991) proposes that cooperative development agencies "should take a more proactive development approach of targeting specific ventures and sectors of the economy where cooperatives have advantages and where systems of cooperatives can develop." She suggests that traditional sectors where worker cooperatives have formed in Western Europe, the United States, and Canada – printing, wood and furniture making, construction, food processing, services, and crafts – are logical places to start since they have relatively low capital requirements, high labor requirements, and the potential for cooperatives to achieve high labor productivity. In addition, she proposes social and professional services as promising sectors for worker cooperative development. The social services sector, in particular, she argues likely attracts a number of people who would be drawn to cooperative principles and values. Hough, Wilson, and Corcoran (2010) propose tax credits for investments in worker cooperatives similar to programs that have existed in Quebec, Canada. Such a program could be akin to a program like that in Missouri, which gave tax credits to residents who invested in value-added, producer-owned cooperatives or joint ventures.[25] An advantage of these, relative to more traditional economic development efforts that give loans, grants, or tax incentives to investor-owned firms, is that many people have a stake in the success of the cooperative, making the firm less likely to leave the state once the tax incentives have expired.

Several authors have promoted the idea of increasing educational efforts to inform the general public about cooperatives. Luhman (2007) suggests a marketing campaign, and specifically proposes financing the making of a documentary, to build awareness of cooperative business models. Dickstein (1991) recommends teaching cooperative models in grade schools. There is a role for university outreach centers and Extension staff in providing education about the benefits, challenges, and risks associated with employee ownership, particularly worker cooperatives. Outreach publications outlining business structure alternatives (sole proprietorship, partnership, LLC, and so on) could be updated to include information about cooperatives structures.

[25] See the Missouri Department of Agriculture website for more information: mda.mo.gov/abd/financial/.

Cooperative developers might benefit from additional case studies and decision tools that help them, and the groups they work with, understand and evaluate alternatives for addressing some of the challenges associated with organizing as a worker cooperative. For example, how do new members build equity in the cooperative and at the same time, what are strategies for retiring equity of exiting members? What are the advantages and disadvantages of alternative governance structures and how does the size of the cooperative (in terms of number of members) magnify or minimize the pros and cons of each? A one or two page bulletin explaining the differences between ESOPs and worker cooperatives and outlining various issues to consider in the case of employee buyouts could be targeted toward small business owners a few years away from retirement.

Suggestions for future research*:* A number of directions for future research were identified as a result of this study. Given the evidence from the literature review, investigating one or more of the potential barriers to formation would seem the most promising direction to pursue.

Policy and Institutional Factors: Aside from a handful of case studies on successful worker cooperatives, little data exist on these organizations. Collecting data on worker cooperatives is difficult since they are apparently quite rare and there is some confusion about what constitutes a worker cooperative. A more promising approach might be to study 100% or majority-owned ESOPs. One approach could be to conduct a comparative case study of organizational forms within an industry in order to identify the advantages and disadvantages arising from organizational form. For example, if a set of home care businesses could be identified, worker cooperatives and similar conventional firms, data could be collected on key issues such as the distribution of profits, decision making processes, job satisfaction, job quality, productivity, and profitability, to shed light on how organizational form may affect these issues.

Another promising area for study would analyze why there is such variation in the number and growth of worker cooperatives across states. Certainly differences in state tax and legal structures might be a factor. Other considerations include how existing worker cooperatives affect entry of new worker cooperatives, the role of worker cooperative developers, and concentration of other types of cooperatives (e.g., farmer-owned, consumer, housing) positively impacted the formation and growth of worker cooperatives.

A related issue is the potential role of new "hybrid" cooperative firms (e.g., worker-community, limited cooperative associations) for facilitating employee-ownership in cooperatives. To what extent has investor participation in LCAs been motivated by community economic development concerns and how might this impact future development of worker cooperatives? What is the role of worker-members in a multiple-stakeholder cooperative?

Person-Organization Fit: The issue of self-selection, sorting, or person-organization fit is another area for future research. Individual workers may have different preferences for different organizational forms and may sort into the form that best suits their abilities and values (Williamson 1973). Trevor (2007) notes that person-organization fit predicts worker satisfaction and commitment, which in turn predicts voluntary turnover and performance. He proposes a study to explore which individuals are best suited to handle the decision making responsibilities and other membership duties required of member-workers in a worker cooperative. For example, potential workers at Mondragon are given an aptitude test to ensure they are a good fit for the cooperative (Corcoran and Wilson 2010). Perotin (2006) conjectures that there may be a limited

number of cooperatives a given environment can support. If worker fit is an issue, only a certain number of people will be happy working in a worker cooperative and the number of these people in a given area is finite. A related line of research could focus on characteristics of founding members of cooperatives in the framework of the growing literature on collective entrepreneurship. There is vast literature on the characteristics of individual entrepreneurs, but one question is whether cooperative (or collective) entrepreneurs have different traits than "primary" entrepreneurs? Identifying the skills, abilities, and personality traits of individuals more likely to prefer a worker cooperative environment, and the prevalence of these individuals in a region, or in a society as a whole, could inform cooperative development efforts and assist in targeting assistance to those most likely to succeed.

IX. Conclusion

There is a renewed interest in employee ownership, spurred in part by the recent recession, but also by more gradual changes in education levels, entrepreneurial activity, and the nature of work in the United States. This paper has reviewed the literature on worker cooperatives and presented some data on the geographic and industrial distribution of worker cooperatives. Despite the dearth of worker cooperatives currently in existence in the United States, we remain optimistic about the potential for future development of employee-owned cooperatives, particularly in rural states such as Iowa.

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