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Labor Turnover in the Child-Care Industry: Voice and Exit

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LABOR TURNOVER IN THE CHILD-CARE INDUSTRY: VOICE AND EXIT

A Dissertation Presented

by

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DEDICATION

To my patient, loving and extraordinary husband

and

to Barbara A. (O'Connell) Hatch who worked to keep doors open for me.

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ABSTRACT

LABOR TURNOVER IN THE CHILD-CARE INDUSTRY: VOICE AND EXIT

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What relationship exists between working conditions and teacher turnover in child-care (early care and education) programs? Research has shown high staff turnover is a major factor affecting the quality of care. Using a new survey and data set I designed of union and randomly selected non-union programs in Massachusetts, I examine factors other than compensation that might be related to lower teacher turnover.

Focusing on different institutional settings, including unionization and regional unemployment, I use economist Albert Hirschman's theory of exit, voice and loyalty to see if "voice" alternatives to quitting are an effective method of reducing exits.

"Voice" alternatives studied include working relationships and practices between management and labor; identified paths for promotion and compensation; and processes for making decisions and addressing grievances.

I discuss three research questions:

What working conditions or practices affect teacher turnover in child-care programs in the private market? Results indicate the presence and type of worker voice

affects teacher turnover. Programs with collective bargaining agreements have lower rates of turnover than those without. Unionized programs also employ more staff per child, pay higher wages, and serve a higher percentage of state-subsidized children.

How does “voice” differ in nature and quantity across different types of workplaces? I find there is more voice in unionized programs. Also different voice practices are used in programs operating in a high-unemployment compared to a low-unemployment environment.

What, if any, is the statistical relationship (correlation) between teacher turnover and voice, and how does this relationship vary across workplaces? My results show a consistently negative relationship between teacher turnover and voice in these workplaces even when controlling for wages. Programs with more voice aspects have less teacher turnover.

PREFACE

Why child care? I have a long-time commitment to child care. Before graduate school, I worked for six years coordinating research on children's out-of-school time at the National Institute for Out-of-School Time (formerly the School-Age Child Care Project) and at the Boston After School Experiences Study, both based at Wellesley College Center for Research on Women.

At the Massachusetts Institute for Social and Economic Research (MISER), I did research on the development of new state job centers and wrote on closing the state's earnings gap for women workers. Both of these issues — training and wages — are crucial to child-care workers.

I conducted interviews with employers on the "New Orleans Living-Wage Impact Study" for the Political Economic Research Institute (PERI). Today many child-care workers in Boston have higher salaries thanks to the living-wage movement.

I worked with Scholars, Artists and Writers for Social Justice organizing a national conference called "Early Care and Education: Crafting a Working Families' Agenda," held in November 2000 in Washington, DC. Copying that successful model, we convened a similar Massachusetts-specific conference in October 2001, where we brought together academics, labor organizers and advocates to focus on child-care workforce and paid leave issues, and design a strategy for working together at the state level. Working Families Massachusetts grew out of this conference.

As my research and interest has increasingly focused on worker compensation and turnover, I have collaborated with others both within and outside Massachusetts. In 2001, I was a consultant to The Urban Institute on its project "Getting Compensation

for Child Care Workers on the Policy Agenda: An In-depth Look at Advocacy Efforts." I interviewed child-care providers and advocates, public officials, community leaders, academics, foundation people and union organizers in Massachusetts, and co-wrote the state site report on how advocates are building public support for better child-care compensation policies in Massachusetts. This project also published state reports for Georgia and Washington, available free at The Urban Institute's Web site.

I have participated in many groups in the Massachusetts child-care community, including Investing in Children. This group meets regularly to explore methods of financing early care and education (ECE), examining such issues as the economic development of the industry and its effect on the state's economy, tax laws, and industry-wide economies of scale. I was a member of Strategies for Children's Early Education for All "Costing-Out Universal Early Childhood Education" working group that collaborated with the Institute for Women's Policy Research of DC to determine the cost of providing universal, voluntary care and education to all Massachusetts 3-, 4- and 5-year-olds. Early Education for All wrote legislation for the state to provide universal ECE, which was filed in Boston in early December 2002 and became law in July 2004. I participated in the New England Workforce (NEW) Partners (funded by the U.S. Administration for Children and Families Child Care Bureau), a four-year regional effort to coordinate research on the difficulty of attracting and retaining qualified child-care staff. This group was especially helpful in improving my research skills and giving me a better understanding of what we do and do not know about these issues.

My dissertation had its beginning at a working meeting during a Center for Popular Economics (CPE) Summer Institute, which brought child-care activists and

workers together with economists to discuss the state of child care. Eight child-care workers and activists attended the Summer Institute, which provided basic economic-literacy training. They also collaborated with CPE staff economists in three workshops on the economics of child care. The working meeting was a success, establishing a network and foundation for future collaboration, and verifying the need for specific information on the causes and solutions to high labor turnover in this industry. Once my dissertation is completed, I will write a short, non-academic report that will be disseminated by CPE to child-care activists, workers and policy-makers.

Last, but by no means least, while working on this project my mother passed away, and I in turn became a mother. I experienced first-hand the many difficulties parents face in securing quality ECE for their children, not least of which is finding a program with a qualified and stable teaching staff.

As an economist, my focus on child care is unusual and something of a surprise, even to myself. I find the work stimulating, worthwhile and purposeful. I hope to expand on this project after my dissertation. I have a large and rich data set and am positioned to incorporate it with some of the Commonwealth's data on this population and industry.

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CHAPTER 1

INTRODUCTION

"*The single most important determinant of child-care quality, according to a growing body of research, is the presence of consistent, sensitive, well-trained and well-compensated caregivers*" (Bellm et al. 1997).

In the last 30 years there has been a vast increase in the number of mothers with young children working outside the home. According to the U.S. Census Bureau, 64.4 percent of mothers with children under 6 participated in the labor force in 2000. In 2006, the Bureau of Labor Statistics (BLS) at the U.S. Department of Labor reported that over 12 million children are in child-care settings every day, and more than 4.6 million families relied on child care as an essential component to maintain employment. The National Association of Child Care Resource and Referral Agencies reports that 75 percent of children under age 5 are in some form of non-parental care.

What's at Stake?

Early care and education is a vital community resource, enabling parents to work and contributing to children's development. Good child care is a first step to school success.[1] Studies show that children who get quality child care enter school with better math, language and social skills. Set against this background there is growing research on and awareness of what is at stake in ECE:

• From birth to age 3, brain development is more rapid than at any other time.

> • Quality early experiences and care have a positive impact on development and are critical to school-readiness.
>
> • School-age child care contributes to building children's resiliency and improving their academic achievements (National Research Council and Institute of Medicine 2000).

The authors of *From Neurons to Neighborhoods: The Science of Early Childhood Development* put it strongly:

> The scientific evidence on the significant developmental impacts of early experiences, caregiving relationships, and environmental threats is incontrovertible. … The science of early development is also clear about the specific importance of parenting and of regular caregiving relationships more generally. The question today is not whether early experience matters, but rather how early experiences shape individual development and contribute to children's continued movement along positive pathways. (National Research Council and Institute of Medicine 2000, 6)

Low- and middle-income families especially are hard-pressed to find and pay for quality care, and economic constraints often force them to settle for arrangements that are far from ideal. Poor-quality child care can adversely affect development, and the impact is disproportionately greater for children from poor and minority families (National Research Council 1990). Research has shown that children who lack close, dependable and consistent caregiving relationships are less likely to thrive (National Research Council and Institute of Medicine 2000).

Conventional wisdom in the ECE field is that annual turnover rates are too high, approaching 32 percent (Brandon and Martinez-Beck 2006). It has been demonstrated that high turnover reduces the consistency and quality of care children receive (National Research Council 1990; Zigler and Kagan 1982; Clarke-Stewart 1977). High turnover increases stress in the workplace and negatively affects job performance and the quality

of care provided by remaining staff (Whitebook, Howes, and Phillips 1990; Mattingly 1986; Whitebook et al. 1982).

High turnover dissipates time and money in staff searches, training, and finding and hiring substitutes, as the U.S. Army found when it calculated the direct and indirect costs of high turnover at its child-care programs. Under the Military Child Care Act of 1989, the Army discovered that reduced turnover with increased compensation and improved training for child-care workers was no more expensive then high turnover and its related costs. The Army implemented a new process for all Army-run programs that dramatically reduced turnover and raised overall program quality (Zellman and Johansen 1998; Bellm 1994).

My Plan

In the next chapter, I discuss key issues relative to child care such as determination of quality and its value, characteristics of the U.S. and Massachusetts child-care markets, definitions of and research on labor turnover, and costs borne by labor, families, children and government. This is in an effort to demonstrate the importance and magnitude of the problem both within and outside of this labor market.

In chapter 3, I introduce Albert Hirschman's theory of "voice" and the relationship of "voice" to labor turnover. I look at some of the relevant economic literature on unionism and labor market segmentation. Then I present my research hypotheses and model of voice and exit. By learning to identify possible "voice" in different child-care workplaces, I hope to begin to understand where and why child-care turnover rates differ.

The research design and methodology undertaken are detailed in chapter 4. Survey design, development and testing; sample frame, selection and participant response; survey distribution and administrative procedures; variable definitions and measurement; and data collection, coding, cleaning and plan for analysis are discussed.

Chapter 5 contains the first of my empirical findings and begins by comparing child-care workplaces. Descriptive statistics show similarities and differences between programs with respect to enrollment, subsidy use, staff ratios, wages, legal status, and turnover. Regression analysis unveils a relationship between union status, wages, and turnover. Finally I compare program director and matched teacher responses concerning five aspects of voice to see if there are differences between a program's stated policies and the practical view, knowledge or attitude toward said policies through the eyes of the teacher.

In chapter 6, answers to my research questions expose working conditions other than wages that may affect turnover, differences in nature and quantity of voice across child-care workplaces, and a possible statistical relationship between turnover and worker voice.

In the final chapter, I review my results and consider the "value-added" from this work. I reflect on the findings within the current ever-changing policy landscape of the ECE industry.

Notes

[1] I use the terms “early care and education” (or the acronym ECE) and “child care” interchangeably. The first is gradually replacing the older term, child care. The terms do have different histories, but ECE has become the national term used to describe the field of Early Care and Education. I use the term “preschool” or “pre-k” to refer specifically to programs that serve children approximately ages 3 to 5 years.

CHAPTER 2

CHILD CARE IN THE U.S.

What is quality child care?

Quality early care and education has been defined differently across numerous studies. When I speak of quality or the level of quality, it refers to the observable patterns of interaction between teachers and the children for whom they are responsible (Brandon and Martinez-Beck 2006, 10). There are many characteristics and measures of positive interactions. Both structural and process quality characteristics are important. Structural characteristics, sometimes called "static features of care," include things that can be easily measured and regulated through licensing, such as child-to-staff ratios (number of children per qualified classroom staff member), group size (number of children in the classroom), and the educational level and specialized training of teachers and directors. Process characteristics or "dynamic features of care" typically are not regulated by state or local agencies and are hard to measure, since they cover the interactions between children and their caregivers and other children.

Licensing standards try to ensure a basic level of quality. The Massachusetts Department of Early Education and Care or DEEC licensing regulations require all staff have a criminal background check and that all programs be safe, clean, comfortable, of adequate size, free from hazards, and pass all local building, health and lead paint inspections.[1] Programs must meet specified staffing ratios and provide evidence that staffs are appropriately supervised and qualified for their positions based on state qualification guidelines. State licensing standards vary widely, and some are quite negligible.

Process characteristics cover the daily elements that take place in the child-care setting such as how the staff and children interact, what materials are available for children, and how adults support children's use of materials. Scales such as The Early Childhood Environment Rating Scale — Revised Edition (ECERS-R) (Harms, Clifford, and Cryer 1998) have been developed to measure the quality of care children receive. They include measures of warmth, sensitivity and responsiveness of staff; the emotional tone of the setting; activities available to children; the developmental appropriateness of activities; and learning opportunities for children. Studies have shown these process characteristics are associated with children's cognitive and social-emotional development (Helburn and Howes 1996). Detailed issues of quality, such as what it is and how you recognize it, are discussed extensively in the ECE literature. (See National Research Council 1990 for example.)

Researchers use a variety of scales to make measuring a program's process characteristics easier and uniform across studies. The ECERS-R is a commonly used scale that provides benchmarks for different levels of quality. It is a 43-item scale designed for center-based programs that care for children ages 2 to 6.[2] The scale is organized into seven categories, with each having subscales and numerous items to evaluate.

ECERS-R categories studied when rating programs

1. Space and Furnishings — age-appropriate play equipment, suitable space, lighting, heating and cooling equipment, children's work on display, furnishings set up in a way to facilitate children's play and minimize disruptions;

2. Personal Care Routines — the quality of routines for naps, toileting and diapering, meals, and separations and reunions with parents at drop-off and pick-up;

3. Language-Reasoning — the books available for children, how the books are used, and the communication and language skills used and encouraged;

4. Activities — the types and variety of materials and activities available for children;

5. Interaction — quality of interaction between staff and children, and between children;

6. Program Structure — the predictability and variability of daily activities;

7. Parents and Staff — quality of communication between parents and staff, the working environment and professional development support for staff (Marshall et al. 2001).

Items are scored from 1 to 7, with benchmarks set at each level from 1 ("Inadequate care") up to 7 ("Excellent care"). Quality care is typically thought of as a rating of 5 ("Good") or above, because a score below 5 indicates, "children in these classrooms are receiving less than the standards set for developmentally appropriate care" (Marshall et al. 2001, 41).

For example, to receive a score of 3 ("Minimal") in the Parents and Staff category, a program must provide written information about the program to parents; share child-related information between staff and parents; and engage in generally respectful and positive interactions between parents and staff. The program's work environment must have a separate adult bathroom for staff; at least one break per 8-hour workday; and access to a telephone, storage space and individual conference space. Staff must receive some supervision and in-service training, and attend some staff meetings.

By comparison, in a program that meets the 5 ("Good") benchmark on the Parents and Staff scale, there is more extensive involvement of parents, including the

sharing of information about the philosophy and approaches of the program; workers communicate effectively and supportively with each other and attend monthly staff meetings that include staff development activities; there is a staff lounge area and workers get three breaks in their 8-hour workday; and there are regular in-service trainings, annual supervisory observations and written evaluations. To receive a 7 ("Excellent") rating, parents need to be involved in decision-making roles with staff and asked annually to evaluate the program. The program must provide staff with clear guidelines for their individual responsibilities; involve staff in self-evaluation, offering frequent observations and feedback; and provide separate administrative, conference and group meeting space. Such a program must provide support for professional development and require that staff with less than an associate's degree in early childhood education continue their formal education.

The Child-care Market

Center-based child care in this country is provided in a mixed industry. Approximately 60 percent of center-based programs are run by non-profit agencies, including a few that are publicly operated, and 40 percent are for-profit businesses (Morris and Helburn 2000).

Each week, approximately 2.3 million child-care workers provide care for children up to age 5 in the United States. In addition, there are approximately 2.4 million unpaid individuals, primarily relatives and volunteers, providing care to children age birth to 5 in any given week (Burton et al. 2002, 2). The BLS projects that wage-and-salary employment growth in the industry of "child day care services" (NAICS code 624400) will be 43 percent during the decade 2002-2012.[3]

Despite the clear need for and benefit of quality child care, all too often and for many reasons this need is not met. In some situations, parents are unable or unwilling to pay for care. In other cases, there is not a sufficient supply of subsidized or unsubsidized care available. Low quality and consumer ignorance of aspects of quality care are also problems. For example, numerous efforts to characterize the quality of child care nationally have found that 10 to 20 percent of children receive care that falls below adequate standards, and fewer than 20 percent of toddlers and preschoolers are in care that is "highly characteristic" of positive care-giving (National Research Council and Institute of Medicine 2000, 320). Yet most parents believe *their* child is in a good program.

Market Failure

Most of these problems can be considered market failure. Typically, market failure is said to occur when the allocation of goods and services by the free market is not efficient. Market failure where Adam Smith's "invisible hand" fails to produce Pareto efficiency is, by definition, inefficient. Some theories predict that unhindered, any market can produce the socially optimal amount of services and goods. However, despite the high demand for child-care services, this market does not adjust and produce significantly more child care, and the new care that is supplied is of widely varying quality.

On the demand side, a key problem in this market is asymmetric information. The quality of the service is vital, yet it is difficult to identify and to monitor, assuming one knows for what to look. Thus the purchaser is unable to accurately evaluate the price of the service they demand. This is partly due to the type of good that child care is.

Goods can be classified into three categories: search goods, experience goods and post-experience goods. A search good is one such as a chair, the characteristics of which consumers can determine with certainty prior to purchase. A good is an experience good if consumers only can determine its characteristics after purchase and during consumption. Examples of this good are legal services and used cars. Post-experience goods pose even more difficulty for consumers to obtain accurate information about them. The quality of these goods, such as medicine and child care, is difficult to distinguish even after one begins consuming them (Weimer and Vining 1999).

The demand for child-care services may simply be very price-elastic. Many parents would like more child care but are unwilling or unable to pay enough to cover suppliers' costs. If we consider child care as one good among many in a consumer basket, typically parents will choose to purchase the good based on its price, its quality, their need and the availability of substitutes. However, in this market with asymmetric information, vastly different levels of quality, and presumed substitutes, price inadequately signals the quality of service. This may discourage parents' willingness to pay for better child care. As noted earlier, poor quality care is not a substitute for high quality care, but parents and guardians purchase care, a post-experience good, unable to identify quality or its possible externalities.

Externalities — good and bad — result from the care and education children do and do not receive. Children themselves and society as a whole enjoy benefits in the present and future from good child care as discussed in chapter 1, "What's at Stake." These benefits reap dividends for children and society for which families typically are asked to pay. Some of the externalities from the purchase of poor- verses good-quality

care are not obvious and unable to be captured in the price of unsubsidized and subsidized care.

Parents in need of subsidized care have difficulty getting it. There are enormous waiting lists, with 14,407 children waiting in Massachusetts alone as of June 2005 (Massachusetts DEEC 2005a). Some government policies try to remedy this situation through subsidies to low-income families, grants for provider training, or incentives for programs to improve quality and seek accreditation. However, these efforts reach only a small percentage of children and programs. In 1999, for example, it is estimated that a mere 15 percent of children eligible for a subsidy under federal block grants to states received that subsidy (Blau 2001, 10).

In *The Child Care Problem,* Blau proposes that a key problem here is the tension between two government goals: to facilitate the employment of parents, and to improve the development and well-being of children. In efforts to reach the first goal, policies focus on adult employment or training-program participation, as is the case with the welfare reform of 1996 (Personal Responsibility and Work Opportunity Reconciliation Act or PRWORA). Employment is required for parents to receive a child-care subsidy. This subsidy is crucial for the economic welfare of low-income families, especially those trying or being forced to move off public assistance into the workforce. However, there are no requirements regarding quality of care, and the subsidy may be used on mediocre care where it will usually buy more quantity (hours of care). This intervention typically fails government's second goal of improving the development and well-being of children.

Efforts to reach the second goal focus on improving the quality of care by providing grants to programs for such things as caregiver training or program accreditation. These subsidies have no employment requirements for the parents of enrolled children. Often, high-quality programs and preschools are only part-day and/or part-week, requiring parental involvement and availability, which is typical of good ECRES-R rated and NAEYC accredited programs. These policies fail to the meet the first objective to facilitate the employment of parents. Theoretically, a government policy could serve both objectives. However, in practice we see a quality-quantity tradeoff, since a given amount of money can buy more low or mediocre care than care of high quality.

Supply of Child-care

Child care is not considered a promising career. Workers typically are low-paid and offered few if any benefits. During the period 1977 to 1998, non-household child-care workers averaged $5.30 per hour less (1998 dollars) overall than other women workers (Blau 2001, 31). During this time, there was huge growth in the demand for child care, and program enrollment more than quadrupled (Blau 2001, 37). However, for most of this period (1977 to 1992), there was a downward trend in non-household child-care workers' wages at an average annual rate of 2.4 percent. From 1993 to 1998, the wages for this group grew by 3.3 percent annually on average, adjusted for inflation. Despite the large increase in demand, wages were more or less constant throughout most of this era, averaged over all child-care workers including pre-kindergarten and private-household child care (Blau 2001).

Under neoclassical theory of supply and demand, we expect this increase in demand to drive up the wages of child-care workers as they become scarcer in relation to the number of children in care. The fact that this did not happen implies that the supply of child-care labor may be quite elastic. As demand expands so does the supply of child-care workers, restraining increases in wages.

For demand to rise and not wages, there needs to be an increase in the number of people entering the field, current workers working more hours, or possibly less-qualified staff hired. A combination of these three scenarios is closer to reality than any one alone. It is estimated that between 1976 and 1990, the number of child-care programs of varying quality tripled. The quantity of for-profit programs increased by 143 percent, while the number of paid employees increased by a factor of 3.2 between 1982 and 1997. The supply of non-profit programs grew by 43 percent, with a 77 percent increase in the number of paid employees in the same period (Blau 2001). Given that hours of work have increased for most American workers during these years, there is little reason to believe that child-care workers are not averaging more working hours. In addition, the report "Losing Ground in Early Childhood Education: Declining Workforce Qualifications in an Expanding Industry, 1974-2004" shows that average qualifications of those caring for our young children have declined (Herzenberg 2005a).

Labor Turnover

Labor turnover is calculated by determining the percentage of labor whose employment ends within a year or other specified period. Nationally, programs report annual turnover anywhere from zero to 100 percent, though few report complete turnover in any given year.

Typically, high turnover is more likely in markets with low-paid, low-skilled and low-educated workers. The case of child care is particularly egregious. Across the economy's expansions and contractions or recessions, i.e., the business cycle, and despite above-average levels of education and training among U.S. child-care workers, at least one-third continue to leave their jobs each year, a trend nearly double the overall U.S. job turnover rate (U.S. Department of Labor 1998, quoted in Whitebook and Bellm 1999; Blau 2001).

As noted in the first chapter, persistently high rates of teacher turnover in this industry undermine the quality of service provided, impede the development of consistent relationships between children and caregivers, interfere with children's social and cognitive development, destabilize work environments, and hinder the development of skillful teaching teams.

There are different types of turnover in this labor market, and it is important to distinguish between them: position, job and occupational turnover. *Position* turnover describes movement of a teacher from one classroom to another within the program or to a different program site within the same agency. This may be due to promotion, agency expansion, or a desire to work with a different age group. This type of turnover typically is considered positive, though it can be disruptive, especially if it happens often. However, it can be somewhat stabilizing in a program if, for example, the children's new teacher is someone they are a little familiar with, having seen them around the program (Whitebook and Bellm 1999).

Job turnover occurs when a teacher leaves a particular program. Such turnover may be involuntary, resulting from dismissal, or voluntary, such as when a teacher

leaves for a better-paying job (Whitebook and Sakai 2004). Usually considered negative turnover unless a poorly qualified teacher is leaving, voluntary job turnover happens for many reasons including when people must leave the work they love even though they and the program would prefer them to stay. Job turnover affects the stability of a child's relationship to teachers and is hard for children, especially if it happens often and they lose a trusted and dependable caregiver. It is unsettling to program operations, and directors and co-workers suffer, particularly as they try to meet their daily child-to-staff ratios in response to staff departures.

Occupational turnover happens when a teacher not only leaves her program but also leaves the ECE field entirely. Like *job* turnover, this is very disruptive to daily life for children, families and programs. It is bad for the child-care labor pool, limiting the return on investments in professional development since it is typically the better-educated and more-experienced teachers who leave for a better-paying occupation. Many in the child-care field have friends and ex-colleagues who left child care and became public school teachers, or moved into better-paying jobs in related care-giving or service industries in order to support their families. *Occupational* turnover is especially burdensome in the field as it reduces the pool of qualified candidates and often prolongs the process to fill vacancies.

More specifically, annual *occupational* turnover for program staff only (excluding all other child-care workers) is estimated at 19 percent. In other words, of the approximately 30 percent of staff who leave each year, roughly 2 in 3 leave the field. Whitebook, Sakai, Gerber and Howes (2001) assume that this number is a very

conservative estimate across all paid caregivers and settings, and persistent over the business cycle.

Both *occupational* and *job* turnover plague the field, and these are what I focus on in this project. Generally, when people talk about turnover in child-care, they are referring to job and occupational turnover, both of which are high (Whitebook and Bellm 1999).

Some turnover of caregivers is expected. The need for teachers changes as levels of enrollment rise and fall when families move and cohorts of children grow. Often these transitions are expected and are part of a staffing plan. In addition, a reasonable amount of mobility and opportunities for advancement is needed to attract highly qualified teachers. Nonetheless, most transitions due to teacher turnover are difficult to plan for and adjust.

Child-care workers say turnover is a serious drain on time and energy, making them redo schedules, cover for departed or unqualified staff, and undertake lengthy search and hiring procedures. But children and staff are not the only ones affected by this labor turnover, note Whitebook and Bellm (1999). High turnover is the number-one child-care problem (other than fees) with which parents are dissatisfied, as it disrupts their lives and destabilizes their child's relationship with his/her caregiver. Second, employers find parent-employees less focused on work when their child-care arrangements are unstable (Whitebook and Bellm 1999).

Research on Turnover

Research has shown that programs with high turnover are far less able to meet improvement goals or gain accredited status, both important to improving quality

(O'Connor 2000). Programs with high turnover are unable to provide stability and continuity or build trust for children or caregivers. As the authors of *From Neurons to Neighborhoods: The Science of Early Childhood Development* state:

> The time is long overdue for society to recognize the significance of out-of-home relationships for young children, to esteem those who care for them when their parents are not available, and to compensate them adequately as a means of supporting stability and quality in these relationships for all children, regardless of their family's income and irrespective of their developmental needs. (National Research Council and Institute of Medicine 2000, 7)

When the council's study was first released, it was hailed by many advocates as validation that children's early years are far more important than society recognized. From elected officials to parents, more people started asking about how children spend their first few years. New players emerged, and in some states, including Massachusetts, polices were enacted and money was found to give more support to ECE programming.

Many states, including North Carolina beginning in 1994, Washington in 2000, and Florida and Wisconsin in 2003, have implemented wage supplementation programs to encourage teachers to attain more education and remain in the child-care field, thereby improving quality.[4] The U.S. Child Care WAGE$ Project administered by various states provides education-based salary supplements to low paid teachers, directors and family child-care providers who work with children through age 5. Supplements, which vary by state, tend to increase incrementally as benchmarks are met, and range from a few hundred dollars a year to $3,000 a year (Brandon 2006).

Not surprisingly, evaluations of these projects show turnover is affected by the value of staying and the opportunity cost of leaving (Brandon 2006). With very low pay, and low or no entry requirements, there is little cost to leaving this job or profession. Some evaluations have shown marginal improvements and others indicate a

positive short-term impact on the ability to attract better-qualified teachers and reduce turnover. Unfortunately, a statistically significant improvement in these initiatives does not equate to a large-enough effect to achieve an ECERS-R "Good" quality rating or to reduce turnover by more that a few percentage points (Brandon 2006, 32). These results indicate that a far greater increase in ECE teacher pay is needed for ECE to compete in the labor market for workers with the education and training that lead to high quality care.

Others studies of ECE turnover suggest ways to address staffing problems. The National Institute for Out-of-School Time studied turnover in school-age programs throughout eastern Massachusetts. Eleven programs developed action plans to address issues important to lowering turnover rates, implemented the plans and assessed the results. One of the most effective supports received by the programs during the study was consultation with an accountant who had knowledge of the child-care industry. The consultant worked with programs on enhancing revenues and decreasing expenses to find funds for new staff support. In a few cases, the consultant helped the program find ways to provide staff with benefits, slightly higher salaries, or pay for time spent in training or planning (O'Connor 2000).

In addition, participating programs each received an incentive grant to implement strategies they thought would reduce turnover. Some sites financed an annual staff retreat or paid for staff to participate in regular staff meetings as a way to increase staff decision-making and communication within the program. Some sites funded professional development opportunities for staff. One site used the funds to offer a bonus for staff successfully recruited and retained for more than a year. Many of these

strategies affect a program's working environment, and I look at them in chapter 5 using my data set.

The outcomes were encouraging, with teachers and directors buying into the process and committing to their plans of action. However, the effect on turnover rates was unclear. Certain determinants of turnover such as wages and overall working conditions could not be adequately addressed or measured in the scope of the project (O'Connor 2000).

Taking on Turnover: An Action Guide for Child Care Center Teachers and Directors (Whitebook and Bellm 1999) was written to help teaching staff and administrators explore together how to make their ECE programs places where they and their co-workers could grow and develop in their careers, while providing stability and continuity for children. This how-to book helps programs define their problem, its cost, and whom it affects. Through a series of exercises, it directs teams to work toward solutions collectively, addressing four key areas: the program's work environment; recruitment and hiring; compensation; and substitute policies. The book is helpful for programs, but programs alone cannot solve the aggregate problem for the industry.

In their conclusion, the authors note it will require a community effort to address high turnover in child care. They suggest numerous advocacy and community efforts to get others to recognize the effect and cost on the community if child-care teacher turnover continues its present course. Imagine they ask, what would happen if all child-care workers did not show up for work tomorrow. While working with other stakeholders in the community can help increase awareness and reduce the isolation and frustration caused by high turnover, it does not address turnover at the macro-level. It

leaves it to staffs to work out. Relying on those already over-worked and under-paid further hinders this self-help approach.

The Costs of Care

Quality child care is expensive and highly labor intensive. In current dollars, the investment, i.e., the cost is large for families and communities. In center-based child care, labor accounts for 70 percent of all costs (Helburn 1995; Blau 2001). There is little data available on the price incurred for other inputs such as materials and supplies, operating insurances, training, administration, advertising, and bricks and mortar. The community or government incurs expenses in supporting ECE services by providing subsides for children, higher education programs for workers, regulation and licensing staffs.

Studies have shown benefits to children, communities and government outweigh ECE expenditures. Measurable benefits in the short-term include increases in IQ and academic achievement, as well as long-term effects, such as improvements in high school graduation rates, crime, welfare enrollment, income, and tax revenue. (See Karoly et al. 1998; Barnett 1995; Currie 2001.) One study conducted by Karoly and colleagues (1998) under very conservative assumptions showed a dollar savings of more than 2-1 to government alone on the Perry Preschool Project, a well-known early intervention program with evaluation data on its subjects through midlife. In a speech in June 2008, then-Senator Barack Obama spoke of up to $10 in future reduced health-care costs, crime and welfare expenditures for every dollar spent now on ECE programs (Grumman 2009).

Despite public opinion polls indicating a willingness to subsidize ECE, government-subsidy programs do not provide adequate funding (Early Education for All 2000). While the Child Care and Development Fund (CCDF) is the biggest of the government subsidy programs in terms of expenditures, at $9 billion in 1999, it is estimated that CCDF serves only 12 to 15 percent of eligible children (U.S. Department of Health and Human Services 1999, 2000; Blau 2001). In September 2005, The National Association for the Education of Young Children (NAEYC) reported that only 1 in 7 eligible children are receiving subsidies.

Families needing organized child care, be they single-guardian or two-parent families, are juggling home, work and/or school, and sometimes other care-giving responsibilities. During 2003-2004, average annual child-care expenses for full-time care of a preschool child ranged from $3,016 in Alabama to $9,628 in Massachusetts. This cost represents 40.7 percent of median single-parent family income in Massachusetts (National Association of Child Care Resource and Referral Agencies 2005). Nationally in 1995, of families in poverty who paid for care, child-care fees consumed 35 percent of their income compared to 7 percent for other families (Blau 2001, 26).

These fees are extremely burdensome for low-income families and impossible for some to meet. Yet parental fees cover less than half the true cost of care, and government and other contributions only cover another third. It is estimated that the balance, 20 percent, is borne by the caregiver through foregone earnings they would receive in other sectors of the labor market (National Research Council and Institute of Medicine 2000, 321).

In 1999, the average daily market rates (fee or price) in the 50th percentile for center-based, full-time care (six or more hours per day for 30 or more hours a week) in Massachusetts was $42.25 for infants, $37.77 for toddlers, and $30.58 for preschoolers.[5]

Table 1: Massachusetts 1999 Daily Market Rates

Care type	25th percentile average	50th percentile average	75th percentile average
Infant care	$37.94	$42.25	$46.90
Toddler care	34.17	37.77	42.06
Preschool care	27.97	30.58	34.27

Source: Author's calculations based on data from Workplace Solutions April 2000.
Note: Care type as defined by DEEC: infant care is for babies from birth up to 15 months old; toddler care is for children ages 15 months to 33 months; preschoolers are children ages 2 years 9 months and older but under age 7 years and not yet in first grade.

Massachusetts, like most states, offers child-care subsidies — financial assistance given to eligible parents for child care provided by an eligible child-care provider. However, there are time limits, strict eligibility criteria, and long waiting lists of thousands of children as detailed earlier in this chapter. Families may qualify for assistance because of low incomes, medical problems, early parenting or problems in parenting that put children at risk of abuse or neglect. Eligibility is determined for no more than six-month periods and renewable only under certain conditions. Nevertheless, there is a long waiting list of eligible parents for state-subsidized child care. When a subsidy becomes available, most parents have to make up the difference between the subsidy and the cost of care. If eligible parents lose their job, they are only entitled to child-care assistance while looking for paid employment for a maximum of eight weeks.

The Costs of Caring

Most child-care jobs do not pay a living wage, offer significant benefits, nor enable providers to deliver the best care and education for children (Center for the Child Care Workforce 1998). Nationally in 2000, the mean annual earnings for parking-lot attendants were higher than for child-care workers: $15,080 compared to $14,830 (Massachusetts OCCS April 2001, 5).

Child care is an industry that does not reward education. The mean annual full-time equivalent salary for a child-care worker in Massachusetts was $17,880 (Massachusetts OCCS April 2001, 5) even though 47 percent of lead teachers have at least a bachelor's degree (Massachusetts Child Care Resource and Referral Network 2000).[6] Note that the federal poverty level was only a few hundred dollars below this, at $17,050 for a family of four.

Preschool teachers in public schools and in child-care programs have many of the same teaching responsibilities and care for the same age children. In Massachusetts in 2000, the highest median hourly wage (across the six regions) paid to child-care teachers was $11.00, usually with few benefits. The state's annual turnover rate consistently hovered at about 29 percent for these teachers (Massachusetts Child Care Resource and Referral Network, 2000). As reported in *Current Data on the Salaries and Benefits in the U.S. Early Childhood Education Workforce* (2004), wages in 2001 averaged $33.50 per hour for Massachusetts's public-school preschool teachers. In 1999 the turnover rate for Massachusetts's public school kindergarten teachers, preschool teachers' closest "professional" peers, was 9.9 percent (Massachusetts OCCS April 2001, 1). During this period, state unemployment rates ranged from 3.3 percent in 1999

to 3.7 percent in 2001, dipping to 2.7 in 2000 (Massachusetts Division of Career Services and Division of Unemployment Assistance 2005). In this strong employment climate, ECE teachers in child-care programs earned, on average, about one third the hourly wage while experiencing turnover rates three times greater than those in public schools.

Other studies report similar figures. The BLS reports the median annual earnings of Massachusetts's preschool teachers, mostly in child-care programs, as $22,600 in 2002. On the other hand, in the same year, the state's kindergarten teachers' median earnings were $46,550, and elementary school teachers earned more (BLS 2002 as reported in Marshall et al. 2005).

Sufficient financing is key to quality education at every age. Traditionally in the ECE market, wages are directly connected to family fees, which many feel cannot be increased. Public-school teacher salaries (kindergarten through grade 12) depend on a broad tax base. One reason society has approved public financing of teachers salaries is because we know parental fees alone are insufficient to pay professional salaries. The benefit trained and dedicated teachers contribute to the production of an educated citizenry is publicly recognized and funded. However, it now is clear that learning does not begin at age five and nor should education. While public subsidies try to support quality ECE, these subsidies reach a very small segment of the industry. We must be creative to remedy the low wage/high turnover link in ECE, but to do so the connection between low wages and insufficient fees must be broken.

Those Paid to Care

One director of a non-union program wrote at the end of her survey, *"… the crux of the problem of great teachers leaving — they have to get jobs that pay more!"*

Teachers (non-union) made similar comments in their surveys:

"The laughable pay drives most reasonable people away."

"Teachers in our program are underpaid and have NO benefits."

Marshall, Dennehy, Johnson-Staub and Robeson (2005) estimated that in 2003 about 30 percent of child-care workers in Massachusetts held a bachelor's or higher degree in early childhood education or a related field, while about 20 percent held an associate's degree. (Typically directors and lead teachers hold the bachelor's or higher degrees.)

The Commonwealth's child-care workforce is diverse. For example, as much as 22 percent of the workforce (including Head Start) is Hispanic or Latino (Marshall et al. 2005). Nationally, only 11 percent of the center-based child-care workforce was Hispanic or Latino in 2000 (Burton et al. 2002, 24). This diversity is strength. It expands the pool of qualified teachers and helps ensure children benefit from the diversity of their communities. One of the goals of the DEEC is to "support high quality ECE programs that reflect the diversity of the Commonwealth." The race and ethnic make-up of Massachusetts's children ages 3 to 5 in 1999 was:

74 percent white (non-Hispanic);

11 percent Hispanic or Latino;

6 percent black (non-Hispanic);

4 percent Asian/Pacific Islander;

4 percent other (including multi-racial children).

Program staffs (excluding Head Start) in Massachusetts are more likely to be non-Hispanic white (80 percent) or non-Hispanic black (8 percent) than are the children they serve. However, staffs are less likely to be Hispanic or Latino (8 percent) or Asian (2 percent) compared to Massachusetts' child population. In addition to ethnic, racial and socioeconomic diversity, Massachusetts enjoys a number of language groups throughout its ECE workforce, including Spanish, Russian, Portuguese, Chinese, Hmong, Vietnamese, Khmer, Creole and others (Marshall et al. 2005; author's data 2003).

Child-care teachers are overwhelmingly female, 97 percent nationally in 1994 (Blau 2001, 8). This may contribute to the low wages and low level of respect accorded many in the field, and thus affect turnover. But even compared with other primarily female occupations (excluding health-care aides), turnover rates in child care are high. (For more on gender and occupation see Folbre 1994 or Joy 1998.) The annual demographic supplement to the March Current Population Survey is one of the few sources covering the entire child-care market and can help document the rate of turnover. The CPS does not include job changes, but it does identify occupation changes and changes in employment status between a worker's longest job held during the previous year and their job, if any, held at the date of the survey. From 1977 to 1998, CPS data confirms that a child-care worker is more likely to change employers than the average woman in another profession (Blau 2001).

Nationally, the breakdown by age of program teachers and assistant teachers in 1999 was:

7 percent 18 years or younger;

34 percent 19 to 25 years (“young”);

17 percent 26-30 years;

34 percent 31-50 years (“mature”);

7 percent 51 years or older (Whitebook, Howes, and Phillips 1990, quoted in Burton et al. 2002, 25; Blau 2001, 31).

One third of teachers is of “mature” age and perhaps offer some experience. Another third is “young,” ages 19 to 25. These teachers may be passing through these jobs as they work toward something else, or they may have new early childhood education credentials. The percentage of teachers in the middle, ages 26 to 30, drops to 17 percent. This may be explained by the high turnover in entry-level assistant teacher jobs, where training and education requirements are minimal, or among young college graduates, who leave for better-compensated careers. This data reveals that the child-care workforce is ageing, and the most educated cohort is in its 50s. As noted previously, occupational turnover is especially high among qualified teachers. Teachers entering the field and new hires are often less qualified than their predecessors. In Massachusetts in 1999, 48 percent of newly hired teachers were less qualified than their predecessors, according to program directors in *The Cost and Quality of Full Day, Year-round, Early Care and Education in Massachusetts: Preschool Classrooms* (2001).

“*For the work that is done and taking care of other people’s children, it is hard to call out or leave if your own child is sick. This to me is a big problem,*” wrote one

union teacher who responded in her survey that it is "*very likely*" that she will leave her job and the field within the next 12 months.

Why does anyone stay in this low-wage, physically and emotionally demanding field? That many women are willing to supply their labor for low compensation when there are better paying positions in other sectors suggests there are non-pecuniary benefits to working in child care**.** Teacher altruism is often seen when teachers are committed to the mission of teaching although in a market economy it can be a costly attribute for the worker. Good feelings and satisfaction from work are important and enticing, but do not pay the bills. On the other hand, child-care work may provide more schedule flexibility and worker autonomy when compared to other low-wage work. For example, a program director may not be able to offer more in wages, but can allow flexibility in work time to accommodate teachers with families of their own. Teachers usually are able to structure and run their classrooms as they prefer, within certain limits. These characteristics are rare in low-wage jobs and add some appeal to child-care work.

Conclusion

Both chapters 1 and 2 have tried to demonstrate the importance and magnitude of the turnover problem in the child-care labor market. Cognitive research and economic studies have demonstrated both the present and long-term benefits of quality ECE to children and communities. Yet this commodity is, in a manner of speaking, a square peg trying to fit into a market of round holes. The price of ECE fails to signal the quality or increase the quantity of good ECE. Buyers do not know what quality ECE looks like, and when they do they often cannot find or afford it. Teachers entrusted with

the care and education of our children must meet few if any requirements and as such are often compensated poorly and leave the field for better opportunities in other sectors.

This situation has not gone unnoticed. Studies are being conducted in other disciplines — education, child development, child psychology, business, sociology, and labor studies. Colleges are creating new ECE programs to increase the size of the qualified labor pool. Philanthropists are researching new program models with stable funding streams. Community agencies are creating public awareness programs and materials to educate families on what quality ECE is and why there are few real substitutes. State and federal governments are debating how best to make quality ECE available and affordable.

"We need more training money, higher wages and more subsidies in this state," wrote one union-program director.

Qualified child-care workers need more reasons to stay in the field. They deserve respect both within and outside their workplaces. Within, respect can take the form of better compensation, professional development opportunities, and a professional work environment with communication and decision processes appropriate to the education and experience they bring to the job. Outside, respect can include our knowledge and recognition of quality, a unified public agency to support, monitor and analyze effective practices, an enlightened legislature, and a stable revenue stream that encourages the production of quality ECE. Many ideas are being tried in different parts of the county, and I will discuss some of them in the final chapter when considering future possibilities for new actions and policies.

An ECE labor market where competitive compensation reflects the experience and education of labor is a practical goal. Yet in a fiscally constrained market, can employees and employers create a better working and thereby learning environment for all stakeholders?

Notes

[1] Massachusetts Department of Early Education and Care (DEEC) officially came "on-line" July 1, 2005. It was created by an act of legislation and took over the functions of the Massachusetts Office of Child Care Services (OCCS) and the Early Learning Services Division of the Department of Education (DOE). OCCS and Early Learning Services of DOE no longer exist. However I refer to both OCCS and Early Learning Services of DOE whenever the original reference does, and whenever I am discussing distinctions between the two departments. In the first year, DEEC ran both service delivery systems primarily as they were but has created one integrated service system. DEEC is supervised and guided by an independent board, the Board of Early Education and Care, and led by its own Commissioner.

[2] The term "center-based" refers to a legal entity (not a family) that runs one or more child-care programs in non-residential building(s) or space. I use the term "program" when speaking of any single operation that provides child care.

[3] North American Industry Classification System (NAICS) replaced the U.S. Standard Industrial Classification (SIC) system.

[4] U.S. Child Care WAGE$ Project programs include: WAGE$ North Carolina www.childcareservices.org ; Washington Career & Wage Ladder www.econop.org/Policy-EarlyLearning&Care.htm ; WAGE$ Florida www.fcforum.org; Wisconsin R.E.W.A.R.D. www.dwd.state.wi.us/dws/programs/childcare/teach/reward.htm

[5] A percentile refers to value on a scale of one hundred that indicates whether a distribution is above or below it. The 50th percentile means that half of the distributions (market prices in this case) are below 50 percent and half are above.

[6] While annual salaries for child-care workers in Massachusetts are higher than the national mean, the cost of living in the Boston area was 140 percent greater than the average U.S. city in 1999 (Massachusetts OCCS April 2001, 6).

CHAPTER 3

THEORY AND MODEL

In this chapter, I introduce Albert Hirschman's theory of "exit and voice" and the relationship of "voice" to labor turnover. By learning to identify the presence and opportunity of "voice" in different child-care workplaces, I hope to gain insight into where and why turnover rates differ in this industry. I look beyond market failure discussed in the previous chapter at some of the labor economic literature on turnover, unionism and labor market segmentation. Then, I present my research hypotheses and conceptual model of voice and exit. My focus is on those who provide care to children. One purpose of this project is to consider a possible non-wage solution to the high turnover problem in ECE.

Voice

Some economic theories predict that turnover will be lower in firms where "voice" is a recognized and established alternative to exit, i.e., to quitting. In economist Albert Hirschman's terms, "voice" refers to the use of direct communications to bring actual and desired conditions closer together (1970). "Voice" reduces the probability that workers will quit by providing workers with a voice and management with a response in determining rules and conditions of work, by instituting grievance and arbitration procedures for appealing supervisors' decisions and demands, and by publicly negotiating wages and benefits desired by workers. This can lead to a more stable workforce than where voice alternatives to exit do not exist or are not used.

In 1970, Hirschman wrote that economists have paid little attention to what he calls "repairable lapses in economic actors." He gives two reasons for this "neglect" and

later questions its justification. First, this is due largely to the rational behavior assumed of economic actors responding to given demand and supply conditions. Second, the traditional competitive economic model does not require recovery from lapses, since as one firm loses out others step in and consume its market share and factors of production, which in the end may be a better allocation of resources. He questions this justification, noting that the above assumptions cannot be an accurate representation of the real world.

Forty years later, there are many more critiques and alternative theories to the traditional model of a competitive economy where comparative advantage and rational behavior explain most actions and outcomes. However, in 1970 most economists were reluctant to consider mechanisms other than competition for restoring lagged activity or correcting poor decisions. Hirschman saw voice, a tool often used by political scientists, as a useful alternative when the competitive mechanism is not available, or as a complement to competition.

When a product or service deteriorates in quality, the exit option is demonstrated when consumers stop purchasing the firm's commodity or members leave the organization. Alternatively, the voice option is demonstrated when customers or members express their dissatisfaction directly to those in charge or through general protest to anyone who will listen. In both cases, management is pushed to find and correct the problem.

There are institutions such as families, voluntary associations, unions and political parties where exit is not typically a desired option to attain some change or satisfaction. The principal way members express their dissatisfaction in these

organizations is by making their voice heard. While exit is usually clear-cut (either exit or don't), impersonal and indirect, voice is not. It is "messy," often graduated, and requires people to speak of critical options without anonymity. Thus many economists see it as less efficient than exit (Hirschman 1970).

In our time of political and economic upheaval, it is clear that change in societal, commercial or environmental practices and policies cannot be accomplished wholly through the exit option. Likewise with child-care programs. The exit option alone will not force improvement in the quality of ECE delivered. Here the voice option is a timely and effective substitute and complement to exit.

Labor often chooses to exercise voice over exit because it is more graduated. Exit assumes a take-it-or-leave-it process; one is either faithful or traitorous to the organization. Rather, there is another possibility, articulation, whereby the worker demonstrates both, independence of thought and allegiance to the organization.

If voice is chosen over exit to express dissatisfaction with the current condition, its effectiveness increases with its volume, up to a certain point. In addition, when labor chooses voice over exit to alert management to its problems or failings, labor needs to allow management time to respond. Clearly, voice is not a quick fix; but neither is a revolving door of workers or customers.

To date, no systematic empirical research has been done on this subject in child care, even though turnover is considered extremely high in this industry. I focus on whether a system of direct communication and shared decision making can help reduce labor turnover. I look at unionized and non-unionized programs to see if programs with firmly established voice alternatives to exit have lower exit rates.

Labor Market

Non-familial child care in the United States today is primarily a fee-for-service market activity. Yet competitive market mechanisms have not produced a level of turnover at all similar to other education or female-dominated service industries. While we agree that turnover rates are too high to achieve quality ECE, there are no clear guidelines as to what is a desirable or acceptable turnover rate. Many in the child-care industry consider an annual turnover rate of 10 percent (the approximate rate for public school kindergarten teachers) highly desirable but are unsure if it is attainable.

A classic market adjustment mechanism for dealing with social and economic problems is the exit and entry of workers. Individuals respond to a divergence between what they want and their actual situation by exercising freedom of choice, or mobility. By leaving bad jobs for good jobs, qualified workers penalize bad employers and reward good ones. This can lead to an overall improvement in efficiency. Yet there are markets, such as child care, where this exit and entry mechanism does more than penalize bad employers. Costs incurred from interruptions and instability in operations, insufficient or inexperienced staffing, increased hiring and training activities, and lose of firm-specific knowledge can be considerable for employers. In addition, in ECE programs the remaining workers, children, parents, and parents' employers incur similar difficulties due to a departing teacher.

Two out of three workers who leave child-care jobs leave the field entirely (Massachusetts OCCS April 2001, 3). These departing workers are typically more experienced and better trained than the workers who stay, their qualifications allowing them better employment choices. Child-care programs and their customers are left to

deal with the difficulties and instability caused by staff turnover. These bad spillovers can have long-lasting effects, especially on children from poor and minority households, as noted in the first chapter.

Unionism

Many economists question whether the entry-exit market mechanism is the only adjustment mechanism for the optimal operation of the economy (Freeman and Medoff 1984). In labor economic theory on unionism, two elements are often highlighted. Both of these, the monopoly and the voice/response elements, lead to expectations of lower labor turnover, though the degree varies by industry. The monopoly element reduces turnover by raising wages above the competitive level (the monopoly-wage effect). The voice/response element lowers turnover by creating desirable working conditions and providing discontented workers with a voice alternative to quitting.

Freeman and Medoff find that unionism greatly reduces the exit behavior of workers paid the same wages (their "voice effect"). They also find that the voice effect has a greater impact on exit than the monopoly-wage effect. In other words, unionized workers quit at lower rates than otherwise comparable non-union workers, due more to the fact that unionization transforms work sites through "voice" rather than through raising wages. Another of their findings is that unionization has a larger effect on tenure in the service industry than in manufacturing or construction. This makes child care a particularly interesting industry to study.

Voice options abound in unions. Collective bargaining provides union workers with an important voice through the process of negotiating for better wages, benefits, job safety, hours and working conditions. Other voice options are specified in

Collective Bargaining Agreements. For example, a CBA typically contains procedures for solving grievances, thereby providing workers with a voice between contract negotiations. Grievance procedures are an established, agreed upon method for solving work related-problems and identify allowable processes for dealing with possible disciplinary action, complaints among workers and between workers and management, and procedures for lay-offs and severance. These voice structures are not as common in non-union workplaces.

Labor Market Segmentation

The failure of economic theory to take into account employers' caring about the amount of effort a worker expends is a flaw in the standard competitive model. Bulow and Summers (1986) developed a model of dual labor markets where, in order to motivate employees, employers may find it profitable to increase their monitoring efforts or to pay workers above the competitive wage to make quitting more costly to the worker. Employers typically do this to lower turnover or attract high-quality workers. These actions on the part of employers help to create primary and secondary sectors. The primary sector where there is good use of monitoring technology contains "good jobs" with wages above the market-clearing wage, job security, and responsible career paths. These working conditions tend to create trust, commitment and lower turnover in the workplace. The secondary sector is characterized by menial jobs with lower wages, no real career path, and little to no monitoring as described by Doeringer and Piore (1971).

Workers in the primary sector want to avoid secondary sector jobs because of the lower compensation, lack of advancement opportunities, and menial work, so they

are willing to expend more effort. Workers in the secondary sector envy workers in the primary sector but are unable to bid for primary-sector jobs by offering to accept lower wages. If they did, primary workers would have an incentive to lower their effort, thus defeating the employer's original reason for paying the higher wage.

For example, a secondary-sector worker tells the employer they are willing to do the primary-sector worker's job for a lower wage. The employer accepts and pays less to the secondary-sector worker for the job that the primary-sector worker was doing. However, the primary-sector worker was motivated to work harder by the high wage. The primary-sector worker's effort decreases because his/her utility maximizing decision puts him/her at a point where the increased effort necessary to decrease the risk of losing their primary-sector job is no longer worth it since the secondary-sector jobs are always available.

In the private sector, child-care workers tend to earn low wages, enjoy little advancement opportunities, and experience little monitoring or job competition. These jobs are in the secondary sector. Wages in this sector are constrained by the lack of public funding and the limited ability to raise parental fees. ECE providers (employers) face a dilemma. Many want to offer better wages, which usually leads to better care, but fear raising prices will harm the families they serve. Especially in this sector, it is risky for a provider to raise wages (take the high-wage road) to gain the benefits and cost savings described above. This is because with such constrained revenue sources, the provider may be unable to raise fees or other revenue to recoup the initial expense despite the cost-savings over time due to increased worker effort and greater desire to hang on to their job.

In Massachusetts, primary-sector ECE jobs exist in the public school districts. Districts administer programs though they represent a small percentage of the state's ECE industry. Teachers working in the public-school administered ECE programs are better compensated, have advancement opportunities with specified education and experience requirements and are unionized. ECE workers in the secondary sector envy and compete for the public school positions. ECE teachers working for the public schools want to avoid ECE jobs in the secondary sector, which are primarily in the private market. Many workers in the secondary sector, who can attain the necessary education and training, bid for the better jobs in the public-schools. As such, the ECE public school openings are filled quickly. This bidding for the primary-sector jobs adds to the instability in the secondary sector where there are continuous openings. As I'll describe in the next chapter, the institutional differences in Massachusetts between the private-sector ECE programs and those in the public sector were too great to combine into one data set. A fundamental difference is the primary and secondary labor markets that separate them.[1]

If turnover can be decreased by giving workers more of a say in their work life, this strategy might lower the risk for secondary-sector employers to take the high-wage road by lowering their turnover transactions costs including staff replacement and re-training.

Taking the high-wage road is a choice. In the public-school sector, it is a policy choice, and for unions, it is a collective decision. This study may help to encourage private-sector ECE programs to take the high-wage road (high trust, high commitment, low turnover) and create a larger primary-sector labor market in this industry. The new

high-wage providers may increase segmentation in the child-care labor market by squeezing marginal providers. Alternatively, an increase in the percentage of high-wage providers may pressure other secondary-sector (low-wage road) providers to improve wages and working conditions, thus reducing their turnover, and improving the overall quality of care and education provided.

Research Questions and Hypotheses

Many factors influence a worker's decision to stay at their job. Wage is one factor, albeit an important one. Others may include benefits (health insurance, time off, educational support, etc.), distance to work and/or child's school, hours of operation, and program philosophy. Many of these have been studied, but many more remain to be considered.

Research Question 1:

What working conditions affect teacher turnover in ECE programs in the private market?

To answer this and the following research questions, I conducted surveys of Massachusetts ECE programs and teachers. Based on the data collected, I group workplaces according to similarities and differences and calculate their annual turnover rates.

Out of a pool of possible conditions present at work sites, I identify five that I call "voice." These encompass the working relationships and practices between management and labor, the culture of interaction among colleagues, paths of promotion, and processes for making decisions and addressing grievances. (Details of these factors,

identified as “aspects or product of voice” in my model, are discussed in the next section and laid out in my model of voice and exit, figure 1.)

Hypothesis 1: The presence and type of worker voice affects turnover in ECE programs.

Specifically, I believe the following working conditions are important to the degree and use of voice at ECE workplaces:

- A formal agreed-upon and applied method or policy for solving internal grievances;
- A clear and utilized career lattice and compensation schedule;[2] and
- A process that encourages worker voice in policy decisions through the use of joint committees, meetings and direct communication.

Research Question 2:

How does “voice” differ in nature and quantity across different types of workplaces?

I compare programs by union status and the regional employment market in which they operate. I consider the type and quantity of voice in programs, grouped by union status or regional unemployment levels, an exogenous factor for programs. Then I use the voice variables I’ve constructed from the data to study voice across these work sites.

Hypothesis 2: There is more voice in unionized programs, and there is more use of voice in programs operating in a high-unemployment environment.

However, the aspects of voice most prevalent in union programs may not be the same aspects used most by programs faced with high-unemployment conditions.

Research Question 3:

What, if any, is the statistical relationship (correlation) between teacher turnover and voice, and how does this relationship vary across workplaces?

Data collection and analysis allow the statistical testing of possible relationships between teacher turnover and voice in different workplaces. Multiple regression analysis unveils a relationship between union status, wages, voice and turnover, elaborated on in chapter 6. After accounting for wages, the presence, type and use of worker voice has a measurable affect on turnover.

Hypothesis 3: There is a negative relationship between teacher turnover and voice that varies little across ECE workplaces.

Specifically, as the use of voice increases, I expect that teacher turnover decreases.

A Model of Voice and Exit

My model**,** illustrated in figure 1 at the end of this chapter, shows the relationships and variables, including turnover, unionization status and aspects of voice to be tested. Reading figure 1 from left to right and drawing on my hypotheses, the basic relationship (correlation) is that a change in union status, i.e., from 0 to 1 when unionized, is associated with more (positive "+") voice and less ("-") turnover, that is, fewer exits.

Union status and teacher compensation data come directly from the completed surveys. Union Status is shown in figure 1 as "a cause of voice" because unionization involves negotiation between management and labor, thereby allowing voice into the process. "Other causes of voice" identified in the lower left corner of figure 1 are

management policies that may simulate best practices. These operate in the same way as union status, a change to good management policies, i.e., from 0 to 1, is associated with more ("+") voice and less ("-") turnover.

Other research noted earlier has demonstrated that compensation can affect labor turnover. Increased wages and/or benefits due to unionization or management decree typically have a dampening effect on turnover rates. As stated in Hypothesis 1, voice can operate in the same way. Thus more voice can lead to less turnover. How much voice leads to reduced turnover is the subject of Research Questions 2 and 3.

Voice is operationalized through survey questions on program practices and policies. The "aspects of voice" in the center box of figure 1 are:

- A signed CBA where both sides of the labor relationship negotiate policies and procedures for their workplace;
- A formal agreed-upon and applied procedure or policy for solving internal grievances;
- A process for making decisions that includes consideration of both labor and management perspectives though the use of joint committees;
- Regularly-scheduled staff meetings on paid time with management and labor participation; and
- Annual performance reviews incorporating management's and labor's goals.

In this industry, one policy that has developed through workers' voice is a formal career and compensation lattice. This is a tool that provides staffs with information for planning their training and career path, allowing labor to focus on improving skills rather than competing with colleagues in a vacuum of unknown benchmarks used by management to determine compensation and promotions. In figure 1, this "product of voice" is shown in a small box linked to "aspects of voice."

Other factors can influence turnover rates and play a role in a program's overall working culture. Cooperative attitudes, trust and respect among staff and management, along with training and advancement opportunities are covered in the surveys and can also be outcomes from management's best practices. I list these factors, which are not ranked, in the lower center box. Causes of voice can increase or improve ("+") these other factors, and as with aspects of voice, lead to less ("-") turnover.

While not all variables are specified in figure 1, independent, dependent and control variables will be described in the research design in the next chapter.

Conclusion

Many aspects of the child-care market such as supply and demand interaction, product differentiation and price signaling, firm and wage competition, and the exit and entry of workers do not respond according to the theories detailed in chapters 2 and 3.

Hirschman believed that the voice option was under used, and I think he would not say differently now. Child care's unique market characteristics and various purchasers, users, benefactors, regulators, workers, and suppliers make it a good industry in which to study "articulation" as a mechanism toward change and/or "recovery," as Hirschman might put it.

As Freeman and Medoff (1984) found, unionism greatly reduces the exit behavior of workers paid the same wages, and unionized workers quit less than their comparable non-union colleagues, due more to unionization transforming work sites through "voice" than through simply raising wages.

In child-care, labor market segmentation does not only pigeon-hole workers but also children. ECE programs operating in the primary-sector labor market are few, and

therefore serve fewer children than the more common programs operating in the secondary-sector. A process to lift up these secondary-sector workers would benefit many.

Much influences a worker's decision to stay or quit their job or field. Having a voice at their workplace, such as representation on empowered committees and effective procedures to handle grievances fairly, may reduce their likelihood of exiting. Given the nature and structure of unions, it seems reasonable to propose that there is more voice in use at unionized ECE programs. If so, then as voice increases in the workplace, I expect turnover will decrease. However, the type and amount of voice required to produce such an effect is unclear. Study of these workplace practices will help explain their effect on turnover in the child-care industry. If a management style incorporating voice has a desirable effect on labor turnover, it could prove to be a cost-effective way to lower turnover in all types of programs and especially those operating in the secondary-sector labor market.

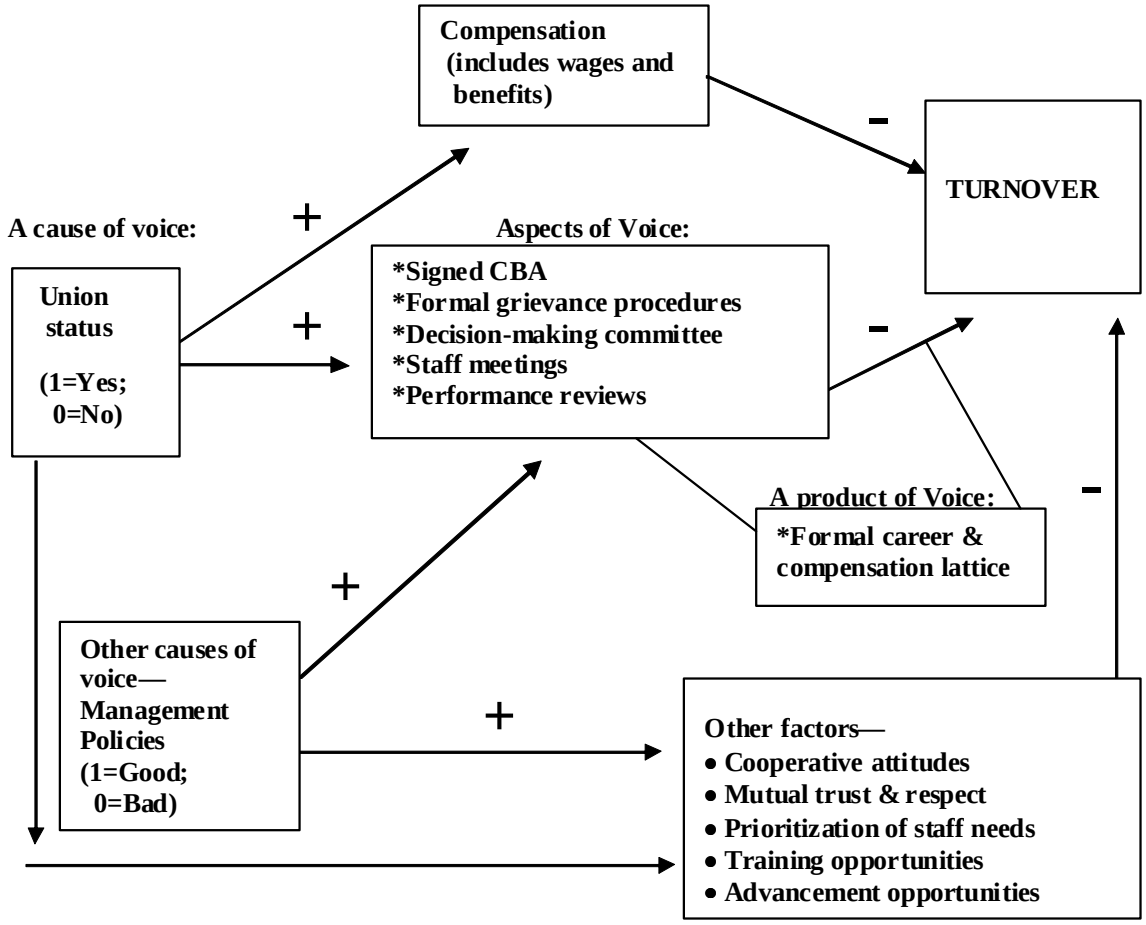

Figure 1: Model of Voice and Exit

Notes

[1] This discussion focuses on the formal sector. It does not include what is often referred to as the informal child-care market which is large, unregulated and undocumented. For some, child-care is not a market activity, and for personal and/or economic reasons they do not want to be part of a process that formalizes the type and cost of care.

[2] Nancy L. Marshall et al. (2005) defines “career lattice” as a term used to expand the image of a linear career ladder to that of a trellis, with multiple points of entry, opportunities for lateral movement across settings, age groups, and programs, as well as progression from entry levels to advanced professional levels.

CHAPTER 4

RESEARCH DESIGN AND METHODOLOGY

My project studies labor turnover in Massachusetts child-care programs caring for 3- to 4-year olds. I define a program as a state licensed, non-residential site, open year round at least Monday through Friday for six or more hours a day that provides paid care by non-relatives for 11 or more children. I look for what, other than higher wages, might lead to lower labor turnover in this industry.

To do this, I developed written surveys to be filled out by directors and teachers at programs selected for the study. This chapter describes the programs and teachers in the sample, the survey instruments, and the process of data collection. The surveys asked for information about program characteristics including but not limited to enrollment, legal status, and qualifications, continuity and compensation of staff. In addition to information about sample recruitment, selection and participation, this chapter provides a detailed description of the measures and procedures used for collecting and preparing the data for analysis.

Research Design

Before designing the surveys, I reviewed existing research to see if the information I needed had already been gathered in Massachusetts or elsewhere. While much data exists, none of the research projects I examined asked programs about union status, nor did they cover the working conditions I seek to identify. Massachusetts maintains much accessible data on child-care programs, but the data does not contain information on working conditions or relationships, nor does it identify unionized workplaces, making comparisons and investigation of these issues impossible with

existing data. It was clear that I had to design and implement a new survey. Below I describe the process leading up to my survey design and beyond.

Advisory Committee

During the design phase, I contacted several prominent child-care professionals and advocates in Massachusetts to put together an Advisory Committee. The members have two main responsibilities: first, to comment on aspects of the research plan, including the survey instruments, sampling and analysis methodologies, and then on the public report and its dissemination; and second, to lend their names to correspondence sent to child-care providers in the hope of encouraging participation in the project and use of the findings in their advocacy work. Eleven people were selected. I wrote to each one telling them they had been nominated to the study's Advisory Committee because of their commitment to and understanding of the state's ECE workforce. I explained the study and that the committee was charged with bringing researchers and advocates together to ensure the project did not waste providers' time and the outcomes were useful to advocates and policy-makers. Ten people agreed to participate. Contact with committee members was primarily via email, and none were paid for their contributions.

The Population

Massachusetts makes a good case study for the impact of unionization, voice and turnover. The state has a comprehensive system of ECE programs that includes for-profit and non-profit centers, union and non-union programs, preschools and family child-care providers, with more than 2,300 center-based programs licensed, regulated and partially funded by DEEC (Marshall et al. 2005). In total, Massachusetts preschool

programs serve more than 165,000 children, most in state-licensed programs in the private sector (Marshall et al. 2002, 1). There is a mix of urban, suburban and rural sites serving a diverse population. Though not mandated, the ECE community has pushed programs to earn accreditation from the National Association of Education for Young Children. Approximately 40 percent of eligible Massachusetts programs are accredited by NAEYC, more than in any other state, due largely to the participation of the DOE as described below (Massachusetts DEEC 2005b).

The Massachusetts DOE involvement in ECE is unique. The DOE became a player in the commonwealth's child-care industry in the early 1990s, seeking to develop a universal system of early education to support all children by providing accessible, affordable quality programs. In 1993, under the commonwealth's Education Reform Law, Early Learning Services Division of DOE (now part of DEEC) started the Community Partnerships for Children grant program. This program encouraged communities and groups of communities to form community partnership councils to expand and improve existing local ECE programs and integrated preschools for 3- to 4-year-olds with disabilities. In each council, a lead agency manages the fiscal aspects of the program and is responsible for overall monitoring. Public schools are the lead agency for 69 percent of these councils (Massachusetts DEEC 2005b).

The new funding stream from the CPC grant program which has a focus on local decision-making created some tension between those child-care services funded by the traditional OCCS system of state vouchers and slots and those funded by DOE through CPC. Nonetheless, as of fiscal year 2004 (FY04), 165 CPC councils had developed local ECE systems in 336 of the 351 cities and towns in Massachusetts.

Approximately 22,500 children attend preschool in the public schools (Marshall et al. 2005). However, public-school run integrated early education programs are different from those traditionally licensed through OCCS. All programs run by the public schools are exempt from OCCS licensing; DOE established its own licensing standards and set its reimbursement rates higher than OCCS. Unlike traditional OCCS-licensed programs, which tend to operate full-time year-round, these programs tend to be part-day and many do not offer services to all children five days a week and/or 12 months a year.

Most teachers at these integrated preschools work for the public school district. Their jobs typically provide good compensation, require specific education and experience, and are in the primary sector of the labor market. The job characteristics and requirements of preschool teachers in the public sector are often tied to public school teacher compensation and training-requirement ladders. Also, most public school teachers in Massachusetts are unionized, their salary scales and working conditions negotiated through collective bargaining. Preschool teachers in programs run by public schools benefit from these aspects of unionization.

For this study, the institutional differences between the OCCS and DOE programs were too great to lump together, so only OCCS programs (secondary sector) were used for the sample, and no public-school administered programs (primary sector) were surveyed. In 2005, the new Department of Early Education and Care took over all responsibilities of OCCS and Early Learning Services of DOE, bringing all state ECE services under one commissioner. Gradually, DEEC is merging the two service-delivery

systems. This includes establishing one set of reimbursement rates, teacher education and training requirements, and licensing standards.

Unions

Several national unions have child-care workers as members, including the Service Employees International Union (SEIU), United Auto Workers (UAW), American Federation of State, County, and Municipal Employees (AFSCME), Communications Workers of America (CWA), American Federation of Teachers (AFT) and National Education Association (NEA). While unions represent center- and home-based child-care providers in several states including Pennsylvania, Michigan, California, Illinois, Oregon, Washington, New York, New Jersey and Massachusetts, a small percent of the nation's more than two million child-care workers belong to unions.

Of the roughly 2,300 licensed child-care programs in Massachusetts in January 2003, 44 programs were unionized and represented by either the UAW or SEIU. This represented approximately 2 percent of all private-sector, licensed center-based programs in the state. However, on average, Massachusetts unionized programs are larger than non-unionized programs. (I will demonstrate this in chapter 5.)

Some Organizing History

For approximately 20 years after 1981, the UAW was the major organizing force of child-care workers in Massachusetts. Its organizing strategy targeted large programs, programs with a high percentage of state subsidy contracts, and geographic areas where many programs were clustered, typically cities.[1] These characteristics have had an effect on enrollment in union programs over time, which is evident in my data.

One of the goals of the UAW was to increase child-care workers' wages. Campaigns targeted these programs because organizers believed a promising way to raise wages was to get an increase in subsidy rates paid by the state.[2] If subsidy revenue increased, this money could be used to raise teacher wages. This was a successful strategy. Overall, rates paid by Massachusetts and wages paid to child-care workers have risen since the early 1980s, according to market-rate surveys conducted by the state. Because programs negotiated their own rates with the Department of Social Services based on their costs, union bargaining representatives were able to get higher wages for their members, thus creating a wage premium for unionized child-care workers.

However, this changed in 1996 with federal welfare reform (PRWORA), which required subsidy rates to be set in relation to market prices. The law stated that subsidy rates be set at the 75th percentile of market rates (Blau 2001). Thus families with state assistance should have no problem purchasing care from three quarters of the providers in their area. Average non-union program rates (fees) were in the 50th percentile, while union-rate averages were higher. Each year since rates have been set by the state based on regional market rates, non-union programs have received higher rate increases than union programs in an effort to close the union gap.

The UAW maintains its existing shops, but stopped actively organizing child-care programs in Massachusetts in the 1990s. Under its structure, the UAW found centers costly to maintain, due in part to numerous negotiations with various employers and the state, and supporting its members in the grievance process. Since 2000, the UAW has not had a significant presence in this industry. Its withdrawal from

organizing, combined with the changes brought by federal welfare reform, has led to a decrease in the union-wage premium in center-based child-care.

Sampling Frame

Child-care programs were selected from a state-managed list. The sample targeted all full-time, licensed center-based child-care programs in the state with at least one classroom that cared for 3- and/or 4-year-olds. (All union programs met these criteria.) I excluded programs that only cared for Head Start populations, the public-school administered programs, and part-day preschool programs. The sampling frame was the OCCS list as of January 2003. To reduce the possibility of a non-representative sample, the entire list was used for the design and selection of the sample. This allowed all eligible programs in the state, based on the criteria above, an opportunity to be selected for the study.

The Sample

The sample includes 59 randomly selected non-unionized programs plus all 44 unionized programs, representing approximately 4.5 percent of the study-eligible programs. The sample is drawn using the Massachusetts Executive Office of Health and Human Services (EOHHS) six geographical regions, shown in figure 2. I sampled more non-union providers in regions with more union programs, rather than sampling more non-union programs in larger population regions. For example, western Massachusetts has the most unionized programs, so I sampled more non-union programs in this region than any other. The regions share certain features, including serving a mix of high-, middle- and low-income populations, and a variety of center-based child-care programs operating on a non-profit and for-profit basis.

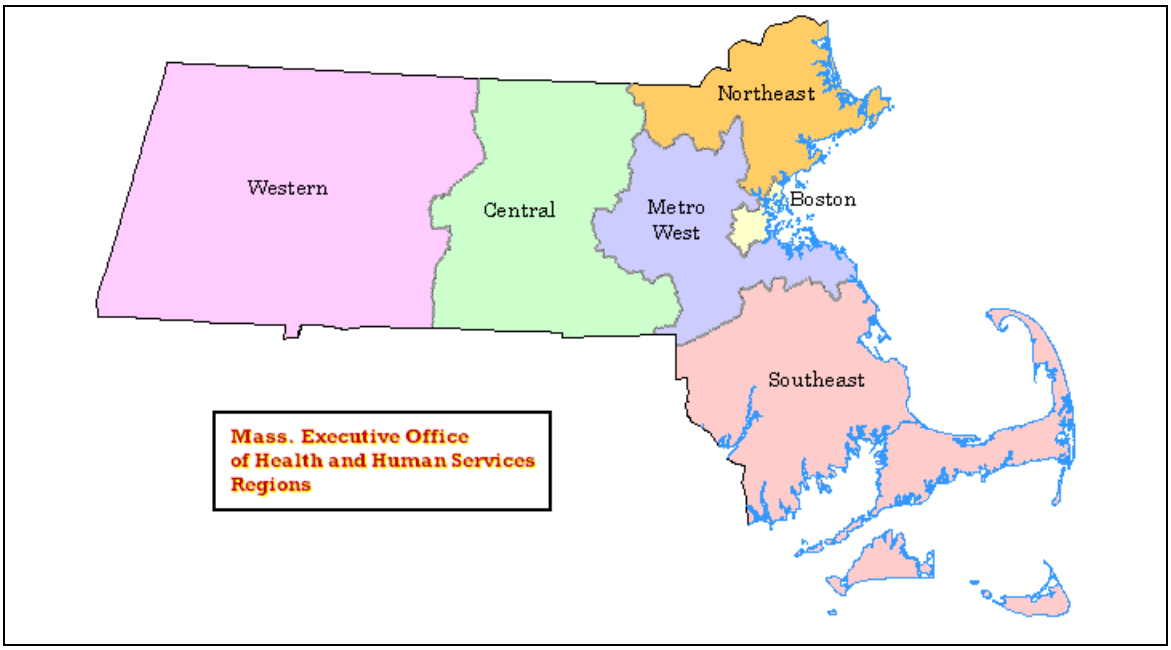

Figure 2: Massachusetts EOHHS Regions

Table 2 shows the breakdown of programs in my sample by EOHHS regions. All unionized programs were included to gain as much specific information as possible on whether, and how, unionization affects compensation and turnover. Unionized programs were identified with the help of the UAW and SEIU.

Table 2: Program Populations and Sample by Region

Region in Massachusetts	Non-union population n	Non-union sample n	Union population = union sample n
1. Western	216	17	13
2. Central	212	3	0
3. Northeast	339	4	3
4. Metro West	578	13	10
5. Southeast	364	11	8
6. Boston	196	11	10
Total n	1,905	59	44
(%)		(3.1%)	(100%)

For the non-union program population, I developed a statistically-valid stratified random sample of the remaining eligible programs. After eliminating non-union

programs that did not fit my criteria, I was left with 1,905 qualifying programs. I sampled 59 of them, 3.1 percent, as shown in table 2. A total of 103 programs were selected.

Selection of Respondents

The OCCS list provided program names, addresses, region, telephone numbers, program size and other licensing criteria. However, it did not provide the names of directors or teachers. Therefore, I called each program in the sample to get the name of the director. I felt surveys generically sent to "Program Director" in manila envelopes would likely be seen as junk mail and ignored.

To reduce non-response bias, directors received a letter from known advocates in the child-care field (my Advisory Committee) explaining that economists and activists interested in advocating for the child-care community were conducting the project, and that their participation would help shape child-care public policy recommendations.

Some directors refused to participate, or I determined by talking with them that their programs did not meet the project criteria, usually because they either served only Head Start children or ran only a part-day preschool program. Replacement sampling was used to handle ineligible programs.

Teaching-staff Sample

All programs for which directors received and returned their surveys (n=74) were called again in May 2004 to get the names of their preschool classroom teachers. Lead teachers were not considered for the project because they tend to have a greater investment in their child-care career, having opted to gain more qualifications and thus

longer tenure in the field. Turnover is highest among assistant teachers, who are usually paid the least, have fewest qualifications and tend to leave the field, so they were not surveyed either. In the middle are teachers who typically have been in the field for a year or more and have a good idea of the work and career opportunities. They do the bulk of the primary care since they have no supervisory responsibilities.

Teacher turnover is difficult for children, disrupting relationships and stability, as discussed in chapter 2. Teacher turnover is also very difficult and costly for programs. The Advisory Committee supported the idea that this staff level was the most crucial to study recognizing that other position levels do have different behaviors that would not be included. Studying one staff level did limit the range of possible responses, but at the observation level of the program, staff in similar positions provided a more level playing field for comparison.

Eligible teachers were full-time employees who had been at the program at least one year and spoke English. These criteria assured that respondents had some experience at the program, but it did not allow for a non-English speaking teacher's perspective. In a few programs, no teacher met all three criteria. Rather than drop that program from the study, the teacher closest to meeting the criteria was surveyed. This is noted in the data. If only one teacher qualified, she was sent a letter and survey instrument. If more than one teacher qualified, I randomly selected one. This process helped reduce selection bias by not allowing the director to select the participating teacher.

I surveyed a director and teacher at each program to get a better view of working conditions from two perspectives, management and labor, as I felt it inadequate to study

working conditions from only one viewpoint. First I asked directors through the survey if certain structures were in place, such as grievance procedures, open committees, career lattices, etc., and how well these worked. Then I asked teachers in a different survey if they were aware of these structures, made use of them, and found them beneficial.

Survey Design

I reviewed numerous surveys before designing any for this project. I needed to identify aspects and degrees of voice and get sufficient program information to be able to compare different types of programs. I also wanted the survey to take no more than 25 minutes to complete, and to contain information that would add to existing state data. The survey instruments included questions about decisions and decision processes, staffing, cost of space, committees, meetings, performance reviews, compensation, grievance procedures, worker attitudes and more. (Many of these are referred to in figure 3.1 under “Aspects of Voice” and “Other factors.”)

Finally, I requested and received permission from most respondents to match this new data with existing state data. This will allow me to expand the analysis to answer additional questions in later work.

Field Tests

The survey questions were extensively pilot-tested. First I sent a draft of the program survey to Advisory Committee members asking for feedback. After incorporating their feedback, I sent the revised draft by first-class mail to six program directors, one in each region, including one unionized program, in spring 2003. I asked them to follow a specified protocol plus answer a short field test questionnaire that

included questions such as how long the survey took for them to complete and whether they found it easy to understand.

After I received the completed field tests, I called each director and went over their responses to the field test questionnaire. These conversations were very insightful. In all cases, program directors did not like my original protocol of interviewing people over the telephone with both interviewer and interviewee having a written copy of the survey in front of them. They preferred to fill out the survey at their own pace, and thought others would feel the same.

I also was able to refine some questions and add or eliminate answer choices. For example, it was suggested that I add the category "not a good fit" to the program survey question about the three most common reasons teachers voluntarily leave the program. Those questions I judged most effective in soliciting requested information were further refined as necessary and used in the final survey, which was mailed first-class in large, brightly colored envelopes to directors in August 2003.

A main concern was to get a large enough group of participating programs to be able to look at some industry patterns. For this reason, I changed the original protocol to align with the field test results and used written surveys without accompanying telephone interviews. I also hoped this new process would take less time for me to administer and therefore allow me to increase the number of programs sampled. I am not sure if written surveys were actually less time consuming, since I often had to follow up with telephone calls to get participants to return the instrument and enter the survey responses into my database at a later date.

The teacher surveys were field tested in the programs that participated in the program field test in the same manner in June 2004. Teachers were asked to follow the revised protocol used for the program surveys, which meant filling out the survey at their convenience and returning it in the postage-paid business-reply envelope provided. Information about what worked, what was unclear and what did not solicit the desired information was obtained from the field tests and follow-up telephone interviews with these teachers.

Originally I wanted to survey more than one teacher at each program. However, if I were to do that it would have increased my collection efforts and data entry by 50 percent, which was not feasible due to time and budget constraints.

Next, the final version of the teacher survey was mailed in the same manner as the director surveys to teachers in the 74 participating programs. All completed teacher surveys were received by November 2004**.** I received completed program-matched surveys from directors and teachers within 11 months.

Instrument

Questions in both surveys were geared to answer the research questions. Both addressed the program's typical operating schedule, excluding programming or enrollment for camp, vacation or holidays. The director survey was longer than the teacher survey because it included several administrative questions about program operations and finances. Surveys and letters describing the study and its expectations and benefits to participants were personally addressed to each named director or teacher.

Director surveys requested information about:

- Program characteristics: legal status, subsidies, enrollment, ethnicity and ages of children enrolled, age of program, hours of operation, budget, accreditation status, union status, hiring process, turnover, opinions about their program's turnover, and number of advertised vacancies;

- Staff and job characteristics: number employed, information about ongoing training and education opportunities, salaries, benefits, personnel policies, and the director's experience, educational attainment and tenure.

Teacher surveys requested information about:

- Program characteristics: number of children in their classroom, budget shortfalls, committees, classroom coverage and substitutes;

- Teacher and job characteristics: information about their experience, educational attainment and tenure, age, gender, ethnicity, number of dependents, household income, additional employment, working hours, ongoing training opportunities, compensation, working conditions, and participation in the accreditation process.

Measuring Turnover

In the director survey, I asked four questions to get at the program's turnover rate for the previous 12 months. First, how many people worked at the program when it was fully staffed? Second, how many people actually are working at the program, i.e., today? Third, how many staff were fired or let go by management? Fourth, how many voluntarily left, resigned or quit? For each question, I asked for a breakdown of the answers by Assistant Teachers, Teachers and Lead Teachers. I computed three exit rates (involuntary, voluntary, and total turnover) each as a percentage of the program's actual teaching staff. In addition, similar rates were computed using the program's fully-staff numbers.

Through the process of contacting program directors individually to acquire eligible teachers' names, I learned of director turnover for the sample. Ten programs

(three union and seven non-union) out of 74 had acquired a new director during the five to 11 months since their completed program survey was returned.

Procedures

In this section, I further describe the procedures followed in administering the survey, plus the method of data collection, coding and cleaning, and how turnover rates were ascertained.

Shortly after mailing the surveys, I called the program directors to ask if they had received the survey and if they had any questions. By first mailing the survey and then making personal contract I hoped participants would be more willing to answer and return the survey promptly. It was difficult to get the director on the telephone. When I did, many directors responded to me with, “What survey?” or “Oh that colored envelope. I recall seeing it but don’t know what happened to it.” Many directors were able to locate their initial survey, but one-third asked me to mail them a second or even a third copy. Most respondents were willing to participate and returned their surveys, though not without considerable prodding. I spent three months resending surveys and calling directors, beseeching them to return their survey. Most required an average of three follow-up phone calls before returning their completed survey. Numerous surveys seemed to be ‘lost’ in the mail.

Directors were asked to return the survey when completed, along with any other program literature they wished to share, such as their grievance procedure, performance review, exit interview forms, career and compensation schedule or lattice, union contract and/or collective bargaining agreement and personnel policies, in the postage-paid business-reply envelope provided. I received several collective bargaining

agreements, grievance procedures and other policies from directors and teachers. All program surveys used in the study were received by the end of 2003. If a director did not return the survey, the program was dropped and no teacher's survey sent. Participants who completed a survey were offered a small stipend of $15 for their time and effort, and a copy of the final report.

After revising the teacher survey based on the field tests, teachers were sent a survey addressed to them personally in a bright-colored 9" x 12" envelope. A letter addressed to each teacher explained that the study was being conducted by economists and ECE activists interested in advocating for the child-care community, and that their participation would help shape ECE public policy recommendations. To indicate that this was a reasonable use of their time, I told them that their director was participating in the study and had returned a survey earlier. I stressed that all responses were strictly confidential, would not be shared with anyone, and no person or program would be identified.

Shortly after the teacher survey mailing, I called each teacher to ask if they had received the survey and if they had any questions. In many cases, their responses were similar to those of the directors. Again, three months were spent calling and resending surveys to teachers. Half of the teachers were able to locate their initial survey and return it. However, more than one-third asked me to mail them another survey, and nine needed a third or fourth copy.

The majority of teachers was willing to participate and returned their surveys, usually after I had telephoned them several times, and in some cases after six or seven

calls. Teachers who completed a survey were offered a stipend of $15 for their time and effort, and a copy of the report's executive summary.

Because respondents filled out their surveys on their own, some did not answer all questions. In addition, some respondents contradicted themselves in their answers and others did not answer the questions asked. Nonetheless, the surveys are rich with data and descriptions of their programs.

When first reviewing the surveys, I began to call directors to clarify some of their responses. This proved very time consuming. In addition, I could not guarantee that all directors would be called and offered an opportunity to clarify their responses. Therefore this process was dropped after speaking with only a few directors.

Who is in the sample?

Table 3 shows the survey response rates from program directors and teachers. During the fall of 2003, on-site directors returned 74 out of 103 program surveys (40 out of 59 non-union plus 34 out of 44 union), representing a 71.2 percent total response rate. Directors of unionized programs returned 77.3 percent of surveys, and directors of other programs returned 66.7 percent. The higher rate of return from union programs may be because union programs feel they are unique and are eager to be "studied." Another possibility may be that directors in union programs have more time for paperwork because they have more staff than their colleagues in non-union programs. I look at this and discuss staffing in the next chapter.

Table 3: Program- and Teacher-survey Response Rates

	Non-union Program Response		**Union Program** Response		**Non-union Teacher** Response		**Union Teacher** Response	
EOHHS Region	n	%	n	%	n	%	n	%
1. Western	13	76.5	8	62	11	76	7	87.5
2. Central	4	100	…	…	4	100	…	…
3. Northeast	3	75	0	0	2	66.7	…	…
4. Metro West	10	77	9	90	10	100	7	77.8
5. Southeast	6	55	8	89	5	83.3	8	100
6. Boston	4	36	9	90	3	75	7	77.8
Total	40	66.7	34	77.3	35	87.5	29	85.3

In the next phase of the study, surveys were sent to a teacher in each of the 74 programs that returned a program survey. Of the 64 teacher surveys returned, 35 were from non-union programs and 29 from unionized programs, representing a total teacher response rate of 86 percent. In contrast to the program-survey responses, non-union teachers had a slightly higher rate of return than unionized teachers, 87.5 percent compared to 85.3 percent. These return rates are high, especially considering the length of the survey and the little time child-care workers have outside care hours, and provide a good representation of the population.

Of the 74 program surveys returned, five had to be eliminated because they either answered only a few questions or mistakenly slipped into the sample although they did not meet the original criteria. In the end, the data comes from 133 surveys, each completed by an individual in the industry. These 69 programs employ 1,176 workers, 632 of them in unionized programs.

Data Coding and Cleaning

All surveys are coded to hide respondent and program identities. All university procedures were strictly followed regarding participant consent and data confidentiality.

Survey questions are coded by subject matter and categorized in relation to the research questions.

Data was entered in EpiData, freeware specifically designed to make data entry easy and exportable to statistical software for analysis. I designed two data entry forms to match the two surveys. All program surveys were entered twice into two separate files, once by me and once by someone else. The two files were run against each other in EpiData to find data entry discrepancies. Then the teacher files were entered twice and compared in the same way. I checked each survey that EpiData identified as not matching its "partner." Program and teacher master files were created containing the correctly entered surveys.

I used EpiData to export the files into StataSE 8. In Stata, I cleaned the data with regard to incorrect coding and field types, and created some composite variables before analysis.

What's next?

In the next chapter, I begin reporting my findings. I use t-tests and descriptive statistics to compare program characteristics including structure, enrollment, wages, ratios, union status, and aspects of voice present by workplace. I use multiple regression techniques to test the effect of wages and union status on turnover. Finally, director and teacher responses to matched survey questions at the program-level are compared to identify possible differences between a program's policies as stated by management and the practical view, knowledge or attitude toward said policies through a teacher's eyes.

Notes

[1] Nancy deProsse, personal conversation with author, June 7, 2006.

[2] Nancy deProsse, personal conversation with author, June 7, 2006.

CHAPTER 5

COMPARING WORKPLACES

In this chapter, I compare program characteristics including type, union status, enrollment, racial and ethnic make-up of children served, public subsidy receipt, staff ratios, turnover and compensation. I calculate voluntary and involuntary turnover rates and test for significance. In the last half of the chapter, I compare directors' and teachers' survey responses to matched questions regarding their program's practices.

Program Characteristics

Programs vary in size, with all but five observations employing between four and 30 staff members**.** This variation is due more to program location and classification as detailed in table 4 than to union status. There are only two non-union programs and three union programs with more than 30 employees each in the data set.

Table 4: Classifications of Responding Programs

Classification-program type	**All programs**		**For-profit programs**		**Non-profit programs**		**Union programs**		**Non-union programs**	
	n	%	n	%	n	%	n	%	n	%
Single-site, child-care only	28	40.6	11	78.6	17	30.9	9	27.3	19	52.8
Part of large child-care multisite agency	16	23.2	2	14.3	14	25.5	11	33.3	5	13.9
Part of multi-service agency	17	24.6	…	…	17	30.9	10	30.3	7	19.4
Employer- or university-based	5	7.2	1	7.1	4	7.3	3	9.1	2	5.6
Church-run	3	4.3	…	…	3	5.5	…	…	3	8.3
Total	69	100	14	20.3	55	79.7	33	47.8	36	52.2

Note: May not total 100 due to rounding.

Programs are classified as one of the following: single-site (only provides child-care services at the site surveyed); part of a large agency that only provides child care (programs at more than one site operated by the same owner); part of a multi-service agency (child-care programs and other services offered by the same owner, such as the YMCA); employer- or university-based; or church-run. Table 4 shows that just over 40 percent of the responding programs are single sites. This is in keeping with the state's profile for this industry.

Only 20 percent of responding programs are for-profit businesses, and 79 percent of these are single sites. Table 4 shows no multi-service or church-run for-profit programs. This makes sense, since few for-profit child-care chains operate in Massachusetts, and many single-site for-profit programs are run as small family businesses. Finally, none of the unionized programs are for-profit. Given that only one-fifth of the responding programs are for-profit, profit status is not used as a basis of comparison in this study.[1]

When looking at union status in table 4, over half of all non-union programs are single sites, and nearly 20 percent are multi-service agencies. On the other hand, unionized programs are fairly evenly spread between the first three classifications, with two-thirds of responding programs in the larger organizational structures. This composition is partly a result of Massachusetts's union organizing history explained in chapter 4. The larger-structure programs can enjoy economies of scale in administration such as marketing, licensing compliance, staff recruitment and training, enrollment management and payroll, for example.

Children Enrolled

As noted earlier, non-union and union programs are reasonably similar in staff size. Table 5 shows this is also true with enrollment: 62 children in non-union and 66 in union programs. The difference is not statistically significant and suggests comparability.

Race

Union program enrollment averages 17 percent fewer white European American children than non-union programs, a statistically significant difference. They serve 22 percent more children identified as non-European American (black or African American, Latino or Hispanic, Asian/Asian American/Pacific Islander, American Indian/Alaskan Indian/Eskimo, biracial or multiracial), as shown in table 5.[2] This difference is also statistically significant at the 0.05 level. In other words, approximately one-fifth of children in unionized programs are white compared to more than a third in non-union programs. (In both union and non-union programs, the director did not identify approximately 24 percent of the children by race or ethnicity.)

Table 5: Enrollments, Race, and Subsidy Receipt per Program

Variable	Non-union Mean	Union Mean	Union less Non-union Difference
Number of children enrolled	61.9	66.4	4.5
[Standard deviation]	[35.4]	[40.6]	
	(5.902)	(7.058)	t = 0.49
Percentage of enrollment by race:			
White European American	38.8 %	21.8 %	–17.0
	(0.066)	(0.048)	t = –2.08**
Non-European American	32.9 %	55.3 %	22.4
	(0.060)	(0.065)	t = 2.53**
Director unable to say	24.9 %	23.1 %	–1.8
	(0.071)	(0.070)	t = –0.19
Percentage receiving public subsidy	29.0 %	76.3 %	47.3
	(0.058)	(0.053)	t = 6.02***

Notes: Race results are not child weighted. Standard errors are in parentheses. Statistically significant at ***p<.01 level; **p<.05 level

Subsidy receipt

Children in unionized programs are substantially more likely to receive subsidies. Government subsidies typically pay the program less than the market rate that parents or guardians pay. Three-quarters of children in union programs receive some type of government subsidy from the commonwealth and/or federal government. Non-union programs average less than a third of their children receiving subsidies. This statistically-significant difference points to union programs, on average, serving more low-income children than non-union programs. This is not a surprise, since the UAW organizing strategy mentioned earlier targeted programs with a high percentage of public subsidies.

To summarize, I find that enrollment size is not a statistically significant difference between non-union and union programs with slightly more children enrolled on average in unionized programs. More of the children enrolled in union programs are non-European Americans and are much more likely to receive public subsidies than

those in non-union programs. These enrollment characteristics for union programs could lead to a more demanding workload for staff than in programs that serve fewer children and receive higher (private) fees for the majority of their enrollees. Based on these characteristics, which are typically outside a program's direct control, we might think that turnover is likely to be higher in unionized programs.

Staff Ratios

Government licensing requirements for child-care programs state the maximum number of children of each age that can be supervised by one qualified staff person in a specified physical area. Child-to-staff ratios in Massachusetts vary by child age. No more than two children up to age 15 months may be under the care of one qualified teacher. One teacher can be responsible for up to six children between the ages of 15 months and 30 months provided four of them can walk. Nine children 30 months to 5 years may be in the care of one qualified teacher. These child-to-staff ratios are important because the education literature points to low ratios as having a positive impact on the quality of care children receive. The required ratios must be met every day. This may necessitate the shuffling of staff or children when qualified teachers are absent or positions are vacant.

Massachusetts' regulations require a teacher be responsible for fewer children than many states. This in turn affects enrollment capacity and program revenue. While programs can choose to have lower-than-required ratios, it is more costly since it implies fewer paying "clients" per teacher on payroll. When determining these ratios for state licensing, only paid and qualified lead teachers, teachers and assistant teachers

who work directly and regularly with children in the classroom are counted. Administrative staff, aides, absent teachers, and all other staff are excluded.

Teaching staff

I asked directors how many teachers are employed when the program has no vacancies, and refer to this as *"Desired teachers."* Secondly, I asked how many teachers are employed presently, calling this *"Actual teachers."* When classrooms are fully staffed, non-union programs seek a children-to-teacher ratio of 5.5 to one, indicated by bar 3 on the left side of figure 3. Union-program directors indicated a preference shown in bar 3 on the right for a ratio lower by almost one child per teaching staff, or 4.6 to one (with a standard deviation nearly half, 1.32, compared to 2.26 for non-union). These are the ratios directors wish to maintain. The difference in desired-teacher ratios is statistically significant at the 0.05 level (t-statistic = -2.07).

Fully staffed classrooms are difficult to maintain especially if there is high turnover. Given the hiring process, there is usually a lag between the departure of one teacher and the entry of another. Regardless, ratios must be maintained daily and so substitutes and directors fill in, or teachers and children are reassigned to classrooms. Actual ratios were equal to or higher than desired for all but 8.7 percent of programs, possibly due to under-enrollment in these few programs at the time.

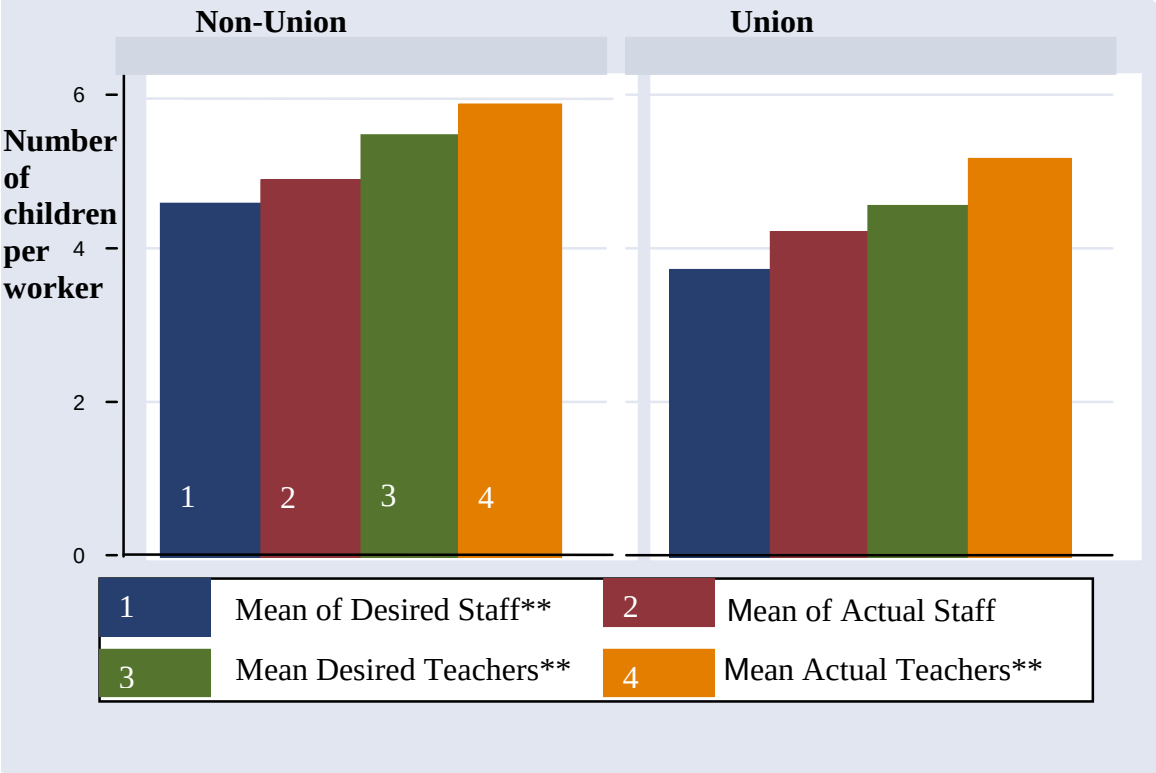

Figure 3: Staff and Teacher Ratios per Program by Union Status

Actual union ratio means are lower than non-union as represented by bars 4 in figure 3. On the day of the survey, the difference in actual means between union and non-union teacher ratios averaged -0.69, or the employment of four teachers for an enrollment of 21 children at a union site rather than 24 children at a non-union site.

Program staff

Given that union programs appear to employ more teachers per class enrollment, do they make up for having more teachers by hiring fewer administrators and support staff than non-union programs? Not according to this data. When there is full employment at the program, union programs expressed a desire for having nearly one less child per staff, 3.7 children per staff member contrasted to 4.6 to one for non-union programs, as shown by bars 1 on each side of figure 3. This difference is also statistically significant at the 0.05 level.

Consistent with the other ratio comparisons, actual-staff ratios are lower for union programs, with a mean of 4.2 compared to 4.9 at non-union programs (bars 2), though not statistically significant. If all programs enroll the same number of children and pay similar wages, union programs will average higher payroll expenses since they employ more people for a given number of enrolled children, as shown in the graph by all the bars on the union (right) side being lower than the bars on the left representing non-union programs.

This shows a pattern. Union programs prefer lower ratios, and they actually enroll fewer children per teacher. They do not make up for this lower teacher ratio by hiring fewer administrative, management or support staff than non-union programs. Also worth noting is that all ratios' standard deviations are smaller for union programs, indicating that more programs are closer to the mean than in the non-union group. These findings show unionized staffs are responsible for fewer children on average. With less responsibility, lower wage rates could be justified. However, research in other industries has shown that a higher wage is associated with unionization (Freeman and Medoff 1984). Next I will see if that holds true in these child-care programs.

Compensation

Table 6 shows mean wages excluding benefits paid to teachers and program directors. Union wages in my data are higher for both positions. However as described in chapter 4, the union-wage premium in Massachusetts center-based child-care has been declining since 1996. In 2003, the average wage paid to unionized teachers represents a premium of $0.42 per hour. This works out to approximately a $1,000 more

per year, based on full-time employment. This difference in wages is not statistically significant.

Though unions typically do not represent directors since they are management, it is interesting that on average, directors' wages are also higher in union programs, by $2.51 per hour. This coefficient estimate is statistically significant.

Table 6: Means and Standard Deviations of Wages by Program

2003 Hourly wage	Non-union Mean	Union Mean	Union less Non-union Difference
Teacher – average wage	$10.79	$11.21	$ 0.42
	[2.03]	[1.74]	t = 0.92
Director	17.71	20.22	2.51
	[4.71]	[4.72]	t = 2.06**

Notes: Standard deviations are in brackets. Statistically significant at **p<.05 level

Health Insurance

All programs, except 11 percent of the non-union programs, offer some kind of group health insurance benefit to their full-time staff. Also, 43.5 percent of the programs in my data set (twice as many are union than non-union) offer health insurance to their part-time workers as well. With regard to full-time workers, the union-nonunion difference for this big-ticket benefit is statistically significant at the 0.05 level, and at the 0.01 level for part-time workers, as can be seen in table 7.

Table 7: Percentage of Programs that offer a Health Insurance Plan

Plan offered to	Non-union	Union	Union less Non-union Difference
Full-time workers	88.9 %	100 %	11.1
			t = 2.09**
Part-time workers	27.8	60.6	32.8
			t = 2.86***

Notes: Dichotomous variables. Statistically significant at ***p<.01 level; **p<.05 level

However, offering health insurance does not tell us how many people actually participate in a plan, the take-up rate, nor anything about the adequacy or cost of the

plan. As a benefit, the plan should provide sufficiently for health-care services in balance with its premiums and out-of-pocket expenses. The insurance plan needs to be affordable to the employee and employer.[3] Also, some workers may be covered through their spouse or partner's insurance, so this benefit may have little value to them. Staff take-up rates here are loosely tied to the amount employers contribute to health insurance premiums. Responses from program directors indicate unions cover more of the monthly premium than non-unions, and there is little variation in the amount unions contribute, unlike non-union programs.

As one director summed up the compensation issue,

> Being a unionized program has improved our wages and benefits and stabilized our working conditions. It has decreased staff turnover. But we continue to be among the lowest pay category. … Percentage-wage increases keep our wages low relative to other workers. Teaching assistants in the public schools with no certification requirements or individual responsibility for children are paid better.

Turnover

As discussed in chapter 2, national turnover rates in the child-care industry have persisted at around 30 percent for more than 20 years. The most recent data available shows that the annual turnover rate in Massachusetts has changed little, hovering at about 29 percent (Massachusetts Child Care Resource and Referral Network 2000) despite changes in the economic climate and various initiatives aimed at supporting and stabilizing the ECE workforce.

A teacher who responded that she was "*very likely*" to leave this job within the next 12 months wrote, *"I love what I do, just not happy with the salary when I have two young children."*

Recall that high turnover reduces the consistency and quality of care children receive. There are numerous benefits to lower turnover. Low turnover frees up time and money for programs to focus on caring for children. Staffs dedicate less time to the hiring and orientation process. Management spends less on advertising and training new employees. Children have a chance to develop a long-term relationship with their caregiver. As stated earlier, I focus on the most disruptive form of turnover in child care, the departure of teaching staff from programs.

Calculating rates

I calculate annual turnover rates by dividing the number of staff who left the program in the previous 12 months by the actual number of staff working at the program. These staffing numbers come from directors' responses to staffing questions in the survey. As shown earlier in figure 3, the differences between "Desired" and "actual" staff were consistent and relatively small. The definition of staffing does not affect the results, and actual staffing data is used here. Three sets of exit rates — voluntary (quit), involuntary (employer-induced) and total turnover (all permanent separations) are presented in table 8.

Table 8: Turnover Rates in Percentages

	Non-union		Union		Union less Non-union Difference
Variable	Mean	Max	Mean	Max	
Quit rate	20.5 % [0.1817]	75%	11.4 % [0.1098]	39%	–9.1 t = –2.19**
Layoff rate	5.2 [0.0635]	20	4.3 [0.0738]	25	–0.9 t = –0.11
Total Turnover rate	26.4 [0.1996]	80	16.6 [0.1290]	44	–9.8 t = –2.11**

Notes: Standard deviations are in brackets. Statistically significant at **p<.05 level

The *quit variable* for each program represents the total number of workers that voluntarily left in the previous 12 months. A program's quit *rate* is their quit variable divided by actual staff. This is the rate the industry needs to lower. Recall from chapter 2 that it is usually the better-educated and more-experienced teachers who have opportunities to leave for a better paying and respected occupation.

The *layoff variable* for each program is the total number of workers that were fired, dismissed or laid-off in the previous 12 months. A program's layoff *rate* is its layoff variable divided by actual staff. In general, this rate is low. Layoffs are few, averaging 5 percent here. With voluntary turnover so high, there are fewer possible layoffs unless there is a significant drop in enrollment.

A program's *total turnover variable* is the sum of the quits and layoffs in the previous 12 months. As with the other two rates, the total turnover *rate* for each program is the total number of people who left divided by actual staff.

As table 8 shows, the means for non-union programs' quit rate (20.5 percent) and layoff rate (5.2 percent) are higher than for union programs (11.4 percent and 4.3 percent respectively). While there is a difference of less than 1 percent in layoff rates between non-union and union programs, union quit rates average nearly half that of their comparison group.

The total mean turnover-rate for these non-unionized programs is 26.4 percent, less than the state's average of 29 percent. For unionized programs, the mean is much lower, 16.6 percent (nearly half the state average).

Turnover Distribution

Figure 4 illustrates the frequency distributions of total turnover rates as fractions of my sample. The left side of the graph represents the group of all responding non-union programs, and the right side represents union programs. The horizontal axis is the frequency distribution of the turnover variable. The vertical axis represents the percentage or fraction of the sample.

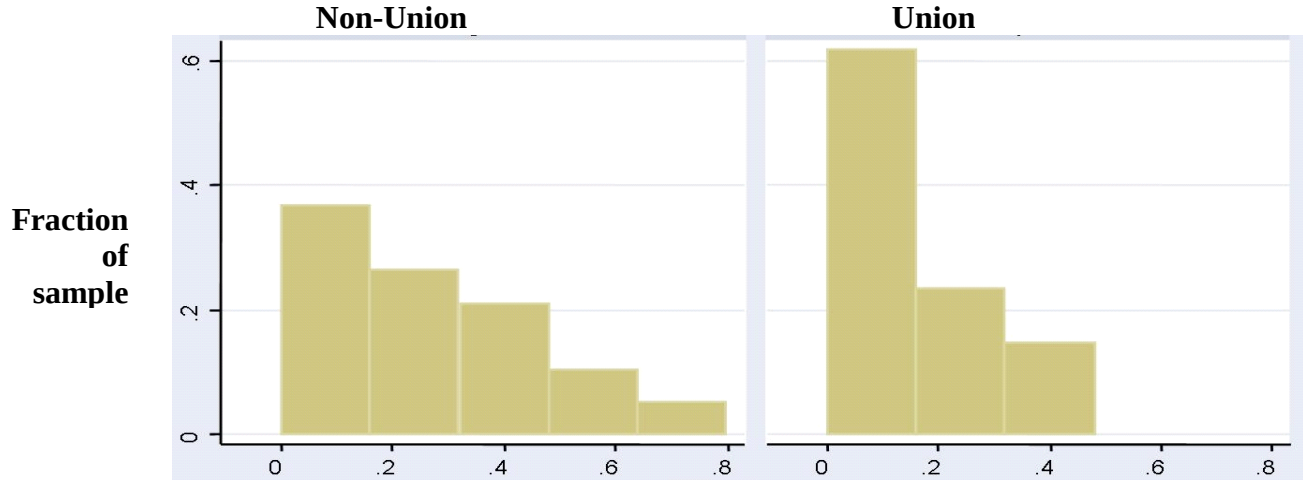

Figure 4: Distributions of Turnover Rates by Union Status

National program-level turnover ranges from zero to 100 percent. Turnover for my non-union programs ranged from zero to 80 percent evidenced by the five bars on the left half of figure 4. Yet for the union programs, the range was much smaller, zero to 44 percent. In other words, none of the unionized programs had an annual turnover rate above 44 percent, yet some non-union programs in the data set experienced nearly twice as much turnover in the same year.[4] Consistent with national and state averages, nearly half the programs in this data set had turnover between 11 and 30 percent. The tallest bar in the graph shows that union programs are much more likely than non-unions to have “low” or no annual turnover, just over 60 percent versus 38 percent.

Less is better

In each side of the graph, the first (tallest) bar bundles together programs with annual turnover between zero and 18 percent. Specifically 10.5 percent of the non-union programs and 14.3 percent of union programs reported annual turnover of zero, i.e., no one quit or was dismissed. Five times more union programs (25.7 percent) than non-union programs experienced "low" annual turnover of 3 to 10 percent. Recall that the state average turnover rate for public school elementary teachers is less than 10 percent; a rate the child-care industry would like to have. Yet turnover rates greater than the national average (30 percent) were experienced by nearly 40 percent of the non-union sites (third, fourth and fifth bars on the left side of figure 4) compared to only 14.3 percent of unionized sites (third bar on right).

Voluntary Turnover

Half of all sampled programs had one or two people quit during the previous 12 months. Figure 5, same structure as figure 4, shows the percentage of programs with staff that quit by union status. Examining the quit rate frequency distribution reveals interesting results—considerably more variation among non-union providers.

The first bar on the left side indicates that approximately 50 percent of the non-union programs had quit rates below 18 percent. This is pretty good when compared to the state average, but it also means that 50 percent had higher quit rates. More union programs, approximately 70 percent, had quit rates below 18 percent (tallest bar). These results suggest that the percentage of staff quitting is lower and the distribution is more compact at the low end of the scale for unionized programs than for non-unionized ones.

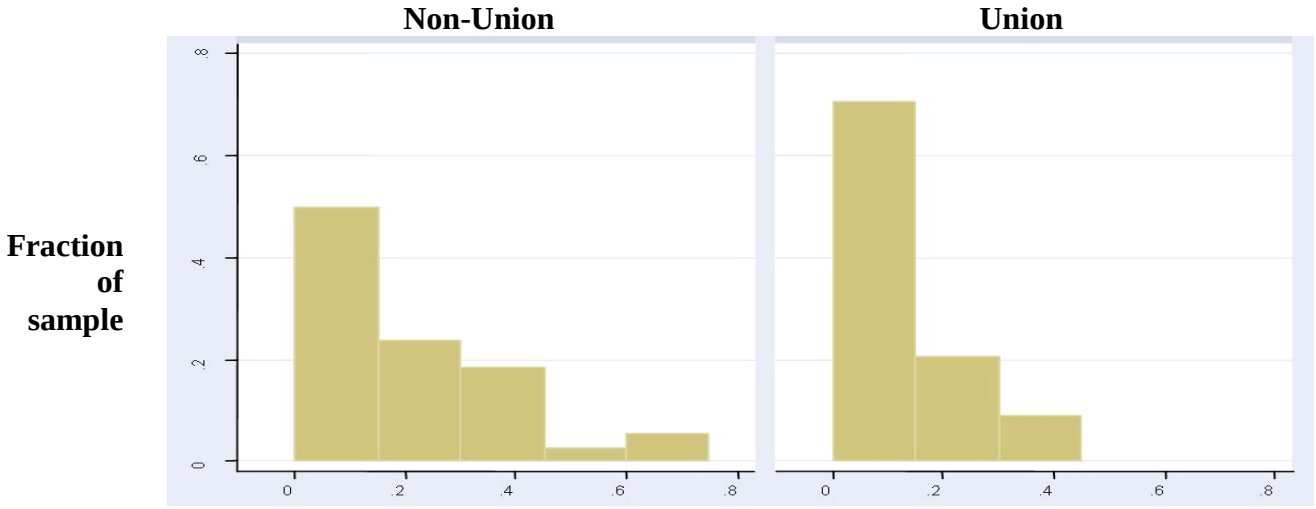

Figure 5: Voluntary-departure Rates by Union Status

Involuntary Turnover

Involuntary separations are less common than quits. More than half the programs reported no involuntary turnover (lay-off or firing) in the 12 months studied. A little more than a third of the programs had one or two people exit involuntarily.

As in figure 5, the left half of figure 6 shows non-union programs and the horizontal axis is the frequency distribution for involuntary program turnover. Again, fewer unionized sites experience these separations than non-union sites. Over three-quarters of union program directors report involuntary turnover of 7 percent or less.

One explanation for fewer union firings is that it might be harder for management to fire people without clear cause, if causes for firing are specified in the collective bargaining agreement (CBA). Another possibility is that the CBA prohibits mandatory layoffs and/or requires people in positions that are to be eliminated have access to other positions in the firm.

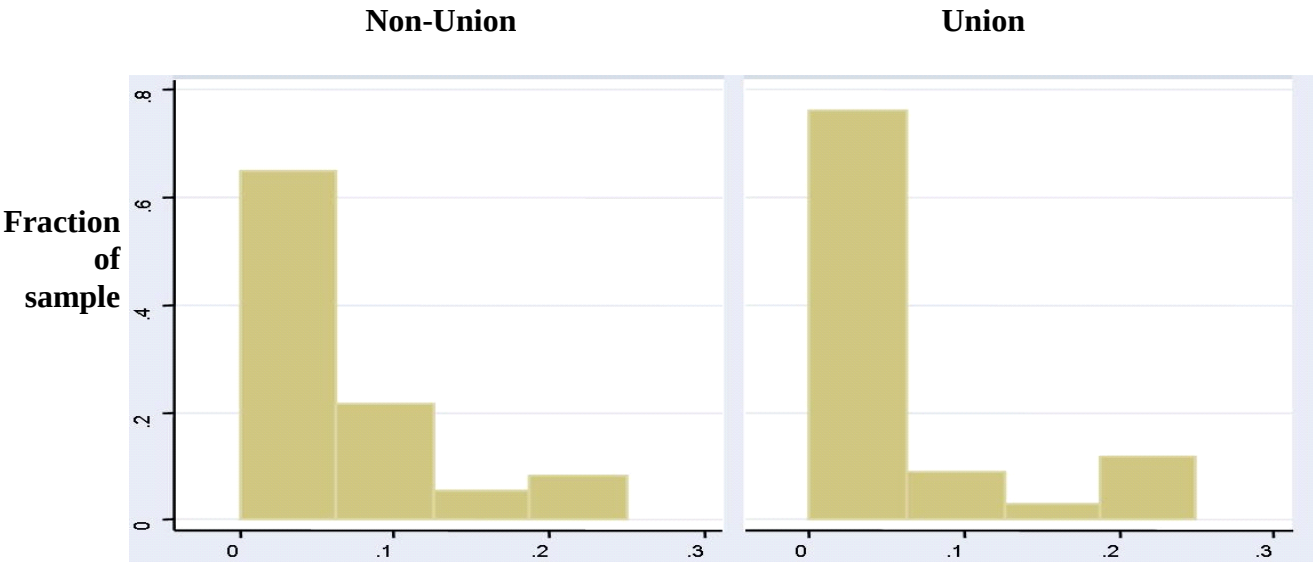

Figure 6: Involuntary-departure Rates by Union Status

Effects of Union Status and Wages

Unions do many things. Here I focus on whether the presence of a union has a direct effect on turnover and an indirect effect on turnover that operates through the wage. Similarly, the wage may have a direct effect on turnover. However, since unions also raise wages, omission of union status in the turnover regression will bias the coefficient on wages. Nonetheless, it is instructive to get a handle on the aggregate effect of wages and union status on teacher turnover. Table 9 reports the results of three OLS specifications where the dependent variable is the teacher turnover rate and the independent variables are union status and teacher average wage.

Specification 1 of table 9 is a bivariate regression of the turnover rate on union status with no controls for confounding factors. The union variable combines the voice and wage effects but allows a look at the effect of union status on turnover. The coefficient says that union status is associated with a statistically significant reduction in turnover of 8.3 percentage points.

Table 9: Regressions of Turnover on Union Status and Average Wage

Specification	**[1]**	**[2]**	**[3]**
Variable	**Est. Coef. (Std. Error)**		
Union Status	–0.083 (0.044)*	…	–0.086 (0.045)*
Average Wage	…	0.006 (0.012)	0.008 (0.012)
Adjusted R<2>	0.036	–0.012	0.029

Notes: Results are not weighted. n=69 Significant at *p<.10 level

Specification 2 regresses turnover on wage. Here the teacher average-wage variable combines the union and wage effects but allows a test of whether lower turnover is associated with higher wages. Recall from table 6 that the average union-wage premium for teachers in the data is less than 50 cents an hour. Here the coefficient for average wage, which is not statistically significant, is unexpectedly positive but very small, 0.6 percentage-points.

Specification 3 regresses turnover on union status holding the wage constant. Controlling for wage does not reduce the effect of unionization on turnover in this data set. When wage, a mechanism through which the union may work, is included, union status still is associated with a statistically significant (t = –1.94) reduction of 8.6 percentage-points in turnover per dollar of wage. This is a fairly large effect compared to observed turnover rates in ECE and indicates that unions matter.

Unionized workplaces in my data have statistically significant lower turnover rates than non-union workplaces (table 8). The higher union wage does not appear to account for any of the difference between union and non-union turnover rates. In consideration of possible omitted variable bias and for a better understanding of why

union workplaces have lower turnover, I expand on this analysis and consider effects of voice and unemployment in chapter 6. However, first let us look at the issue of how much management and labor agree on the presence and use of workplace practices.

To Agree or Disagree

As described in the previous chapter, I administered two surveys, one to the on-site program director and a different survey to a teacher at the same program working in a classroom with 3- and 4-year-olds. By surveying both sides of the working relationship, I hope to be able to get a good picture of working conditions at the programs. I look at programs to see if the workers have or perceive having recognized and established methods of communicating with management, "voice."

Recall from chapter 3 that "voice" can reduce the probability workers will quit by giving them a mechanism to express concerns, and management with a response in determining rules and conditions of work, instituting grievance and arbitration procedures for appealing supervisors' decisions and demands, and publicly negotiating wages and benefits. This can lead to a more stable workforce than where voice alternatives to exit do not exist.

Many factors influence a worker's decision to stay at their job. Unionized programs have signed collective bargaining agreements, allowing workers or their representatives to participate in the negotiation of their contracts and thus have a say in their work environment. Grievance procedures, career lattices, staff meetings, annual reviews and other mechanisms typically are part of a CBA.

Surveying both sides of the labor relationship can shed light on the level of agreement on working conditions at a program. Often people make decisions based on

what they think the situation is, even though the reality may be different. Due to self-reporting, the accuracy of these program policies is not assured. This is not a problem since it is the views of the manager (director) and the worker (teacher) that are important to understanding the workplace culture. Staffs tend to make decisions, such as to stay or quit, based on how they feel overall about their workplace. As one (male) unionized teacher wrote, *"Have many systems and structures by name, but they are often quite dysfunctional."*

In this analysis of asymmetric disagreement or misclassification, the teacher's response may be a mix of two things, her knowledge about the existence of the specific practice and her perception about the quality or effectiveness of the voice practice at the workplace. This causes the slippage.

Question of Union status

I have 60 matched program and teacher surveys. First I look at the amount of agreement between a teacher and director on whether their program is unionized and has a signed CBA. This is the only comparison where I verify the accuracy of the responses, because whether or not a program is unionized is key to much of my later analyses. Eighty-seven percent agree on their program's union status. Five teachers left the question blank. Of these five, three programs are unionized and two are not. Three teachers did not know their programs were unionized.

With such a high rate of agreement on this issue, it is not a good candidate for the comparisons of responses between program directors and teachers. This degree of agreement indicates that there is not significant confusion about the unionization status of these workplaces; teachers and directors know if their workplace is unionized.

Questions of Voice

I compare the responses of a teacher and her director (manager) to five questions identified below as *A.* – *E.* in each of the 60 programs. More than half of all program directors and their teachers agree with each other. Naturally, there is disagreement too. On average, nearly a quarter of responding teachers disagree with their director over the existence of specific voice aspects or policies at their workplace. In some cases, teachers do not know if a certain policy exists at their program, despite having worked there for more than a year. This may indicate that it is not something management explains or shares regularly with workers. In other cases, the policy is "in the book" but the teacher doesn't see it as effective or utilized. In addition, the results show that on average there is more agreement between management and labor in unionized than in non-unionized programs for the practices queried.

Four sets of programs are identified in the cross-tabulations that follow. The first set, referred to as Group I, always represents the teacher-director pairs that agree the voice practice is present, and Group IV represents the pairs that agree the voice aspect is not present or in use at their program. In Groups II and III, the teacher-director pairs disagree. Programs where the teacher replies negatively, while their director reports voice in use at their program are in Group II. Group III is the opposite, with the teacher reporting the voice aspect is present and in use, and their director reporting it is not.

I propose that teacher turnover is greatest among programs where both labor and management agree there is no worker voice, Group IV, followed by Group II where only the teacher reports there is no worker voice. Where employee dissatisfaction is high, for whatever reason, perception of voice will be low. Next are the programs in

Group III where the teacher reports there is voice. I believe turnover is not has high in this group because of the importance of the employee's feelings about the use and effectiveness of their voice. Turnover will be the lowest (desirable) in Group I programs in which the teacher-director pair agree voice is present and in use. Thus in this group, teachers do not misclassify. Turnover rates in Group I will be less than or better than those in Group III, which will be less than turnover in Group II, which is less than turnover in Group IV.

Four comparisons are tested. The agreement-disagreement matrix is modeled in table 10, showing how the results for each voice aspect are displayed later in table 11a through table 11e. In each cell, the mean turnover rate for the programs in that group, the disagreement or misclassification rate for the programs in that group, and the number of programs in that group are listed. The misclassification rate is the fraction of programs with the teacher disagreeing with the director. Thus it is equal to zero when the teacher-director pairs agree, i.e., Groups I and IV in the diagonal cells. In the off-diagonal cells, the misclassification rate is the percentage of programs where teachers "misclassify" divided by the total of programs in that row.

Table 10: Agreement-Disagreement Matrix Model

		Teacher	
	Voice aspect	Voice	Not
Director	Voice Row total n	**Group I** *Agree voice is present.* Turnover rate Misclassification rate number of programs	**Group II** *Teacher "misclassifies"* Turnover % Misclassification % n
	Not Row total n	**Group III** *Teacher "misclassifies"* Turnover % Misclassification % n	**Group IV** *Agree voice is not present.* Turnover % Misclassification % n

To simplify the language in this analysis, I refer to the director's response as "correct" regarding whether the voice aspect is in place and in use. This is justified because more than 50 percent of labor-management pairs agree with regard to these voice practices. Therefore when the teacher disagrees with the director, the teacher is misclassifying. If it is a dissatisfying workplace, i.e., has high turnover, then teachers think they do not have good voice options, even if they actually do.

If the presence and use of a given voice aspect affects teacher-turnover rates, there should be a significant difference in turnover between Groups I and IV, those teacher-director pairs who agree the voice aspect is present and in use, and those who agree it is not. (This relationship is further studied in chapter 6.) Here I find a statistically significant difference in turnover for three voice aspects: career and compensation lattices, grievance procedures and exit interview protocols. Thus for each of these three voice aspects, when directors and teachers agree that worker voice is

present, there is a statistically significant difference in turnover rates than when they agree it is not.

Now consider the impact of the teacher's perception. If it is what a teacher *thinks* exists at her program that is associated with turnover, then responses from teachers indicating that they perceive or think a voice practice is in use (Groups I and III) should have similar turnover rates to one another, and responses from teachers who think there is no such voice practice (Groups II and IV) should have similar turnover. This presents the following comparison questions:

1. Does the director's response matter, given that the teacher *thinks* the voice aspect is in use (Group I versus Group III)?

2. Does the director's response matter, given that the teacher *thinks* the voice aspect is **not** in use (Group II versus Group IV)?

However, if it is the *actual existence* and use of a voice practice that is associated with teachers' voluntary turnover rates, then directors' reports that a voice practice is in use (Groups I and II) should have similar turnover to one another, and reports from directors that there is no such voice practice (Groups III and IV) should have similar turnover rates. Two additional comparisons are done to answer these questions:

3. Does what the teacher thinks matter, given that the director says the voice practice is present and in use at the program (Group I versus Group II)?

4. Does what the teacher thinks matter, given that the director says the voice practice is **not** in use at their program (Group III versus Group IV)?

I make these comparisons to examine the role, if any, of voice practices that are perceived to be in use compared to those that actually are in use. For each of the five voice practices, I test whether the comparisons are statistically significant.

A. Does your program have and use a career and compensation schedule or lattice?

Fifty out of the 60 directors respond that their program uses a career and compensation lattice or ladder to determine wages and promotions. Not as many teachers agree. The diagonal (white cells) in the cross-tabulations represent agreement between the program director and their teacher, whereas the cross-diagonal (shaded) cells represent programs where the teacher and her director disagree.

In table 11a, Group I includes 30 teacher-and-director pairs (15 union and 15 non-union) who agree that there is a career schedule or lattice in use at their workplace. In other words, in half of the programs, the director and teacher agree with each other. As I expected, the turnover mean for this group is the lowest of the four tabulations (groups), at 22.4 percent. (This varies little when sorted by union status.)

Table 11a: Agree-Disagree Matrix for Career Lattice

Teacher

Director	Career Lattices	Voice	Not
	Voice	**Group I** 22.4 % 0 30	**Group II** 27.6% 40 % 20
	Not	**Group III** 25.5% 50 % 5	**Group IV** 43.6 % 0 5^
	Row n= 50	Row n=10	

^ All are non-union programs.

Group IV also represents staff pairs that agree. It includes five teacher-and-director pairs, all from non-union programs, who agree their program does not have a career and compensation lattice. While there are only five programs in this group, the turnover mean is nearly double that of any other group. The difference in turnover between programs with and those without this voice practice (Groups I and IV) is statistically significant ($p < .05$), signifying that voice through career ladders is associated with lower turnover rates.

In the groups where teachers respond that they believe a career lattice is in use (Groups I and III in table 11a), turnover means are similar, indicating that the director's response is not paramount. This is in answer to the first comparison question noted above. There is an association with lower turnover at programs where the teacher *thinks* there is a career lattice.

The off-diagonal cells (shaded blocks) show programs with disagreement between directors and teachers. For career lattices and all but two cases that follow, the disagreement is asymmetric. The number or percentage of programs with teachers

misclassifying that there is a lattice and those misclassifying that there is not are not equal, so it is unlikely to be due to measurement error. Group II includes 20 programs where the director reports that the program has a career lattice but the teacher disagrees with 40 percent misclassified. The average teacher-turnover rate for Group II is higher than Groups' I and III, where the teachers believe career lattices are in use.

Sorting the responses to this question by union status does not change the relationships between groups. Both union and non-union teachers are less likely than their director to be aware of and benefit from the planning and information provided by career and compensation ladders. If there is such a ladder that management refers to at these programs, its use and benefits are limited to one side of the labor-management relationship. When teachers are unaware of or denied access to the method management uses to determine wages and promotions that information cannot be accurately incorporated into their career decisions, such as what training and education to pursue, merits of job tenure, and view of advancement opportunities.

B. Has the program charged a joint committee to look into a work-related issue?

In eight programs (Group I in table 11b), the director and teacher agree that their program's culture includes committee(s) empowered to make decisions on work-related issues, and 13 additional directors (Group II) also report this. These two groups have the lowest turnover means, contrary to my expectation. What the teacher thinks does not significantly alter turnover rates when the director reports joint committees function at the program. This result is supported by the high misclassification rate in Group II along with the low turnover rates in Groups I and II in table 11b.

Turnover means are similar when the teacher thinks joint committees are able to effect change, despite what their director reports. On the other hand, when the teacher thinks the voice aspect is **not** in use (as is the case in 44 out 60 observations), the director's response does matter, and the difference in turnover rates between Groups II and IV is statistically significant. (This result holds true also when only non-union observations are used.)

The disagreement (off-diagonal) is asymmetric (not statistically significant) with more teachers disagreeing or misclassifying that joint committees are not part of the program culture.

Recall that there are 27 union and 33 non-union programs. In five non-union and three union programs, respondents agree that inclusive committees are empowered to make decisions on work-related issues. For the union sites, the number or percentage of programs with teachers misclassifying that there are empowered committees are equal to those misclassifying that there are not. Thus the disagreement between teachers and directors is symmetric, and therefore is probably due to measurement error. However, the disagreement in the non-union programs is asymmetric, with a total of 11 out of 33 director-teacher pairs disagreeing.

The lowest non-union turnover rates (17.6 and 17.1 percent) occur where the director reports that committees are inclusive and empowered (Groups I and II). Oddly the lowest turnover rates in the union observations (15 and 19.7 percent) are where the teacher perceives **no** empowered committees at work (Groups II and IV).

Table 11b: Agree-Disagree for Joint Committees

Teacher

	Joint Committees	Voice	Not
Director	Voice	**Group I** 21.9 % 0 8	**Group II*** 16.3 % 61.9% 13
	Not Row n=39	**Group III** 24.4 % 20.5 % 8	**Group IV*** 31.9 % 0 31

Note: *Statistically significant difference p<.05 between Groups II and IV.

C. Are there regularly scheduled productive staff meetings on paid time?

Many programs use staff meetings to facilitate communication and work. However in this analysis, the question does not only ask if there are staff meetings. Recall that the objective is to get a good picture of working conditions. Staff meetings viewed as unpredictable and/or unproductive do not facilitate communication. Therefore a yes to this questions, must be yes to all three parts of it. In other words, there are regularly scheduled staff meetings, and they are conducted during paid time, and the respondent views them as productive. (In the survey, these are each distinct questions.)

In two-thirds of the programs, respondents agree that they have regularly scheduled and productive staff meetings during paid time. (This agreement rate varies little when sorted by union status: 63 percent union and 70 percent non-union.) When looking at programs where management and labor responses disagree, again the directors are more likely than teachers to see this aspect of their program positively.

Note that in three programs (Group III in table 11c), only the teacher perceives regular and effective staff meetings. Though few, this group has the lowest turnover mean, actually the lowest of any of the five sixty-program tabulations, 15.6 percent. Likewise, it appears less favorable to low turnover rates when the teacher, in agreement or not with her director, views the staff meetings negatively, as in Groups II and IV. These results support my central hypothesis that employee's feelings are important. Where employee dissatisfaction is high, for whatever reason, perception of voice is low.

Table 11c: Agree-Disagree for Staff Meetings

Teacher

Director	Staff Meetings	Voice	Not
		Group I	**Group II**
	Voice	24.1 %	33.3 %
		0	25.9 %
	Row n=54	40	14
		Group III	**Group IV**
	Not	15.6 %	31.1 %
		50 %	0
	Row n=6	3	3^

^ All non-union programs

The disagreement (off-diagonal) for staff meetings is asymmetric, and this is the only voice practice where teachers misclassifying voice have the highest turnover mean (though only slightly greater than director-teacher pairs in agreement in Group IV). None of the comparisons tested are statistically significant, consistent with results for staff meetings found in the next chapter.

D. Are there formal written grievance procedures, and do grievances get handled fairly and professionally?

As shown in table 11d, teachers and directors in more than half the programs agree that their program has formal, written grievance procedures providing fair and professional treatment. Again, this can be viewed as two questions. However the mere presence of a voice aspect that is neither used nor viewed effective provides no practical course for communicating with management.

An additional 14 directors indicate they too, believe their program has such procedures though their teachers disagree. This may be another example of incomplete information. Management knows of the procedures and can utilize them. However,

teachers either do not know about this "tool" for resolving conflict, or they may feel that grievances are not handled fairly.

Table 11d: Agree-Disagree for Grievance Procedures

		Teacher	
	Grievance procedures	Voice	Not
Director	Voice	**Group I** 22 % 0 38	**Group II** 31.6 % 26.9 % 14
	Not Row n= 8	**Group III*** 29.5 % 75 % 6	**Group IV*** 57.7 % 0 2^

Note: * Statistically significant difference, p<.05 between Groups III and IV.
^Both programs are non-union.

While there are only two teacher-director pairs that agree their programs are without formal grievance procedures, these programs have substantially higher turnover rates. The difference between this group and Group I that agrees grievance procedures are present is statistically significant ($p < .05$), indicating that this voice aspect matters. When limiting the comparison to non-union programs, the result remains statistically significant.

Consider the fourth comparison question asked earlier in this section. For Groups III and IV, directors report no grievance procedures. Yet turnover rates in table 11d in these two groups are not similar (29.5 and 57.7 percent respectively), indicating that what the teachers perceive is important, and in this case, associated with a statistically significant difference. When comparing non-union Groups III and IV exclusively, the difference in turnover is still statistically significant.

More than half the teacher-director pairs in both union and non-union programs agree that this voice aspect is in use, and the mean turnover rates are within a half of a percentage point of each other regardless of union status.

The similar turnover in union Groups I and II suggests that turnover rates vary little in union programs where the director reports formal grievance procedures in use, despite the teacher's view. Yet in these programs, mean turnover rates are approximately 10 percentage points higher than when union directors report no grievance procedures, though all means are below 22 percent.

In both union and non-union observations, the asymmetric results are more than 2-1, with more directors reporting the presence of these procedures than teachers. The lowest turnover rates are in the union cells. Only when non-union teacher-director pairs agree that this voice aspect is in use is non-union turnover below 30 percent. The higher non-union turnover rates should lead some programs to consider implementing and publicizing a formal and fair grievance procedure.

E. Does your program conduct exit interviews or a similar process?

All but one program reported doing annual-performance reviews (a voice aspect listed in my model, figure 3.1), so for the analysis I substitute exit interviews, another one-on-one-type meeting. Exit interviews are an opportunity for a worker to speak directly with management on behalf of colleagues who may agree about the working environment (big picture). I see the exiting person as a staff proxy or representative using voice as a mechanism for future change even though that particular worker will not benefit from any improvements made as a result of their interview. Exit interviews

can be a (good faith) signal from management to workers that it matters to them why workers leave. It provides workers a collective voice at the program level—my level of observation.

In exactly 18 programs, director-teacher pairs agree that exit interviews are done with a person when they leave, and another 18 agree that such interviews are not done. The former shows the lowest turnover, 19.5 percent, and the latter the highest turnover, at 40 percent in the tabulation table 11e, and represents a statistically significant difference.

Table 11e: Agree-Disagree Matrix for Exit Interviews

Teacher

Director: Exit Interviews	Voice	Not
Voice Row n=35	**Group I** 19.5 % 0 18	**Group II*** 22 % 48.6 % 17
Not Row n= 25	**Group III** 20.8 % 28 % 7	**Group IV*** 40 % 0 18

Note: *Statistically significant difference, p< .05 between Group II and IV.

It seems reasonable that more directors are aware of this procedure since they conduct the interview when a worker leaves. However, in seven programs the director says exit interviews are not done, but their teacher misclassifies, reporting that such interviews are done. This “no-yes” result is odd. Perhaps these interviews are done at the agency level and are not shared with the program director. If this is the case, the

interview's usefulness is limited since the departing worker's supervisor is not aware of the issues discussed relating to their staff's exit.

The difference in turnover rates between Groups II and IV in table 11e is statistically significant for the whole data set as well as for the non-union data set. This may be an example of where the use of a policy by management is more relevant to low turnover than the teacher's perception, since it is the director who remains at the program and has an opportunity to implement changes that may be realized while interviewing a departing teacher. This kind of voice is relevant at the program level, providing staff another vehicle to communicate with management.

This is the second example where a disagreement between union teachers and their directors is symmetric; it is likely due to measurement error among the union observations. However, the disagreement among the non-union programs is quite unbalanced, with only one program in Group III and eleven in Group II. The lowest non-union turnover mean, 18 percent, is associated with the eleven programs where teachers misclassify when reporting on exit interviews. On the other hand, the six union programs in Group II are associated with the second-highest union turnover mean of 29.3 percent, one percentage point less than the mean for the three Group IV programs.

Fifteen non-union staff pairs agree that they do not conduct exit interviews at their program (Group IV), five times more than in union programs. Regardless of union status, Groups IV have the highest turnover means in relation to their colleagues, with the non-union mean 10 percentage points higher, at 40.7 percent.

In summary

More often than their teachers, directors report the presence and effective use of these five aspects of voice. These practices or policies can facilitate productive communication and mutual agreement between management and staff. However, if only one part of the labor relationship is aware of the tool's existence or views the tool as fair and effective, opportunities are lost to improve the labor-management relationship as well as teacher turnover. These lost opportunities may directly or indirectly contribute to a teacher deciding to exit the program. For example, if the program is known to fairly handle grievances and/or provide a clear picture of what the career and compensation schedule entails, a teacher may see her options differently.

The presence and use of career lattices, formal grievance procedures or exit interview protocols affect teacher-turnover rates; there is a statistically significant difference between groups that agree the voice practice exists and those that agree it does not (Groups I and IV). Also, if at least one person, director and/or teacher, reports the existence and use of a career lattice or exit interviews (Groups I, II or III), turnover means are almost half of turnover when both people agree no such voice practice is in use.

At programs where the teacher thinks joint committees are not in use, the difference in turnover is statistically significant, indicating that what the director reports matters. This is true for exit interview results as well. On the other hand, when the director says formal grievance procedures do not exist, it is what the teacher perceives that is significant for low turnover rates.

What the director reports does not matter when teachers perceive career lattices in place, joint committees able to make change, or exit interviews conducted. It does not matter how the director views staff meetings either if teachers think such meetings are unproductive. In these four cases, teacher turnover rates are similar (within 3 percentage points) regardless of the director's response. These results indicate that as I proposed at the beginning of this section, teacher's feelings about voice are important. However, in this small data set for each voice aspect, teachers' feelings matter only under one set of assumptions, either voice is perceived or voice is not perceived, and not both. A larger data set might bridge this gap, showing that for some voice aspect, teachers' views are important in both scenarios.

I also hypothesized that teacher turnover is greatest among programs in Group IV followed by turnover in Group II then Group III and finally Group I (Group IV > II > III > I). This proved true for three voice practices: career lattices, grievance procedures and exit interviews.

We all have had jobs where we agreed and/or disagreed with our boss on policies and their effectiveness. The impact on the workplace by such perspectives can be considerable. On average in this study, only 24 percent of the teachers disagree with their director regarding the voice aspect in question. Therefore, for simplicity and because it is more likely to reflect the program culture, I will use the directors' responses henceforth.

Conclusion

Despite unionized staffs being responsible for fewer children on average, their wages tend to be higher than non-unionized staff. If unionized teachers earn more and

have fewer children in their charge, this may help to explain why their quit rates and total turnover rates are lower. However, is the lower turnover due to the higher wages?

I found that the higher union wage does not dissipate the significance of unions in relation to turnover. It could be argued that first workers need a union to get the higher wage. Through collective bargaining, higher wages can be negotiated for staff. Others might argue that if the wage were already high, union organizing would be less successful. Longitudinal data could help to clarify this if it were available.

Unionization lowers turnover rates. Yet the evidence suggests that non-wage factors such as lower staff ratios are also significant. In the next chapter, I use more controls to assess this difference, looking at the presence or lack of aspects of voice in different workplaces and under different regional employment conditions.

The results from the teacher and director agree-disagree study in this chapter indicate that the presence and use of career lattices, formal grievance procedures and/or exit interview protocols significantly affect teacher turnover. Also, where teachers think they do not have good voice options, even if they actually do, some of their dissatisfaction is seen in higher turnover rates. The result demonstrates that teachers' perception of voice cannot be ignored when studying voluntary turnover. Further study of voice practices continues in the next chapter.

Notes

[1] For a look at for-profit child care, see Brenda Bushouse.

[2] My data set has enrollment numbers for each of the following categories: Black or African American; Latino or Hispanic; Asian/Asian American/Pacific Islander; American Indian/Alaskan Indian/Eskimo; biracial or multiracial. However numbers in each category are small, so they are grouped together into one category, non-European American, for the bulk of this analysis.

[3] The Massachusetts health care reform law was enacted in 2006 mandating nearly every resident obtains health insurance. The law established an independent public authority, known as the Health Connector, to offer subsidized coverage and facilitate the purchase of private insurance by individuals and small businesses. However, the statute does not diminish the significant value (due to the practice of cost sharing) of health insurance offered through employers.

[4] There are no programs in the data set with turnover at one or two percent, or between 44 and 50 percent.

CHAPTER 6

SEARCHING FOR VOICE

The search for voice has led me to take a closer look at different programs and their teacher turnover. Structured around the original research questions, this chapter looks at working environments and practices within child-care programs.

I continue testing the theory that predicts lower turnover at programs where workers have voice. Recall the definition, "voice" refers to the use of direct communications to bring actual and desired conditions closer together (Hirschman 1970). The aspects and products of voice identified in my model of voice and exit in figure 3.1 are formal grievance procedures, participation on decision-making committees, regular paid staff meetings, performance reviews, and career and compensation lattices or schedules. With or without unionization, these voice aspects embody good management practices and an acknowledgement of the importance of staff views and contributions. I predict these are integral to programs with low turnover.

Research Questions

The research questions are restated here.

- What working conditions affect teacher turnover in ECE programs in the private market?
- How does "voice" differ in nature and quantity across different types of workplaces?
- What, if any, is the statistical relationship (correlation) between teacher turnover and voice, and how does this relationship vary across types of workplaces?

Below I explore each question. First I look at turnover and specific working conditions (previously grouped together and called "voice"). Next I compare voice

aspects in different types of workplaces. Lastly I query the possible relationship between voice and turnover in different work sites.

Working Conditions and Turnover

When considering the factors that influence a worker's decision to stay at their job or to exit, the wage is only one, albeit a big one. Other conditions that may affect the decision include benefits and the practical considerations identified in chapter 3.

I hypothesized that after accounting for wages, there are three working conditions that are key to the presence and use of voice in the workplace. First, there is evidence of consistent use of "voice" in a workplace with an agreed-upon policy for solving grievances. Second, voice is evident in workplaces that utilize a career and compensation lattice. Third, workplaces where decisions are made though management and labor committees and meetings promote a culture of open communication. The presence of these conditions reflects a positive management style and is characteristic of programs with low teacher turnover.

Recall that the presence of each voice aspect is captured with a dummy variable with a possible value of 0 for "not present" and 1 for "present and an integrated part of the working environment." The results in this chapter bear out my earlier hypothesis that programs incorporating certain practices at their workplace have lower turnover.

Table 12 shows the percentage of programs reporting each voice aspect. (As in chapter 5, exit interviews are used instead of performance reviews.) While the percentage of union and non-union programs with each aspect are somewhat similar, the differences in percentages are larger when looking at programs with two or more voice aspects, as shown later in table 17. In table 12, exit interviews stand out as a

disproportionately union practice. Likewise, committee participation is more often reported in non-union programs, though the share of all programs that solicit committee participation is relatively low in both union and non-union sites.

Table 12: Percentages of Programs with each Voice Aspect

VOICE ASPECT Variable:	**% Non-union Programs with**	**% Union Programs with**	**Union less Non-union Difference**
CBA	0 %	100 %	100 %
Career Lattices	80.6	90.9	10.3
Grievance Procedures	83.3	90.9	7.6
Committee Participation	38.9	33.3	–5.6
Staff Meetings	88.9	93.9	5.0
Exit Interviews	50.0	66.7	16.7

In the next section, teacher turnover is regressed on the voice variables in a single equation. While there is little variation among the programs with regard to the use of voice aspects, the correlation matrix in table 13 and the contingency tables in table 14 show that pair-wise correlation is low among the voice aspects in the data set. My results described below allow the concern of multicollinearity be set aside.

Table 13: Correlation Matrix

PROGRAM	Union	Lattice	Grievance	Committee	Meeting	Exit Interview
Union	1.000					
Lattice	0.147	1.000				
Grievance	0.112	–0.037	1.000			
Committee	–0.057	0.310	–0.066	1.000		
Staff Meeting	0.090	–0.127	0.033	–0.088	1.000	
Exit Interview	0.169	0.150	0.106	–0.152	0.050	1.000

Since the correlations are low and many programs have the same aspects, I also determined the Pearson chi2 for each of the unique 15 voice-aspect pairs. Table 14

shows the results for two of these variable pairs: A. Career lattices and Grievance procedures; and B. Career lattices and Decision-making committees.

For each test, the null hypothesis is that programs with voice-aspect X and with voice-aspect Y are independent, i.e., are not correlated (assuming aspect X is not the same as aspect Y). The alternative hypothesis then is that they are bundled, i.e., dependent on each other, or are correlated.

Table 14: Two Contingency Tables

A. Grievance procedures

Career lattices	No	Yes	Total	**Frequency**
No	7	29	36	**0.806**
Yes	3	30	33	**0.909**
Total	10	59	69	**0.855**

B. Decision-making committees

Career lattices	No	Yes	Total	**Frequency**
No	10	0	10	**0.000**
Yes	34	25	59	**0.424**
Total	44	25	69	**0.362**

Contingency grid A. in table 14 above indicates that among programs without career ladders, 80.6 percent have grievance procedures, and among programs with career ladders, 90.9 percent have grievance-procedures. Are these correlated? When comparing the observed frequencies with the expected frequencies, the Pearson chi2 (with one degree of freedom) equals 1.489 (Pr = 0.222). Therefore I fail to reject the null hypothesis that they are independent, i.e. are not correlated.

I got similar pair-wise collinearity results ($0.160 < Pr < 0.784$) when I tested all the voice-aspects pairs with one exception, career lattices and decision-making committees. Contingency grid B. in table 14 shows that all of the programs without

career ladders do not have decision-making committees, and among programs with career ladders, 42.4 percent do have decision-making committees. In this case, when the observed frequencies are compared with the expected frequencies, the Pearson chi2 (with one degree of freedom) equals 6.645 (Pr = 0.010). For this pair only, I reject the null hypothesis. The frequency of programs with career lattices correlates with the frequency of programs with decision-making committees. This is consistent with table 13, where this pair had the largest correlation (0.310) in the matrix.

In 14 out of 15 pairs, I cannot reject the hypothesis that the voice aspects are not correlated. Overall the Pearson chi2 results do not contradict the low correlations shown in table 13.

I also checked for multicollinearity among the six voice variables using variance inflation factors (VIF). In all six regressions, the VIF values ($1.026 < VIF < 1.206$) indicate that further consideration of multicollinearity is not warranted.

Unionization

I introduce Equation 6.1 below. In it, Y is the outcome variable, teacher turnover, and $_i$ is the index for each of the 69 observations. β_1 (beta one) is the coefficient for programs with a signed CBA. It tells us the average change in the outcome variable when the variable $D_{CBA} = 1$. β_2 is the coefficient for programs with career lattices. It tells us the average change in teacher turnover when there is a career lattice, $D_{Lattice} = 1$. $\beta_{3,}$ $\beta_{4,}$ $\beta_{5,}$ and β_6 are the coefficients for the voice aspects grievance procedures, decision-making committees, staff meetings, and exit interviews respectively.

Equation 6.1 (All programs i = 1 to 69)

$$Y_i = \beta_{01} + \beta_1 D_{CBA} + \beta_2 D_{Lattice} + \beta_3 D_{Grievance} + \beta_4 D_{Committee} + \beta_5 D_{Meeting} + \beta_6 D_{ExitInterview} + \varepsilon$$

Each coefficient in table 15 represents the average change in teacher turnover when said voice variable is equal to 1. The coefficients estimate the effect on turnover of introducing a specific voice aspect. The table shows the direction of the effect for each voice aspect, which aspects are significant, and compares aspects in union and non-union workplaces.

Table 15: Turnover Regressed on Voice: Union Non-union Comparison

	Equation 6.1		Eq 6.2 *Union*		Eq 6.3 *Non-union*	
Variable	Coefficient	t	Coefficient	t	Coefficient	t
D_{CBA}	–0.048	–0.98				
	(0.049)					
$D_{Ladders}$	–0.033	–0.44	0.086	0.68	–0.090	–0.98
	(0.074)		(0.127)		(0.092)	
$D_{Grievance}$	–0.124	–1.73*	0.040	0.29	–0.119	–1.32
	(0.071)		(0.137)		(0.090)	
$D_{Committee}$	–0.107	–2.01**	0.046	0.48	–0.162	–2.16**
	(0.053)		(0.095)		(0.075)	
$D_{Meetings}$	0.023	0.27	0.119	0.73	0.005	0.05
	(0.085)		(0.163)		(0.108)	
$D_{ExitInterview}$	–0.100	–1.98*	–0.036	–0.43	–0.139	–2.09**
	(0.050)		(0.083)		(0.066)	
Constant	0.488	4.00	0.0004	0.00	0.588	3.88
	(0.122)		(0.262)		(0.152)	
Adj R^2	0.108		-0.135		0.278	
n	69		33		36	

Note: Standard errors in parentheses. Statistically significant at **p<.05 level; *p<.10

With Equation 6.1, all the coefficients except staff meetings are negative, indicating that the presence of that voice aspect is working in the desired direction, toward lower turnover. Grievance procedures and exit interviews are statistically significant at the 0.10 level, and decision-making committees are statistically significant at the 0.05 level, all shown in table 15. The adjusted R-squared is 0.108.

Equation 6.2 uses the 33 union-program observations (with a signed CBA) and Equation 6.3 is for the 36 non-union observations. Equations 6.2 and 6.3 use the same voice aspects as in Equation 6.1 except there is no CBA variable.

Equation 6.2 *Union* (i = 1 to 33)

$$Y_i = \beta_{02} + \beta_7 D_{Lattice} + \beta_8 D_{Grievance} + \beta_9 D_{Committee} + \beta_{10} D_{Meeting} + \beta_{11} D_{ExitInterview} + \varepsilon$$

Equation 6.3 *Non-union* (i = 1 to 36)

$$Y_i = \beta_{03} + \beta_{12} D_{Lattice} + \beta_{13} D_{Grievance} + \beta_{14} D_{Committee} + \beta_{15} D_{Meeting} + \beta_{16} D_{ExitInterview} + \varepsilon$$

When turnover is regressed on the variables in Equation 6.2, no variables are statistically significant. Recall from figure 4, the distribution range of turnover rates among union programs was nearly half that among non-union programs. Also, because the percentage of union programs that utilize voice aspects is high, there is less variability in the independent variables, as seen in table 12. With low variability in the dependent and independent variables, Equation 6.2 is unlikely to produce statistically significant results.

However, when turnover is regressed on voice aspects in the non-union data set using Equation 6.3, decision-making committees and exit interviews are statistically significant at the 0.05 level (see table 15). The coefficients indicate the effect on turnover that might be expected if a non-union program were to add a specific voice practice. With more to explain due to greater variability among the variables, the adjusted R-squared for Equation 6.3 (non-union) is the highest in table 15 at 0.278.

Having looked at the three equations, now I focus on each voice variable within the equations.

Collective Bargaining Agreement (CBA)

A signed CBA can be seen as a proxy for union status. A CBA comes out of a process of negotiation where labor representatives and management communicate directly. This process can give workers a say in their work environment even before agreement is reached. These agreements cover areas such as hiring, seniority, time off, discrimination, disability access, committee structure, job requirements, wages, benefits and more. Many of the aspects of voice I am studying are typically part of a CBA. With Equation 6.1, the CBA is associated with a 4.8 percent reduction in turnover (table 15).

All these unionized programs have a CBA. Contracts or agreements between management and labor are rare in non-union shops, and none of my non-union observations have such agreements.

Career and Compensation Lattices

Career and compensation lattices, also called ladders, are used to determine the wage of a new hire and what workers must do to earn a promotion and/or wage increase. These types of lattices (common at government work sites, for example) are reported in 80.6 percent of the non-union and 90.9 percent of the union programs (table 12). For non-union programs with career lattices, the effect is an average reduction in teacher turnover of 9 percentage points (from the constant), as shown on the right-hand side of table 15. Having the information contained on career lattices available to all staff does work in the desired direction (toward lower turnover), but it is not statistically significant, contrary to my hypothesis.

The constant (β_{0-}) represents the expected rate of teacher turnover when all the other variables in the equation are zero. All the observations in Equation 6.2 have a

CBA. That equation's constant is much smaller than the others, most likely because all programs with a CBA in the data set have at least two voice aspects.

Grievance Procedures

Over 80 percent of programs report using some type of formal grievance procedure. These procedures are intended to provide a recognized and consistent treatment of grievance accusations and are associated with an 11.9 percentage-point reduction in turnover in non-union programs (table 15). For union programs, the coefficient for this variable is 0.040 (4 percentage points) but is not statistically significant.

It is not possible to know if on average grievance procedures in non-union programs are similar in terms and conditions as such procedures in union programs, which are publicly reviewed at least during contract renewals. One non-union teacher wrote in her survey, *"Our problems are more with getting problems resolved through our directors."*

Empowered Committee Participation

Committees with both staff and managers can be a place where worker voice is expressed with colleagues and management. Of all the voice aspects being studied, this one is reported in the fewest programs, approximately one-third of each workplace type in table 12. However, the coefficient for active participation on committees in non-union programs is statistically significant at the 0.05 level, and indicates an expected reduction in turnover of 16.2 percent. This coefficient for all programs (Equation 6.1) with empowered committee participation is also statistically significant at the same level.

Staff Meetings

Staff meetings regularly scheduled during paid time and considered productive are common, taking place in 94 percent of union programs and 89 percent of non-union programs (table 12). The small positive coefficient estimate for staff meetings in non-union programs implies that using only staff meetings is not associated with lower teacher turnover rates in these programs. Perhaps responders feel there are too many staff meetings, or the meetings are not productive, and/or are not taken seriously. Regardless of which set of observations are used, the coefficient for staff meetings remains positive and is not statistically significant.

Exit Interviews

Though not as common as most of the other voice aspects, table 12 shows that exit interviews are conducted regularly in half of the non-union work sites and in two-thirds of the unionized work sites, a 16.7 percent difference. As discussed in chapter 5, an exit interview happens after a worker has decided to leave. However, the program's practice of collecting this information can indicate that management seeks and receives "direct communication" which they may later use "to bring actual and desired conditions closer together," the definition of voice. The coefficient in each of the three equations is negative, indicating the practice appears to work in the desired direction. There is an estimated 13.9 percentage-point reduction in teacher turnover associated with non-union programs that conduct exit interviews. This reduction is both statistically and economically significant.

In Equation 6.2, only the coefficient for the exit interview variable is negative, indicating a reduction in turnover of 3.6 percentage points in union programs, though

this result is not statistically significant. Not all CBAs require the practice of conducting exit interviews when a staff member leaves, so there may be more variability among union programs in this independent variable than with other voice aspects.

Which working conditions?

This section began by asking what working conditions affect teacher turnover in child-care programs. Recall that I hypothesized that an agreed-upon policy for solving grievances, a career and compensation lattice, and decisions made though management and labor committees are evidence of the presence and use of voice and are present in programs with low teacher turnover. The results show that when teacher turnover is regressed on voice aspects, grievance procedures and empowered committee participation are statistically significant. While career lattices are not found to be significant, exit-interview protocols are. In the complete data set, committee participation and exit interviews are associated with a reduction of 10.7 and 10 percentage points in teacher turnover respectively. Among non-union programs, the average reduction in turnover is greater, 16.2 and 13.9 percentage points respectively. The use of committee participation and exit interviews protocols is representative of programs with lower teacher turnover. Implementation of these voice aspects may aid in lowering turnover.

Table 15 sheds light on the relationship between voice and turnover in these workplaces. The small constant in Equation 6.2 may indicate that the driving force in the expected value of the outcome variable, teacher turnover is the program's unionization status rather than the program culture including a specific aspect of voice. Therefore it seems reasonable to expect that the coefficients in Equation 6.2 do not

further reduce the outcome variable, since a union contract (CBA) typically covers the use of career and compensation ladders, grievance procedures, committee integration and staff meetings, as well as decreases the variability among this group.

Location of Workplaces

My second research question asks how voice differs in nature and quantity across different types of workplaces. I'm looking for which aspects of voice are in use, and which workplaces adopt which variants. Part of the answer to this question has been discussed and shown in the tables above. In chapter 3, I proposed that there is more evidence of consistent use of voice by workers and management in unionized programs. The comparison between union and non-union programs in the previous section indicates that there is more voice in union programs through the signed CBA.

What about other types of work sites? While there are many different types of workplaces, I choose to compare the use of voice in different geographical locations grouped by regional unemployment because this is an exogenous factor with which all programs must deal.

Regional Unemployment

The unemployment rate represents the number of unemployed persons as a percentage of the regional labor force.[1] This seems a useful comparison, since unemployment rates can affect how workers see their prospects in the job market. High unemployment in the area, external to a program's work environment, can be a discouragement to quitting. Therefore teacher turnover is expected to be lower in a high-unemployment market than in a tighter labor market.

As described in chapter 4, Massachusetts is divided into six geographic regions. The regions in order from 1 to 6 are: Western, Central, Northeast, Metro West, Southeast and Boston, as shown in figure 2. Unfortunately these regions do not correspond to standard geographic and statistical groupings used by the Bureau of Labor Statistics to calculate unemployment rates. The unemployment rates within EOHHS regions, ranging from 4.2 to 7.2 percent, are so different that EOHHS regions are not a useful basis for a comparison of unemployment rates within Massachusetts.

Instead, each child-care program's county, and metropolitan New England City and Town Area (NECTA), if appropriate, were used to determine the corresponding unemployment rate for its area in September 2003, when the survey was conducted.[2] When comparing all the relevant unemployment rates, there was a clear break around 5.9 percent. Therefore I have grouped together programs in areas with an unemployment rate of 5.9 percent or greater as the "high-unemployment group." There are more programs in this group (n=43) than in the "low-unemployment group" which tend to be located in non-urban areas. Programs in the high-unemployment group are located in the counties of Hampden (includes the city of Springfield), Worcester, Essex, Bristol (includes New Bedford), and Suffolk (Boston), and the city of Cambridge in Middlesex County.[3] Programs in areas with an unemployment rate of less than 5.9 percent are in my low-unemployment group (n=26). These programs are in the rest of Middlesex county as well as in the counties of Berkshire, Hampshire, Norfolk, Plymouth, and Barnstable (includes Hyannis on Cape Cod).

When comparing programs in high- and low-unemployment regions, correlation is weak among the voice aspects in the data set, as it is when comparing programs by

union status. Similar to Equation 6.1 studied earlier, each coefficient in Equation 6.4 represents the expected average change in teacher turnover when that voice variable is equal to 1. However, the union-status variable is replaced in Equation 6.4 with D_{RHigh}, representing regional unemployment group. Therefore the coefficient β_1 (beta one) tells us the expected change in the dependent variable, teacher turnover, when the independent variable D_{RHigh} =1 for programs in the high-unemployment group. Since a region with high unemployment indicates there are more people chasing fewer jobs, we expect teacher turnover to be lower than if the same program were in a region with lower unemployment.

Equation 6.4 (All programs i = 1 to 69)

$$Y_i = \beta_{04} + \beta_1 D_{RHigh} + \beta_2 D_{Lattice} + \beta_3 D_{Grievance} + \beta_4 D_{Committee} + \beta_5 D_{Meeting} + \beta_6 D_{ExitInterview} + \varepsilon$$

When teacher turnover is regressed on the variables in Equation 6.4 using all the program surveys returned by directors, D_{RHigh} and $D_{ExitInterview}$ are statistically significant, as shown in table 16. The adjusted R-squared is 0.207 (higher than for Equation 6.1 with the CBA variable). The constant, β_{04} is 52.2 percent, as shown in the left column of table 16. This represents the expected rate of teacher turnover for programs in a low-unemployment region (written as nR) without any voice aspects (written as nX):

E (Y | nR nX). It is the highest constant in table 16 supporting the expectation that turnover is higher in a low-unemployment climate. (This is above state and national averages discussed in previous chapters. However state and national child-care turnover averages are calculated over time and do not include information about corresponding economic conditions.)

Equation 6.5 uses the 26 program observations in the low-unemployment regions and Equation 6.6 uses the 43 observations in the high-unemployment regions. Sorted by unemployment group, both equations use the same voice variables as Equation 6.4.

Equation 6.5 *Low unemployment* (i = 1 to 26)

$$Y_i = \beta_{05} + \beta_7 D_{Lattice} + \beta_8 D_{Grievance} + \beta_9 D_{Committee} + \beta_{10} D_{Meeting} + \beta_{11} D_{ExitInterview} + \varepsilon$$

Equation 6.6 *High unemployment* (i = 1 to 43)

$$Y_i = \beta_{06} + \beta_{12} D_{Lattice} + \beta_{13} D_{Grievance} + \beta_{14} D_{Committee} + \beta_{15} D_{Meeting} + \beta_{16} D_{ExitInterview} + \varepsilon$$

Of course, the regional labor market affects voluntary and involuntary labor turnover, and this is confirmed in table 16 with the statistically significant coefficient (at the 0.01 level) for $D_{RHigh.}$ The coefficient, β_1 when $D_{RHigh} = 1$ and all other variables are zero indicates a 14.5 percentage-point decrease in teacher turnover for being located in a region experiencing high-unemployment, an element external to the program's control. While high unemployment is generally undesirable, it affords lower turnover because teachers see few job opportunities elsewhere. Given this external effect on exit, does the use of voice differ for programs forced to operate under different market realities?

Table 16: Turnover Regressed on Voice: Regional Unemployment Comparison

	Equation 6.4		Eq.6.5 *Low-unemployment*		Eq.6.6*High-unemply*	
Variable	Coefficient	t	Coefficient	t	Coefficient	t
D_{RHigh}	–0.145	–2.97***				
	(0.049)					
$D_{Ladders}$	–0.059	–0.86	0.117	0.89	–0.163	–2.32**
	(0.069)		(0.130)		(0.070)	
$D_{Grievance}$	–0.102	–1.51	0.002	0.02	–0.135	–1.72*
	(0.068)		(0.113)		(0.079)	
$D_{Committee}$	–0.063	–1.21	–0.196	–1.82*	0.027	0.50
	(0.052)		(0.108)		(0.053)	
$D_{Meetings}$	0.035	0.44	0.086	0.61	–0.002	–0.03
	(0.080)		(0.140)		(0.091)	
$D_{ExitInterview}$	–0.082	–1.73*	–0.249	–2.80**	0.044	0.92
	(0.048)		(0.089)		(0.048)	
Constant	0.522	4.52	0.359	1.76	0.413	3.07
	(0.116)		(0.204)		(0.134)	
Adj R^2	0.207		0.202		0.115	
n	69		26		43	

Note: Standard errors in parentheses. Statistically significant at ***p<.01 level; **p<.05 level; *p<.10

Career and Compensation Schedules or Lattices

As mentioned earlier, compensation ladders are used to determine the wage and rank of employees. Among the high-unemployment group, the coefficient estimate for a program reporting use of such a ladder is statistically significant at the 0.05 level, and is associated with an average reduction in turnover of 16.3 percentage points (right-hand side of table 16). While management may appear to have the upper hand in a high-unemployment market, both sides of the labor relationship bear costs. For example, on National Public Radio's *All Things Considered*, Laurie Bienstock of Watson Wyatt Worldwide stated that over time replacing staff is three times more expensive than keeping existing workers[4].

By contrast, the coefficients for career lattices, grievance procedures and staff meetings are positive and not statistically significant in the low-unemployment group.

This indicates that under favorable employment conditions for workers, these voice aspects are not associated with teacher turnover.

Grievance Procedures

Focusing on Equation 6.4, fair and consistent use of established grievance procedures is estimated to lower teacher turnover by 10.2 percentage points, though it is not statistically significant. However, with annual turnover in child-care programs of 30 percent reported, a 10 percentage-point reduction is economically significant.

In the high-unemployment group, the coefficient estimate for formal grievance procedures is negative 13.5 (second highest reduction) and statistically significant at the 0.10 level. Programs with this process in place, as with the career lattice, benefit from lower turnover and a more stable workforce at their programs.

Empowered Committee Participation

Programs that utilize committees with a mix of staff and management to make workplace decisions can be a method for people to communicate across hierarchical lines. The negative coefficient of 6.3 percentage points for the practice of inclusive and empowered committees (Equation 6.4) is associated in this data set with a desirable effect on turnover. Also note that the coefficient for this variable in Equation 6.5 (consisting of observations in low-unemployment regions only) is associated with a larger reduction in turnover, 19.6 percentage points, and is statistically significant at the 0.10 level. Thus even when teachers view their external job prospects as good, implementing this practice may prove beneficial to managers who hope to deter teachers' voluntary departures.

Staff Meetings

The positive coefficient estimate of 3.5 percent for productive staff meetings on the left side of table 16 implies that this voice aspect is associated with a small though undesirable increase in turnover. Consistent with the coefficients shown in table 15, staff meetings are not associated with lower turnover in this data. As discussed earlier, the view of what is productive varies, and these meetings may be perceived as a waste of time.

Exit Interviews

Conducting exit interviews when a staff person leaves provides feedback to management and an opportunity to reconsider what may or may not be working at the workplace. The overall negative coefficient of 8.2 percent is statistically significant at the 0.10 level. Using Equation 6.5, the expected change in teacher turnover among programs in the low-unemployment group that conduct exit interviews is a 24.9 percentage-point reduction (statistically significant at the 0.05 level). This practice among programs facing a competitive employment market is associated with the largest decrease in average turnover of the independent variables in table 16. Likewise, recall that in non-union programs, exit interviews are statistically significant and associated with the second largest reduction in turnover (table 15). This is interesting, because exit interviews often are not viewed as an opportunity for workers and management to communicate; yet the practice in these different workplaces seems to reduce voluntary exits.

Different Environment, Different Response

Unemployment matters, and it appears that the use of voice aspects vary in different labor market conditions. For example, if management is facing a competitive employment market and unable to raise wages, my results suggest that empowered committee participation and exit interview protocols are worth considering in order to retain teachers. On the other hand, in a region with high-unemployment, career and compensation ladders and grievance procedures are associated with lower teacher turnover. In a market with many job seekers, these voice aspects are associated with reductions in turnover larger than for any of the other voice aspects tested. This may be because in a region with high unemployment, a career lattice and formal grievance procedures are tangible and measurable practices that can affect wages and/or titles over time. Whereas in regions with low unemployment, wages may be competitive across programs, and therefore workplace culture and daily practices such as decision-making committees and exit interview practices play an important role in distinguishing programs. Detailed wage data over time could clarify this.

Decision-making committees and exit interviews are associated with low-turnover programs in both workplace comparisons when turnover is often high, i.e., among non-union programs or in regions with low-unemployment. As shown earlier in table 15, the use of empowered committees or exit interviews in programs without a CBA is associated with the largest reductions in teacher turnover. While these two voice aspects are not associated with lowering turnover for programs in the high-unemployment group, they are associated with statistically significant turnover reductions for programs in the low-unemployment group.

More is better

This section began with a focus on my second research question: how voice differs in nature and quantity across different types of workplaces. The above comparisons show that there is difference in the use, or nature of voice in different workplaces. What about quantity?

Recall that I proposed that there is more evidence of consistent use of voice by workers and management in unionized programs. Table 17 is a summary of the number, or quantity of voice practices and associated turnover-rate distributions by unionization status. Union shops report more aspects or practices of voice than non-union shops. For example, 72.7 percent of union programs report 4-5 voice practices in use compared to only 52.8 percent of non-union shops.

Table 17: Turnover Distribution by Quantity of Voice Aspects

			TURNOVER Percent			
Aspects n	Programs n	Percent of programs	1st quartile	2nd quartile	3rd quartile	4th quartile
ALL PROGRAMS						
	69	100.00 %	11.44 %	20.00 %	36.93 %	100.00%
0-1	0	0	0	0	0	0
2-3	26	37.68	18.18	34.85	50.00	100.00
4-5	43	62.32	9.09	14.29	25.00	63.64
NON-UNION						
	36	100.00	14.29	22.25	40.00	100.00
0-1	0	0	0	0	0	0
2-3	17	47.22	25.00	40.00	57.61	100.00
4-5	19	52.78	9.09	14.29	21.43	40.00
UNION						
	33	100.00	6.90	17.39	30.95	63.64
0-1	0	0	0	0	0	0
2-3	9^	27.27	3.57	25.00	32.47	42.86
4-5	24	72.73	7.27	16.20	31.25	63.64

Note: ^Given the small number of observations (9), these quartile estimates may not be accurate.

Another pattern that emerges from table 17 is that with more voice practices, turnover rates for both union and non-union programs are lower at most points in the distribution and consistently at the 2nd and 3rd quartile. For example, in the 2nd quartile the turnover rate for non-union programs with 2-3 (few) voice practices is 40 percent while for programs with 4-5 (several) voice practices, the turnover rate is quite a bit less, 14.29 percent. This is a large difference between programs in the low verses high voice-practices categories. The addition of one or two voice practices reduces the turnover rate by more than half. At the first quartile for non-union programs for example, turnover goes from 25 percent to 9.09 percent, a 64 percent drop, with the addition of a fourth voice practice.

Nearly three-quarters of the union programs report 4-5 voice practices in use. While the size of the decrease in turnover for non-union programs is larger across the distribution when going from the "few" group (2-3) to "several" (4-5) voice practices, the small number of union programs (9) that report 2-3 aspects begin with much lower turnover than non-union programs reporting 2-3 aspects. The patterns that emerge from table 17 provide strong evidence for my hypothesis that voice is more common in unionized programs.

Relationship between Turnover and Voice

The final research question asks what the statistical relationship (correlation) between teacher turnover and voice is, and how this relationship may vary across workplaces.

I proposed that there is a negative relationship between turnover and voice. As aspects of voice in the workplace increase, teacher turnover decreases. Table 17 showed

this to be true from a simple counting approach but says nothing about the statistical relationships. In chapter 3, I proposed three aspects or products of voice are present when teacher turnover is lower than the state's industry average: a signed CBA; a formal grievance procedure; and a career and compensation lattice or schedule. As has been shown, career lattices are not significant with regard to turnover in this data set. However, both the CBA and grievance procedure practices seem promising for further analysis.

Effects of Voice, Union status and Wages

Table 18 reports the results of nine OLS specifications where the dependent variable is the teacher turnover rate and the independent variables are union status, teacher average wage, unemployment and three aspects of voice that stand out from earlier analyses. These specifications expand on those in table 9 by including unemployment and voice. (I have included the results of specifications 1, 2 and 3 from table 9 in table 18 for reference.)

Voice

Specification 4 of table 18 is a multivariate regression of the turnover rate on three aspects of voice without controls for the confounding effects of union status, wage or unemployment. These voice variables are statistically significant at the 0.05 level or better. The coefficients indicate a negative relationship to turnover. For example, the coefficient estimate for grievance procedures is associated with a decrease in teacher turnover of 16.9 percentage points when controlling for other aspects of voice. Grievance procedures consistently show the most significant effect of all the independent variables tested in table 18.

Union status and Voice

Specification 5 is a regression of teacher turnover on union status and the same aspects of voice, allowing a test of whether lower turnover is related to union status when including voice. This coefficient for union status, though not statistically significant, indicates that unionization is associated with a decrease in teacher turnover of 6.2 percentage points. There is little change between specifications 4 and 5 in the statistically significant voice coefficients.

Wage and Voice

Specification 6 is similar to specification 5 except it replaces union status with teacher average wage, regressing turnover on wage and voice. The voice coefficients vary little and remain statistically significant. The wage coefficient indicates a small effect on turnover of roughly one percentage-point per dollar of wage regardless of regression, i.e., specifications 2, 3, 6, 8, or 9.

Table 18: Regressions of Turnover on Union, Wage, Unemployment and Voice

Specifications *from Table 9*	**[1]**	**[2]**	**[3]**
VARIABLE	Est. Coef. (Std. Error)		
UNION STATUS	–0.083 (0.044)*	--	–0.086 (0.045)*
AVERAGE WAGE	--	0.006 (0.012)	0.008 (0.012)
Adjusted R<2>	0.036	–0.012	0.029

Specification	**[4]**	**[5]**	**[6]**	**[7]**	**[8]**	**[9]**
VARIABLE	Est. Coef. (Std. Error)					
UNION STATUS	--	–0.062 (0.041)	--	--	–0.068 (0.041)	–0.046 (0.041)
AVERAGE WAGE	--	--	0.014 (0.011)	--	0.016 (0.011)	0.016 (0.011)
HIGH UNEMPLOY-MENT	--	--	--	–0.104 (0.043)**	--	–0.094 (0.044)**
GRIEVANCE PROCEDURE	–0.169 (0.061)***	–0.160 (0.061)**	–0.182 (0.062)***	–0.148 (0.060)**	–0.174 (0.061)***	–0.158 (0.060)**
DECISION COMMITTEE	–0.094 (0.043)**	–0.096 (0.043)**	–0.101 (0.043)**	–0.068 (0.043)	–0.104 (0.043)**	–0.080 (0.043)*
EXIT INTERVIEW	–0.093 (0.042)**	–0.083 (0.042)*	–0.093 (0.042)**	–0.077 (0.041)*	–0.083 (0.042)*	–0.073 (0.041)*
Adjusted R<2>	0.167	0.183	0.174	0.226	0.196	0.240

Notes: Results are not weighted. n=69
Significant at ***p<.01 level; **p<.05 level; *p<.10 level

Unemployment and Voice

Specification 7 replaces union status with unemployment group, regressing turnover on unemployment and voice. The unemployment coefficient indicates that operating in a high unemployment area is associated with a 10.4 percentage-point decrease in turnover when controlling for voice. Only in this specification is one of the voice aspects not statistically significant.

Union, Wage and Voice

Specification 8 regresses turnover on union status controlling for average wage and three aspects of voice. The coefficients for union status and wage are similar to those in specifications 5 and 6, showing that when wage is included the associated effect of union status on turnover changes less than one percentage point (–6.2 to –6.8). Again, all the voice aspects are statistically significant with grievance procedures associated with a 17.4 percentage-point reduction in turnover even when controlling for the other effects.

Union, Wage, Unemployment and Voice

Specification 9 regresses turnover on all variables listed in table 18. The unemployment group, grievance procedures, committees and exit interviews are each statistically significant. With coefficient estimates between –7.3 and –15.8 percentage points, the voice aspects are associated with desirable reductions in teacher turnover even when controlling for unionization, wage and unemployment climate.

Recall the regression results in table 9 (shown again in table 18, specifications 1 through 3) that used the same dependent variable with union status and teacher average wage as the only independent variables. Specification 3 indicated that when controlling

for wages, union status was statistically significant and associated with an 8.6 percentage-point reduction in turnover per dollar of wage (t = –1.94). When controlling for voice in specification 5, union status losses some of its effect and significance (t = –1.51). This may be due to the CBA, which as noted earlier typically incorporates aspects of voice. When also controlling for wages and unemployment as in specification 9, the union effect is still associated with a 4.6 percentage-point reduction in turnover (t = –1.10). Unionization lowers turnover rates, but as the evidence suggested in the previous chapter, other factors are also significant.

I acknowledge that some of the coefficients for union status are below conventional levels of statistical significance. However, a 4.6 percentage-point reduction is economically desirable in this market, considering Massachusetts' ECE teacher turnover rates are typically 29 percent annually regardless of unemployment rates. A reduction of nearly 5 percentage points is a measurable difference for these programs and offers a way to lower turnover.

Conclusion

This chapter looked at different program types, voice, and relationships to teacher turnover. Many programs utilize the voice aspects tested, with more than 80 percent reporting career lattices, formal grievance procedures, or paid staff meetings as part of program policy (shown in table 12). Exit interviews stand out as a disproportionately union practice while the less common joint committee participation is more often reported in non-union programs.

Work practices do affect teacher-turnover rates in child-care programs. When turnover is regressed on voice aspects, grievance procedures, empowered committee

participation and exit interviews are statistically significant. Committee participation and exit interviews are associated with desirable reductions in turnover, especially among non-union programs and programs in a region with low unemployment.

It is clear that voice differs across workplaces. Geographically comparing programs based on regional unemployment rates produced some interesting results. Contrary to the results found in regions with low-unemployment, career lattices and grievance procedures are associated with low-teacher turnover in regions with high-unemployment where there are typically more applicants than job openings.

Union shops report more aspects or practices of voice than non-union shops. Results indicate that with more voice practices, turnover rates for both union and non-union programs are lower.

Some non-union work sites adopt individual aspects of voice through good management policies. Career and compensation lattices are the second most reported voice aspect by union programs and the third most reported by non-union programs (see table 12). Perhaps the high use of this voice practice (and others) inhibits the ability to separate them from the effects of a CBA, which builds in many voice aspects.

Finally, I find a negative statistical relationship between labor's voice alternatives to quitting and turnover. When controlling for voice and wages, the associated effect of union status is a 6.8 percentage point reduction in teacher turnover. In a high-turnover industry, many managers would welcome this reduction in exchange for allowing their workers some voice. Even when also considering a high unemployment climate, the associated effect of union status is 4.6 percentage points in the desired direction.

The education literature tells us lower turnover improves the quality of education and care received by children, and provides numerous future social and economic benefits. My results add to the literature that identifies improved compensation as crucial to lowering turnover by showing that working conditions are relevant to turnover rates. Labor-management agreements, joint committee participation and exit interviews can improve turnover rates, benefiting teachers, programs and children. In the next and final chapter, I'll consider my results in a broader context.

Notes

[1] Unemployed persons are defined as 16 years and older who had no employment during the reference week, were available for work, except for temporary illness, and had made specific efforts to find employment sometime during the 4-week period ending with the reference week. Persons who were waiting to be recalled to a job from which they had been laid off need not have been looking for work to be classified as unemployed.

[2] U.S. Department of Labor, Local Area Unemployment Statistics Massachusetts, http://data.bls.gov/cgi-bin/surveymost?la+25 The regional labor area unemployment measures are not seasonally adjusted. The *Metropolitan NECTA* (New England City and Town Area) classification is considered more accurate for Massachusetts than the *MSA* (Metropolitan Statistical Area) classification. For county unemployment rates see: http://data.bls.gov/map/servlet/map.servlet.MapToolServlet?state=25&datatype=unemployment&year=2003&period=M09&survey=la&map=county&seasonal=u

[3] Counties with ECE observations in EOHHS Region 1: Berkshire, Hampshire, Hampden; Region 2: Worcester, Norfolk; Region 3: Essex, Middlesex; Region 4: Middlesex, Plymouth, Norfolk; Region 5 Bristol, Plymouth, Barnstable; Region 6: Suffolk.

[4] *All Things Considered*, "Some Companies Stay Firm To No-Layoffs Pledge," January 9, 2009. http://www.npr.org/templates/story/story.php?storyid=99175009 (audio accessed July 3, 2009).

CHAPTER 7

RECENT DEVELOPMENTS AND A POSSIBLE FUTURE

Parents can't afford to pay,

Teachers and providers can't afford to stay,

Help us find a better way

(Worthy Wage Campaign Jingle, 1992).

In this chapter I review my findings and the project's contributions, discuss lessons learned, detail some recent developments, and close with future possibilities.

Summary of Empirical Findings

Albert Hirschman's theory of exit, voice and loyalty demonstrates how workers or members of a group can draw attention to problems and initiate processes to solve them. In the private sector when workers are unionized, voice is a group of established mechanisms for workers and management to communicate directly about working issues, usually specified in a collective bargaining agreement. In child-care programs that are not unionized, human resource and management policies may provide opportunities for voice.

The aspects of voice I studied in this dissertation are:

CBAs that require negotiations with representatives from both sides of the labor relationship;

Grievance and arbitration procedures that formalize a process for appealing supervisor decisions and demands;

Committees and meetings structured to include and empower both labor and management to seek solutions cooperatively;

Exit interviews conducted by management to inform future decisions; and

Career lattices that describe clear advancement opportunities and rewards for commitment and skill improvements.

My model of voice and exit (figure 3.1) identifies connections between these aspects of voice, union status and/or management policies, compensation and turnover.

Program-level

My Massachusetts results indicate that compared to non-union programs, unionized programs:

Employ more staff per child;

Pay higher wages;

Serve a higher percentage of state-subsidized children; and

Have lower rates of turnover.

Less than 15 percent of union programs experienced turnover in 2003 greater than the state's industry average of 29 percent, compared to nearly 40 percent of the non-union programs. Union quit rates averaged nearly half that of non-union programs (11.4 percent vs. 20.5 percent). This difference in quit rates and total turnover rates are both statistically significant at the 0.05 level.

Hypotheses

Results drawn from the ECE director and teacher surveys confirmed my hypotheses, with one exception.

1. The presence and type of worker voice is associated with turnover rates in ECE programs.

When turnover is regressed on voice aspects in the data set, grievance procedures, joint committee participation and exit interview protocols are statistically significant. Among non-union programs, joint committee participation and exit interviews are statistically significant and associated with desirable reductions in turnover. This is true for programs in regions with low unemployment as well. When turnover is regressed on voice controlling for union status and the wage, grievance procedures, joint committee participation and exit interviews are statistically significant. Contrary to my hypothesis, career lattices are only statistically significant in this analysis for programs in high-unemployment regions, where turnover is suppressed already by exogenous factors.

2. There is more voice in unionized than in non-unionized programs, with 73 percent of unionized programs reporting four or more voice practices in use compared to only 53 percent of non-union programs as shown in table 17. My results indicate that as the number of voice practices increases, turnover rates decrease for all programs. In addition, the aspects of voice that are significant to turnover vary depending on the current exogenous employment conditions for the program.

I found that both non-union programs and programs in low-unemployment regions have higher turnover than their comparison group. Even in a tight labor market, ECE wages may vary little across programs. In this case, it is unlikely that management can stop teachers leaving the ECE field (referred to as occupational turnover).

However, program culture and daily practices such as joint decision-making committees and exit interviews can play an important role in distinguishing programs. As such, the use of voice may help managers keep their teachers from jumping to another position within the ECE field (job turnover). Data on where teachers go when they leave could provide a basis for refining this explanation.

In regions with high unemployment, career lattices and formal grievance procedures are associated with relatively large reductions in turnover compared to the other voice aspects I tested. Career lattices and formal grievance procedures are tangible and measurable practices that can affect wages and/or job titles over time. These policies help create a positive program climate that counters the negative atmosphere typical when there are more job seekers than job openings.

3. I found a statistically significant negative relationship between turnover and voice that varied little across types of ECE workplaces.

When I regressed turnover on three aspects of voice (grievance procedures, joint committees and exit interviews) without controls for the effects of union status or wage, coefficients for all three voice variables indicated a statistically significant negative relationship to turnover at the 0.05 level or better.

When turnover is regressed on union status controlling for wages, the higher union average wage does not dissipate the significance of unions, yet the evidence suggests non-wage factors also play a role. When controlling for both wage and the three aspects of voice significant above, voice remains statistically significant, and the associated effect of union status is a 6.8 percentage-point reduction in turnover. While not statistically significant, I believe ECE managers would welcome a nearly seven

percentage-point reduction in exchange for allowing more worker voice, given the typical levels of turnover (and turmoil) to which they are accustomed.

Agreement between Labor and Management?

In addition to these three hypotheses, I explored the issue of labor-management disagreements. Surveying both sides of the labor relationship gave me a better picture of working conditions at a program. It also gave me an opportunity to compare the rate of disagreement in these relationships. Overall, when responses from a director and teacher at the same program are compared, the teachers report the presence and effective use of voice aspects less than directors. If at least the director or teacher reports the use of a voice aspect, turnover is lower, though not always significantly, than when they agree there is no voice (Group IV), for all aspects except staff meetings.

The differences in turnover rates between director-teacher matches that agree either a career lattice, formal grievance procedures or exit interview protocols exist, and those that agree the aspect does *not*, are statistically significant and indicate these practices are associated with lower turnover. When in disagreement, turnover is lower when the teacher perceives there is voice than when the teacher sees no voice.

I found that what the director states does not matter with regard to turnover rates when their teacher perceives career lattices in place, joint committees able to make change, or exit interviews conducted. Also, if the teacher thinks staff meetings are unproductive, the director's view on these meetings matters not to turnover outcomes. With these four aspects of voice, teacher turnover rates are similar (within 3 percentage points) regardless of director response.

Where employee dissatisfaction is high, for whatever reason, perception of voice is low. Some of this dissatisfaction is seen in higher turnover rates. These results support my premise in chapter 5 that employees' feelings about work are important and need to be considered, especially when studying voluntary-turnover issues.

My focus on voice and its relationship to turnover contributes to a better understanding of where and why turnover rates differ in ECE workplaces. These findings provide methods and practices worth considering to reduce turnover rates. The results are relevant and informative to economists and others beyond the academic community. State and federal policy-makers and child-care professionals are invited to use these findings and consider workers more in their organizing and policy analyses.

Methodological Lessons

This dissertation taught me a lot, as it should. Next time I conduct such a project there are some things I will do differently. With regard to sampling, matching non-union and union programs by size and legal status (type) as well as geography would produce a better comparison group than the geographic matching done here.

Another concern is response rates. While critical to both legitimacy and results, I would spend less time collecting data since after the second month, the marginal benefit (receipt of another survey) did not equate to the marginal costs in time or money of an additional observation. I could not survey more unionized programs since my union sample was the population. However I could increase the non-union sample though it would reduce the union percentage in the data set and naturally increase costs.

What I learned in the process of cleaning and coding the data will significantly improve the timeliness and detail of future research. More enlightened decisions

concerning variable coding and indices creation, for example, will enhance future analysis and elucidate outcomes.

Other research has demonstrated, and conventional wisdom supports, that wages are significant to the hiring and retention of workers. However, in my results this is not borne out. Recall from table 18 that the coefficients for wages are 1.6 percentage points or less, indicating practically no effect on turnover rates. This is a conundrum.

My wage variable is the mean of each programs' average wage for teachers. This variable does not do a good job of explaining turnover. There is a lot of variation in wages within and across programs. The variable does not capture differences in the range of teachers' wages or distinguish the implications of a wage distribution tied to years of service. While the survey asked for high, average and starting wage levels for teachers, it did not ask how many teachers were in each category, or the wages of those who quit or those who have been at the program for many years. Also many directors did not provide the three wage levels for each staff position. The difference in average wage for union teachers and non-union teachers in this data set is only $0.42 per hour (table 6). The difference in average wages of those quitting and those remaining at a given program could be greater than this. Therefore, my wage variable is probably not a good proxy for testing the significance of teachers' wages on turnover among these programs. I must incorporate a more accurate wage variable in future work through better data collection and/or better variable definition.

Future Research Questions

I believe the surveys ask relevant and useful questions. Some questions could be refined, limiting possible misinterpretations. The number of questions could be reduced,

although I now have a wealth of information for future study. For example, I can study whom the teachers and directors are, their contracts or written procedures submitted voluntarily with their surveys, or why people quit. Results from further study of this data could add to, clarify, substantiate, weaken or not relate to my present results.

It is worth testing for other relationships in the model such as a relationship between more worker voice and better management. As Hirschman (1970) notes and I would hypothesize, worker voice can improve management behavior both by shining light on a problem and suggesting or initiating improvement strategies.

I see and experience voice in action in my workplace at the university. My survey respondents described voice in action at their programs in their answers to the survey questions. Voice is a construct, a theory that I operationalized through the identification of related aspects and practices that may be present in a workplace. I believe voice exists and can be measured as I have done in this project, and possibly in other ways as well. It is a useful concept in uncovering possible motivations and outcomes of actions or policies in a group with unequal and overlapping power. Voice is not a definitive one-size-fits-all gadget, but rather a collective process with a wide scope of practicality and possibility specific to those involved. Whether a "voice-filled" institution is more successful than a non-voice-filled institution depends on how success is defined. In this project, I defined success narrowly, as lower turnover. The unions in my data are "voice-filled" institutions and more successful than the non-union programs with less voice. Is this true elsewhere?

Of the five aspects and products of voice I studied, two (career lattices and staff meetings) do not matter to turnover in this data, though there was little variability in the

percentage of observations that did and did not report using them. Grievance procedures reported in more than 85 percent of programs were statistically significant in many regressions. Joint empowered committees, used more by non-union programs, and exit interviews, more by unions, were statistically significant in more analyses than other aspects. However, they were reported present by fewer observations (table 12). How would greater variability in the use of the other voice aspects change the results? A larger sample size and/or additional voice variables might elucidate this issue.

Recent Developments

My research is consistent with what others are doing. At least two-thirds of state legislatures are debating ECE costs, merits, access, quality, quantity, capacity and workforce issues. As discussed in chapter 2, several states administer marginally successful wage-supplementation programs (U.S. Child Care WAGE$ Project) to encourage teachers to gain more education and stay in the field. Thirty-one states have established core competencies, areas of skills, knowledge and understanding necessary to provide high-quality care. Twenty-nine states have implemented career ladders, and 26 have established standards for training (Marshall et al. 2005). In early 2009, Washington passed the Quality Child Care Bill which allows "child-care directors and workers to collectively bargain with the state over matters within the state's purview to improve the quality of child care for Washington families" including subsidy rates (Center for the Child Care Workforce March 2009).

Other organizations are studying the problem. The National Association for the Education of Young Children has developed five standards for the preparation of ECE professionals. These comprehensive standards are what NAEYC believes "tomorrow's

teachers should know and be able to do." The standards state that well-prepared early childhood professionals should have extensive knowledge of child development and how to apply it, along with recognition of the range and influences of culture, economic conditions, health and learning styles on development; value all families and communities and create respectful reciprocal relationships; understand and use effective assessment strategies to influence child development and learning; use developmentally effective teaching strategies in appropriate subjects; and identify themselves as early childhood professionals who adhere to high ethical standards, demonstrate self-motivation, collaboration and continuous learning, advocate for children and families and "cultivate their role as professionals doing critical work" (National Association for the Education of Young Children 2006).

Massachusetts

In 2005, the Massachusetts legislature created the nation's first board and consolidated state agency, the Department of Early Education and Care, to be responsible for all aspects of care and education for the state's youngest residents. DEEC works to improve ECE quality, accessibility and affordability.

Massachusetts Governor Deval Patrick, noting early education's positive fiscal impacts, was one of 16 in the country who proposed increasing pre-k funding for FY09. Despite a $1.2 billion deficit in Massachusetts, Patrick proposed a 22 percent and the legislature agreed to an 11 percent increase in the state's pre-k investment. Among other line items, this increased funds for early childhood professional development (Pre-K Now April 2008, September 2008). Patrick also moved the state closer to his pre-k-through-20 vision for education. This is a lot of money, especially in difficult financial

times. It shows commitment and an understanding of where pre-k belongs in a more complete educational system.

In July 2008, the legislature passed and Patrick signed a second bill, *An Act Related to Early Education and Care*, to enhance DEEC's original enabling statute. It covers a broad range of programs and initiatives, including continued development of the Massachusetts Universal Pre-Kindergarten Program (UPK), program quality standards and developmental benchmarks, educational evaluation tools and a performance measurement system. It requires implementation of a regional coordination system and adds new licensing responsibilities to DEEC. Under workforce development, the law requires DEEC to facilitate professional development of the ECE workforce by providing for training programs and professional development (in English and other languages), establishing ways to recognize and reward educational advancement, and requiring core competencies in training be aligned with approved program quality standards (Early Education for All January 2008, July 2008).

Although this workforce development system is in the initial stages, there are initiatives and pilots across the state upon which the coordinated plan hopes to build. A multi-million dollar scholarship program (Early Childhood Educators Scholarship Program) to help ECE workers pursue higher education degrees has been part of the FY06, FY07 and FY08 state budgets. The Massachusetts Board of Higher Education's Early Childhood Transfer Compact between public university, state and community colleges enhances the scholarship program by guaranteeing students who complete compact programs at community colleges consideration for admission to teacher education programs at four-year schools and transfer of credit for all core-requirement

courses passed (Early Education for All January 2008). These two efforts provide funding and begin to tackle the lack of capacity to prepare and train early childhood professionals in the higher education system.

Clearly, legislatures, governors and others believe children's successful early learning is dependent upon a prepared and qualified early childhood workforce. Understanding some of the practical and personal constraints these workers face, programs specifying what credentials must include and aiding workers in acquiring these enhanced skills and knowledge is in society's best interest. I agree that a more qualified workforce is necessary to improving the quality of ECE children receive, but it is not sufficient.

Most workforce development efforts in this field are focused at the individual level, implying that properly educating the teacher, director and state licensing staff will solve the workforce problem. Staff members are accepting this challenge, enrolling in college while maintaining their employment in ECE. In Massachusetts, more than 1,900 ECE scholarships have been awarded since FY06 (Early Education for All November 2008). However, these educational initiatives will not succeed in a vacuum. More money and support for professional development will not transform the majority of programs supplying low-quality care into programs delivering high-quality care. A revolution at the industry level is required for such change.

In the short-run, professional development initiatives will increase the pool of qualified candidates and lower turnover due to the tenure requirement conditions of participation. Care and education provided by these educated and experienced teachers completing their "tour of duty" will be improved. But with better qualifications and

work requirements fulfilled, many teachers will leave this unrecognized, physically and emotionally demanding work for better-paying jobs with more benefits and better hours. Few who meet the NAEYC standards will be willing to work for $12 an hour.

Unfortunately, like many states, Massachusetts has not sufficiently addressed the issues of worker voice and pay. The changes under way and under consideration are too small and not sweeping enough to solve the problem.

My research shows that giving workers voice can have a desirable effect on tenure. In addition, as Brandon and Martinez-Beck's (2006) research indicates, a much larger increase in ECE teacher pay than any existing initiatives include is necessary for the field to be competitive in a labor market of qualified workers, at least under any labor market conditions we have experienced thus far.

If such a pay increase came or was mandated by government, it would cause a revolution in the industry, since improved wages are only a piece of the puzzle. Better-compensated teachers would need better qualifications, additional licenses, greater career commitment, respect from others including education professionals, and greater voice as others seek to hear what ECE professionals have to say about child development and working in ECE. If a widespread pay increase came from the firm level, it could be an outgrowth of a revolution initiated in the field, possibly with workers withholding their labor power, working collectively and giving voice to their needs and conditions.

Future Possibilities

Qualified child-care professionals need more reasons to stay in the field, including more money in their pockets, a professional work environment with

communication and decision processes appropriate to the education and experience teachers are asked to bring to the job, and a stable revenue stream that encourages long-term investment in quality ECE for all stakeholders.

An ECE labor market where competitive compensation reflects the experience and education of labor is a necessary and practical goal. The large amount of funds allocated annually to k-through-12 public education puts the present funding for pre-k into shameful perspective. Billions of federal and state dollars are allocated through programs, grants and bills to support and improve k-through 12 education, covering, for example, low-performing schools, quality improvements, students with disabilities, teacher education and loan forgiveness, data and technology systems, child outcome assessments, standards development, school construction and accreditation, plus partnership grants and access to U.S. Treasury bonds.

Like kindergarten teachers before them, pre-k workers must be wholly brought into the system, recognizing their present and future contributions as equal with elementary and secondary education.[1] Only then there will be a predictable revenue stream and comparable compensation for early childhood teachers.

The Power of Bargaining

Both public policy intervention and collective action can improve the efficiency of market outcomes by empowering workers. The legislation in Massachusetts that created the DEEC was an outgrowth of an ongoing community organizing campaign, *Early Education for All* by Strategies for Children Inc.

In California, initiatives to win better compensation were hindered by the lack of organization affiliations among ECE workers, so advocates developed a Child

Development Corps under C.A.R.E.S. (Compensation and Recognition Encourage Stability) to create a group affiliation for workers for advocating, organizing and professional development. This led to more involvement by organized labor, resulting in the C.A.R.E.S. legislation co-sponsored by the California State Labor Federation (Whitebook and Eichberg 2001).

Historically, unionization has been associated with the manufacturing industry in the United States. However, by 2006 the union presence in the service sector was greater than that of manufacturing; this was so in 2007 and 2008 as well (Schmitt and Zipperer 2007).

Recall from chapter 3, Freeman and Medoff (1984) found that unionization raised wages and greatly reduced the exit behavior of workers paid the same wages. In addition, unionization had a larger effect on tenure in the service industry than in manufacturing or construction. A 2009 report from the Center for Economic and Policy Research, "Unions and Upward Mobility for Service-Sector Employees" (Schmitt), shows that these effects remain. CEPR found that unionization raises the wages of the typical service-sector worker by 10.1 percent and increases the likelihood that a service sector worker will have health insurance and/or a pension in comparison to their non-union peers. For employees in the 15 lowest-paying occupations of this sector, including child care, unionization raises wages even more, by 15.5 percent. The likelihood of having health insurance and/or pension benefits also was greater than for the typical service-sector worker (Schmitt 2009). My results regarding Massachusetts' child-care unions concur.

This is not surprising, since workers in low-paying occupations typically have little bargaining power and therefore more to gain by bargaining collectively. Child-care workers initiated the movement for worth wages in the early 1990s. However, most ECE workers are not represented by a CBA or members of a work-related organization. Therefore, they most likely have not been represented in the planning or initiation of policies attempting to meet their needs. My findings show that with collective bargaining, ECE workers earn more, are more likely to have health insurance associated with their jobs and experience lower turnover.

The combined need of unions for new members and child-care advocates for effective strategies to increase public and private investment in child care has encouraged organizers to take a closer look at the industry, including Head Start, center-based and home-based child care. Nationally, SEIU is organizing family child-care providers. This is a difficult labor force to organize because these workers, who are self-employed, work out of their homes as small businesses. By the beginning of 2009, more than 90,000 family child-care providers had joined SEIU *Kids First*.

Only eleven states allow these independent workers the right to form a union. Despite the failure of ballot question 3 in 2006, SEIU Local 888 continues to work with Massachusetts family child-care providers to help them earn the right to form a union for better working conditions.

While pushing for increased public financial responsibility of ECE, organizing to improve working environments can be successful at the program and community level. My work joins the extensive literature that shows unions and organized employee associations in many sectors have a positive economic impact, including raising wages

and benefits of union and non-union workers, increasing productivity, reducing income inequality, reducing worker turnover, and increasing the retention of firm-specific skilled employees (U.S. Congress 2009). It seems clear that real change from government is unlikely unless policymakers feel a strong movement of constituents on the ground demanding they be heard and involved.

As discussed in chapter 2, the peaks and valleys of the business cycle over the last 30 years have not significantly altered the trends in ECE demand or turnover. Despite the uncertain economic future, the issues and concerns surrounding ECE and her workers are unlikely to diminish. As more work is done on this issue, the public will become better educated and able to recognize quality ECE. Hopefully this will foster an understanding of the vital education and dedicated service provided by those we pay to care for our youngest citizens.

I hope my findings aid in creating more comprehensive workforce development programs that not only improve individual qualifications but also provide workers with what they voice necessary to stay, and care for and educate children well.

Notes

[1] It took kindergarten teachers nearly 100 years to become considered the equals of public school teachers (Barbara Beatty 1995).

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