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## EMPLOYMENT RESEARCH

## Better Incentives Data Can Inform Both Research and Policy

Timothy J. Bartik

## ARTICLE HIGHLIGHTS

■ *Incentives tripled from 1990 to 2015, increasing from 9 percent of state/local business taxes to 30 percent.*

■ *Incentives often vary by a factor of 2 or 3 to 1 across nearby states, for no clear economic reason and with no obvious economic consequences.*

■ *States underinvest in customized business services and overinvest in tax incentives for low-wage businesses and long-term incentives.*

In March 2017 the Upjohn Institute released a new, publicly accessible database on economic development incentives, which are those offered by state and local governments as their “usual deal” to entice a business to locate a new facility. (The database is housed on the Upjohn Institute’s website: [www.upjohn.org/models/bied/home.php](http://www.upjohn.org/models/bied/home.php).) These incentives include property tax abatements, job creation tax credits, investment tax credits, and R&D tax credits. They also include customized job training programs, under which community colleges provide a new facility with training for new workers that is customized to the facility’s needs.

No other study of incentives is as comprehensive in covering diverse industries and lengthy time periods. Using data from 1990 to 2015, the “Panel Database on Incentives and Taxes” estimates marginal business taxes and business incentives for 45 industries in 33 states; the industries compose 91 percent of U.S. labor compensation, and the states produce over 92 percent of U.S. economic output. The database has data for a new facility starting up in each of 26 “start years.” Compared to prior studies, the new database provides more incentive details, such as how incentives are broken down by different incentive types (e.g., job creation tax credits vs. property tax abatements), and the time pattern by which incentives are paid out over a facility’s life cycle.

The purpose of this new database is to help researchers and policymakers learn more about incentives and their effectiveness. Without knowing how different incentives vary over time and across industries for different states, it is impossible to conduct any meaningful incentives research or to subject incentives to any informed public debate. Do incentive differences across states, industries, or time lead to any significant effects on an industry’s growth in a state? Do incentives allocate more U.S. growth to needier areas or to industries that might boost national

productivity? Without incentives data, such questions cannot begin to be addressed.

In addition to being downloadable, the database is analyzed in an accompanying report (Bartik 2017) that focuses on 31 “export-base” industries, which are those that sell their goods and services outside the state but not necessarily outside the country. Such industries provide the base for a

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**The typical state does little industry targeting—for example, higher-wage industries do not receive significantly higher incentives.**

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state’s economy by bringing new money into the state. This article highlights the main findings in the report.

**Incentives are Large Compared to State and Local Business Taxes but Modest as a Share of Overall Costs**

Incentives for the average state’s base industries in 2015 offset around 30 percent of what otherwise would be charged in state and local business taxes. Incentives play a significant role in state and local taxes and budgets.

On the other hand, incentives for base industries average about 1.4 percent of business value-added, a measure of the value of the business’s production. (Business value-added is defined as the business’s sales minus what it purchases from other businesses.) Incentives can be offset by modest variations in other business costs, such as wages.

**Incentives Tripled from 1990 to 2015**

Average incentives increased from 9 percent of business taxes in 1990 to 30 percent in 2015. As shown in Figure 1, this increase was most rapid

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## Better Incentives Data Can Inform Both Research and Policy

in the 1990s. In the past decade, some states have significantly expanded incentives while other states have made cuts.

### Incentives Vary Greatly across Nearby States, with No Obvious Strong Correlation with a State's Economic Past or Future

As shown in Figure 2, incentives often vary by a factor of 2 to 1 or more across nearby states. These incentive differences are not tied to a state's unemployment, so incentives are not reallocating jobs to high unemployment areas.

Incentive differences do not appear to have large effects on state economic growth by industry. The database suggests incentive effects toward the low end of prior estimates: the average incentive package, 1.4 percent of value-added, might tip the location decision of 6 percent of incented businesses—the other 94 percent of the time, the

state would have experienced similar growth without the incentive.

This typical 6 percent tip rate of incentives is a low batting average. To have benefits greater than costs, incentives must do something special—they either need unusually high benefits per job created, or incentive designs must exceed the typical batting average, lowering costs per job created.

Higher benefits per incented job can be achieved if incentives target high-wage or high-tech industries. High-wage industries obviously are good for those industries' workers. In addition, because higher-wage workers have more income to spend at local retailers, such industries will have higher multiplier effects in creating other local jobs. Because high-tech industries tend to cluster, incented high-tech jobs might also have higher multipliers, with each induced high-tech job creating five other local jobs (Moretti 2010).

### Incentives Vary Little across Industries

Even though some industries offer much greater benefits, the typical state does little industry targeting. As shown in Figure 3, higher-wage industries do not receive significantly higher incentives. Incentives do not particularly target high-tech, as each extra 10 percent of industry R&D spending only increases incentives by 0.3 percent.

### Incentives are Excessively Long Term

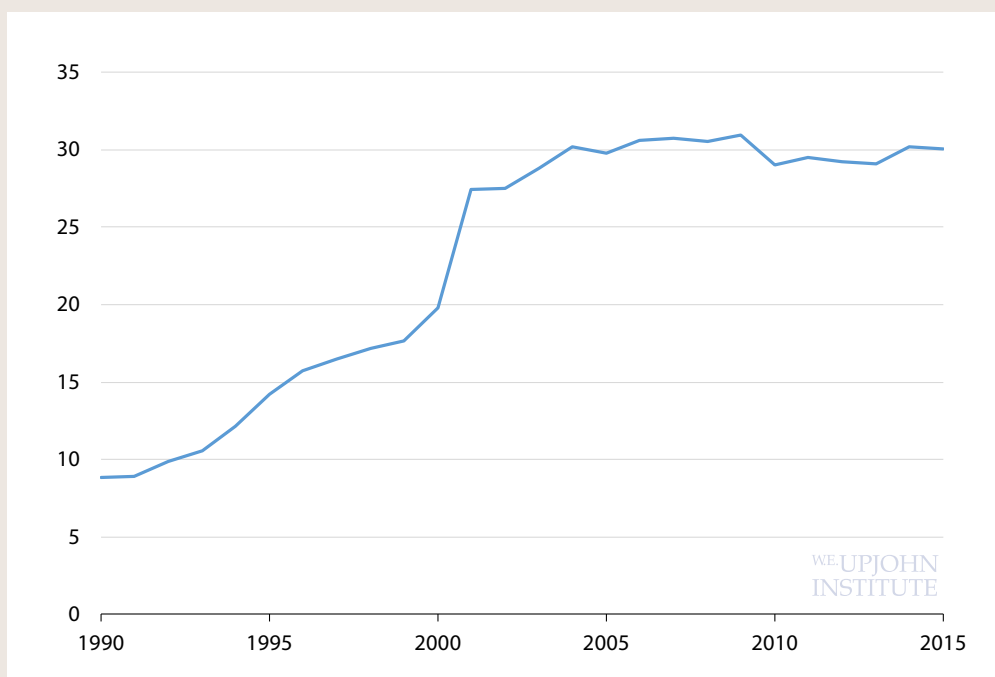
Incentives are more effective if they are more up front. Because business executives tend to think in the short term, an incentive today is more effective at inducing location decisions than an incentive that is only paid out 10 years from now. The average state has incentives that are still 1.1 percent of business value-added when a facility is in its tenth year of operation. Reducing such long-term incentives would lower long-term government costs of incentives without having much effect on job creation.

### States Underinvest in Customized Business Services

Incentives designed as customized services may be more effective than tax incentives. For example, customized job training is a very effective incentive. Research suggests that, per dollar, customized job training might be 10 times more effective than tax incentives in encouraging local business growth (Hollenbeck [2008]; Hoyt, Jepsen, and Troske [2008]; see also Holzer et al. [1993]). Other effective customized services include manufacturing extension programs, which have been shown to improve productivity (Jarmin 1998).

Why are such customized services more cost-effective? They tend to be more targeted than tax incentives at small and medium-sized businesses, whose location and expansion behavior is easier to affect than large businesses'. Because obtaining quality job training

**Figure 1 Incentives as a Percent of Business Taxes, 1990–2015**



NOTE: Chart shows the average magnitude of state and local business incentives as a percent of state and local business taxes, 1990–2015.

SOURCE: Author's calculations.

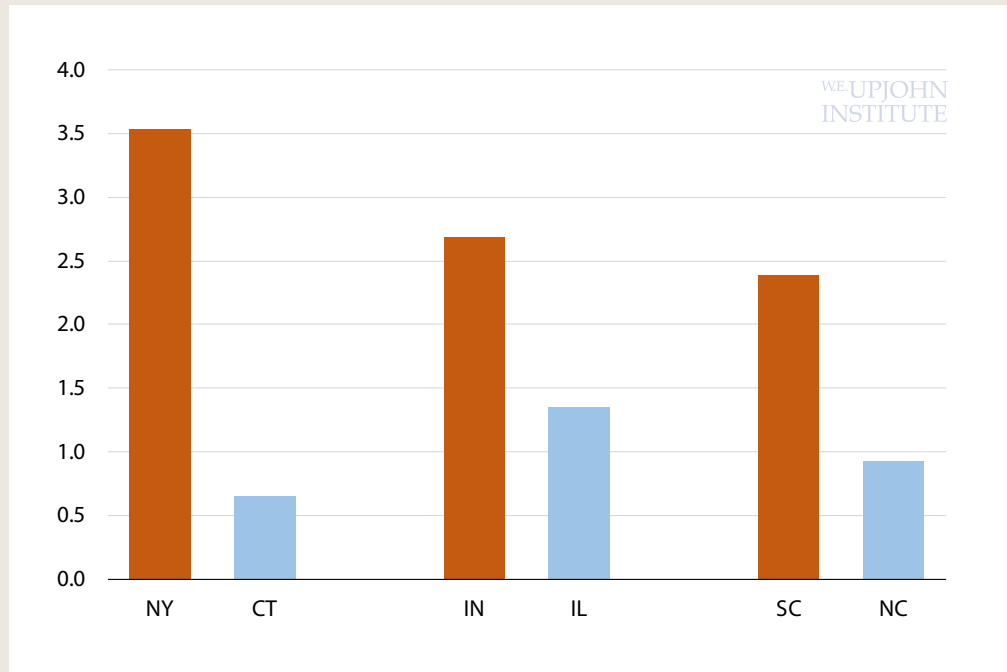
services or business advice may be difficult for smaller businesses to do on their own, the value of such services may exceed their costs. Finally, customized services provide up-front assistance, helping the business be more productive immediately.

However, despite the greater cost-effectiveness of customized services, state and local incentives are more focused on tax incentives. For example, the typical state only spends \$1 on customized job training for every \$20 devoted to tax incentives.

**Summary**

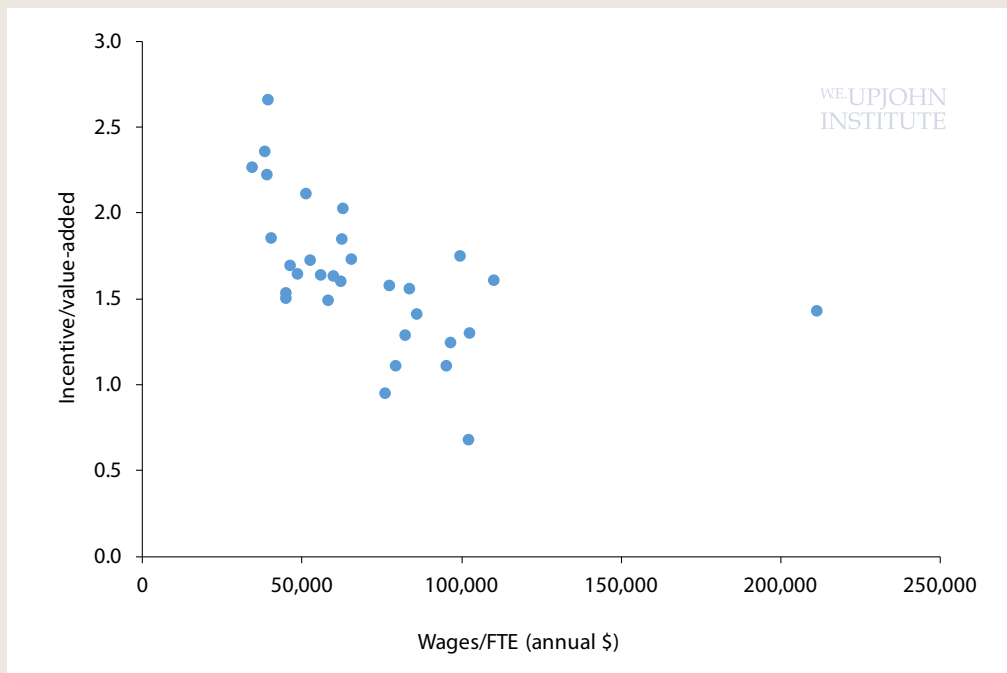
While these conclusions are based on preliminary analysis of the “Panel Database on Incentives and Taxes,” the database allows for much more extensive examinations of different types of incentives for each state for diverse industries. Such detailed analyses can play an important role in the growing national movement toward subjecting incentives to greater transparency, evaluation, and accountability. According to the Pew Charitable Trusts (2016), “Since 2012, 22 states and the District of Columbia have enacted laws requiring regular, rigorous, independent evaluation of tax incentives.” In addition, in 2015, the Governmental Accounting Standards Board adopted a new reporting standard, GASB 77, under which state and local governments that comply with “generally accepted accounting principles” must annually report at least the aggregate revenue foregone from each tax incentive program (Good Jobs First 2015). The database complements GASB 77 reports by providing more long-term and industry-detailed information on incentives. It supports state incentive evaluations by facilitating comparisons across states, industries, and incentive types. With better data and evaluation of incentives, state and local governments over time can reform such incentives to increase their benefits for state residents relative to costs.

**Figure 2 Incentives across Nearby States as a Percent of Value-Added, 2015**



NOTE: Chart shows state and local business incentives as a percent of business value-added across three pairs of adjacent states as of 2015.  
SOURCE: Author's calculations.

**Figure 3 Comparison of Incentives vs. Wages across Industries, as of 2015**



NOTE: Each dot represents 1 of 31 export-base industries. The vertical axis shows the national average for state and local business incentives for that industry, as a percent of that industry's value-added. The horizontal axis shows the industry's average wages per full-time equivalent worker.  
SOURCE: Author's calculations.

## Better Incentives Data Can Inform Both Research and Policy

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# Working Longer, Retiring Later

## Are Employers Ready for the New Employment Trend?

Robert L. Clark and Melinda Sandler Morrill

Policy analysts, economists, and demographers argue that individuals must extend their work lives if they are to achieve their desired standards of living in retirement. Increases in longevity imply that those who leave the labor force at traditional retirement ages must either save more during their working careers or consume less during their retirement.

The logic behind later retirement from the employee's perspective is clear and has been studied in detail: remaining in the labor force for additional years is needed to support increasing years in retirement. However, relatively few studies have directly addressed how employers feel about having workers remain on the job until older ages. Our book, *Extending Work Life: Can Employers Adapt When Employees Want to Delay Retirement?*, which was recently published by the Upjohn Institute (see p. 7), seeks to fill this gap by providing a comprehensive assessment of the costs and benefits to employers of accommodating later retirement ages. Through their employment and compensation policies, employers can either assist or restrict workers' ability to remain on the job.

Economic theory of the firm indicates that companies determine the optimal number of workers to

hire and the appropriate age and skill composition of their workforces. A firm will need a mix of employees of different skill types, skill levels, and vintages of human capital. Changes in the age structure of a firm's workforce due to delayed retirement can affect labor costs, productivity, profitability, and sustainability. Companies develop their compensation policies to attract, retain, motivate, and ultimately retire their desired workforces. As a result, shifts in worker preferences may lead to changes in company policies.

Employers must consider the advantages and costs of retaining or hiring older workers. Older workers often are relatively highly compensated, and some will experience diminished productivity at older ages. Furthermore, as employers retain older workers, the opportunities for advancement by younger workers might be restricted. Employers must address the changing demographics in their workforces. By creating compensation and employment policies to accommodate prolonged or delayed retirement transitions, employers will be better positioned to reap the benefits of employing older workers.

What factors influence a firm's willingness to retain older workers? Can companies develop transitional

### ARTICLE HIGHLIGHTS

■ Between 1994 and 2014, the labor force participation rate for men aged 65–69 rose from 27 to 36 percent.

■ By creating compensation and employment policies to accommodate prolonged or delayed retirement transitions, employers will be better positioned to reap the benefits of employing older workers.

employment contracts so workers can shift to new areas, perhaps with less responsibility and lower compensation, while remaining with their career employers? While exploring the bottlenecks and constraints that might inhibit the development of delayed retirement policies, our book provides new insights into how retirement transitions might develop in the coming years and the potential implications for legislative and employer policies regarding retirement ages.

**Changing Patterns of Retirement**

Throughout most of the twentieth century, labor force participation rates of older individuals steadily declined as real income increased. The establishment of Social Security in 1935 promised workers a base income in retirement. In the post-World War II period, employers began offering pension plans that provided additional retirement income. As these plans gained popularity, employers developed pensions that provided significant incentives for workers to retire at or before age 65. Employers encouraging retirement at relatively young ages was the result of a rapidly growing population that enabled firms to hire younger workers at lower wages. Increases in educational attainment and the emergence of new technologies reduced the competitive advantage of experience. Thus, changing economic and demographic conditions provided the impetus for employers to develop employment and compensation policies that encouraged retirement at specific ages.

In the past twenty-five years, there have been substantial changes in the proportion of older persons in the labor force. As Figure 1 shows, between 1994 and 2014 the largest changes for men have been for individuals aged 62 and older. The labor force participation rate for men aged 62–64 increased from 45 to 56 percent during this period, while the rate for

men aged 65–69 rose from 27 to 36 percent. Participation rates for women followed a similar pattern; however, the increases were greater for younger women. The proportion of women aged 55–59 who were in the labor force rose from 59 to 66 percent, and the rate for women aged 60–61 increased from 45 to 58 percent. These trends in increased labor force participation are projected to continue. That, combined with the aging of the population, has resulted in a more than doubling of the number of workers aged 55 and older, from 15.5 million in 1994 to 33.9 million in 2014. As workers seek to delay retirement, firms must review their policies and determine whether and how they will accommodate later retirement.

**Employer Concerns about Delayed Retirement**

The most important issue for employers associated with delayed retirement is the impact of an aging labor force on productivity and labor costs. Many employers believe that at some point productivity begins

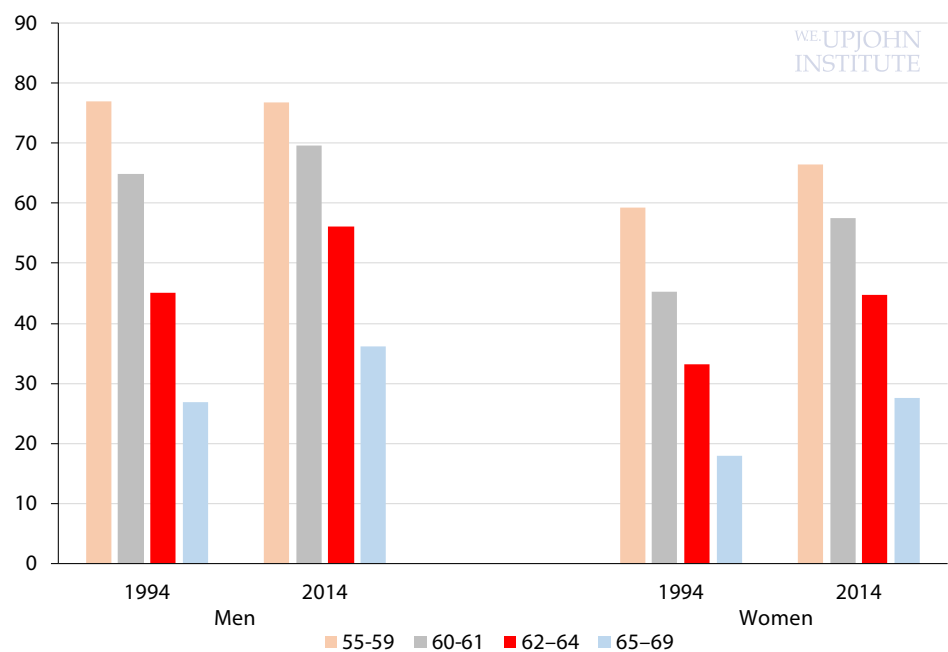
to decline. At the same time, wages and salaries typically rise with years on the job. The cost of employee benefits—especially health insurance, pension contributions, and paid time off—also increases with age. Economic theory indicates that when a worker’s marginal productivity falls below the

**Through their employment and compensation policies, employers can either assist or restrict workers’ ability to remain on the job.**

marginal cost to the firm, then a firm has an economic rationale to want this employee to retire.

Pay scales and benefits help firms attract the desired labor force and then retain them. Companies also develop policies to incentivize employees to retire when it is optimal for the employer. If workers do not retire around these ages, the company will be adversely affected. Thus, many employers will resist later retirement

**Figure 1 Labor Force Participation Rates for Men and Women Aged 55 and Older (%)**



SOURCE: Toosi (2015).

## Working Longer, Retiring Later

because they believe it will lower productivity, raise costs, and alter the optimal age distribution of their workforce.

### Employer Policies for the Future

Assuming that employees will continue to desire later retirement, employers must decide how they will

## Many employers will resist later retirement because they believe it will lower productivity, raise costs, and alter the optimal age distribution of their workforce.

respond. They may seek to develop new compensation and employment policies. They might find that, all else equal, it is optimal to accommodate workers' preferences for working longer by modifying job assignments and compensation policies. However, employers may also face barriers when making adjustments to working conditions and/or compensation, such as union contracts, age discrimination laws, tax law and pension regulations, and production techniques.

In some settings, phased retirement and return-to-work policies might make sense to both employees and employers. Many workers may prefer restructured compensation while remaining with their current employers rather than retiring and seeking new employment in a bridge job. Despite this, the use of these policies in today's workforces is somewhat limited. Employers may have informal policies with the aim of keeping the best workers but may be reluctant to have a broad program that offers phased retirement to all qualified employees. Employers might also be reluctant to adopt such policies for fear that they might run afoul of federal and state age discrimination policies.

It seems likely that firms will face increasing demand from employees

to delay retirement. New research is needed to provide a better framework in which to evaluate the impact of this expected change on labor costs and productivity. For example, would individuals actually prefer a decreasing wage profile at the end of a career prior to complete retirement? Would this type of contract be more appealing if framed as a lifetime compensation package rather than a decline in salary at the end of career? The presence of bridge jobs suggests that lower wages and fewer hours are appealing to some older workers.

In the longer term, if employers accommodate later retirement, does this lead to new types of employment contracts? For example, if the incidence of phased retirement increases, then we might expect adjustments in employment contracts that pre-commit workers to lower salaries and/or benefits at older ages. Do employers find it more efficient to set up formal policies regarding retirement transitions, such as phased retirement options or return-to-work postretirement? If so, are tax policies and government-provided retirement benefits designed optimally to allow for new types of employment relationships? What new types of employment contracts are currently being introduced to accommodate trends toward working longer?

If working longer is deemed to be beneficial for individuals, society, and the economy, legislative policies could be adopted to increase incentives for individuals to remain in the labor force and for firms to employ older workers. Policymakers could identify and remove any real or perceived age discrimination issues associated with phased retirement programs. This would signal the benefit of modifying working conditions and compensation policies to ensure employing older workers is cost-effective. Redesigned jobs and reduced working hours, combined with access to retirement benefits when entering phased

retirement, could make employees more willing to leave full-time employment and accept these new conditions.

Much of this analysis focuses on the impact of delayed retirement on individual employers, holding constant market forces. In many aspects, this is how a firm would view these changes. However, demographic changes and any ensuing macroeconomic shifts will alter the labor market over time. For example, downward pressure on market wages will increase the willingness of firms to accommodate preferences for older retirement ages.

*Extending Worklife* outlines how individual employers might view sudden changes in the retirement ages of their workforce. We emphasize how the push toward delayed retirement might not be desirable to individual employers. We speculate that as individuals choose to delay retirement, firms will respond by trying to form new types of employment contracts more suited to the preferences of older workers and consistent with their changing value to firms.

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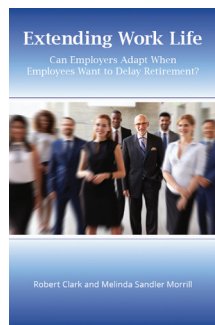
*Melinda Sandler Morrill is an associate professor of economics at North Carolina State University.*

# New Books from the Upjohn Press

## Extending Work Life Can Employers Adapt When Employees Want to Delay Retirement?

Robert Clark and Melinda Sandler Morrill

According to the authors of this *WEfocus* Series book, “Many policy analysts, economists, and demographers have argued that individuals must extend their work lives if they are to achieve their



desired standard of living in retirement. Increases in longevity imply that individuals who leave the labor force at traditional retirement ages must either save more during their working careers or consume less during

their retirement. Reductions in the generosity of employer- and government-funded retirement programs exacerbate this problem. Thus, workers today must save more than their predecessors to achieve the same level of retirement well-being. The idea seems clear—working longer and retiring later is the only way future retirees can sufficiently finance their retirement.”

While working longer may be necessary to support more years in retirement, few studies have examined this phenomenon from the employer perspective. This book seeks to fill that gap by providing a comprehensive assessment of the costs and benefits to employers of accommodating an increasing desire for delayed or phased retirement.

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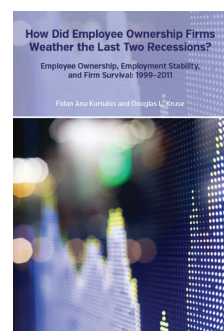
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## How Did Employee Ownership Firms Weather the Last Two Recessions?

### Employee Ownership, Employment Stability, and Firm Survival: 1999–2011

Fidan Ana Kurtulus and Douglas L. Kruse

Employee ownership firms offer workers the opportunity to own a stake in the firms where



they work. This affords them the ability to share in profits and have a voice in firm-related decision making. In this comprehensive new book, Kurtulus and Kruse provide new evidence on whether employee

ownership firms are better equipped to survive recessions. In particular, they focus on broad-based employee ownership, which includes ownership at all levels in the firm’s hierarchy.

The authors begin by defining employee ownership, and then discuss the prevalence of such firms in the United States. They also examine how employee ownership affects employment stability and why employee ownership firms have survived recessions more successfully than other firms.

Kurtulus and Kruse conclude by saying that the benefits they observed in employee ownership firms, particularly the greater employment stability and survival rates, can help the overall economy. Therefore, increased government support to broaden employee ownership programs is merited.

178 pp. 2016 / \$18 paper 978-0-88099-525-2 /  
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## Workers’ Compensation: Analysis for Its Second Century

H. Allan Hunt and Marcus Dillender

Workers’ compensation (WC) is the original form of social insurance as well as the first no-fault insurance program. Under WC, workers receive



compensation and treatment for workplace injuries and disease in exchange for giving up the right to sue their employers for negligence. Each state and Canadian province runs its own WC program, and how

each is administered and the level of benefits provided vary considerably. Therefore, assessing best practices among these programs is tricky.

H. Allan Hunt and Marcus Dillender provide a succinct analysis of the state of WC programs in North America by focusing on three key performance issues: 1) the adequacy of compensation for those disabled in the workplace, 2) return-to-work performance for injured workers, and 3) prevention of disabling injury and disease. Following a brief introductory chapter that provides a discussion of the difficulties of trying to compare so many diverse programs, Hunt and Dillender devote a chapter to each of the three performance issues and provide empirical findings and useful guidance for policymakers and researchers as they set their sights on adapting WC for the twenty-first century.

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The Upjohn Institute invites submissions for its annual prize for the best PhD dissertation on employment-related issues. A first prize of \$2,500 is being offered. Up to two honorable mention awards of \$1,000 may also be given. The deadline to apply for the 2017 award is July 7. Learn more at [upjohn.org](http://upjohn.org).

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