# THE LABOR MARKET EFFECTS OF MATERNITY MANDATES

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ABSTRACT

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The increased reliance on mandates as a tool for providing benefits has prompted a renewed interest in the labor market effects that these mandates have on the group they are intended to benefit. By enacting a group-specific mandate, legislatures provide a socially desirable benefit that is not readily available in the mandate's absence. Although this type of government intervention can be efficient, it may have an adverse impact on workers either when they place a low value on receiving the benefit or when wage rigidities exist.

This paper focuses on the labor market effects of maternity mandates enacted during the 1970s and early 1980s. The staggered enactment of these mandates at the state and federal levels provides an opportunity to study their impact on wages and employment. In the early to mid-1970s, a number of states adopted employer mandates requiring firms to cover pregnancy in the same manner as other temporary disabilities. However, no national standard existed until the enactment of the 1978 federal Pregnancy Discrimination Act.

This paper presents estimates of the labor market effects of the state employer mandates (state study) and the PDA (federal study). In the state study, the wage declines with no change in net labor input. In contrast, the federal study suggests that strong disemployment effects resulted from the passage of the PDA, with no corresponding decline in the wage. A re-estimation of Jonathan Gruber's federal study (1994), based on state insurance code amendments instead of the state employer mandates, does not conflict with this result.

In this paper, I hypothesize that the apparent conflict between the state study and the federal study results may be due to variations in the expected costs and benefits across states. States only adopt the level of state maternity legislation considered efficient. Thus, workers in the states that enacted mandates place a higher value on receiving the mandate's benefits.

Before deciding whether to implement a group-specific mandate, policy makers need to recognize both potential long-term gains and possible disemployment effects. Careful analysis of these factors will provide a framework on which future decisions may be made.

*'It is somewhat conspicuous a truth as the interaction of economics and law should have waited so long for recognition—a recognition by no means universal. Some of those who question it maintain the independence and self-sufficiency of law, while others maintain that of economics. In reality, law and economics are ever and everywhere complementary and mutually determinative....'*

*Fritz Berolzheimer, 1912*

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# INTRODUCTION

In recent years, federal and state governments have enacted a number of group-specific mandates. These mandates provide a socially desirable benefit, which most firms do not voluntarily offer, to a demographically identifiable group of workers. Despite the increased reliance on using mandates as a tool for providing benefits, however, few studies attempt to isolate the resulting labor market effects. The following chapters focus on the legislation leading to, and the wage and employment effects that result from, the enactment of maternity mandates. These policies require employers to cover the medical costs of pregnant workers in the same manner as other temporary disabilities.

Ideally, group-specific mandates correct for a perceived failure of the market to provide a socially desirable benefit. In the absence of a mandate, market failure may occur if the cost of providing the benefit is higher than the wage. This results because firms that offer maternity insurance attract those who value this benefit. Since these workers select into the firm based on the benefit's availability, they have a higher probability of collecting the insurance than that of the general population. Higher premiums result, which leads to an increase in the cost of the maternity insurance for the firm. Over time, these premiums become prohibitively high for an individual firm.

By enacting a mandate, the government requires all firms to provide the benefit. Adverse selection does not occur, since each employer is legally obligated to offer workers at least the minimum requirements of the mandate. Workers who value the mandate implicitly

accept a lower wage in order to receive its benefits. When workers fully value the mandate, the decrease in the wage equals the employer's cost of providing the benefit. There is no corresponding decrease in employment. Conversely, when the value that workers place on the mandate is less than the cost to the employer, disemployment effects accompany a wage decrease.

Enacting this type of group-specific legislation, however, may adversely affect individual workers under its protections, regardless of social or worker valuation. For example, the efficiency of a mandate decreases if employers respond to the increase in the firm's cost, which is dependent on the number of mandate-protected workers, by substituting away from these employees. The same is true if market barriers, such as the minimum wage, prevent the wages of workers from adjusting downward to reflect the value placed on the benefit. In the case of group-specific mandates, anti-discrimination legislation and equal pay laws may also prevent the group's wages from adjusting, regardless of their valuation of the benefit. In either scenario, disemployment effects result. These disemployment effects increase if the value workers assign to the benefit decreases relative to its labor market cost.

Inefficiencies at the legislative and judicial levels may also lessen the effect of a mandate. These inefficiencies may result from the ambiguous—and sometimes conflicting—policies on the same issue adopted by different agencies, from a lack of enforcement, from incomplete information on the coverage of the law, or from varying policies between states. This paper explores the effects of various maternity policies that resulted from these inefficiencies. Chapter 1 describes the legislative and judicial activity—and ambiguity—surrounding the enactment of the state and federal maternity mandates, which require employers to cover pregnancy disabilities in the same manner as other

temporary disabilities. The enactment of and changes in these policies provide a basis for examining the labor market consequences of group-specific mandates.

Chapter 2 estimates the labor market impact of federal and state maternity mandates that require employers to cover pregnancy in the same manner as other temporary disabilities. Next, it discusses how differences in worker valuation may lead to different levels of enactment among states. This chapter posits that states will enact a mandate only to the level that the marginal social benefit of enacting it at the state level is greater than the benefit's marginal cost. States that do not enact legislation before a federal mandate perceive the marginal benefits associated with any state legislation to be below the mandate's marginal cost. Thus, unequal passage of a law at the state level may result from a market failure in the individual state or because these states actively choose not to adopt similar legislation.

After covering the legal aspects in chapter 1 and the economic aspects in chapter 2, this paper comments on a previous study of the state and federal maternity mandates. The study in question, examined in chapter 3, focuses on a select set of insurance code amendments but ignores other maternity policies in place at that time. In chapter 3, the coefficients of the original study are re-estimated, taking into account these other policies. The results found in chapters 2 and 3 are contrasted in the conclusion.

# CHAPTER 1: HISTORICAL MOTIVATION

Determining the labor market effects of requiring employers to cover the medical costs of pregnant workers requires a familiarity with the complicated history behind the various pieces of legislation. A number of state and federal maternity mandates became effective during the 1970s and 1980s; in many instances, there is a close relationship between these policies. Maternity guidelines issued by the Equal Employment Opportunities Commission (EEOC) in 1972, for example, were adopted by various states in the form of state employer mandates during the period from 1972 to 1976. In addition to these state maternity policies, which required the medical coverage of pregnant workers, other maternity policies enacted at that time included maternity amendments to state insurance codes and various federal agency regulations.

This chapter provides a discussion of the legislative and judicial background to the state and federal maternity mandates upon which the empirical estimates in chapters 2 and 3 are based. In addition, this chapter reviews other relevant pieces of legislation that may affect the later estimates.

## I. Action Prior to 1972

The original version of Title VII of the Civil Rights Act of 1964 focused on innate characteristics, and as such, did not define prohibited employer treatment of pregnant employees. In 1966, the first national statement regarding the rights of pregnant workers

came as an opinion letter issued by Charles Duncan, the EEOC General Council, on October 17, 1966.[1] He writes, "we do not believe that an employer must provide the same fringe benefits for pregnancy as he provides for illness."[2] This letter reinforced prevailing trends.

On June 9, 1970, the Office of Federal Contract Compliance (OFCC) of the U.S. Department of Labor issued the first federal statement regarding the treatment of pregnant workers by federal contractors. The Federal Register published the following regulations: "Women shall not be penalized in....employment...on account of childbearing. The conditions applicable to her leave...shall be in accordance with the employer's leave policy."[3] Until 1972, this was the only legal reference at the national level to the treatment of pregnant workers.[4] As a result, this statement formed the standard for employer maternity policy in firms covered under a government contract.

In March 1972, congress amended Title VII to include sex discrimination as a prohibited practice. The text of the amendment, however, did not explicitly mention the treatment of pregnant workers. As a result, determining whether pregnancy was a form of sex discrimination became an important legal issue.

## II. Equal Employment Opportunity Commission Guidelines—1972

As early as April 5, 1972, the EEOC issued guidelines that interpreted the sex discrimination clause in Title VII to include discrimination due to pregnancy and childbirth.

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[1] Many states and federal agencies had compulsory maternity leave policies at that time. These policies required pregnant employees to take leave of absence at a specified period in their pregnancy, regardless of their ability to perform their job. Although these laws mandated the leave period, they did not provide any rights (e.g., return to job) following birth. In 1974, the U.S. Supreme Court ruled in *Cleveland Board of Education* v. *LaFleur* and *Cohen* v. *Chestfield Countr School Board* (414 U.S. 632, 94 S.Ct. 791 [1974]) that the mandated leave period violated due process.

[2] U.S. Supreme Court 1976/77, excerpt from an EEOC opinion letter dated November 15, 1966.

[3] Title 41, Chapter 60, Part 60-20 of the Code of Federal Regulations.

[4] At that time, a few states had instituted maternity policies other than those relating to compulsory leave. For example, Rhode Island began covering maternity conditions under its state-run temporary disability insurance system in 1964. See appendix A for other examples.

By broadening the focus to include "the addition of characteristics over which individuals clearly do exert control to the bases for prohibited employment discrimination," these guidelines represented a clean break from previous EEOC policy.[5] Among the prohibited conditions, these guidelines stated:

> Disabilities caused or contributed to by pregnancy... and recovery therefrom are, for all job-related purposes, temporary disabilities and should be treated as such under any health or temporary disability insurance or sick leave plan available in connection with employment. Written and unwritten employment policies and practices involving matters such as... payment under any health or temporary disability insurance or sick leave plan, formal or informal, shall be applied to disability due to pregnancy or childbirth on the same terms and conditions as they are applied to other temporary disabilities.[6]

The EEOC, however, did not seek congressional approval in 1972 for the amendment of Title VII to include the maternity provisions. Consequently, the maternity guidelines were not enforceable in the same manner as other EEOC regulations, such as those governing sex discrimination.

At that time, the EEOC practice was to target employment discrimination by assigning priority to charges brought against large, nationwide employers or major employers in a region.[7] Federal Communications Commission (FCC) Case No. 19143 was the first test case settled under the 1972 pregnancy guidelines. In this case, the EEOC joined a number of other federal agencies in proceedings against American Telephone and Telegraph (AT&T) and 24 Bell Companies.[8] The EEOC investigation focused on charges of sex discrimination, which included pregnancy discrimination. A January 1973 agreement outlined the terms

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[5] Smith 1980, 499.
[6] Weyland 1978, 180.
[7] American Bar Association 1974, 577-615.
[8] In March 1972, the EEOC received the power to subpoena employers. This case was the first settled under the power of subpoena, as well as under the pregnancy guidelines.

under which AT&T and the Bell Companies were in "full compliance with all laws and regulations governing equal employment opportunity."[9] However, these conditions did not require the company to abolish a policy that denied full insurance benefits to pregnant employees. Since this was the first case settled under the EEOC's pregnancy guidelines, many state agencies and employers subsequently cited the FCC case in defending their position that the EEOC intended the 1972 guidelines to be recommendations only.[10]

Following the AT&T decision, district-level EEOC offices began accepting claims against employers related to pregnancy discrimination.[11] Regardless, the change in the EEOC's original intent, combined with the failure to amend Title VII and the lack of enforcement in a national case, created confusion over whether the guidelines were merely recommendations or were legally binding. A number of states postponed implementing any pregnancy discrimination guidelines pending an U.S. Supreme Court decision or a congressional amendment to Title VII.

## III. Relevant Maternity Legislation Enacted During 1972 to 1976

Although some states chose to wait for a judicial precedent to be established, a few state Fair Employment Practice (FEP) commissions interpreted state sex discrimination laws in the same manner as the EEOC in the 1972 guidelines. Other states, such as Alaska, used the legislature to address the issue of discrimination against pregnant workers. As of December 1976, seven states had implemented legislation specifically prohibiting pregnancy

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[9] U.S. Supreme Court 1976/77, 67.

[10] U.S. Supreme Court 1976/77, 68-70.

[11] States that successfully adopted the pregnancy guidelines were generally states with '706' agencies. In these states, the EEOC deferred to the state agency decisions on FEP matters. To become a '706' agency, states were required to adopt and enforce the EEOC regulations and guidelines.

discrimination.[12] Regardless, many of the employers in these states chose to wait for a state supreme court ruling or a state law prohibiting pregnancy discrimination.[13] For example, the director of the Connecticut FEP agency stated, 'A number of large employers with federal contracts have complied with the statutory mandate... Other large employers appear to be awaiting the Supreme Court decision...'[14]

Aside from the state employer maternity mandates, various states or federal agencies adopted other pieces of maternity legislation during the period. Five states—California, Hawaii, New Jersey, New York, and Rhode Island—chose to provide health insurance for employees under an existing state-run system.[15] The state temporary disability insurance (TDI) systems provided insurance for non-occupational disabilities when workers were unable to receive workers' compensation benefits or unemployment insurance. To provide funds to cover the costs of temporary disabilities, the state TDI systems collected a payroll tax either from workers or from both workers and their employers.[16] In these states, pregnancy was added to the list of temporary disabilities covered under the state TDI systems (see appendix A for dates of enactment).

In addition, a number of states also chose to provide limited maternity coverage under an amendment to an existing insurance code. These states mandated that all health

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[12] These are the following: Alaska, Connecticut, Kansas, Massachusetts, Montana, Pennsylvania, and Washington (see table 1 for the dates of adoption).

[13] Jan A. Larkin, the director of the anti-discrimination section of the Delaware Department of Labor, writes in a letter to Ruth Weyland, attorney for Martha *Gilbert* in *Gilbert* v. *General Electric Company* (1976), "Based on our experience with employers' practices in Delaware, it is not common for income maintenance plans or other benefit plans to include payment for pregnancy and pregnancy related conditions." Letters to Ruth Weyland from agencies in Wyoming and Maine are similar in content. U.S. Supreme Court 1976/77, 318-26.

[14] U.S. Supreme Court 1976/77, 318-26.

[15] The exception is Hawaii, which created a state-run system in 1974.

[16] Summers' (1989) and Gruber's (1992, 1994) theories predict a different outcome for states that implement a benefit through a payroll tax versus states that implement a benefit through a mandate. Consequently, I limit the details of the state TDI legislation to that which is necessary to explain the state systems.

insurance contracts sold within the state cover complications that arose due to pregnancy.[17] Although not specific to workers, these amendments, by default, covered pregnant workers in a firm that purchased health insurance for its employees. Most of these states enacted this amendment between 1976 and 1978 (see appendix A for dates of adoption). This coincided with the U.S. Supreme Court's ruling on the legality of the EEOC's maternity guidelines and, by extension, the legality of the state employer mandates.

At the federal level, confusion over the legal treatment of pregnant workers grew on December 27, 1973, when the Federal Register published the OFCC's proposed revised guidelines. These guidelines extended the previous OFCC policy of 'justifiable leave for pregnancy conditions' to more closely follow the wording of the EEOC's pregnancy discrimination guidelines. Enacting the revised guidelines would have affected all firms covered by a government contract.[18] However, the Secretary of Labor noted that the OFCC acknowledged a continued reliance on pertinent judicial decisions, especially those at the level of the U.S. Supreme Court.[19] At the time of the U.S. Supreme Court's decision in *Gilbert* v. *General Electric Company*, (December 7, 1976) the OFCC guidelines had not been confirmed.

Additionally, the Department of Health, Education, and Welfare (HEW) issued departmental guidelines prohibiting pregnancy discrimination in educational institutions receiving federal funding. The October 1972 regulations abolished the common practice of mandatory leave for maternity conditions (see footnote 1). Thus, those who worked in such

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[17] Maryland, which amended the state insurance code in 1975, is the exception. In Maryland, only normal pregnancies—not complications of pregnancy—were covered under the state's insurance code amendment.

[18] 38 Fed. Reg. 35336.

[19] U.S. Supreme Court 1976/77, 46. The issue of concern for the OFCC seems to be that the unequal benefits implied by the EEOC's guidelines conflicted with the Equal Pay Act (29 U.S.C. 206 (d)).

educational institutions were no longer required to take leave of their position at a pre-set date.

In 1975, HEW supplemented these regulations prohibiting discrimination against pregnant workers in employment and required employers to treat pregnancy as a temporary disability for all job-related purposes—including the provision of health insurance for pregnancy conditions. Following congressional approval, the Federal Register published the HEW regulations on July 21, 1975.[20] Unlike the OFCC guidelines, these regulations were legally binding and directly affected employees in educational institutions receiving federal funding.[21]

Since not all state FEP guidelines covered pregnancy conditions and enforcement of the EEOC guidelines was inconsistent at best, there was confusion over which guideline applied to a specific workforce or firm. A 1973 trade journal summed up the maternity legislation at the time, stating:

> The language and intent of the guidelines appear contradictory and ambiguous.... Other significant contributors to the confusion are the lack of accountability over the EEOC and OFCC which often results in an abuse of power; the lack of conformity among EEOC and OFCC officials in giving out correct information; and the hesitancy of the governmental agencies to distribute information that would keep businesses up to date with what is really expected of them.[22]

Regardless, a number of state courts ruled in favor of the state FEP guidelines.[23] Four of these rulings occurred at the state supreme court level in Wisconsin, Iowa, Pennsylvania, and

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[20] Title 45, Subtitle A, Part 86 of the Code of Federal Regulations.
[21] U.S. Supreme Court 1976/77, 20-1.
[22] Pearson 1973, 21.
[23] For example see: Ray-O-Vac Div. of E.S.B., Inc. v. Wisconsin Department of Industry, Labor, and Human Relations.

Massachusetts, making these guidelines legally binding for all employers in the state without any further legislation.[24]

## IV. *Gilbert* v. *General Electric Company*—U.S. Supreme Court, 1976

In 1976, the test of the 1972 EEOC guideline's legality for which many states, employers, and regulatory bodies had waited finally occurred. *Gilbert* v. *General Electric Company* (December 7, 1976) brought the question of the legality of the EEOC's 1972 guidelines before the U.S. Supreme Court.[25] In a 6-3 ruling, the Court reversed the decisions of six federal appellate courts, which had stated that women who bear children must receive the same benefits that employers provide for other non-occupational disabilities.[26] The court ruled that the distinction in this case was between pregnant workers and non-pregnant workers, not between male and female workers. This effectively ended further judicial interpretation of the EEOC's pregnancy discrimination guidelines under the sex discrimination defense. Any previous court decisions based on state guidelines or the EEOC 1972 guidelines were now subject to re-interpretation by the appropriate lower state courts.[27]

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[24] *Cedar Rapids School Dist.* v. *Parr*, 227 N.W.2d 486 (Iowa Sup. Ct. 1975); *Black* v. *School Dist. of Malden*, 310 N.E.2d 330 (Mass. Sup. Jud. Ct. 1974); *Cerra* v. *East Stroudsberg Area School Dist.*, 299 A.2d 277 (Sup. Ct. Pa. 1973); *Ray-O-Vac Div. Of ESB. Inc.* v. *Wisconsin Dep't of Indus.*, 2376 N.W.2d 209 (Wis. Sup. Ct. 1975) as found in Weyland, 1978, 182.

[25] It should be noted that preceding the *Gilbert* decision, the U.S. Supreme Court decided in *Geduldig* v. *Aiello* (417 U.S. 484 [1974]) that the state of California's TDI system was not required to fund pregnancy conditions under the equal protection clause in the 14th amendment. Further claims of unequal protection in pregnancy cases were no longer valid following this decision. The *Gilbert* case differed from *Aiello* in that the EEOC guidelines were judged on the basis of sex discrimination, not on the basis of equal protection.

[26] The relevant cases at the federal appellate level are: *Berg* v. *Richmond Unified School District.*, 528 F.2d 1208 (9th Cir. 1975); *Gilbert* v. *General Electric Co.*, 519 F.3d 661 (4th Cir., 1975); *Holthaus* v. *Compton and Sons, Inc.*, 514 F.2d 1024 (2nd Cir. 1975); *Wetzel* v. *Liberty Mutual Ins. Co.*, 511 F.2d 199 (3rd Cir., 1975); and *Farkas* v. *South Western City School Dist.*, 506 F.2d 1400 (6th Cir., 1974).

[27] In *Nashville Gas Co.* v. *Satty* (434 U.S. 136 [1977]), however, the Court ruled against a requirement that women forfeit seniority following maternity leave, since it subjected women to a burden that men need not suffer.

## V. State Response to the *Gilbert* Decision—1976 to 1978

The first case the Supreme Court's decision could potentially influence was *Brooklyn Union Gas Co.* v. *N.Y. State Human Rights Appeals Board* (1976). In *Brooklyn*, the New York State Supreme Court upheld the 1973 New York State Human Rights Commission's employer guidelines that mandated maternity coverage.[28] This case is instructive since it set a precedent for other states and other state courts to interpret the Supreme Court's ruling as applying to the 1972 EEOC guidelines only and not to individual state guidelines. This set precedence for other states with employer mandates already in place.

Because of *Brooklyn*, existing state employer mandates could still be subject to the sex discrimination defense if the state courts chose to interpret them in that manner. Intermediate courts in Pennsylvania and Wisconsin followed the precedent set by the New York State Supreme Court in *Brooklyn*.[29] States were able to implement new state maternity legislation or to strengthen existing pregnancy discrimination guidelines and laws through their legislatures. The human or civil rights commissions in 18 states upheld previous state guidelines after the decision of the New York court.[30] As a result of the state guidelines—in conjunction with the Supreme Court's decision—a clear legal division developed between states that enforced the employer mandates and states that neither enforced nor instituted employer mandates after that date.

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[28] 316 N.Y.S.Ct. Appellate Division 1973, 6 EPD ¶ 8713. This ruling also applied to the TDI system.
[29] Weyland 1978, 202.
[30] These are: Alaska, Connecticut, Illinois, Indiana, Iowa, Kansas, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Jersey, New York, Oregon, Pennsylvania, South Dakota, Washington, and Wisconsin. Weyland 1978, 204. See table 1 for dates of enactment.

## VI. Congressional Response to the *Gilbert* Decision—1978

In March 1977, members of Congress responded to the U.S. Supreme Court's ruling in *Gilbert* by introducing a bill into both houses that would amend the sex discrimination prohibition in Title VII to include discrimination against pregnant workers.[31] The bill qualified violations of Title VII to include, "discrimination based on pregnancy, childbirth or other related medical conditions."[32] Passage of the federal Pregnancy Discrimination Act of 1978 (PDA) required employers to treat women affected by pregnancy and complications arising from pregnancy in the same manner as workers with other types of non-occupational disabilities. Employers without temporary insurance coverage for other non-occupational disabilities were not subject to the maternity provisions in Title VII and were not required to provide maternity insurance. In addition, the federal PDA stipulated that employers who provided benefits to a spouse under a health insurance plan must also provide maternity benefits to the spouse.[33] The effective compliance date for employers with benefit programs was 180 days after the date of enactment, which was October 31, 1978.

## VII. Conclusions

Although the PDA ended confusion over the treatment of pregnant workers concerning health insurance coverage, the labor market outcomes associated with the maternity mandate are unclear. By examining various state and federal maternity policies, the wage and employment effects that result may be determined. Chapter 2 presents an

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[31] Simultaneous bills were introduced into both houses of Congress (H.R. 5055, S. 995).

[32] Pregnancy Discrimination Act of 1978, Pub. L. No. 95.555, 92 stat 2067 (1978) amending 42 U.S. C § 20000e (k).

[33] Some state maternity mandates also required spousal coverage. See, for example, guidelines issued by the Wisconsin Department of Industry, Labor and Human Relations (1975) and the Washington State Human Rights Commission (1973). The position of equal treatment for spouses under the federal PDA was later upheld in *Newport News Shipbuilding & Dry Dock Co.* v. *Equal Employment Opportunity Commission*, 462 U.S. 669 (1983).

analysis of the state employer maternity mandates and the federal PDA. In chapter 3, the results from a study of the state insurance code amendments are re-estimated to take the employer mandates into account. From these results, the value that workers place on the benefits afforded by the mandate and by extension, the value of the mandate to workers may be ascertained.

**Table 1: States with Employer Maternity Mandates**

| States: | Law, Guideline, or State Court Decision: | Effective Date: |
|---|---|---|
| Alaska | Section amending 18.80.220 of Alaska Laws Against Discrimination | 6/4/75 |
| California | Fair Employment Practice Act | 1/1/79 |
| Colorado[3] | Section 80.8 Fair Employment Guidelines | 5/31/72 |
| Connecticut | P.A.31-126 of the Fair Employment Practices Act | 10/1/73 |
| Illinois | Fair Employment Practice Guidelines | 11/3/71 |
| Iowa | Civil Rights Commission Guidelines | 10/9/72 |
| Kansas | Commission on Civil Rights - Guidelines<br>Legislative Approval of Guidelines | 1/1/74<br>1975 |
| Maine[3] | Employment Guidelines of Human Rights Commission | 5/15/76 |
| Maryland[2] | Commission on Human Rights - Guidelines<br>Section 17 of Fair Employment Practices Act | 7/11/72<br>7/1/77 |
| Massachusetts | General Laws | 1974 |
| Michigan[2] | Civil Rights Commission - Guidelines<br>Section 201-202 Michigan Civil Rights Act | 9/72<br>5/22/78 |
| Minnesota[2] | Guidelines<br>Section 363.03 of Human Rights Act | 6/22/71<br>6/ 3/77 |
| Montana | Maternity Leave Act, Ch320 Laws 1975 | 7/1/75 |
| New York[2] | Human Rights Commission<br>New York Supreme Court Decision | 9/73<br>1976 |
| Oregon[2] | Bureau of Labor - Guidelines<br>Senate Bill 714 amending Fair Employment Act | 6/71<br>10/4/77 |
| Pennsylvania[2] | Human Rights Commission - Guidelines<br>Human Relations Act | 12/25/71<br>5/17/75 |
| South Dakota | Human Relations Rule §20:03:09:12 | 1972 |
| Washington | Maternity Leave Policy, Human Rights Commission | 10/3/73 |
| Wisconsin | Department of Labor and Human Relations, Employment Policies Relating to Pregnancy & Childbirth<br>Wisconsin Supreme Court | 7/10/72<br>1975 |

Notes:

1. The information in this table is not all-inclusive. Kentucky, Missouri, New Hampshire, and Oklahoma implemented employer mandates, but did not document the effective date of coverage.
2. These states legally strengthened an earlier state employer mandate as a reaction to the U.S. Supreme Court Ruling in *Gilbert* v. *General Electric* (1976), and as a result have two dates of compliance.
3. These states, as well as Kentucky, New Hampshire, and Oklahoma did not strengthen their mandates following the 1976 Supreme Court Decision.
4. The information in this table is primarily from Commerce Clearing House (1978), NELP (1975), U.S. Supreme Court (1975/76), and Weyland (1978).

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# CHAPTER 2: THE EFFECTS OF MANDATED MATERNITY BENEFITS

As shown in chapter 1, the legislative history that preceded the passage of the PDA complicates any attempt to estimate the labor market effects of mandated maternity benefits. The state employer mandates extended health insurance to pregnant workers employed by firms that provided coverage for other non-occupational temporary disabilities. This is similar to the coverage intended by the EEOC's 1972 pregnancy guidelines and found in the PDA. Additionally, the state insurance code amendments provided limited coverage to those who purchased insurance within a state, regardless of labor force status.[34] Since states that adopted both maternity policies adopted the employer mandates before the insurance amendments, this chapter focuses on estimating the labor market effects of enacting the state employer mandates and the federal PDA.

To determine the impact of implementing a group-specific employer mandate, I first estimate the labor market effects that resulted from enacting the set of state employer mandates requiring employers to cover the medical costs of pregnant workers. These mandates comprise the "state study." Comparing the workers in states with mandates to those in states without the mandate, I find that the wages of married females of childbearing age fell by about four percent after the mandate was enacted. This decline is consistent with the estimated cost to employers of providing the benefit. However, net employment did not

[34] All who purchased insurance were eligible for the pregnancy coverage provided by the insurance code amendments. The coverage was limited (in most cases) to complications that arose from pregnancy conditions. See chapter 1 for details on the legal aspects, and appendix A for a list of states.

significantly change in response to the state mandates. This indicates that the value placed on receiving the benefit by the group that benefits from the state employer mandate is at least equal to the employer's cost of providing it.

Next, I exploit the existence of the state mandates to run a "reverse experiment" using the federal PDA. In this "federal study," I estimate the effect of the federal PDA in states without an employer mandate, while using the states with a maternity mandate to control for other factors. In theory, the reverse experiment should return findings similar to the state study. The enactment of the PDA, however, resulted in a significant decrease in the net labor input of covered workers, which is consistent both with these workers placing a low valuation on the benefit and with significant barriers to wage adjustment. Regardless, this translates to a decrease in overall employment, rather than a wage decline.

To reconcile the apparent conflict between the state study and the federal study results, I suggest that the states in which the marginal benefit of mandate is higher than the benefit's marginal cost will enact that mandate. Thus, the value that society assigns the benefit per firm is larger than the individual firm's cost of implementing the mandate. States adopt a matching level of state maternity legislation according to this valuation. Accordingly, the state study results indicate that covered workers in those states with an employer mandate placed a higher value the maternity legislation, implicitly accepting a lower wage to receive its benefits. States that did not enact legislation before the PDA perceived the marginal benefits of the state legislation to be below its marginal cost. The disemployment effects found in the federal study are consistent with the case in which the cost of implementing the PDA in non-mandating states outweighs the mandate's benefits.

The hypothesis that worker valuation of a benefit differs systematically by state may have important implications for policy makers. Due to the high value placed on the

mandates in the state study, the shifting of the mandate's cost to worker's wages should be viewed as a best case scenario. This result is not repeated in states that chose not to mandate, as demonstrated by the federal study. If the PDA had been enacted before any state employer mandates, the estimated total nationwide effect would fall somewhere between the findings from the state study and that of the federal study—that is, a moderate decrease in the wage accompanied by some disemployment effects. This would result despite workers in some states placing a higher value on the mandate than workers in other states.

The remainder of this chapter is organized in the following manner. I review the theories of mandated benefits that cover all workers and of group-specific mandated benefits in Section I. Section II presents an overview of the state and federal maternity policies that are relevant to the empirical work in this chapter. In Section III, I introduce the empirical framework used to estimate the effect of both the state and the federal maternity policies. Section IV discusses empirical results found in similar studies. I test the effects of enacting the state employer mandates, adopted during the early to mid-1970s, in Section V. Turning to the federal legislation, Section VI exploits the state employer mandates to estimate the effect of the federal legislation enacted in 1978. Section VII reconsiders the composition of the non-covered group used in the empirical framework. Potential explanations for the differing state and federal study results are discussed in Section VIII. Section IX concludes.

## I. Theoretical Review

In a 1989 article, Summers proposes a theoretical framework for evaluating the effects of a benefit provided to all workers through a government mandate. He concludes that workers who value the benefit implicitly accept a lower wage by remaining in the labor force; non-workers who value the mandate enter the labor market to receive it. The resulting

increase in labor supply decreases the amount of deadweight loss that would have occurred from public provision of the benefit funded by a payroll tax. This labor supply response, derived from worker valuation of the benefit, leads to different labor market outcomes under a government mandate and a payroll tax system.

If a worker values the mandated benefit at an amount equal to (or above) the cost of the benefit, he or she is willing to accept a wage decline equivalent to the cost of the mandate. Since the decreased wage offsets the full cost of the benefit, the level of employment is not affected. Equivalent to that of a lump sum tax, this is the most efficient outcome. As the level of worker valuation lessens, the amount of deadweight loss increases, and the efficiency of the mandate decreases. Summers suggests that when workers do not value the benefit, the deadweight loss from providing a benefit through a mandate is equivalent to the deadweight loss from publicly providing the same benefit through a payroll tax. Thus, there is no shift in labor supply, but there are wage and employment effects.

However, Gruber (1992, 1994a, 1994b) shows that Summers' argument does not necessarily apply if only a demographically identifiable group receives the mandate's benefit. Although the basic theory is the same, Gruber points out that market or legislative barriers have a larger effect on group-specific mandates. Federal and state barriers that were designed to limit wage or employment differences (e.g., Equal Pay Act, Title VII, discrimination legislation) between demographically identifiable workers are more numerous than barriers that affect all workers (e.g., minimum wage legislation). The group-specific barriers may prevent the wages of the covered workers from adjusting downward to reflect the true value that workers place on the benefit. Empirically, the wage and employment effects in a market containing barriers to wage adjustment are consistent with a freely adjusting market in which worker valuation is low or non-existent.

Another difficulty in using the group-specific mandate as tool for providing benefits is that the demand for this type of mandate may not be readily apparent before the enactment of the mandate. Deciding whether to enact any mandate is a summation of two components: external and private demand.[35] External demand reflects the preferences of all voters, while private demand reveals the preferences of the group that will benefit from the proposed legislation.[36] In the case of a general mandate, the voter's external demand for the mandate, in theory, equals to the private demand of those who benefit. This is not necessarily the case for a group-specific mandate. Since not all workers directly benefit from the adoption of a group-specific mandate, the external demand for the benefit may differ from the private demand. Prior to actually enacting a mandate, it is unclear whether a low external demand reveals a market failure or a low valuation by the group that would be affected by the mandate. This in an important distinction since a group-specific mandate is more efficient in the former case.

When worker valuation is low, the efficiency of a group-specific mandate is below that of an all-encompassing mandate. Gruber (1992) shows that when covered workers do not value group-specific benefits, the deadweight loss may be larger than if the benefit had been publicly provided. Employers, in this case, bear the firm-specific cost of providing the benefit, based on the number of group-specific workers within that firm. Consequently, the marginal cost of hiring a group-specific worker increases. This may create a hiring wedge between the covered employees and all other workers, which leads to employer substitution

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[35] See Conway and Butler (1992) and Medoff (1988) for an application of this theory to the demand for abortion legislation. Wyckoff (1984) presents a similar argument for the demand for primary and secondary education.

[36] It should be noted that the majority of states did not vote on whether to adopt the maternity mandate, and as a result external demand is not determined by the voters in that state. It is instead indirectly determined through voters by the appointments that elected public officials make. Through this process, public demand in these states determines whether the legislative, judicial and executive branches are disposed to enacting (and enforcing) the maternity mandates. Regardless of how public demand determines the state policy, the value the group receiving the benefit places on it following the enactment of the mandate reveals workers' private demand.

of other workers for the demographically identifiable group. With the decrease in wages, many workers may choose to leave the labor market or to move to firms or industries not covered by the mandate. This aspect may cause the group-specific mandate to be less efficient for the targeted group than public provision through a workplace-wide payroll tax.

## II. Historical Motivation

Due to the unique legislative and judicial processes that led to the enactment of the federal PDA, two opportunities arose for states to review the costs and benefits associated with maternity policies prior to the enactment of the PDA. The 1972 enactment of the Equal Employment Opportunity Commission's (EEOC's) pregnancy discrimination guidelines provided the first opportunity. Two 1976 court decisions—the U.S. Supreme Court's decision in *Gilbert* v. *General Electric Company* (1976)[37] and the New York Supreme Court's decision in *Brooklyn Union Gas Co.* v. *N.Y. State Human Rights Appeals Board* (1976)[38]—afforded the second.

At each stage, a number of state Fair Employment Practice (FEP) agencies adopted state guidelines similar to the EEOC's guidelines. This may indicate that the voters in these states placed a higher value on receiving the maternity benefits than those in states that did not do so. In 1978, the federal PDA effectively legislated a minimum standard for pregnancy conditions in employer-sponsored health insurance plans. At this point, employers located in states without a similar mandate were forced to update any existing company health insurance plans, regardless of the value that either voters or workers placed on the benefit.

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[37] 205 429 U.S. 125 (1976).
[38] 41 NY2d 84, 13 EPD ¶ 11381 (1976).

### *A. Pregnancy Discrimination Guidelines, 1972*

The pregnancy discrimination guidelines issued by the EEOC in 1972 represent a clear break from previous EEOC policy.[39] While Title VII of the Civil Rights Act of 1965 originally focused on innate characteristics, the 1972 guidelines broadened the focus to include "the addition of characteristics over which individuals clearly do exert control to the bases for prohibited employment discrimination."[40] Congress, however, did not amend Title VII to incorporate the 1972 EEOC guidelines at this time. Further, in its first decision under the pregnancy guidelines, the EEOC allowed a large national employer to continue a policy that discriminated against pregnant workers. The change in the EEOC's original intent, combined with the failure to amend Title VII and the lack of enforcement in a national case, created confusion over whether the guidelines were recommendations or legally binding.

Despite the ambiguous state of the EEOC's national maternity policy, a number of state FEP agencies formally adopted the 1972 pregnancy discrimination guidelines (see table 1 for a list of states and the corresponding dates of enactment).[41] When a FEP agency complement did not exist, the state courts tended to base their decisions on the 1972 EEOC guidelines. Other states chose to wait until a congressional amendment to Title VII or the U.S. Supreme Court reduced the uncertainty surrounding the legality of various maternity mandates.

### *B. 1976 Court Decisions*

Prior to the U.S. Supreme Court decision in *Gilbert* v. *General Electric Company* (December 7, 1976), no national policy, other than the ambiguous 1972 EEOC guidelines,

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[39] For an in-depth discussion of the relevant maternity legislation, see chapter 1.
[40] Smith 1980, 499.
[41] Although many references record the mandate's adoption, none identify the level at which the state enforced it.

was in effect. However, all of the cases decided at the federal appellate level supported the EEOC's contention that the sex discrimination amendments to Title VII also prohibited pregnancy discrimination.[42] Reversing these rulings, the Supreme Court in *Gilbert* stated that employers who provided an employer health care plan without maternity coverage did not discriminate based on sex. The distinction, the Court ruled, was between pregnant and non-pregnant workers. Since this was legal under Title VII, the 1972 EEOC guidelines effectively became employer recommendations rather than requirements. This ended any application of the guidelines to court cases at the state level.

Immediately following the *Gilbert* decision, the case of *Brooklyn Union Gas Co.* v. *N.Y. State Human Rights Appeals Board* (1976), which questioned the validity of the state's pregnancy guidelines, came before the New York Supreme Court. In this case, the state court ruled that the federal decision applied only to the EEOC's 1972 guidelines, and not to the individual state employer mandates. The opinion stated, "The determination of the Supreme Court, while constructive, is not binding on our court."[43] Under this ruling, the state employer mandate could still be subject to the sex discrimination defense if the state chose to interpret it in that manner. This set a precedent for other states with employer mandates already in place. From 1976-78, most states with a FEP guideline converted that guideline into law (see appendix A for a list of states and the relevant dates). Other employer mandate states chose to disregard the New York State Supreme Court's ruling and did not strengthen the state position against pregnancy discrimination. Regardless, the *Gilbert* and

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[42] These are: *Berg* v. *Richmond Unified School District.*, 528 F.2d 1208 (9th Cir. 1975); *Gilbert* v. *General Electric Co.*, 519 F.3d 661 (4th Cir., 1975); *Holthaus* v. *Compton and Sons, Inc.*, 514 F.2d 1024 (2nd Cir. 1975); *Wetzel* v. *Liberty Mutual Ins. Co.*, 511 F.2d 199 (3rd Cir., 1975); and *Farkas* v. *South Western City School Dist.*, 506 F.2d 1400 (6th Cir., 1974).

[43] 41 NY2d 84, 13 EPD ¶ 11381 (1976).

*Brooklyn* decisions created the first clear division between states with and states without an employer mandate.

### *C. Federal Pregnancy Discrimination Act, 1978*

In 1978, the U.S. Congress enacted the federal PDA (Public Act 95-555). This legislation amends the sex discrimination prohibitions in Title VII to include pregnancy discrimination. Under the PDA, employers are required to treat pregnancy, childbirth, or related conditions in a manner similar to any other non-work temporary disability. The PDA applies only to firms that provide temporary insurance coverage for other non-occupational disabilities. For employers with benefit programs, the effective compliance date was April 30 1979. This allowed all employers who were not in compliance 180 days after the PDA's date of enactment, October 31, 1978, to update their benefit packages to include pregnancy disabilities. By ending the uncertainty over the EEOC guidelines, the state employer mandates, and the 1976 court cases, this law helped to standardize employer maternity policies across all states.

## III. DDD Estimation Techniques

To estimate the impact of the maternity mandates, I follow the example of Gruber (1992, 1994a), who uses a differences-in-differences-in-differences (DDD) analysis. This technique is typically used to analyze the labor market outcomes that result from a policy change or a training program when data are not available from a controlled experiment. In this study, the DDD estimator is used to evaluate the effect of the maternity mandates by controlling for the status of an individual's state of residence (with/without a mandate), the

year of observation (pre-mandate/post-mandate), and coverage status (benefit/not benefit from the mandate's adoption).

To understand the DDD technique fully, it is helpful to understand how the less complicated differences-in-differences (DD) analysis would be used to estimate the effect of the maternity mandates.[44] Since the aim of this study is to estimate the labor market effects of the maternity mandates on the group that benefited, only females who are age 20 to 40 would be included in the study. In this case, the DD analysis would include controls for differences in the women's state of residence and the year of observation.

The DD analysis for the two-state case in which one state adopts the maternity mandate is the following:

$$W_{jt}=\alpha+\beta_1 X_{jt}+\beta_2 S_j+\beta_3 Y_t+\beta_4 S_j*Y_t+\varepsilon_{jt}$$

where: j indexes states;

t indexes years;

$S_j$ is equals 1 for an experimental state and 0 otherwise;

$W_{jt}$ is the natural log of the hourly wage rate;

$X_{jt}$ is the set of individual demographic controls; and

$Y_t$, is a fixed year effect equals 1 if post-policy, and 0 if pre-policy.

For females in both states, $X_{jt}$ controls for an individual's demographic characteristics (e.g., industry, education, age) in the typical wage regression. A female who resides in a state affected by a maternity mandate (experimental state) belongs in the experimental group

[44] See Ashenfelter (1978) or Ashenfelter and Card (1985) for a more detailed explanation of the DD estimator.

($S_j$=1); while a female in a state that is unaffected by a maternity mandate due to her state status (non-experimental state) is a member of the non-experimental group ($S_j$=0). To control for any changes that are not due to the adoption of the maternity mandate, the non-experimental state is chosen to be demographically similar to the experimental state.[45] The difference between the labor market outcomes of those in the experimental state and those in the non-experimental state group is $\beta_2$.

The DD analysis also controls for differences across time in the two states. For the group that benefits from the mandate, this difference equals the pre-mandate to post-mandate change in earnings. The inclusion of the non-experimental group controls for the effect of any national or regional trends in earnings not related to the maternity mandates ($\beta_3$). In this simple case, the DD estimator compares the post-mandate versus pre-mandate difference between those who have the ability to bear a child in the experimental state to the same group in the non-experimental state. This is equivalent to the interaction of the experimental-state post-mandate effect ($\beta_4$). Although it seems obvious at this point, it is important to note that both the females in the non-experimental state and the females in the experimental state share an identifying characteristic that is necessary for the receipt of the benefit (e.g., the ability to bear a child).

In the DDD technique, the DD estimator is expanded to include another dimension of the labor market, a third level of controls, and a second demographically identifiable group that is not covered by the maternity mandates. The third difference measures the change in a labor market outcome (e.g., earnings) for a group of workers that is not affected by the policy change (non-covered group), regardless of state of residence. This non-covered group lacks

[45] In the DD literature, the experimental group corresponds to the treatment group, and the non-experimental group corresponds to the comparison group.

the identifiable characteristic—in this case, the ability to bear a child—necessary to benefit from the mandate.

Because only the members of the covered group are potentially affected by the change in the maternity policy, the inclusion of this third difference is essential to correct the estimation of the labor market effects of the maternity mandates.[46] The non-covered group then comprises any respondent who is not affected by the maternity mandate, regardless of the state in which he/she resides (e.g., single males and those above the typical age range for giving birth). Thus, the non-covered group is constructed to control for any policy changes that are not related to the adoption of a maternity mandate and any legislation at the federal level, which directly impacts on the females in this age group.

It is important to distinguish the purpose of the covered/non-covered group from that of the experimental/non-experimental group. Since members of the non-covered group lack an identifiable characteristic that makes them eligible to receive the mandate's benefits, including this group controls for changes in the labor market outcomes of the covered group that would have occurred in the absence of the mandate. The members of the covered non-experimental group—in this case, residents of the state without a maternity mandate who have the ability to give birth—control for changes specific to the group of women covered by the maternity mandates. For DDD estimation to be unbiased, shocks to the experimental group can not be correlated with the policy change unless the non-covered group is affected in the same manner as the covered-experimental group.

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[46] The group that may be affected by the change in policy may include the following: married females, age 20-40; married males, whose wives may be covered under the policy; and single females, age 20-40. However, I chose to focus on the group of married females throughout this paper for two reasons. First, there is uneven spousal coverage in employer mandates across states; some states expressly covered the wives of male employees while others do not. In addition, the number of states with spousal coverage is too low to test separately. Second, the incidence of pregnancy among single females of childbearing age is lower than among married females of childbearing age. This affects the probability that employers assign to the employee becoming pregnant and the employer's actual (insurance) cost of implementing the mandate.

In the simple two-state case in which one state adopts the maternity mandate, the corresponding DDD regression equation takes the following form:

$$W_{ijt}=\alpha+\beta_1 X_{ijt}+\beta_2 S_j+\beta_3 Y_t+\beta_4 S_j*Y_t+\beta_5 C_i+\beta_6 C_i*S_j+\beta_7 C_i*Y_t+\beta_8 MANDATE_{ijt}+\varepsilon_{ijt}$$

where: i, j, t, $S_j$, $W_{ijt}$, $X_{ijt}$, and $Y_t$ are defined as before;

i indexes the covered group;

$C_i$ is a dummy equal to 1 for the covered group and 0 otherwise; and

$MANDATE_{ijt}$ is equal to 1 if the respondent is in a covered group in an experimental state following the mandate and 0 otherwise.

This regression equation identifies the group-specific effects from the set of eight base equations found in table 2, Equations I-IV and I'-IV'. For each of the four groups in this study (covered experimental, non-covered experimental, covered non-experimental, non-covered non-experimental), this first difference is from the post-mandate year to the pre-mandate year. Variables that do not change across the years included in the DDD analysis are controlled for using this first difference. These variables include the following: individual characteristics, $\beta_1$; fixed state effects, $\beta_2$; fixed group effects, $\beta_5$; and effects specific to the group covered by the maternity mandate in the experimental state, $\beta_6$.

As demonstrated in Equations V through VIII, the second difference addressed by the DDD analysis is between the covered group and the non-covered group. In either the covered or the non-covered group, any effect specific to membership is isolated through this second level of controls. These effects include the following: $\beta_3$, the fixed year effect, and $\beta_7$, the trend effect specific to the covered group. The third difference is over the state and it controls for effects specific to the post-mandate state, $\beta_4$ in Equations IX and X.

Finally, the mandate coefficient, $\beta_8$ in Equation XI in table 2, is now equal to one if the respondent is in an experimental state in the covered group after the enactment of the

mandate, and zero otherwise. The relevant assumption of the DDD estimator is that all state-specific shocks not generated by the maternity mandates affect the non-covered group in the same manner as the covered group.

## IV. Previous Empirical Work

In a recent paper, Gruber (1992, 1994a) estimates the labor market costs associated with the state insurance code amendments enacted in the mid- to late-1970s. These amendments provided all purchasers of insurance with coverage for complications that result from pregnancy, but do not cover the conditions associated with normal pregnancies.[47] Consequently, any health insurance plan purchased by a firm in a state with an insurance code amendment provided female employees (and all others who purchased insurance in the state) with the limited pregnancy coverage.

In his study, Gruber uses the DDD technique to measure the post-amendment (versus pre-amendment) labor market effects on married women (compared to single males and older people) in the amendment states (versus non-amendment states). His results show that the wages of the covered group significantly declined after the enactment of the state insurance code amendments and the federal PDA. Further, the probability of employment among workers in this group declined and the number of hours worked per week increased, although neither effect is significant. These findings are consistent with an increase in the fixed cost of employing married females of childbearing age. Thus, Gruber interprets the full shift of the mandate's cost to the wages of this group as an indication that they fully value the benefits provided by the mandate.

[47] The insurance code amendments are individual-based not employment-based.

In practice, two distinct components of the state's choice of legislation affect employees: timing and content. States that enacted both maternity policies adopted the employer mandate before the insurance code amendment (timing). Further, unlike the insurance code amendments, the state employer mandates and the federal PDA cover normal pregnancy along with complications that arise from pregnancy (content).[48] Therefore, an increase in an employer's cost occurs in response to an insurance code amendment only if a previous state employer mandate does not exist. The converse however, is not true; a prior insurance code amendment only weakens the effect of a state employer mandate. Since Gruber's study classifies states only on their insurance code amendment status, his comparison is flawed.

In chapter 3, I point out that neither Gruber's state or his federal studies control for the impact of the state employer mandates. Using the same data set, I first replicate his state study and federal study results. I then consider only those states that enacted an employer mandate before—or instead of—an insurance code amendment and states without either policy. Estimating the effect of the state employer mandates using this subset allows me to correct Gruber's misclassification of states and re-estimate the effects of a maternity mandate using his set of states. In chapter 3, I find evidence of a wage decline accompanied by some disemployment effects. This chapter differs in that I focus on the full set of states—instead of the subset used by Gruber—to determine the wage and employment effects of the employer mandates on those who receive the maternity benefit.

[48] California, which enacted an insurance code amendment before an employer mandate, is the exception. See chapter 1 and appendix A for more information.

## V. State Employer Mandates

This study tests the labor market effects of maternity legislation by focusing on the state employer maternity mandates. Because most of the state mandates originated from the EEOC's 1972 guidelines, the state employer mandates were enacted earlier and were more expansive than other state policies. As a result, the mandates are similar in content and coverage to each other and to the 1978 federal PDA. Thus, using this set of state maternity mandates allows for a consistent test of state mandates over a large number of states.

### *A. Main Data Source*

This study uses annual data from the May supplement of the Current Population Survey (CPS). The CPS is a national probability sample in which respondents are in the survey for 16 consecutive months. Respondents are interviewed each of the first four and the last four months of the cycle.[49] In every supplement, the CPS collects basic demographic information (e.g., race, sex, age, educational attainment) for each household member reported by the respondent. The May supplement then asks the respondent about the current labor market status of each household member above the age of 15. For each person employed in the week before the survey, data are collected on the characteristics of his or her main job (e.g., hours per week, hourly wage, industry).

Before 1977, the May CPS supplements suppressed the individual state identifier for all but the largest states. The non-identified states were then aggregated into a number of state groupings by region. Complicating matters, the state groupings and the number of individually identified states changed twice between the survey's initial year (1968) and

[49] In this respect, the survey is longitudinal. Because respondents are tracked for only 16 months and the maternity mandates were adopted over a period of about seven years, the longitudinal nature of this data set

1976. From 1968 to 1972, states were identified and grouped according to one formula; from 1973 to 1976, another formula was used. This incompatibility exists between both the individual states and the state groupings. As a result, this study uses the data from six May CPS supplements (1973 to 1978).

### *B. Methodology*

To test the effects of the state maternity legislation, I divide the eligible states into two groups: those that implemented a state employer maternity mandate before the enactment of the federal PDA in 1978 (the experimental states) and those that did not (the non-experimental states). For inclusion in the study, the dates of compliance (month and year) for each experimental state had to be listed in at least two references.[50] The non-experimental states were not included in any reference.

Only experimental states that continued to enforce the mandate until the enactment of the PDA are included in the analysis. The following analysis also excludes any state that enacted an insurance code amendment but not an employer mandate (see appendix A for a list of these states). This removes any potential bias that may occur due to the limited maternity provisions of the insurance code amendments.[51] Because of the structure of the CPS, the sample also excludes state groupings that contain states with different years of or different types of enactment, including no enactment.

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cannot be exploited for this study. Consequently, I ignore the longitudinal aspects of the data and treat each respondent as a cross-sectional observation.

[50] For further information, consult the following references: General Accounting Office (1977, 1979), National Employment Law project, Inc. (1975), United States Supreme Court (1975/76, 1976/77), and Weyland (1978).

[51] States that enacted both types of maternity policies are included since the majority of states implemented an employer mandate before an insurance code amendment. The exception is California. However, this state is excluded due to the state TDI system that began covering maternity conditions in 1974. In later years, California enacted a state insurance code amendment, and finally an employer mandate. See appendix A for a list of relevant state maternity policies.

Further, states for which either a month or a year of compliance were unavailable are dropped from the sample. This is the case even when the state FEP agency is listed by two of the referenced publications as adopting or enforcing an employer mandate prior to the PDA. For example, I was unable to find the initial year of enactment for Indiana in any source, although several sources list the state FEP agency as enforcing maternity guidelines before the *Gilbert* case (see Weyland 1978, for example).

States that previously enforced the EEOC's 1972 guidelines but which ended this practice after the U.S. Supreme Court ruling in *Gilbert* (1977) are also not included in the study.[52] Finally, the five states that covered maternity through various payroll tax systems are dropped from the sample (see chapter 1 and appendix A for details).

The sample also excludes workers who are not covered either under Title VII or the EEOC's protections as listed in Title VII (see appendix B for a list of these states and the unprotected workers). The state FEP agency in a number of experimental states classifies additional workers as being protected by the state FEP agency. These workers are also excluded from the study. Although federal workers are covered under Title VII in theory, there is no mechanism to enforce it at this level. Consequently, the sample does not include federal workers or government workers not clearly identifiable as state or local employees.

Using the DDD analysis presented in table 2, I estimate a model that includes the experimental states and the non-experimental states identified in appendix B. The covered group is comprised of married females age 20 to 40, who are in theory directly affected by the maternity mandates. Workers who are not affected by the maternity mandates are included in the non-covered group (single males age 20-40 and people over the age of 40).

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[52] See, for example, Colorado.

As described in the data section, all observations from 1973 to the date of the federal PDA (1978) are used.[53]

Due to the structure of the May CPS and the dates of passage for the maternity mandates, a vector of year dummies replaces the pre- and post- mandate variable in the DDD analysis found in table 2. This is true for both the first and the second level interactions. The $MANDATE_{ijt}$ interaction is equal to one for the group of married females, age 20-40, in the years that an experimental state has a maternity mandate in place. It is zero for all other states, all other years, and all other observations.

### *C. Results*

The first column in table 3 presents the results of a wage specification that includes the demographic characteristics; the grouped state, year, and covered group interactions; and the mandate variable. Overall, the coefficients on the demographic variables are of the expected sign and magnitude. More-educated workers earn more, as do workers with more years of experience (although at a decreasing rate) and those working in an establishment covered by a union contract. As expected, married workers earn more than unmarried workers do. The wages of non-white workers are below those of their white counterparts; female worker's wages fall below the wages earned by male workers. In addition, those in the covered group earn almost 8 percent more than those in the non-covered group. The coefficient on the mandate variable is positive and significant, indicating an almost 5 percent increase in wages following the mandate. This implies that workers for whom the benefit was adopted place a negative value on the mandate.

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[53] Due to the restrictions on the number of years included, states with early dates of enactment (before May 1973) identify differences off other states and the covered/non-covered group.

Although the finding of an increased wage for those affected by the mandate is counterintuitive, the positive coefficient may not reflect the impact of the state mandates, but instead may reflect the individual state effects not controlled for in the above specification. Based on the two-state model presented in table 2, this specification measures the experimental/non-experimental effect through a grouped-state variable that equals one if a state enacted a mandate at any time before 1978, and zero otherwise. Thus, the coefficient on $MANDATE_{ijt}$ may be measuring individual state-specific effects (e.g., industrial shocks) not controlled for in the grouped $STATE_j$ variable.

The specification in the second column of table 3 controls for state-specific effects by including a vector of individual state variables that equals 1 if the respondent is in a particular state and 0 otherwise. These independent state variables replace the experimental/non-experimental ($STATE_j$) designation in the base regression found in column 2. Including state-specific variables should control for differences that vary by state but that are not related to the state maternity policy. Examples include state anti-discrimination policies or state attitudes towards the female workers.

Using this specification, the effects of the demographic variables are largely unchanged. After controlling for individual state effects, the estimated effect of the state maternity mandates is a 3.5 percent decline in the wages of the covered group. This translates to a decrease of about $291 per year for a full-time female worker covered by the mandate, well within the cost range for implementing a maternity mandate ($277/year to $360/year) estimated by Gruber.[54]

[54] I define full-time in this example to be a respondent who works 40 hours per week for 52 weeks. Gruber's estimates are for females who hold family coverage and who are between the ages of 20 and 39. All amounts are in 1978 dollars. See Gruber (1992) for details on how this estimate was calculated.

In column three, I include the individual state variables in the second level covered*state interaction.[55] The decline in the wages of the covered group increases to 4 percent and is significant. Thus, for each full-time worker covered by the mandate, this equals about a $335-per-year decrease in pay. Again, this is well within Gruber's cost estimate.

Further, under this specification overall net labor input falls. The number of hours worked per week declines by a significant 3.6 percent, which may indicate that more part-time work is being undertaken by married females of childbearing age in the affected states. Although insignificant, the coefficient on the probability of employment is negative. Overall, the wage and the net employment results are consistent with the members of the covered group assigning a positive value to the benefit.

### *D. Group-Specific Effects*

Within this covered group, however, the effect of the mandate may vary across groups of workers. The wages of workers who face existing market barriers, such as anti-discrimination legislation, for example, may not legally adjust downward to reflect the value placed on the benefit by females in the covered group.[56] On the other hand, women whose employers did not provide health insurance would not be affected by the legislation. To determine how the maternity mandates impacted on different types of workers, I re-estimate the full sample specification across more/less skilled workers and on those in the workforce before the U.S. Supreme Court decision in 1976.

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[55] An f-test rejected the inclusion of individual states in the state*year interaction.

[56] This situation may also occur when minimum wage barriers are present. However, it is unlikely these barriers will affect those receiving health insurance benefits since the probability of receiving these benefits increases with the wage. See Averett and Hotchkiss (1995) for more details.

First, I consider the labor market effects of the state maternity mandates on the workers with different probabilities of receiving medical insurance. Since the May CPS does not ask respondents about employer health insurance coverage in the 1970s, I estimate the labor market effects of the maternity mandate on workers holding jobs that require different levels of skill. As a proxy, I use the level of education attained by the respondent at the time of the survey. More-educated workers are, in theory, more likely to hold jobs that require more skills and offer health insurance benefits.[57] As a result, there is a higher probability that the maternity mandates will have an impact on this group. The more-educated group consists of those who report having completed 12 or more years of regular schooling; the less-educated group contains workers who report completing less than 12 years of regular schooling.

These results are in the first two rows of table 4. In the first row, the results for the more-educated group are reported. The coefficient on the mandate variable indicates a wage decline of 4.6 percent after the adoption of the maternity mandates. The number of hours per week worked falls by 4.9 percent. Both effects are significant, suggesting that disemployment effects accompanied the wage decrease for more-educated workers. As in the larger specification, the probability of employment declines, but is not significant. In the second row of table 4, the results for less-educated workers are reported. The employment and wage effects for these workers are insignificant, although the number of hours worked per week is positive. Thus, it is likely that a large portion of this group did not receive health insurance in connection with employment and was not affected by the state's maternity mandate.

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[57] Averett and Hotchkiss (1995) find that for each year of education, workers have a 5.6 percent higher probability of receiving medical insurance.

The U.S. Supreme Court's ruling in *Gilbert* (1976) may also affect the estimates. Under this ruling, the lower courts could no longer interpret the 1972 guidelines under Title VII's sex discrimination amendment. The *Brooklyn* (1976) decision reversed this ruling as it applied to a separate employer mandate enacted by the state. Under this decision, states could continue to enforce an existing state employer mandate. Although a number of states chose to enforce their state employer mandates immediately after *Gilbert*, others allowed a significant lag to occur before strengthening an existing state guideline.[58] Still others chose not to enforce guidelines previously in effect.[59] Due to the Court's decision, the EEOC's pregnancy guidelines and the state's maternity mandates do not apply to employers during this transitional period. Therefore, the uncertainty concerning the state's position may result in a decrease in the amount of employer-offered maternity insurance. If this is case, the effects from the maternity mandate will be understated.

To determine whether the *Gilbert* decision and subsequent state or congressional actions influenced the results, I test a specification that includes only the pre-*Gilbert* years, 1973-76. The third row of table 4 presents these results. The wage and employment coefficients are in the same direction as the full year specification. However, only the wage decline (over 5 percent) in the pre-*Gilbert* specification is significant. Using this coefficient, I estimate that the wages of a full-time female worker (as defined for the full sample) declined by over $430 per year.[60] The decline in the number of hours worked per week is smaller than that found in the full year specification, indicating that state employer mandates had a larger impact on the part- or full-time status of workers after the 1976 court decisions.

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[58] No documentation of enforcement or lack of enforcement during this period is available.
[59] These include the following: Colorado, Kentucky, Oklahoma, and New Hampshire.
[60] This estimate is above Gruber's estimated range, however, the cost was estimated using a state that was the midpoint of the locational cost distribution. The range for other states would presumably be higher.

## VI. The Federal PDA

Due to the confusion created by the 1972 EEOC guidelines, various state maternity policies, and the 1976 court decisions, the extent to which individual employers adopted the maternity policies is unclear. It is also impossible to judge the amount of information workers possessed about their rights concerning pregnancy conditions since the level of enforcement from various agencies was inconsistent.[61] Because of these issues, the federal PDA presents a better opportunity to estimate the effects of a mandate than the state employer mandates. The congressionally approved PDA created a nationally enforceable standard that applied to all employers under the jurisdiction of Title VII.

By exploiting similarities between the state employer mandates and the federal PDA, the federal legislation can be used as a 'reverse experiment.' The purpose of this federal study 'reverse experiment' is to confirm the direction and magnitude of the state study results. In this study, workers who were already covered by a state maternity mandate provide a natural control group for those affected by the federal legislation. The states with employer mandates are now the non-experimental states and the states that did not enact any maternity policies prior to the PDA are now the experimental states. The underlying assumption is that the value that the covered group places on the maternity benefits does not systematically differ by experimental/non-experimental state status.

### *A. Main Data Source*

After 1979, the May CPS supplements gather earnings data only for those respondents in the out-going rotation group (e.g., months 4 and 16). Due to the small sample sizes present in the May CPS supplements, I use the March CPS supplements, which include

[61] See chapter 1 for more details.

earnings information for all respondents, to test the wage and employment effects of the federal legislation. These supplements differ from the May supplements in that respondents are interviewed about their labor market activity and earnings during the previous calendar year. All industry, occupation, hours per week worked, and weeks worked questions refer to the longest held job during that period; the earnings variable contains data on all wage or salary earnings received for work performed as an employee during the previous calendar year.[62] Finally, the March CPS differs from the May supplement in that it does not ask the respondent about his or her union status.

### *B. Methodology*

Aside from the use of the March CPS supplement, the federal study differs from the state study in two respects: the composition of the experimental and the non-experimental states and the pre- and post-policy years. I test the effects of the federal PDA using states with an employer mandate or without any type of mandate policy, such as an insurance code amendment. States that adopt both maternity policies are included in the study since the content of the maternity mandates dominates that of the insurance code amendments. In the federal study, states that enacted and continued to enforce an employer mandate before January 1, 1977 are in the non-experimental group. The time frame for the federal study is also different, covering the years from 1978 to 1982.

As in the state study, states that instituted a maternity policy before the Supreme Court's ruling in *Gilbert* (1976) but did not strengthen that policy by October 31, 1978, are dropped from the sample (see appendix C for a list of states and industries). The federal

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[62] Included in the variable are earnings from wages, salary, armed forces pay, commissions, tips, piece rate pay, and cash bonuses. If a respondent reports a wage range, the midpoint is used (e.g., respondent-reported earnings

sample includes all workers covered by Title VII and the state employer mandates but not federal government employees. While Title VII theoretically covers federal workers, in practice it was not enforceable at that time; all self-employed workers are also dropped from the study. Finally, because earnings data are from all jobs, I drop any respondent who reports more than one job during the previous calendar year.

### *C. Results*

As in the regression framework used in the state study, states are grouped by experimental/non-experimental status in the $MANDATE_{ijt}$ interaction. The March CPS asks respondents about the characteristics of the longest job worked in the previous year. As a result, I am able to calculate the impact of the federal PDA on the number of weeks that the respondent works per year, as well as wage, hours, and employment effects. Table 5 reports the results from a specification similar to the one used in the state study.[63]

In contrast to the findings in the state study, both the wages and employment of the covered group affected by the PDA decline, but only the employment effects are significant. Married females in the post-PDA experimental states work nearly four percent fewer hours (column 2) than those in the non-experimental states. In shown in column 3, the number of weeks worked by this group declines by 7 percent. This indicates that those covered by the mandate are engaging in more part-year and part-time work, which may have a lower probability of providing health insurance. Finally, the probability of employment is negative and marginally significant. Those who are covered by the PDA were almost 3 percentage points less likely to be employed after this legislation was enacted.

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of between $10,000 and $15,000 are reported as $12,500).

[63] The results from an f-test indicate the inclusion of individual state effects in both second level interactions (state*covered and state*year).

These results are consistent with workers in the experimental states placing a very low—or no—value on receiving the maternity benefits provided under the PDA.[64] Although some firms in the experimental states may have adopted similar health insurance in advance of the federal act, the strong decrease in net employment implies that the majority of firms did not.

### *D. Group-Specific Effects*

Next, I examine the effects of the federal legislation across more/less educated workers. Table 6 presents these results. Similar to the state study, more educated workers are affected by the maternity mandate. The number of hours worked per week falls by almost 4 percent, and is significant. Less significant is the decrease in the number of weeks worked per year for this group. All of the other estimates are insignificant. For the less-educated group, the PDA does not impact on their wages or the number of hours worked per week. A large decrease, however, occurs in the number of weeks worked per year, 22.3 percent. In addition, the probability that less-educated workers were employed following the PDA fell by almost 5 percentage points. Taken together, these effects are consistent with a shift to lower hours or part-time employment for more educated workers and part-year work for less educated workers. This may indicate that covered workers, regardless of their

[64] As an example, this response may occur due to the spousal coverage clauses found in some state mandates and the federal PDA. These clauses stipulate that employers provide maternity benefits to spouses covered by the health insurance plan. However, workers with indirect access to the benefit, such as through a spouse, may alter labor market behavior accordingly. This does not occur if the spouse's employer provides insurance coverage below valuation. If the opposite occurs—coverage is equal to or greater than her valuation—the spouse may not value insurance gained through 'own' employment and may view the provision of the mandate in her workplace as a tax. Therefore, some spouses may find it optimal to leave the labor force and devote more time to home production, or move to a job, industry, or sector not covered by the maternity legislation. Unfortunately, I cannot test this hypothesis since the states that chose to include the spousal stipulation either do not appear in the state experiment, or are grouped with non-spousal stipulation states. In addition, there is no way to gauge whether states that do not explicitly state the spousal stipulation interpret the guidelines to include spousal coverage.

educational background, are increasingly in positions that are less likely to provide fringe benefits (e.g., low hours, part year), including health insurance after the PDA.

## VII. Covered/Non-Covered Group

The specifications in both the state study and the federal study rely on three assumptions. The first is that the state provisions correctly identify each state as either an experimental state or a non-experimental state. Second, it is assumed that the dates of enactment for the various state maternity provisions are correct.[65] The third assumption is that the composition of the non-covered group does not bias the results for the non-covered group.

However, the third assumption may conflict with the theory of mandated benefits, which predicts that employers may respond to group-specific legislation by substituting relatively less-expensive non-covered workers for covered workers. If employers substitute between the covered group and the non-covered group, then one of the identifying assumptions of the DDD regression framework—that the non-covered group controls for all labor market shocks correlated with, but not resulting from the group-specific mandate—is violated. This may result in $MANDATE_{ijt}$ measuring the total labor market effect of the legislation, rather than the effect on the group married females. Thus, the inclusion of the full sample non-covered group would overstate the mandate's true effect on the covered group.[66] Similarly, the regression estimates will be biased if employers substitute away from

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[65] Because the state guidelines were superseded by the federal PDA, a number of states no longer had records of the guidelines or the exact dates of enactment. For this reason, I only include the states for which the state status and the dates of enactment are supported by at least two references. For more information, see footnote 13, the material contained in chapter 1, and the list of states in appendix B.

[66] The age-earnings profile of females is not influenced by their age composition, therefore, female workers are closer substitutes. For more detail, see Freeman (1979). For evidence on the elasticity of substitution between women and youths (ages 14-24) see Grant and Hamermesh (1980).

all types of labor due to the maternity mandates. The wages of all workers fall under this scenario. In this case, the legislation's effect on the covered group's wage would be understated.

A separate consideration is whether the composition of the group-specific mandate impacts negatively on either the non-covered group or the non-experimental group. As an example, a portion of the non-covered experimental group in the federal study may be affected by the enactment of the 1978 Age Discrimination in Employment Act (ADEA). This federal mandate increased the mandatory retirement age to 70. Similar to the maternity mandates, a number of states enacted laws similar in content to the ADEA before the federal mandate. The ADEA, in theory, did not affect workers in these states. As a result of the state legislation, the extent that the ADEA affected older workers' behavior depended on which states were directly affected and how large the relative proportion of older workers was per affected state.[67]

If the impact of the ADEA was uniform on workers in all states, the inclusion of the covered/non-covered groups and the coefficients for years of experience would adequately control for the affect of the ADEA in the maternity regression. The same result may occur if the location of states that enacted the state age mandates was not uniform. However, it was primarily the non-experimental states in the federal study that enacted the state age legislation during the 1970s—the same period in which these states enacted maternity

[67] Neumark and Stock (1997) test the effects of the state and federal laws using the decentennial census. They find that the age discrimination laws led to steeper age-earnings profiles and a significant increase in the employment of older workers.

mandates.[68] Thus, inclusion of older workers in the state and federal maternity studies may affect the results.

In view of the covered/non-covered group problem, I again test the legislative effects of the state employer mandates, but use a smaller sample containing only married females of childbearing age. Respondents who report working in industries excluded from Title VII protections or from any state's employer mandate now comprise the non-covered group (see appendix B and appendix C for the eligible states and the affected industries).[69] Inclusion of this non-covered group allows for a test of the effect of the employer maternity mandates on the group of married females, while avoiding the potential problems presented by the full sample non-covered group. Employer substitution of the non-covered workers for the covered workers is no longer an issue. As with the full sample, the small sample non-covered group controls for region-specific shocks that affect both the non-covered group and the covered group.

Using the law-based non-covered group is not without problems. The industries used to form the non-covered group are, for the most part, outside the scope of Title VII. Therefore, workers in these industries may be affected differently by national or regional shocks than the workers protected by the EEOC. Further, industry-specific shocks may have an impact on certain subgroups. The regional grouping of states in both the state study and the federal study will only exacerbate this problem. Still, the results using this group are valuable as they provide an estimate of the mandate's effect for comparison to the full

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[68] Five of the seven non-experimental states implemented state age-discrimination legislation that banned discrimination of employees age 65-70 before 1978 (the year of the federal law). These include the following: Alaska, Illinois, Iowa, Michigan, and Minnesota. None of the experimental states did the same.

[69] I also test the specification that includes only workers exempted under Title VII. The results are unchanged from those found in table 7. These results are found in appendix D.

sample results. More important to policy makers is the extent to which these results are similar to those of the larger sample.

Another important consideration is that it is possible that the covered sector females may 'spill over' into the non-covered sector as a result of these mandates. In particular, this occurs if barriers to wage adjustment prevent the wage in the covered sector from adjusting to reflect the value placed on receiving the maternity benefit. The spillover effect may also occur if workers do not value the mandate. In either case, the supply of labor increases in the non-covered sector, causing a decrease in the non-covered sector wage. The composition of the covered group then would overstate the effect of the mandate. In addition, net employment in the experimental states would decline as well, since the non-covered sector cannot absorb the influx of covered-group workers. It is worth noting that the spillover effect occurs only to the extent that the cost of the mandate is not shifted to the wages of the covered group. In the case of a full shift of the wage, there is no spillover effect.

### *A. State Study Results*

Using the DDD analysis presented in table 2, I estimate a model that includes the experimental and the non-experimental states identified in appendix B. The covered group is comprised of married females age 20 to 40 in industries covered by Title VII or the state employer mandates. Workers in industries not affected by the maternity mandates compose the non-covered group. As described in the data section, all observations from 1973 to the date of the federal PDA (1978) are used.[70]

[70] Due to the restrictions on the number of years included, states with early dates of enactment (before May 1973) identify differences off other states and the covered/non-covered group.

Table 7 reports the results from the state study using the small sample non-covered group.[71] As shown in column 1, there is decline in the covered group's wages (3.7 percent) similar to the estimates found in the full-sample study. The disemployment effects in this sample, however, are not significant, but are in the same direction as those found in the full-sample specification. Thus, employers did not appear to substitute the full sample non-covered workers for covered workers following the enactment of the mandate. In addition, the small-sample full shifting of the wage implies that the spillover of covered workers into the non-covered sector did not occur.

Table 8 presents the results from re-estimating the sub-group specifications from table 4 using the smaller sample. In general, these results are similar to those found in the full-sample specification. The wages of more-educated workers, found in the first row, declined by over 4 percent in the experimental states following the enactment of the mandate. The decrease in the number of hours (4.2 percent) is smaller and less significant than that found for the more-educated workers in the full-sample results. Further, the estimates from the second row specification, which examines the effects of the mandates on the less-educated workers, are insignificant.

In the third row of table 8, I re-estimate the pre-*Gilbert* specification using the small-sample non-covered group. The 5.2 percent decline in the covered group's wage is similar to that found in the full-sample specification. This translates to a decline of nearly $440 per year in the wages of those who benefit from the mandate. The employment results (e.g.,

[71] Although the previous results are consistent with the predicted effects of group-specific mandates, they may reflect the effect of the experimental state prohibition of sex discrimination. Most state FEP divisions adopted the pregnancy guidelines and the sex discrimination mandates concurrently. Although Title VII applies to all workers, it is possible that the lack of state and local enforcement and the EEOC's backlog of cases increased non-compliance with the sex discrimination amendment in the non-experimental states.

decreased hours worked per week, increased probability of employment) remain insignificant.

As an alternative specification, I drop the non-covered group and resort to a DD estimation. These results, found in table 9, base the mandate's effect on a state by year interaction. Therefore, this specification does not control for national or regional effects. The results from the DD specification are similar in direction and magnitude to those found in the small sample specifications: the wages of workers affected by the mandate decrease while net employment remains the same.

### *B. Federal Study Results*

Table 10 reports the estimated wage and employment effects of the federal legislation in the experimental states small-sample specification. Again, female workers under Title VII's protections comprise the covered group. Similar to the full sample results, there is a significant decline in net labor input due to the federal PDA. The estimated post-PDA probability of employment among covered workers is nearly the same as in the full sample specification. The number of yearly weeks worked, found in the third column of table 10, decreases by just over 13 percent, almost twice the decline found in the full sample results. As shown in the second column, the number of hours worked per week falls by 7 percent. The decline in the wage is negative and larger than in the full sample specification, but it is still insignificant.

In table 11, the estimated labor market effects of the PDA on the sub-groups are presented. The first row presents the estimates for more educated workers. As shown in column 3, those affected by the PDA work about 13 percent fewer weeks per year after the mandate is enacted. The 6 percent decrease in the number of hours worked per week by the

more educated workers is less significant than that found in the full-sample results. The specification including less-educated workers is found in the second row of table 11. The estimates in column 4 indicate that these workers experience a decrease in the probability of employment of just over 8 percentage points. However, the mandate does not seem to affect the number of weeks worked per year, the number of hours worked per week, or the wage of this group.

The first row in table 12 presents the results from the DD specification that does not include the non-covered group. The insignificant decline in the wage is similar to that found in both the small- and large-sample specifications. Likewise, those covered by the mandate experience a significant decrease in the number of weeks worked per year. The decline in the number of hours worked per week is much smaller and less significant than the full- or small-sample specifications. The second and third rows of table 12 present the results for more- and less-educated workers. Both more and less educated workers experience a decline in the number of weeks worked per year after the PDA is enacted (7.5 percent and 18.9 percent, respectively). Like the previous specifications, there is a corresponding drop in employment of about 8 percentage points for the less educated workers.

Although differences do exist, the results from the smaller law-based non-covered group are similar to those found using the larger non-covered group. The state study results are nearly identical. Overall these results support the theory that the covered workers place a positive value on receiving the benefits afforded by the state maternity mandates.

However, the federal study results of the small-sample specification differ from those found in the full-sample specification. What does not change is the effect of the mandate on the wage. Although negative, the mandate coefficient is never significant in the wage equation. Disemployment effects are present in both specifications: the probability of

employment and the number of weeks worked per year are lower. Although the effects of the federal study are not clear, it seems that females of childbearing age in states that did not enact a state employer mandate either did not place a high value on receiving the maternity benefits afforded by the PDA or faced significant barriers to wage adjustment.

## VIII. Disparity between State and Federal Study Results

Contrary to the hypothesis for the 'reverse experiment,' the labor market effects of the state employer mandates and the federal PDA differ considerably. The state and the federal study results are plausible according to the theory of mandated benefits. The wage and employment differences are surprising given the nearly identical wording of the state mandates and PDA; both provide female employees with health insurance coverage for normal pregnancies and complications resulting from pregnancy. To determine the cause of the disparity between the state and the federal studies, I consider state-specific differences between the experimental states and the non-experimental states used in the federal study.

In theory, the mandate's marginal costs and marginal benefits should not differ systematically between a state with—and a state without—prior legislation. The federal PDA in this scenario would serve either to quicken the process of adoption in the remaining states, or to correct for market failures originating in those states' governing bodies. In this situation, the effects of the federal study would confirm the direction and the magnitude of the state study results. Given the inconsistent findings between the two studies, it seems clear that the federal PDA did not merely expedite the mandating process. One possible explanation for these results is that the marginal cost and/or the marginal benefits of the

maternity legislation vary by state and, based on these criteria, states actively choose whether to adopt state maternity policies.[72]

The actions of states during this period are consistent with this hypothesis. Initially, a number of states chose to adopt or enforce the EEOC's 1972 pregnancy guidelines, signaling that the public demand for the maternity benefit was greater than the marginal cost of enacting similar state legislation.[73] A positive private demand is evident in the full shifting of the cost of the mandate to the covered group's wages. Following this, the unique combination of the *Gilbert* and *Brooklyn* decisions forced states that had not formally adopted a state maternity mandate to choose whether to adopt similar legislation. States in which external preferences determined that the marginal benefit was greater than the marginal cost enforced the appropriate level of maternity coverage (e.g., a state employer mandate, a state insurance code amendment).[74] As a result of these divisions and the requirements of the DDD estimator, the federal study highlights the PDA's effect on two types of state. These include the following: states with the highest marginal cost/lowest marginal benefit (non-mandate states) and states with the lowest marginal cost/highest marginal benefit (mandate states). Among the non-mandate states, the lack of adoption indicates a lack of external demand. The large disemployment effects that followed the federal legislation confirm that low external demand correctly signaled that private demand was less than full.

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[72] See Rasmusen (1992) for an in-depth explanation of the differences between states that initially enact legislation and states that do not.

[73] States in which the differential between the marginal benefit and the marginal cost was lower may strongly recommended the mandate instead of adopting it. Thus, there may be more disemployment effects that in states that adopted the mandate. Unfortunately, there are not enough states in the 1970 CPS to test this theory.

[74] Some states adopted both an employer mandate and an insurance code amendment. By adopting an employer mandate first, a state effectively provided the minimum level of maternity coverage for non-employed females. Female employees had a higher level of coverage due to the mandate. See chapter 1 for more information.

Casual evidence supports this hypothesis. Married females of childbearing age comprised a larger percentage of the population of the federal experimental states than in the federal non-experimental states (32.7 percent and 30.5 percent, respectively).[75] However, the percent of the employed population in 1979 that was comprised of married females was lower in the states affected by the PDA (31.5 percent) than in the states with employer mandates (33.0 percent). Further, 13.3 percent of the women in the experimental states had a child age three or younger living in the household at the time of the survey. For comparison, 11.6 percent of the population in the non-experimental states are women with children age three or younger. In addition, a larger percentage of females with children age three or younger were employed during the previous survey year in the non-experimental states (67.2 percent) than in the experimental states (65.2 percent). Thus, there were more females of childbearing age in the federal experimental states than the in federal non-experimental states, although fewer of these females were employed.

Additional evidence of the value that the voters place on legislation favorable to females can be found in the propensity of states to adopt similar legislation. Table 13 lists the status of the federal study states with regard to four separate policies that were favorable to females during the 1970s and the 1980s.[76] In the first column, I define each state's status with regard to an active FEP agency. The state status is important since a FEP agency had to enforce all EEOC regulations, including sex discrimination guidelines, to retain its active status. After 1976, these agencies also tended to quicken the processing of discrimination claims at the state level. Column 2 lists whether a state adopted a separate Equal Pay act

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[75] The statistics in this paragraph are weighted calculations from the March 1981 CPS.

[76] Although I focus on the propensity of a state to enact female-specific policies, it may be the case that these states should be examined according to pro-business versus pro-worker policies. Of the nine experimental states listed in table 13, for example, all but three are right-to-work states. Only three of the 15 non-experimental states had enacted right-to-work legislation as of 1981.

above that found in the state FEP law.[77] In the third column, states that ratified the Equal Rights Amendment (ERA) petition before 1978 are distinguished. The fourth column lists states that adopted the ERA into their state constitution.

Of the nine federal experimental (non-mandate) states, only West Virginia supported three of the four female-favorable policies. Four of the remaining states adopted at least one piece of female-favorable legislation; the remaining four did not enact any. Most of the federal non-experimental (mandate) states adopted at least three of the four of the pieces of female-favorable legislation. Preferring not to adopt the ERA into their state constitution, only three non-experimental states (Iowa, Missouri, and Wisconsin) legislated less than three pieces of legislation. Thus, the majority of states that adopted the maternity guidelines before the passage of the federal legislation tended to implement other policies that were favorable to females during the 1970s. This supports the hypothesis that their constituencies valued similar state policies, such as the state maternity mandates, that were favorable to females.

## IX. Conclusions

This chapter evaluates the labor market impact of state and federal mandates. In particular, the focus is on group-specific mandates that required employers to cover pregnancy conditions when providing health insurance benefits. Over the period examined, three major events had an impact on employees. The 1972 EEOC's pregnancy guidelines changed the focus of the EEOC's policy to include acquired worker characteristics; a limited

[77] The state equal pay statutes are in effect following the 1963 federal legislation. The following argument describes why these state statutes are favorable to women: "While a plaintiff in any state may point to federal laws as well to argue that sex discrimination is contrary to general 'public policy,' the existence of a state statute that explicitly forbids such discrimination further buttresses public policy arguments relevant to state tort and contract claims..." (Wald, 1982). Thus a number of avenues are created to redress employer discrimination.

number of state FEP agencies adopted these EEOC guidelines. Second, the diverging opinions presented by the *Gilbert* (1976) decision, which redefined the guidelines to be 'recommendations,' and by the *Brooklyn* (1976) decision, which upheld the individual state FEP guidelines, created a clear division between the states with and states without employer mandates. Third, the 1978 federal PDA effectively legislated a minimum standard that all employer-sponsored health insurance plans must treat pregnancy in the same manner as other temporary non-occupational disabilities.

Using these legislative and judicial divisions, I test the labor market effects of the maternity mandates using the state employer mandates and the federal PDA. At the state level, I find that the enactment of employer mandates resulted in a substantial shifting of the cost of the benefit to the covered group's wages. This indicates that those affected by the state legislation placed a high value on receiving the benefit relative to the employer's cost of providing the additional health insurance. The federal legislation, on the other hand, significantly affected the employment of females who stood to benefit. The disemployment effects indicate that those affected by the PDA may not have fully valued the mandate.[78]

Although neither of these results contradicts the theory of group specific mandates, the state study and the federal study effects are disturbing from a policy perspective, especially given the similarities found in the legislation. The evidence found in the state study reflects a seemingly efficient choice by the state governments; the federal study results indicate the opposite. Which results should legislators believe?

[78] The state study results are similar to Gruber's (1992, 1994a, 1994b); however, the federal study results are dissimilar.

The disparity between the state study and the federal study results may be explained by the propensity of the states to adopt similar legislation. Because states implement a mandate if the perceived social benefit is higher than the benefit's marginal cost, it is reasonable that each state adopts the 'correct' level of state maternity legislation (an employer mandate, an insurance code amendment, or neither) prior to the PDA. Covered workers in states that value the mandate implicitly accept a lower wage to receive the mandate's benefits. Therefore, the labor market estimates from the state study should be viewed as a best case scenario.

By default, the PDA mainly affects workers who place a low—or no—value on the federally legislated benefits. These workers did not necessarily place such a high value on receiving the maternity benefit; therefore, the cost of the benefit was not shifted to the covered group's wages. True to the hypothesis, a state mandate was not enacted before the PDA in these states. The total effect of a federal mandate enacted before any similar state legislation would be somewhere between these results: a moderate decrease in the wage, accompanied by disemployment effects.

**Table 1: Dates and Status of the Employment Mandates**

| State | Date of Enactment | State Study | Federal Study |
|---|---|---|---|
| Alabama | N/A | N | E |
| Alaska | 6/4/75 | — | N |
| Arizona | N/A | — | — |
| Arkansas | N/A | — | — |
| California | 9/22/76 | — | — |
| Colorado | 5/31/72 | — | — |
| Connecticut | 10/1/73 | E | N |
| Delaware | N/A | — | — |
| Florida | N/A | — | — |
| Georgia | N/A | — | — |
| Hawaii | 5/73 | — | — |
| Idaho | N/A | — | — |
| Illinois | 1/16/73 | E | N |
| Indiana | Pre-1976[3] | — | — |
| Iowa | 10/9/72 | — | N |
| Kansas | 1/1/74 | — | N |
| Kentucky | Pre-1976[3] | — | — |
| Louisiana | N/A | — | E |
| Maine | 5/15/76 | — | — |
| Maryland | 7/11/72 | — | N |
| Massachusetts | 6/19/72 | E | N |
| Michigan | 9/72 | E | N |
| Minnesota | 3/71 | — | N |
| Mississippi | N/A | N | E |
| Missouri | Pre-1976[3] | — | N |
| Montana | 7/1/75 | — | N |
| Nebraska | N/A | — | E |
| Nevada | N/A | — | — |
| New Hampshire | Pre-1976[3] | — | — |
| New Jersey | 1948 | — | — |
| New Mexico | N/A | — | E |
| New York | 9/73 | — | — |
| North Carolina | N/A | N | E |

**Table 1 (cont'd)**

| State | Date of Enactment | State Study | Federal Study |
|---|---|---|---|
| North Dakota | N/A | — | E |
| Ohio | N/A | N | — |
| Oklahoma | N/A | — | — |
| Oregon | 6/71 | — | — |
| Pennsylvania | 12/71 | E | N |
| Rhode Island | 5/7/75 | — | — |
| South Carolina | N/A | — | — |
| South Dakota | 1972 | — | N |
| Tennessee | N/A | — | — |
| Texas | N/A | — | — |
| Utah | N/A | — | — |
| Vermont | N/A | — | E |
| Virginia | N/A | — | — |
| Washington | 10/3/73 | — | N |
| West Virginia | N/A | — | E |
| Wisconsin | 7/10/72 | E | N |
| Wyoming | N/A | — | — |

Notes:

1. This information is from Commerce Clearing House (1978), NELP (1975), U.S. Supreme Court (1975/76), and Weyland (1978).
2. E" denotes an experimental state; "N" denotes a non-experimental state. See chapter 1 and appendix A for states not in a particular study.
3. The exact dates of compliance in these employer mandates states are unknown.
4. These states have payroll tax systems that fund pregnancy disability.

**Table 2: DDD Regression Framework**

Pre-Mandate

(I) $W_{ijt}=\alpha+\beta_1 X_{ijt}$

(II) $W_{ijt}=\alpha+\beta_1 X_{ijt}+\beta_4 COVER_i$

(III) $W_{ijt}=\alpha+\beta_1 X_{ijt}+\beta_2 S_j$

(IV) $W_{ijt}=\alpha+\beta_1 X_{ijt}+\beta_2 S_j+\beta_4 COVER_i+\beta_6 COVER_i*S_j$

Post-Mandate

(I') $W_{ijt}=\alpha+\beta_1 X_{ijt}+\beta_3 Y_t$

(II') $W_{ijt}=\alpha+\beta_1 X_{ijt}+\beta_3 Y_t+\beta_4 COVER_i+\beta_7 COVER_i*Y_t$

(III') $W_{ijt}=\alpha+\beta_1 X_{ijt}+\beta_2 S_j+\beta_3 Y_t+\beta_5 S_j*Y_t$

(IV') $W_{ijt}=\alpha+\beta_1 X_{ijt}+\beta_2 S_j+\beta_3 Y_t+\beta_4 COVER_i+\beta_5 S_j*Y_t+\beta_6 COVER_i*S_j+\beta_7 COVER_i*Y_t$
$+\beta_8 MANDATE_{jti}$

First-Difference

(V) [I-I']: $\Delta W_{ijt}=\beta_3 Y_t$

(VI) [II-II']: $\Delta W_{ijt}=\beta_3 Y_t+\beta_7 COVER_i*Y_t$

(VII) [III-III']: $\Delta W_{ijt}=\beta_3 Y_t+\beta_5 S_j*Y_t$

(VIII) [IV-IV']: $\Delta W_{ijt}=\beta_3 Y_t+\beta_5 S_j*Y_t+\beta_7 COVER_i*Y_t+\beta_8 MANDATE_{jti}$

Second-Difference

(IX) [(III-III')-(I-I')] $\Delta\Delta W_{ijt}=\beta_5 S_j*Y_t$

(X) [(IV-IV')-(II-II')] $\Delta\Delta W_{ijt}=\beta_5 S_j*Y_t+\beta_8 MANDATE_{jti}$

Third-Difference

(XI) [[(IV-IV')-(II-II')]-[(III-III')-(I-I')]] $\Delta\Delta\Delta W_{ijt}=\beta_8 MANDATE_{jti}$

Notes:

1. In the set of equations:
   $X_{ijt}$ refers to the set of demographic variables.
   $S_j$ is a dummy variable which equals 1 if the respondent is in the experimental state, and zero otherwise.
   $Y_t$ is a dummy variable which equals 1 following the mandate and zero before the mandate.
   $COVER_i$ is a dummy variable which equals 1 for respondents covered by the mandate, and zero otherwise.
   $MANDATE_{ijt}$ equals one if the respondent is in an experimental in the post-mandate, and is covered by the law.
2. Equations I and I' refer to respondents in the non-experiment state and the non-covered group.
3. Equations II and II' refer to respondents in the non-experiment state and the covered group.
4. Equations III and III' refer to respondents in the experiment state and the non-covered group.
5. Equations IV and IV' refer to respondent in the experiment state and the covered group.

**Table 3: State Employer Mandates, Full Sample**

| | (1) Log Hourly Wage | (2) Log Hourly Wage | (3) Log Hourly Wage | (4) Log Weekly Hours | (5) Employ-ment Probit |
|---|---|---|---|---|---|
| Education: | .057 | .055 | .054 | -.001 | .016 |
| | (.001) | (.001) | (.001) | (.001) | (.001) |
| Experience: | .020 | .020 | .020 | .002 | .038 |
| | (.001) | (.001) | (.001) | (.001) | (.001) |
| Experience | -.339 | -.338 | -.337 | -.091 | -.543 |
| Squared/1000: | (.012) | (.012) | (.012) | (.012) | (.012) |
| Non-White: | -.101 | -.089 | -.089 | -.001 | -.084 |
| | (.007) | (.007) | (.007) | (.007) | (.006) |
| Female: | -.258 | -.261 | -.261 | -.040 | -.057 |
| | (.010) | (.010) | (.010) | (.010) | (.009) |
| Married: | .168 | .167 | .167 | .065 | .303 |
| | (.008) | (.007) | (.007) | (.007) | (.008) |
| Female*Married: | -.205 | -.203 | -.202 | -.189 | -.485 |
| | (.011) | (.011) | (.011) | (.011) | (.009) |
| Union | .129 | .113 | .112 | .007 | |
| Coverage: | (.005) | (.005) | (.005) | (.005) | |
| Covered | .077 | .078 | .102 | -.136 | -.192 |
| Group: | (.015) | (.015) | (.024) | (.024) | (.020) |
| Mandate: | .047 | -.035 | -.040 | -.036 | -.009 |
| | (.016) | (.016) | (.020) | (.019) | (.016) |
| Status of Variables:[3] | | | | | |
| State: | Group | Individual | Individual | Individual | Individual |
| Covered*State: | Group | Group | Individual | Individual | Individual |
| State*Year: | Group | Group | Group | Group | Group |
| Adjusted $R^2$ : | .481 | .494 | .494 | .152 | .163 |
| N: | 33277 | 33277 | 33277 | 33277 | 83780 |

Notes:

1. The numbers in parenthesis are standard errors.
2. Regression also includes 15 industry dummy variables.
3. 'Individual' indicates that the separate state and year dummy variables are used. 'Group' indicates that the variables are entered as a group. 'N/A' indicates that the variables are not included.
4. The variables included in the probit are age and age squared, not experience and its square.
5. Self-employed respondents, government employees (except state and local administration), and those who report a wage less than $1 per hour or greater than $100 per hour are dropped from the sample. Workers who report an industry not covered by Title VII or the FEP acts are dropped from the sample. See text for details.

**Table 4: State Study by Type of Worker: Large Sample**

| | (1) Log Hourly Wage | (2) Log Weekly Hourly | (3) Employ ment Probit |
|---|---|---|---|
| 12th Grade Education or Greater: | -.046 | -.049 | -.005 |
| | (.023) | (.023) | (.018) |
| | [22133] | [22133] | [53940] |
| Less than a 12th Grade Education: | -.009 | .042 | -.027 |
| | (.041) | (.040) | (.036) |
| | [11144] | [11144] | [29840] |
| Pre-*Gilbert*: | -.051 | -.023 | .010 |
| | (.024) | (.025) | (.020) |
| | [22166] | [22166] | [56131] |

**Table 5: Federal Pregnancy Discrimination Act, Full Sample**

| | (1) Log Hourly Wage | (2) Log Weekly Hours | (3) Log Yearly Weeks | (4) Employ-ment Probit |
|---|---|---|---|---|
| Education: | .054 | -.003 | .009 | .020 |
| | (.001) | (.001) | (.001) | (.001) |
| Experience: | .021 | .003 | .022 | .023 |
| | (.001) | (.001) | (.001) | (.001) |
| Experience | -.322 | -.098 | -.392 | -.388 |
| Squared/1000: | (.012) | (.000) | (.017) | (.012) |
| Non-White: | -.103 | .011 | -.036 | -.075 |
| | (.007) | (.006) | (.010) | (.006) |
| Female: | -.279 | -.049 | -.037 | -.064 |
| | (.010) | (.009) | (.015) | (.008) |
| Married: | .211 | .063 | .061 | .251 |
| | (.008) | (.007) | (.011) | (.008) |
| Female*Married: | -.259 | -.199 | -.182 | -.378 |
| | (.012) | (.010) | (.017) | (.009) |
| Covered | .158 | -.073 | -.094 | -.027 |
| Group: | (.033) | (.027) | (.045) | (.028) |
| Mandate: | -.007 | -.037 | -.070 | -.027 |
| | (.021) | (.017) | (.029) | (.017) |
| Status of Variables:[3] | | | | |
| State: | Individual | Individual | Individual | Individual |
| Covered*State: | Individual | Individual | Individual | Individual |
| State*Year: | Individual | Individual | Individual | Individual |
| Adjusted $R^2$: | .373 | .142 | .088 | .149 |
| N: | 49152 | 49152 | 49152 | 83758 |

Notes:

1. The numbers in parenthesis are standard errors.
2. Regression also includes 15 industry dummy variables.
3. The variables included in the probit are age and age squared, not experience and its square.
4. Self-employed respondents, government employees (except state and local administration), and those who report a wage less than $1 per hour or greater than $100 per hour are dropped from the sample. Workers who report an industry not covered by Title VII or the state FEP acts are dropped from the sample. See text for details.

**Table 6: Federal Study by Type of Worker: Large Sample**

| | (1) Log Hourly Wage | (2) Log Weekly Hourly | (3) Log Yearly Weeks | (4) Employ ment Probit |
|---|---|---|---|---|
| 12th Grade Education or Greater: | -.005 | -.038 | -.041 | -.014 |
| | (.024) | (.020) | (.033) | (.019) |
| | [36868] | [36868] | [36868] | [59234] |
| Less than a 12th Grade Education: | .002 | -.007 | -.223 | -.047 |
| | (.049) | (.036) | (.070) | (.021) |
| | [12284] | [12284] | [12284] | [24524] |

**Table 7: Labor Market Effects of State Employer Mandates: Small Sample**

| | (1) Log Hourly Wage | (2) Log Weekly Hours | (3) Employ-ment Probit |
|---|---|---|---|
| Education: | .059 | -.012 | .014 |
| | (.002) | (.003) | (.002) |
| Experience: | .017 | -.036 | -.083 |
| | (.002) | (.003) | (.006) |
| Experience Squared: | -.480 | 1.300 | 1.323 |
| | (.096) | (.133) | (.106) |
| Non-White: | -.033 | .090 | .066 |
| | (.013) | (.018) | (.012) |
| Union Coverage: | .172 | .087 | |
| | (.012) | (.018) | |
| Covered Group: | .166 | .602 | |
| | (.089) | (.122) | |
| Mandate Effect: | -.037 | -.024 | .005 |
| | (.020) | (.027) | (.015) |
| Status of Variables:[3] | | | |
| State: | Individual | Individual | Individual |
| Covered*State: | Individual | Individual | N/A |
| State*Year: | Group | Group | Group |
| Adjusted $R^2$: | .304 | .184 | .018 |
| N: | 7664 | 7664 | 22778 |

Notes:

1. The numbers in parenthesis are standard errors.
2. Regression also includes 15 industry dummy variables.
3. The term 'Individual' indicates that the state, year, and covered group variables are entered individually. The term 'N/A' indicates that the variables are not used in this specification.
4. The variables included in the probit are age and age squared, not experience and its square.
5. Respondents who report self-employment, government employees (except state and local administration), and those with a wage less than $1 per hour or greater than $100 per hour are dropped from the sample.
6. All workers who report working in industries exempt from Title VII regulations or from the state employer mandates are in the non-covered group.

**Table 8: State Study by Type of Worker: Small Sample**

| | (1) Log Hourly Wage | (2) Log Weekly Hourly | (3) Employment Probit |
|---|---|---|---|
| 12th Grade Education or Greater: | -.041 | -.042 | .008 |
| | (.022) | (.031) | (.017) |
| | [6199] | [6199] | [17921] |
| Less than a 12th Grade Education: | -.002 | .056 | -.012 |
| | (.042) | (.055) | (.033) |
| | [1465] | [1465] | [4857] |
| Pre-*Gilbert*: | -.052 | -.012 | .016 |
| | (.024) | (.034) | (.019) |
| | [4962] | [4962] | [15424] |

**Table 9: State Study by Type of Worker: Covered Group Only**

| | (1) Log Hourly Wage | (2) Log Weekly Hourly | (3) Employment Probit |
|---|---|---|---|
| Main Sample | -.044 | -.017 | .005 |
| | (.018) | (.024) | (.015) |
| | [7257] | [7257] | [22778] |
| $12^{th}$ Grade Education or Greater: | -.047 | -.033 | .008 |
| | (.020) | (.028) | (.017) |
| | [5845] | [5845] | [17921] |
| Less than a $12^{th}$ Grade Education: | -.004 | .042 | -.012 |
| | (.038) | (.048) | (.033) |
| | [1412] | [1412] | [4857] |
| Pre-*Gilbert*: | -.062 | -.006 | .016 |
| | (.022) | (.031) | (.019) |
| | [7257] | [7257] | [22778] |

**Table 10: Labor Market Effects of the Federal PDA: Small Sample**

| | (1) Log Hourly Wage | (2) Log Weekly Hours | (3) Log Annual Weeks | (4) Employ -ment Probit |
|---|---|---|---|---|
| Education: | .073 | .006 | .048 | .035 |
| | (.002) | (.002) | (.003) | (.001) |
| Experience: | .019 | -.027 | -.012 | -.050 |
| | (.002) | (.002) | (.004) | (.006) |
| Experience | -.463 | .897 | 1.028 | .871 |
| Squared/1000: | (.099) | (.110) | (.167) | (.103) |
| Non-White: | -.040 | .109 | .014 | .044 |
| | (.013) | (.015) | (.023) | (.011) |
| Control Group: | .262 | .079 | .094 | |
| | (.063) | (.070) | (.108) | |
| Mandate Effect: | -.040 | -.070 | -.131 | -.026 |
| | (.041) | (.046) | (.071) | (.014) |
| Status of Variables:[3] | | | | |
| State: | Individual | Individual | Individual | Individual |
| State*Year: | Individual | Individual | Individual | N/A |
| State*Covered: | Individual | Individual | Individual | N/A |
| Adjusted $R^2$: | .206 | .099 | .064 | .036 |
| N: | 14791 | 14791 | 14791 | 25189 |

Notes:

1. The numbers in parenthesis are standard errors.
2. Regression includes 15 industry dummy variables.
3. The term 'Individual' indicates that the variables are entered individually. The term 'N/A' indicates that the variables are not used in this specification.
4. The variables included in the probit are age and age squared, not experience and its square.
5. Respondents who report self-employment, government employees (except state and local administration), and those with a wage less than $1 per hour or greater than $100 per hour are dropped from the sample.
6. All workers who report working in industries that are exempt from Title VII regulations or from the state employer mandates are in the non-covered group.

**Table 11: Federal Study by Type of Worker: Small Sample**

| | (1) Log Hourly Wage | (2) Log Weekly Hourly | (3) Log Yearly Weeks | (4) Employment Probit |
|---|---|---|---|---|
| $12^{th}$ Grade Education or Greater: | -.032 | -.062 | -.131 | -.010 |
| | (.043) | (.048) | (.072) | (.015) |
| | [13100] | [13100] | [13100] | [21276] |
| Less than a $12^{th}$ Grade Education: | -.131 | -.122 | -.084 | -.082 |
| | (.174) | (.177) | (.345) | (.033) |
| | [1691] | [1691] | [1691] | [3913] |

**Table 12: Federal Study by Type of Worker: Covered Group Only**

| | (1) Log Hourly Wage | (2) Log Weekly Hourly | (3) Log Yearly Weeks | (4) Employment Probit |
|---|---|---|---|---|
| Main Study | .006 | -.026 | -.086 | -.026 |
| | (.018) | (.018) | (.030) | (.014) |
| | [12229] | [12229] | [12229] | [25189] |
| 12th Grade Education or Greater: | .002 | -.028 | -.075 | -.010 |
| | (.019) | (.020) | (.033) | (.015) |
| | [10684] | [10684] | [10684] | [21276] |
| Less than a 12th Grade Education: | .021 | .028 | -.189 | -.082 |
| | (.045) | (.042) | (.089) | (.033) |
| | [1514] | [1514] | [1514] | [3913] |

**Table 13: Legislation Favorable to Females as of 1978**

**Federal Experimental Maternity Mandate States**

| | FEP Status[2] | Equal Pay Status[3] | Signed ERA[4] | Adopted ERA |
|---|---|---|---|---|
| Alabama | N | N | N | N |
| Louisiana | N | N | N | N |
| Mississippi | N | N | N | N |
| Nebraska | Y | Y | N[5] | N |
| New Mexico | N | N | Y | Y |
| North Carolina | N | N | N | N |
| North Dakota | N | Y | Y | N |
| Vermont | N | Y | N | N |
| West Virginia | Y | Y | Y | N |

**Federal Non-Experimental Maternity Mandate States**

| | FEP Status[2] | Equal Pay Status[3] | Signed ERA[4] | Adopted ERA |
|---|---|---|---|---|
| Alaska | Y | Y | Y[6] | Y |
| Connecticut | Y | Y | Y | N |
| Illinois | Y | Y | N | Y |
| Iowa | Y | N | Y | N |
| Kansas | Y | Y | Y | N |
| Maryland | Y | Y | Y | Y |
| Massachusetts | Y | Y | Y | Y |
| Michigan | Y | Y | Y | N |
| Minnesota | Y | Y | Y | N |
| Missouri | Y | Y | N | N |
| Montana | Y | Y | Y | N |
| Pennsylvania | Y | Y | Y | Y |
| South Dakota | Y | Y | Y[7] | N |
| Washington | Y | Y | Y | Y |
| Wisconsin | Y | N | Y | N |

Notes:

1. This information is from the Federal Register (1977), Lee (1980), and the U.S. Department of Labor Women's Bureau (1975, 1983).
2. States that have a FEP agency were designated '706' agencies by the EEOC before September 1977.
3. The states listed as having an equal pay statute are those that adopted a separate statute as of January 1982. However, states that include equal pay as part of their FEP laws are not listed.
4. The states that ratified the ERA did so by 1980.
5. Nebraska signed the petition for the ERA in 1972, but rescinded support for it in 1973.
6. The *1975 Handbook of Women Workers* lists Alaska as having a separate ERA statute; however the 1983 edition does not.
7. South Dakota signed the petition for the ERA in 1973, but rescinded support for it in 1979.

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# CHAPTER 3: THE INCIDENCE OF MANDATED MATERNITY BENEFITS, A COMMENT

In a recent AER paper, Gruber (1994a) examines the labor market effects of amending state insurance codes such that complications of pregnancy are covered. His estimates suggest that the wages of those who were eligible to receive the benefit fell at rate equal to the cost associated with the benefit. Because he does not find a decline in net labor input, he concludes that the decrease in wages is approximately equal to the employer's cost of providing it. This indicates that the group receiving the benefit places a monetary value on the maternity mandate at or above its actual cost. To confirm these results, Gruber performs a 'reverse experiment' which estimates the effect of the federal Pregnancy Discrimination Act of 1978 (PDA) on the states that did not enact an insurance code amendment before 1978. The results from this study support his earlier findings.[79]

Abstracting from these results, Gruber asserts that employers are able to shift mandated costs to the wages of demographically identifiable groups within the workplace (Gruber, 1994b). This conclusion is relevant in light of the ongoing debate over the effectiveness of employer mandates. Since Gruber's findings are central to this debate, it is important to confirm his results capture the effects of only the insurance code amendments and not other maternity policies in place at the time.

[79] Gruber bases his claim for the relative equivalence of the PDA and the insurance code amendments on the congressional testimony of health insurance representatives. This group estimated that the existing insurance code amendments represent two-thirds of the cost of implementing the PDA. However, as described in section II, the federal legislation still affects employers in a non-experimental state who have met the minimum requirements of an insurance code amendment.

Reviewing the legislative history described in chapter 1, it quickly becomes apparent that the state insurance code amendments were not the sole determinants of state maternity policies during the 1970s. This observation calls into question Gruber's results on the grounds that he does not control for a second set of closely related maternity policies, state employer maternity mandates. The state employer mandates and the state insurance code amendments are similar in scope: both require complications of pregnancy to be covered under an insurance policy. In states that adopted both maternity policies, however, the state employer mandates preceded the insurance code amendments.[80] The dates at which states adopted either—or both—maternity policies are critical to evaluating the labor market effects of a maternity mandate. Since states enacted the employer mandates first, estimates of the effect of an insurance code amendment should control for the presence of an employer mandate. Otherwise, this estimate does not represent the true effect of a group-specific mandate. Conversely, some states that Gruber includes as non-amendment states do have an employer mandate; thus, testing the effects of the insurance code amendment against these states may affect the results he derives.

The remainder of this comment is organized as follows. Section I begins with an abbreviated history of maternity mandates; then, differences between the relevant pieces of state legislation are discussed. Section II presents an identical replication of the results from Gruber's state study. The potential impact of the state employer mandates on Gruber's state study results is examined in Section III. Section IV replicates Gruber's federal study. In Section V, I use the subset Gruber's federal states that adopted an employer mandate to estimate more precisely the labor market effects of the 1978 federal Pregnancy Discrimination Act (PDA). Section VI concludes.

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[80] California is the exception, see appendix A.

## I. Types of State Maternity Policy

A review of the legislation relating to maternity mandates reveals three distinct periods of enforcement.[81] Before 1972, most state legislatures did not address the issue of mandating insurance for maternity conditions.[82] The Equal Employment Opportunity Commission changed its stance in 1972 to support the position that employers should treat all conditions relating to pregnancy as "...temporary disabilities...under any health...insurance plan available in connection with employment."[83] Although the EEOC did not seek congressional approval for the pregnancy guidelines at that time, it was the beginning of a transitional period during which many states adopted some type of maternity policy. The end of this period occurred in 1978 when President Carter, with congressional approval, signed into law the federal Pregnancy Discrimination Act of 1978. The PDA closely follows the wording of the EEOC's April 1972 position.

During the transitional period (April 1972 to October 1978), a number of states adopted a state insurance code amendment and/or a state employer mandate. States with both types of maternity policies adopted the employer mandates first. In addition to the timing of the adoption, these maternity policies differ on two key points: the group covered under the legislation, and the extent to which the legislation covers that group. The employer mandates, which followed the wording of the EEOC's stated position as of April 1972, ensured that all employers include any pregnancy condition when providing employee

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[81] An in-depth review of these maternity policies enacted during the 1970s can be found in chapter 1.

[82] A few exceptions do exist. The state of New Jersey did provide insurance benefits for some maternity conditions at an earlier date. See appendix A for a full listing of the dates at which states adopted maternity policies.

[83] Weyland 1978, 180.

disability insurance.[84] In contrast, the insurance code amendments generally provided all who purchase insurance with coverage for complications of pregnancy.

By adopting both policies, a state effectively provided the minimum level of maternity coverage for non-employed females, as well as a higher level of coverage to female employees whose employer offered health insurance coverage for temporary disabilities.[85] Other states chose between providing coverage under the terms of the insurance code amendments or the employer mandates. The remaining states adopted neither.

Regardless, it is the differences in the dates of enactment that may affect Gruber's results. His state study includes states with employer mandates that are misclassified as non-amendment states. Conversely, he correctly classifies states that enacted both maternity policies as amendment states, but misspecifies the date of adoption. He uses the date of enactment for the insurance code amendments rather than the earlier dates of adoption for the employer mandates. Because the labor market estimates found in his state study derive from the pre- to post-legislative change in states with an insurance code amendment, his state study may underestimate the effect of the insurance code amendments.

In his federal study, Gruber classifies amendment and non-amendment states based on whether the state enacted an insurance code amendment before the passage of the federal PDA. Factoring in the employer mandates changes the classification of some states. The effect of the insurance code amendments is then underestimated due to Gruber's

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[84] Most employer mandates only required firms with a minimum number of employees—under EEOC guidelines at that time the minimum number was 25—to provided maternity coverage if the employer provided insurance coverage for other temporary non-occupational disabilities. Some states legislated exceptions to the EEOC's rule. Connecticut, for example, required all employers to provide insurance coverage for all pregnant workers, regardless of whether the employer provided coverage for any other type of temporary worker disability.

[85] It should be noted that in a number of states, non-employed married females benefited through their husband's insurance policy.

misclassification of employer mandates states as states without pregnancy coverage, or "non-amendment states." Thus, the estimates from both Gruber's federal study and his state study may be sensitive to the inclusion of states with employer mandates.

## II. Replication of Gruber's State Study

To test the effects of the state insurance code amendments, Gruber divides the eligible states into 2 groups: (1) those that enacted this maternity policy after July 1, 1976 but prior to the PDA, (experimental states) and (2) those that did not (non-experimental states).[86] States ineligible for this study include those that enacted an insurance code amendment after January 1, 1977. Defining the legislative period as 1976-77, Gruber examines the pre-policy labor force situation for the years 1974-75, and the post-policy situation for the years 1977-78. His primary focus is on the labor market effects of the amendments on married females age 20-40.[87] The composition of the non-covered group, which serves as the control group in the DDD estimation, is the following: single males age 20-40 and people over the age of 40.

The first row of table 1 presents the results of an identical replication of Gruber's state study. The post-amendment wages of married females fell by 4.3 percent in the experimental states. Two labor input effects are of note: employment decreases, although insignificantly, and the number of hours worked per week increases by a significant 4.9

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[86] The experimental states are Illinois, New Jersey and New York, while the non-experimental states are Ohio, Indiana, Connecticut, Massachusetts and North Carolina (see appendix A for the adoption dates for all states). Gruber states that he chooses North Carolina as a control state for New Jersey and New York to avoid comparing the Mid-Atlantic experimental states to the New England non-experimental states. He tests this specification without the state of North Carolina, and finds that the results are similar to those that include the state (Gruber 1992).

[87] Gruber also tests the labor market effects of the insurance amendments separately on two other groups: married males age 20-40 whose wives are covered by the insurance amendments; and single females age 20-40. In this paper, I chose to focus on the group of married females for two reasons. First, there is uneven spousal coverage in employer mandates across states; some states expressly covered the wives of male employees while others do not. Second, the incidence of pregnancy among single females of childbearing age is lower than among married females of childbearing age.

percent. The change in worker composition to low-hours employees is consistent with the hypothesis that the insurance code amendments increase the fixed cost of group-specific labor. For the group that receives the maternity benefit, the net result is a shift of the amendment's cost to their wages. These results indicate that those who receive the benefit under a state insurance code amendment place a positive value on it.[88]

## III. Impact of Employer Mandates on Gruber's State Study

In the absence of the state employer mandates, Gruber's results reveal a great deal about the effect of maternity mandates on wages and employment. His conclusions may be incorrect, however, if the states are reclassified from non-amendment states to amendment states—using the date of adoption for the employer mandates—when the employer mandates are incorporated in the analysis. Table 2, which lists the states Gruber uses in his state study, presents a comparison of the states with insurance code amendments and states with employer mandates.[89] In column 1, the date (if any) that a state enacted an insurance code amendment is listed. The state status that Gruber assigned (e.g., amendment, non-amendment) in the state study is found in column 2. For comparison, column 3 presents the date (if any) that a state adopted an employer mandate; column 4 lists the state's employer mandate status after the employer mandates are included.

As shown in column 3, employer mandates are present in most of the states in Gruber's state study. Indiana, for example, did not enact an insurance code amendment before 1976 but it did adopt an employer mandate. Thus, classifying Indiana as a non-amendment state in light of existence of the employer mandate is incorrect. A similar case is

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[88] Gruber also tests a cost specification in which he imputes the cost of increasing the level of health insurance instead of the mandate variable. His basic result is unchanged.

[89] A full comparison can be found in appendix A.

found in Connecticut and Massachusetts, both considered non-amendment states by Gruber. Illinois, on the other hand, enacted an employer mandate more than three years before the state's insurance code amendment took effect.[90] Thus, the amendment status of Illinois is correct; however, Gruber uses the incorrect date—that of the insurance code amendment rather than the employer mandate—to estimate the full effect of implementing a maternity policy.

Unlike the other states, New Jersey and New York provided insurance for pregnancy conditions through a state-run temporary disability insurance (TDI) system.[91] This system required both males and females to contribute to the state plan, which covers temporary disabilities. In 1975 and 1976 respectively, New Jersey and New York considered pregnancy to be a temporary disability under the TDI system.[92] This system is separate from both the state insurance code amendments, which affected only those who purchased insurance, and the state employer mandates, which did not require any type of employee contribution to a state-run system. Therefore, analyses of both the insurance code amendments and the employer mandates should exclude states with a TDI system.

Ideally, the correct test of the effect of the insurance code amendments in Gruber's state study should be conducted using the states that have only an insurance code amendment or neither policy. A state that uses a TDI system for implementing a maternity mandate (e.g., New Jersey, New York) would not be included. Also excluded would be any state (e.g., Connecticut, Illinois, Massachusetts) in which an employer mandate was adopted during the pre- or post-policy years. The remaining states would then be divided according to their

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[90] Since most workers were covered by the employer mandate, the impact of the insurance code amendment falls only on workers in firms with less than 25 employees that provided employee health insurance. Thus, Illinois' insurance code amendment may have a small effect, although the magnitude would certainly be underestimated.

[91] See chapter 1 for more details.

[92] The amendment of the insurance codes and the change in the New York TDI system were independent events.

insurance code amendment classification. In this case, however, only the status of North Carolina and Ohio—both non-amendment states—can be determined. Thus, the effect of the insurance code amendments, after removing the employer mandate states, cannot be measured using this group of states in conjunction with the constraints imposed by Gruber's state study. The same is true of estimating the effects the employer mandates.[93]

## IV. Replication of Gruber's Federal Study

To test the effect of the federal PDA on states without a maternity mandate, Gruber classifies states with an insurance code amendment as non-experimental states. The purpose of this federal 'reverse experiment' is to confirm the direction and magnitude of his state study results. Gruber's state and federal studies differ in only three respects: the composition of the experimental and non-experimental states; the pre- and post-policy years; and the union variable, which is present only in the state study.[94] In the federal study, states that enacted an insurance code amendment before January 1 1977, are in the non-experimental group; states without an amendment are in the experimental group. Gruber drops states that enacted an insurance code amendment after January 1977, but before the federal legislation. Finally, the pre-PDA years in this analysis are 1978-79 and the post-PDA years are 1981-82.

The second row of table 1 presents the results of replicating Gruber's federal specification. In the experimental states, the decrease in the wages of married women is almost one-half the decrease (2.1 percent) reported in his state study.[95] It is marginally significant. The coefficients on the number of hours worked per week and probability of

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[93] See chapter 2 for an empirical test of the employer mandates using a larger subset of states.

[94] Starting in 1979, the May CPS supplement began reporting the earnings variables only for the outgoing rotation groups. As a result, Gruber tests the labor market effects of the federal PDA using the March CPS. See section VI in chapter 2 for a detailed explanation of the differences between these data sets.

[95] The coefficients are identical to Gruber's (1994a), but, this replication contains an additional observation.

employment are small and not significant, but they are in the same direction as the results found in the state study. The net effect of the maternity legislation on this group is a full shifting of the PDA's cost to the covered group's wages in the experimental states. There is no significant change in net labor input. These results confirm the findings of the state study and reinforce the hypothesis that workers receiving the maternity benefits assign a positive value to receiving them.

## V. Impact of Employer Mandates on Gruber's Federal Study

As in Gruber's state study, the presence of the employer mandates affects a number of states in his federal study. Unlike the state study, the enactment status of an employer mandate as of January 1, 1977, and not the actual date of enactment, matters. This is because the federal study is structured such that it depends only on the status of a state (e.g., amendment, non-amendment). In conjunction with the larger number of states included in the federal study, this allows for a better test of the employer mandates than the state study. Table 3 is the federal compliment to the table 2. The dates of enactment for states with an insurance code amendment and/or an employer mandate are listed in column 1 and column 3, respectively. Column 2 lists the amendment status used by Gruber to determine the impact of the PDA.

Since few of the states with an insurance code amendment are left, this study attempts to estimate the labor market impact of the state employer mandates. Eighteen states remain (see table 3, column 4 for a list of these states) following the imposition of the following restrictions. To determine the impact of the federal PDA on states without either maternity policy, I first isolate the states that clearly enacted and enforced a state employer mandate and the states that adopted neither policy. States that only enacted an insurance

code amendment are not included in this estimation. I delete any respondent in a state that enacted a maternity policy during the early 1970s and did not continue to enforce that legislation.[96] Finally, for the reasons given earlier, I do not consider any of the states with a state-run TDI system

Next, I isolate any effects that may result from dropping the ineligible states and the TDI states. To do this, I re-estimate Gruber's federal study according to his classifications (e.g., Alaska is included as an experimental state, while Colorado is dropped), but using the smaller sample of 18 states. The third row of table 1 presents the results from the amended version of Gruber's federal study. In the remaining states, the decrease in the wages of married women is of a larger magnitude than in Gruber's federal study—3.4 percent—but less significant than the full-sample results. As in the full-sample federal study, the coefficients on the number of hours worked per week and the probability of employment are insignificant. Thus, the decline in women's wages is greater using the smaller sample, which excludes states with an unclear employer mandate status and states that insure maternity through a state-run TDI plan, than the larger sample.

Using the smaller sample, I next change the status of these states to reflect whether a state has an employer mandate or neither maternity policy (see table 3, column 4). States are grouped according to their employer mandate status. In every other way, this test is identical to the amended version of Gruber's federal study described in the preceding paragraph. The results from this study are found in table 1, row 4. The post-mandate wages of married females fell by 2.4 percent in the experimental states. The number of weekly hours worked decreased, although insignificantly. The decline in the probability of employment is weakly

[96] See chapter 1 for a complete history of the maternity legislation in place at that time.

significant—below the ten percent level—suggesting that disemployment effects may accompany the wage decline.[97]

## VI. Conclusions

The inclusion of employer mandates in both Gruber's studies results in the reclassification of a number of states. Several of these changes occurred because Gruber's studies did not account for a state-enacted employer mandate. Others reflected a situation in which a state adopted an employer mandate at an earlier date than an insurance code amendment. The purpose of this comment was to re-estimate the effect of the maternity mandates after reclassifying states to reflect all maternity mandates in place at that time. However, an examination of Gruber's state study in light of the employer mandates was not possible due to the small number of states remaining.

Conversely, a sufficient number of states remained in the federal study to estimate the effect of the employer maternity mandates. Although these results do not differ drastically from Gruber's, they do indicate that disemployment effects may result from the adoption of the employer mandate. The decline in the wage is nearly the same as Gruber's estimate, but less significant. This decline indicates that the workers receiving the benefit value the mandate. Apart from the wage effects, however, the coefficient on the probability of employment indicates the PDA has a negative effect, although this decline is weakly significant. Thus, changing the state status to reflect the employer mandate classifications suggests evidence of disemployment effects in addition to the wage decreases. Since these effects indicate either a low valuation by the covered group or significant barriers to wage

[97] Chapter 2 considers the labor market effects of a group-specific mandate using the full set of eligible states. The results indicate that disemployment effects occur following the PDAs enactment. See chapter 2 for details.

adjustment, the potential for disemployment effects in this case is especially important to policy makers who are considering enacting similar group-specific mandates.

**Table 1: Results from Replicating and Correcting Gruber's Study**

| | Log Hourly Wage | Log Weekly Hours | Employ-ment Probit |
|---|---|---|---|
| **State Study:** | | | |
| Insurance Code Amendment Status—Replication: | -.043 | .049 | -.018 |
| | (.023) | (.022) | (.018) |
| | [27033] | [27033] | [62575] |
| **Federal Study:** | | | |
| Insurance Code Amendment Status—Replication: | -.021 | .001 | -.006 |
| | (.012) | (.010) | (.009) |
| | [131513] | [131513] | [190038] |
| Insurance Code Amendment Status—using Smaller Group of States: | -.034 | -.002 | -.012 |
| | (.022) | (.018) | (.017) |
| | [49984] | [49984] | [72270] |
| State Employer Mandate Status—using Smaller Group of States: | -.024 | -.010 | -.023 |
| | (.020) | (.016) | (.015) |
| | [49984] | [49984] | [72270] |

Notes:

1. This is an exact replication of Gruber's State Study results.
2. This replication contains one more observation than Gruber's Federal Study; however the results found in this replication are the same as Gruber finds.
3. The smaller group of states is comprised of states with an employer mandate, an employer mandate and an insurance amendment, or neither type of legislation. States with only an insurance amendment are dropped from the sample. The smaller sample of states allows for a direct comparison the results from of Gruber's insurance amendment classification with the employer mandate classification found in this study.

**Table 2: States, Enactment Dates and State Status from Gruber's State Study**

| | Insurance Code Amendments | | Employer Mandates | | |
|---|---|---|---|---|---|
| | Date Enacted | Status between 7/1/76 and 1/1/77[1] | Date Enacted | Status between 7/1/76 and 1/1/77[1] | Reason for Exclusion |
| Connecticut | — | N | 10/1/73 | — | Mandate enacted before 1/1/76 |
| Illinois | 7/1/76 | E | 1/16/73 | — | Mandate enacted before 1/1/76 |
| Indiana | — | N | Pre-1976 | — | Date of mandate's enactment unclear |
| Massachusetts | — | N | 6/19/72 | — | Mandate enacted before 1/1/76 |
| North Carolina | — | N | — | N | — |
| New Jersey | 9/1/76 | E | Pre-1970's | — | TDI State |
| New York | 1/1/77 | E | 9/73 | — | TDI State |
| Ohio | — | N | — | N | — |



Notes:

1. Gruber requires the maternity legislation to be enacted during this period.
2. This information is from Commerce Clearing House (1978), HIAA (1990), NELP (1975), U.S. Supreme Court (1975/76), and Weyland (1978).

**Table 3: States, Enactment Dates and Status from the Federal Study**

| | Insurance Code Amendments | | Employer Mandates | | |
|---|---|---|---|---|---|
| | Date Enacted | Status before 1/1/77[1] | Date Enacted | Status between 1/1/77[1] | Reason for Exclusion |
| Alabama | — | E | — | E | |
| Alaska | — | E | 6/4/75 | N | |
| Arkansas | 2/1/76 | N | — | — | Only an insurance code amendment |
| California | 7/1/76 | N | 1/1/79 | — | TDI State |
| Colorado | 1/1/76 | N | 5/31/72 | — | Mandate not enforced after 1/1/77 |
| Delaware | — | E | — | — | Mandate status unclear |
| Hawaii | 12/30/74 | N | — | — | TDI State |
| Idaho | 7/1/77 | N | — | — | Only an insurance code amendment |
| Illinois | 7/1/76 | N | 1/16/73 | N | |
| Indiana | — | E | Pre-1976 | — | Mandate not enforced after 1/1/77 |
| Iowa | 4/13/76 | N | 10/9/72 | N | |
| Kentucky | — | E | Pre-1976 | — | Mandate not enforced after 1/1/77 |
| Louisiana | — | E | — | E | |
| Maine | — | E | 5/15/76 | — | Mandate not enforced after 1/1/77 |
| Maryland | 7/1/75 | N | 7/11/72 | N | |
| Massachusetts | — | E | 6/19/72 | N | |
| Mississippi | — | E | — | E | |
| Missouri | — | E | Pre-1976 | N | |
| Montana | — | E | 7/1/75 | — | Mandate not enforced after 1/1/77 |
| Nebraska | — | E | — | E | |
| New Hampshire | 1/1/77 | E | — | — | Only an insurance code amendment |

**Table 3 (cont'd)**

| | Insurance Code Amendments | | Employer Mandates | | |
|---|---|---|---|---|---|
| | Date Enacted | Status before 1/1/77[1] | Date Enacted | Status between 1/1/77[1] | Reason for Exclusion |
| New Jersey | 9/1/76 | N | Pre-1970's | — | TDI State |
| New Mexico | — | E | — | E | |
| New York | 1/1/77 | N | 9/73 | — | TDI State |
| North Carolina | — | N | — | E | |
| North Dakota | — | E | — | E | |
| Ohio | — | E | — | — | Legislation for state employer mandate after 1/1/77 but before PDA |
| Oklahoma | — | E | — | — | Mandate status unclear |
| Rhode Island | 10/4/78 | N | — | — | TDI State |
| South Carolina | — | E | — | — | Mandate status unclear |
| South Dakota | — | E | 1972 | N | |
| Tennessee | 6/1/76 | N | — | — | Only an insurance code amendment |
| Texas | 1/26/77 | E | — | — | Only an insurance code amendment |
| Utah | — | E | — | — | Mandate status unclear |
| Vermont | — | E | — | E | |
| Washington | 3/1/77 | E | 10/3/73 | N | |
| West Virginia | — | E | — | E | |
| Wyoming | — | E | — | — | Mandate status unclear |
| Wisconsin | 6/1/76 | N | 7/10/72 | N | |

Notes:

1. Gruber requires the maternity legislation to be enacted during this period.
2. This information is from Commerce Clearing House (1978), HIAA (1990), NELP (1975), U.S. Supreme Court (1975/76), and Weyland (1978).

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# CONCLUSIONS

The increased reliance on mandates as a tool for providing benefits has prompted a renewed interest in the labor market effects that these mandates have on the group that receives them. By enacting a group-specific mandate, the government provides workers with a socially desirable benefit that is not readily available in the absence of the mandate. This type of government intervention is efficient when the workers covered by the mandate value its benefits. Enacting this type of legislation, however, may have an adverse impact on individual workers either when wage rigidities exist or when workers place a low value on receiving the benefit. In this case, the outcomes are less efficient when compared to provision of the same benefit though a lump sum tax.

Despite the government's growing tendency to enact group-specific mandates, few studies have attempted to isolate the labor market effects of these mandates. In a 1994 paper, Gruber focuses on two group-specific maternity policies, the state insurance code amendments and the federal PDA. These maternity policies required insurance contracts to cover the medical costs of pregnant workers. His results indicate a substantial shifting of the cost of the mandate to the wages of those who benefit from it. In both of his studies, he finds small disemployment effects. Together, these results indicate that state and federal maternity policies were efficient—workers placed a high value on receiving the benefits of both.

When reviewing the history of pregnancy discrimination legislation, however, it quickly becomes apparent that the insurance code amendment was not the sole determinant

of a state's maternity policy during this period. During the 1970s and early 1980s, three major events had the potential to impact on the maternity policies of firms. The first was the EEOC's 1972 pregnancy guidelines, which changed the focus of the EEOC's discrimination policy to include acquired worker characteristics, in addition to innate qualities such as race or sex. Following the EEOC's lead, a limited number of state FEP agencies adopted these guidelines into their own state employer mandates. These employer mandates required firms to cover pregnancy in the same manner as other temporary disabilities. At that time, a number of states also amended their insurance codes to require these policies to cover complications that arise from pregnancy.

In 1976, two court decisions clearly separated the states with and the states without an active employer mandate. The *Gilbert* (1976) decision redefined the EEOC's guidelines to be 'recommendations,' while the *Brooklyn* (1976) decision upheld the individual state guidelines. In 1978, congressional enactment of the federal PDA ended this division by creating a minimum standard—treating pregnancy in the same manner as other temporary disabilities—to which all employer-sponsored health insurance plans must adhere. This division among state policies and the subsequent federal law created a unique opportunity to investigate the labor market effects of the group-specific mandate.

Using the full set of states eligible to be included, chapter 2 presents the estimates of the labor market effects of the state employer mandates and the federal PDA. In the state study, the wage declines by about 4 percent with no change in net labor input. Overall, the costs of the mandates in the state study are substantially shifted to the wages of those who benefit, indicating an efficient outcome. In contrast to the findings presented in the state study, the evidence in the federal study indicates that strong disemployment effects resulted from the passage of the PDA, with no corresponding decline in the wage. This is consistent

either with workers placing a low valuation on the benefit or with significant barriers to wage adjustment.

Variations in the expected cost and the expected benefit of the maternity mandate across states may cause the apparent conflict between the state study and the federal study results. As a result of these variations, states adopt only the level of state maternity legislation that is considered efficient. In states that adopted a mandate before the federal PDA, the perceived value assigned by society is larger than the cost to the individual firm of implementing the mandate. Since it was inefficient, the experimental states in the federal study did not implement a state mandate before the enactment of the federal legislation.

In addition, chapter 3 reconsiders the results of Gruber's federal study on insurance code amendments using states that enacted employer mandates or states that enacted neither maternity policy. The decline in the wage (2.4 percent) is nearly the same as Gruber's estimate (2.1 percent), but it is less significant in the new study. Apart from the decline in the wage, however, the coefficient on the probability of employment suggests a decline of about 2 percentage points. This estimate is significant, although at less than the 10 percent level. Thus, changing the state status to reflect the employer mandate classifications reveals weak evidence of both wage and employment effects. These results support the chapter 2 hypothesis that the effects of the PDA may not be limited to a decline in the wage. Unfortunately, I was unable to re-estimate Gruber's state study results using the employer mandate states because too few states remained.

Although the federal study results that are found in chapter 2 suggest that enacting the PDA was inefficient in states without prior maternity legislation, these findings are silent on the issue of equity. Long-term benefits may include an increased participation in and an attachment to the labor force by females who previously left the labor force to have a child.

Future gains would be realized if females who planned to have children attained additional education or training with the intention of beginning a career in a more-skilled field that provided maternity benefits. Aside from the gains to female workers, however, society would benefit if healthier babies resulted from the additional health insurance coverage. This may occur through better pre-natal care, longer hospital stays, or the use of increased technology. The extent to which states that did not adopt a mandate before the PDA considered these long-term benefits is unclear and requires further analysis.

As well as increasing the equity between demographic groups, the PDA may have decreased any costs associated with legislative inconsistency between states and government agencies. The high information costs associated with multiple legal statements and guidelines decrease with the federal mandate, which sets a minimum standard of compliance. Although EEOC complaints may rise due to the increased information on the part of the workers, related court costs may decrease if more disputes are settled without legal intervention. While these issues are not addressed in this paper, they have further implications for the cost/benefit analysis that states may perform when deciding whether to a mandate particular benefits.

Before deciding whether to implement a group-specific mandate, policy makers should recognize these potential long-term gains, as well as the possibility of disemployment effects. This is particularly true at the federal level, where the total effects of the mandate may be distributed unequally over various states. In part, the failure of a state to adopt a mandate before the enactment of a federal policy may be due to a low valuation by those who benefit from the group-specific mandate rather than a market failure. Depending on the value placed on the mandate by the group to benefit, the state-specific effects of that mandate may range from a decrease in the wage equal to the cost of the benefit to significant

disemployment effects. Careful analysis of the labor market effects of group-specific mandates, as well as other potential long-term benefits not immediately present in the labor market, will provide a framework for policy makers to base such decisions in the future.

# APPENDIX A

## Appendix A: Dates of Compliance by Maternity Policy

| | Dates of Compliance[1] | | |
|---|---|---|---|
| | Insurance Code Amendment | Employer Mandate | Temporary Disability Insurance |
| Alabama | — | — | — |
| Alaska | — | 6/4/75 | — |
| Arizona | 6/13/77 | — | — |
| Arkansas | 2/1/76 | — | — |
| California | 7/1/76 | 9/22/76 | 1979 |
| Colorado | 1/1/76 | 5/31/72 | — |
| Connecticut | — | 10/1/73 | — |
| Delaware | — | — | — |
| Florida | 1/1/78 | — | — |
| Georgia | 7/1/77 | — | — |
| Hawaii | 12/30/74 | — | 5/73 |
| Idaho | 7/1/77 | — | — |
| Illinois | 7/1/76 | 1/16/73 | — |
| Indiana | — | Pre-1976[2] | — |
| Iowa | 4/13/76 | 10/9/72 | — |
| Kansas | 2/15/77 | 1/1/74 | — |
| Kentucky | — | Pre-1976[2] | — |
| Louisiana | — | — | — |
| Maine | — | 5/15/76 | — |
| Maryland | 7/1/75 | 7/11/72 | — |
| Massachusetts | — | 6/19/72 | — |
| Michigan | — | 9/72 | — |
| Minnesota | 6/3/77 | 3/71 | — |
| Mississippi | — | — | — |
| Missouri | — | Pre-1976[2] | — |
| Montana | — | 7/1/75 | — |
| Nebraska | — | — | — |
| Nevada | 9/11/77 | — | — |
| New Hampshire | 1/1/77 | Pre-1976[2] | — |
| New Jersey | 9/1/76 | — | 1948 |
| New Mexico | — | — | — |
| New York | 1/1/77 | 9/73 | 7/76 |
| North Carolina | — | — | — |
| North Dakota | — | — | — |
| Ohio | — | — | — |
| Oklahoma | — | — | — |
| Oregon | 10/4/77 | 6/71 | — |
| Pennsylvania | 10/26/77 | 12/71 | — |
| Rhode Island | 10/4/78 | — | 5/7/75 |
| South Carolina | — | — | — |
| South Dakota | — | 1972 | — |
| Tennessee | 6/1/76 | — | — |

**Appendix A (cont.)**

**Dates of Compliance**[1]

| | Insurance Code Amendment | Employer Mandate | Temporary Disability Insurance |
|---|---|---|---|
| Texas | 1/26/77 | — | — |
| Utah | — | — | — |
| Vermont | — | — | — |
| Virginia | 7/1/78 | — | — |
| Washington | 3/1/77 | 10/3/73 | — |
| West Virginia | — | — | — |
| Wisconsin | 6/1/76 | 7/10/72 | — |
| Wyoming | — | — | — |

Notes:

1. This information is from Commerce Clearing House (1978), HIAA (1990), NELP (1975), U.S. Supreme Court (1975/76), and Weyland (1978).
2. The exact dates of compliance in these employer mandates states are unknown.

# APPENDIX B

## Appendix B: Mandate States and Coverage for State Study

| State Groupings | Included in Experiment | Mandate Coverage |
|---|---|---|
| New England | | |
| Connecticut | Yes | All |
| Group: Maine, New Hampshire, & Vermont | No | |
| Massachusetts | Yes | No Religious, Education |
| Rhode Island | No - TDI State | |
| Mid Atlantic | | |
| New Jersey | No - TDI State | |
| New York | No - TDI State | |
| Pennsylvania | Yes | All |
| East North Central | | |
| Illinois | Yes | No Religious, Education |
| Indiana | No- Law Unclear | |
| Ohio | Yes | None |
| Group: Michigan & Wisconsin | Yes | Not Religious |
| West North | | |
| Group: Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska & Kansas | No | |
| South Atlantic | | |
| Group: Delaware, Maryland, Virginia & West Virginia | No | |
| District of Columbia | No - Laws Unclear | |
| Florida | No - Insurance code amendment | None |
| Group: South Carolina & Georgia | No - Insurance code amendment | None |
| North Carolina | Yes | None |
| East South Central | | |
| Group: Kentucky & Tennessee | No | |
| Group: Mississippi & Alabama | Yes | None |
| West South Central | | |
| Group: Arkansas, Louisiana, & Oklahoma | No | |
| Texas | No - Insurance code amendment | None |
| Mountain | | |
| Group: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah & Wyoming | No | |
| Pacific | | |
| California | No - TDI | |
| Hawaii | No - TDI | |
| Group: Alaska, Oregon, & Washington | No | |

Notes:

1. The information in this table is primarily from Commerce Clearing House (1978), NELP (1975), U.S. Supreme Court (1975/76), and Weyland (1978).

# APPENDIX C

## Appendix C: PDA States and Coverage for Federal Study

| | Included in Experiment | Affected by PDA |
|---|---|---|
| Alabama | Yes | All |
| Alaska | Yes | None |
| Arizona | No - Insurance code amendment | |
| Arkansas | No - Insurance code amendment | |
| California | No - TDI State | |
| Colorado | No - Change in Mandate Status[1] | |
| Connecticut | Yes | None |
| Delaware | No - Letter to Ruth Weyland[2] | |
| Florida | No - Insurance code amendment | |
| Georgia | No - Insurance code amendment | |
| Hawaii | No - TDI State | |
| Idaho | No - Insurance code amendment | |
| Illinois | Yes | Religious & Education |
| Indiana | No - Extent of Mandate Unclear | |
| Iowa | Yes | None |
| Kansas | Yes | Religious |
| Kentucky | No - Change in Mandate Status[1] | |
| Louisiana | Yes | All |
| Maine | No - Change in Mandate Status[1] | |
| Maryland | Yes | All |
| Massachusetts | Yes | Religious |
| Michigan | Yes | All |
| Minnesota | Yes | All |
| Mississippi | Yes | All |
| Missouri | Yes | Religious |
| Montana | Yes | None |
| Nebraska | Yes | All |
| Nevada | No - Insurance code amendment | |
| New Hampshire | No - Change in Mandate Status[1] | |
| New Jersey | No - TDI State | |
| New Mexico | Yes | Not Education |
| New York | No - TDI State | |
| North Carolina | Yes | All |
| North Dakota | Yes | All |
| Ohio | No - Legislation Enacted | |
| Oklahoma | No - Change in Mandate Status[1] | |
| Oregon | No - Change in Mandate Status[1] | |
| Pennsylvania | Yes | None |
| Rhode Island | No - TDI State | |
| South Carolina | No - Evidence of Previous Mandate[3] | |

**Appendix C. (cont'd)**

| | Included in Experiment | Affected by PDA |
|---|---|---|
| South Dakota | Yes | None |
| Tennessee | No - Insurance code amendment | |
| Texas | No - Insurance code amendment | |
| Utah | No - Letter to Ruth Weyland[2] | All |
| Vermont | Yes | All |
| Virginia | No - Insurance code amendment | |
| Washington | Yes | Religious & Education |
| West Virginia | Yes | All |
| Wisconsin | Yes | Religious |
| Wyoming | No - Letter to Ruth Weyland[2] | |

Notes:

1. These states had employer mandates in place previous to the 1976 Supreme Court Ruling in *Gilbert*. However, there is no record that these states either enforced or strengthen the existing employer guidelines after 1976. Therefore, these states were dropped from the sample.
2. Commissioners in these states informed Ruth Weyland, that their intent was to uphold the EEOC 1972 guidelines.
3. One source lists South Carolina as having the maternity mandates in 1976. No other source confirms this, so I do not include South Carolina in the sample.
4. The information in this table is primarily from Commerce Clearing House (1978), NELP (1975), U.S. Supreme Court (1975/76), and Weyland (1978).

# APPENDIX D

## Appendix D: State Study Small Sample, Title VII Workers

| | (1) Log Hourly Wage | (2) Log Weekly Hours | (3) Employ-ment Probit |
|---|---|---|---|
| Education: | .059 | -.012 | .014 |
| | (.002) | (.003) | (.002) |
| Experience: | .017 | -.036 | -.083 |
| | (.002) | (.003) | (.006) |
| Experience Squared: | -.480 | 1.275 | 1.323 |
| | (.097) | (.133) | (.106) |
| Non-White: | -.039 | .089 | .066 |
| | (.013) | (.018) | (.012) |
| Union Coverage: | .172 | .085 | |
| | (.012) | (.016) | |
| Covered Group: | .272 | .738 | |
| | (.159) | (.219) | |
| Mandate Effect: | -.038 | -.027 | .005 |
| | (.020) | (.027) | (.015) |
| Status of Variables:[3] | | | |
| State: | Individual | Individual | Individual |
| Covered*State: | Individual | Individual | N/A |
| State*Year: | Group | Group | Group |
| Adjusted $R^2$: | .303 | .188 | .018 |
| N: | 7584 | 7584 | 22778 |

Notes:

1. The numbers in parenthesis are standard errors.
2. Regression also includes 15 industry dummy variables.
3. The term 'Individual' indicates that the state, year, and covered group variables are entered individually. The term 'N/A' indicates that the variables are not used in this specification.
4. The variables included in the probit are age and age squared, not experience and its square.
5. Respondents who report self-employment, government employees (except state and local administration), and those with a wage less than $1 per hour or greater than $100 per hour are dropped from the sample.
6. All workers who report working in industries exempt from Title VII regulations or from the state employer mandates are in the non-covered group.

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