

Comparable Worth, Disparate Impact, and the Market Rate Salary Problem: A Legal Analysis and Statistical Application

“Comparable worth” represents the concept that men, women, minorities, and whites should receive equal pay for work of equal value to their employer. The concept has grown out of the widely held belief that social and historical factors acting in the marketplace tend to depress the wages of those jobs that have been traditionally held by women and minorities.¹ Despite seventeen years of legislated equal employment opportunity,² most women and minorities continue to work in sexually and racially segregated occupations.³ In 1977 the average full-time woman worker in the United States earned only fifty-nine cents for every dollar earned by her male counterpart.⁴ This wage gap, which has remained constant for more than twenty years,⁵ has been blamed largely on the concentration of women in traditionally female-dominated, low paying jobs.⁶ A wage gap also exists between white and minority workers,⁷ which similarly has been attributed to the concentration of minorities in traditionally minority-dominated, low

1. See, e.g., Blumrosen, *Wage Discrimination, Job Segregation, and Title VII of the Civil Rights Act of 1964*, 12 U. MICH. J.L. REF. 397, 401-57 (1979).

2. Civil Rights Act of 1964, Pub. L. No. 88-352, §§ 701-716, 78 Stat. 241, 253-66 (codified as amended at 42 U.S.C. §§ 2000e to 2000e-17 (1976 & Supp. IV 1980)) (effective 1965).

3. COMM. ON OCCUPATIONAL CLASSIFICATION & ANALYSIS, NAT'L RESEARCH COUNCIL, WOMEN, WORK, AND WAGES: EQUAL PAY FOR JOBS OF EQUAL VALUE 26-28 (1981) [hereinafter cited as WOMEN, WORK, AND WAGES]; Blumrosen, *supra* note 1, at 402-10.

4. U.S. DEP'T OF LABOR, WOMEN'S BUREAU, *The Earnings Gap Between Women and Men*, excerpted in MANUAL ON PAY EQUITY: RAISING WAGES FOR WOMEN'S WORK 20 (J. Grunne ed. 1980).

5. *Id.*

6. *Id.* at 15-16; WOMEN, WORK, AND WAGES, *supra* note 3, at 41-42; Blumrosen, *supra* note 1, at 415-28. In fact, there is evidence indicating that an occupation pays less the more it is dominated by women. WOMEN, WORK, AND WAGES, *supra* note 3, at 28. Examples of female-dominated low paying occupations include clerical work, (accounting for 35% of employed women in 1978), nursing, elementary or secondary school teaching, librarianship, and retail sales. Hunttoo, *The Female-Male Earnings Gap*, in MANUAL ON PAY EQUITY: RAISING WAGES FOR WOMEN'S WORK 16 (J. Grunne ed. 1980).

7. For example, the annual earnings of black males in the mid-1970's to late 1970's averaged 72.9% of those of white males. WOMEN, WORK, AND WAGES, *supra* note 3, at 16.

paying jobs.⁸

Title VII of the Civil Rights Act of 1964,⁹ the omnibus federal statute designed to eliminate employment discrimination, would seem to be the legislative solution to the problem of remedying comparable-worth wage inequities. However, title VII's role in solving the comparable-worth problem has not yet been clarified by the courts. Eleanor Holmes Norton, former Chair of the Equal Employment Opportunity Commission, has described comparable worth as "the largest and most difficult issue left unresolved under title VII today."¹⁰

Currently, plaintiffs who bring actions for hiring or promotion discrimination under title VII are aided by two evidentiary presumptions that allow them to make out a *prima facie* case of discrimination using purely circumstantial evidence. One, the disparate treatment presumption, has recently been applied a number of times in the context of compensation discrimination; the other, the disparate impact presumption, generally has not been applied into the compensation context.¹¹

This Comment combines a legal analysis of the evidentiary requirements for proving compensation discrimination under title VII with an empirical study of comparable worth among University of California staff employees. Part I compares the evidentiary doctrines established in title VII hiring and promotion cases to the developing evidentiary doctrines into cases involving compensation. Part II argues that disparate impact analysis is needed to eliminate a loophole in current compensation discrimination law and can easily be justified by an extension of existing doctrines in the compensation context. Part III then develops the practical machinery necessary to apply disparate impact analysis, asserting that an employer's stated minimum requirements of education and experience for particular job classes may be

8. See Blumrosen, *supra* note 1, at 400, 410, 415-16.

9. 42 U.S.C. §§ 2000e to 2000e-17 (1976 & Supp. IV 1980).

10. U.S. EQUAL EMPLOYMENT OPPORTUNITY COMM'N, HEARINGS ON JOB SEGREGATION AND WAGE DISCRIMINATION 2-3 (1980) (opening statement of then EEOC Chair Eleanor Holmes Norton).

Comparable worth is an issue involving high financial stakes. For example, San Jose employees who were members of the American Federation of State, County and Municipal Employees (AFSCME) staged a strike over the comparable worth issue in July 1981. The result was a \$4.5 million settlement involving a general wage increase and special wage increases of up to 30% for certain female-dominated jobs. Lublin, *Big Fight Looms Over Gap In Pay for Similar "Male," "Female" Jobs*, Wall St. J., Sept. 16, 1982, at 33, col. 4.

11. "Disparate treatment" and "disparate impact" are discussed *infra* at notes 15-36 and accompanying text. The numerous cases applying the disparate treatment presumption to compensation cases are collected *infra* at note 64. Only one case, *Bryant v. International Schools Servs., Inc.*, 675 F.2d 562, 572 n.17, 573-74 (3d Cir. 1982), has ever recognized the possibility of applying the disparate impact presumption to compensation cases; however, the court in *Bryant* ruled that the plaintiffs had not presented sufficient disparate impact evidence to establish a *prima facie* case. *Id.* at 574. See *infra* text accompanying notes 67-72.

used as a correlate of job "worth" sufficient for the purpose of disparate impact analysis. In the Appendix, this machinery is applied to nonacademic staff positions at the University of California, revealing a substantial gap in pay between male-dominated and female-dominated jobs, and a smaller gap in pay between white-dominated and minority-dominated jobs, involving work of comparable worth.

I

EMPLOYMENT DISCRIMINATION THEORY UNDER TITLE VII

A. Evidentiary Presumptions of Discrimination

Title VII of the Civil Rights Act of 1964 bars employment discrimination that is based on race, color, religion, sex, or national origin.¹² The statute specifically forbids discrimination in hiring, discharge, compensation, terms, conditions, and privileges of employment.¹³ Because "discrimination" is not defined in the statute, the courts have been primarily responsible for articulating the parameters of illegal discrimination.

Judicial decisions have gradually defined discrimination by developing procedural rules that specify the evidentiary showing necessary to prove that discrimination has occurred. In hiring and promotion cases, the courts have developed two evidentiary doctrines that employ presumptions to aid title VII plaintiffs in establishing discrimination: disparate treatment and disparate impact. The disparate treatment doctrine allows a plaintiff to prove discrimination from circumstantial evidence of the employer's conduct. The disparate impact presumption allows a plaintiff to establish discrimination from statistical evidence showing that an employer's policies have a disproportionately negative impact on the plaintiff's protected group.¹⁴

1. Disparate Treatment

While the showing of an employer's discriminatory intent has always been a viable method of proving discrimination, the courts recog-

12. 42 U.S.C. § 2000e-2(a) (1976).

13. Title VII, § 703(a), 42 U.S.C. § 2000e-2(a) (1976):

It shall be an unlawful employment practice for an employer—

(1) to fail or refuse to hire or to discharge any individual, or otherwise to discriminate against any individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, sex, or national origin; or

(2) to limit, segregate, or classify his employees or applicants for employment in any way which would deprive or tend to deprive any individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, sex, or national origin.

14. Title VII forbids discrimination based on race, color, religion, sex, or national origin. 42 U.S.C. § 2000e-2(a) (1976) (quoted *supra* note 13).

nized long ago that requiring proof of the defendant employer's discriminatory state of mind would place an extremely heavy evidentiary burden on the plaintiff. As the New York Court of Appeals has pointed out, an employer "intent on violating the Law Against Discrimination cannot be expected to declare or announce his purpose. Far more likely is it that he will pursue his discriminatory practices in ways that are devious" ¹⁵ Accordingly, early cases established the principle that the provision in the remedies section of title VII referring to "intentional[]" ¹⁶ discrimination, did not require the plaintiff to show that the employer deliberately violated the law, but merely that the employer intended to do what it did, and did not act accidentally. ¹⁷ The courts thus permitted circumstantial evidence to be used to infer discriminatory intent on the part of the employer.

In *McDonnell Douglas Corp. v. Green*, ¹⁸ the Supreme Court established the general standard for the type and degree of circumstantial evidence necessary to reach an inference of intentional discrimination ¹⁹ within the meaning of title VII. In that case, a black employee actively participated in illegal protest activities after being laid off by his employer, claiming that his layoff and other practices of the employer were racially motivated. When the employer next advertised openings in the plaintiff's trade, the plaintiff applied but was rejected, allegedly due to his participation in the illegal protests. The employee claimed that his rejection was based on his race and on his involvement with the civil rights movement.

The Court stated that the complaining employee has the initial burden of establishing a prima facie case of discrimination. ²⁰ This initial showing can be made by demonstrating that the employee belongs to a racial minority, that he applied and was qualified for a job opening, that he was rejected despite his qualifications, and that the employer afterwards held the job open and continued to seek applicants with the plaintiff's qualifications. ²¹ The Court noted that the particular facts necessary to make out a prima facie case under title VII would

15. *Holland v. Edwards*, 307 N.Y. 38, 45, 119 N.E.2d 581, 584, 134 N.Y.S.2d 38, 45 (1954).

16. 42 U.S.C. § 2000e-5(g) (1976).

17. *E.g.*, *Laffey v. Northwest Airlines, Inc.*, 567 F.2d 429, 454-55 (D.C. Cir. 1976); *Rogers v. International Paper Co.*, 510 F.2d 1340, 1344 (8th Cir. 1975); *Kober v. Westinghouse Elec. Corp.*, 480 F.2d 240, 246 (3d Cir. 1973); *United Papermakers Local 189 v. United States*, 416 F.2d 980, 996 (5th Cir. 1969), *cert. denied*, 397 U.S. 919 (1970).

18. 411 U.S. 792 (1973).

19. *Id.* at 802-04; *see Texas Dep't of Community Affairs v. Burdine*, 450 U.S. 248, 253, 256, 258 (1981) (ultimate issue in disparate treatment case is intentional discrimination); *see also International Bd. of Teamsters v. United States*, 431 U.S. 324, 335 n.15 (1977) (proof of discriminatory motive is critical in disparate treatment case).

20. 411 U.S. at 802.

21. *Id.*

vary in different circumstances,²² but concluded in this case that the plaintiff had made the necessary initial showing.²³

After the initial showing has been made, the evidentiary burden shifts to the employer to provide a "legitimate, nondiscriminatory reason" for its actions.²⁴ The plaintiff's participation in the illegal protests provided such a legitimate reason. After the defendant's explanation, however, the plaintiff may offer additional evidence of discrimination to show that the employer's stated reasons were no more than a pretext to cover up a discriminatory decision. The Court suggested that such a pretext might be shown if *McDonnell Douglas* rehired white employees involved in the illegal protests but not black employees.²⁵ As later clarified by the Supreme Court in *Texas Department of Community Affairs v. Burdine*,²⁶ the ultimate burden of persuasion remains with the plaintiff.

McDonnell Douglas has been broadly interpreted to indicate that a prima facie case of intentional discrimination²⁷ is made out when a plaintiff shows that he or she was treated differently in terms of employment than similarly situated individuals of another race or sex.²⁸ This theory of proving discrimination is referred to as "disparate treatment."²⁹

2. Disparate Impact

The persistence of discrimination after the passage of the Civil Rights Act forced courts to face the fact that the elimination of present, intentional discrimination could not eliminate all the effects of past discrimination. Additionally, courts realized that even a neutral employment policy could have a discriminatory effect if applied to racial classes not similarly situated with respect to the policy.³⁰ To remedy these effects, the Supreme Court articulated the disparate impact theory

22. *Id.* at 802 n.13.

23. *Id.* at 802.

24. *Id.*

25. *Id.* at 804-05.

26. 450 U.S. 248, 253 (1981).

27. Because the courts in title VII hiring and promotion cases have not restricted their view of intentional discrimination to those cases involving specific discriminatory motivation, but have adopted the broader view of implied intent reflected in the disparate treatment theory, the courts have found it unnecessary to draw distinctions between specific and implied intent. The disparate treatment theory encompasses both approaches, and proof of discrimination under the disparate treatment theory is used synonymously with proof of "intentional discrimination."

28. *Teamsters*, 431 U.S. at 335 n.15. Courts generally apply the same legal analysis to sex discrimination and race discrimination cases involving hiring and promotion. See *infra* note 35.

29. The Supreme Court first utilized the terms "disparate treatment" and "disparate impact" in *Teamsters*, 431 U.S. at 335 n.15.

30. See, e.g., *Arlington v. Massachusetts Bay Transp. Auth.*, 306 F. Supp. 1355, 1358 (D. Mass. 1969) (race-based hiring discrimination case brought under 42 U.S.C. §§ 1981, 1983 (1976

of discrimination in *Griggs v. Duke Power Co.*³¹

In *Griggs*, an employer had recently established diploma and testing requirements for certain jobs. These requirements were applied equally to all applicants but resulted in the exclusion of a disproportionate number of blacks. Reasoning that Congress required "the removal of artificial, arbitrary, and unnecessary barriers to employment when the barriers operate invidiously to discriminate," the Court held that title VII bars "not only overt discrimination but also practices that are fair in form, but discriminatory in operation."³² Stating that "the touchstone is business necessity," the Court held that an employer can justify a neutral policy that has a discriminatory effect by showing that the policy bears a "demonstrable relationship to successful performance of the jobs for which it was used."³³ Because whites hired prior to the establishment of the diploma requirements performed satisfactorily, the Court concluded that the requirements were not sufficiently job-related to justify their discriminatory effect, and therefore the requirements violated title VII. The Court reversed the appellate court's holding that a showing of intent was necessary to prove discrimination under title VII.³⁴

Under disparate impact theory, then, a plaintiff can establish a prima facie case of discrimination with statistical proof³⁵ that a facially neutral employment policy has a disproportionately negative impact on members of the plaintiff's race or sex.³⁶ The plaintiff need not prove

& Supp. III 1979)); EEOC Decision No. 71-762 (Dec. 21, 1970), *digested at* 3 Fair Empl. Prac. Cas. (BNA) 264, 265 (1972) (race-based hiring discrimination case under title VII).

31. 401 U.S. 424 (1971).

32. *Id.* at 431.

33. *Id.* By using these words, the Court created what has come to be called the "business necessity" or "job relatedness" defense to a prima facie showing of discrimination by disparate impact. The Court further stated: "If an employment practice which operates to exclude Negroes cannot be shown to be related to job performance, the practice is prohibited." *Id.* Elsewhere, the Court stated that "Congress has placed on the employer the burden of showing that any given requirement must have a manifest relationship to the employment in question." *Id.* at 432. The question of what constitutes business necessity or job relatedness sufficient to justify an adverse impact is a subject of debate. See *infra* notes 133-37 and accompanying text.

34. 401 U.S. at 429-30, 436.

35. Modern cases have held that a prima facie case of job discrimination, in proper circumstances, can be established by statistical evidence alone. *New York City Transit Auth. v. Beazer*, 440 U.S. 568, 584 & n.25 (1979); see *Dothard v. Rawlinson*, 433 U.S. 321, 329-30 & n.12 (1977).

36. A number of the early hiring and promotion cases under title VII, including *McDonnell Douglas* and *Griggs*, involved race discrimination. However, the courts have applied the same legal analysis to sex discrimination cases involving hiring and promotion. See, e.g., *Burdine*, 450 U.S. at 256 (disparate treatment analysis used in a sex discrimination case); *Dothard*, 433 U.S. at 329 (disparate impact analysis used in a sex discrimination case). The courts regularly cite race and sex discrimination cases interchangeably. See, e.g., *id.* (following the rationale of *Griggs*); *Beazer*, 440 U.S. at 586 n.29 (race discrimination case citing *Dothard*); *Robbins v. White-Wilson Medical Supply Clinic*, 660 F.2d 1064, 1066-67 (5th Cir. 1981) (race discrimination case following the rationale of *Burdine*). As Judge Higginbotham observed in *International Union of Elec.*

any discriminatory intent on the part of the employer, but the employer can defend on the ground that the challenged practice is justified by business necessity.

B. Theories of Discrimination in Compensation Cases

1. Cases Prior to Gunther

Prior to *County of Washington v. Gunther*,³⁷ courts approached compensation cases involving race-based discrimination with the same evidentiary doctrines used to analyze hiring and promotion cases. Little case law on the subject had been published, but in at least two cases courts utilized disparate treatment analysis to evaluate the compensation rates of blacks and whites doing comparable but not identical work.³⁸ Courts refused, however, to apply title VII disparate treatment analysis to cases involving sex discrimination, since they believed that a provision known as the Bennett Amendment³⁹ had carved out an exception to title VII for sex-based compensation discrimination.⁴⁰

The Bennett Amendment was originally interpreted by several courts as incorporating the equal work requirements of the Equal Pay Act of 1963⁴¹ into title VII sex-based compensation cases.⁴² Plaintiffs

Workers v. Westinghouse Elec. Corp., 631 F.2d 1094, 1100 (3d Cir. 1980), "in dicta in Title VII cases, the Court tends to refer to discrimination on the basis of race, religion, sex, or national origin as they are equally nefarious and equally prohibited."

37. 452 U.S. 161 (1981).

38. *Calcote v. Texas Educ. Found., Inc.*, 578 F.2d 95, 96 (5th Cir. 1978) (white "residential counselor" alleged compensation discrimination where he was paid less than black "vocational counselor," and the court applied disparate treatment analysis without considering whether the jobs were "equal"); *Quarles v. Phillip Morris, Inc.*, 279 F. Supp. 505, 509 (E.D. Va. 1968) (court found that a black casing attendant's job was "comparable" to a white machine operator's job and granted relief on the basis of "comparable work for lesser pay"). But see *Pittman v. Hattiesburg Mun. Separate School Dist.*, 644 F.2d 1071, 1074 (5th Cir. 1981) (court required the plaintiff to prove that his job and the job to which he was comparing his position had "substantially the same responsibility" as part of his prima facie case under title VII).

39. The Bennett Amendment refers to a provision of title VII that states:

It shall not be an unlawful employment practice under this subchapter for any employer to differentiate upon the basis of sex in determining the amount of the wages or compensation paid or to be paid to employees of such employer if such differentiation is authorized by the provisions of section 206(d) of Title 29 [the Equal Pay Act of 1963].

40. 29 U.S.C. § 2000e-2(h) (1976).

41. See, e.g., *Lemons v. City & County of Denver*, 620 F.2d 228, 229-30 (10th Cir.), cert. denied, 449 U.S. 888 (1980); *Ammons v. Zia Co.*, 448 F.2d 117, 119-20 (10th Cir. 1971).

42. The Equal Pay Act of 1963 provides:

No employer . . . shall discriminate, within any establishment . . . on the basis of sex by paying wages to employees in such establishment at a rate less than the rate at which he pays wages to employees of the opposite sex in such establishment for equal work *on jobs the performance of which requires equal skill, effort, and responsibility, and which are performed under similar working conditions*, except where such payment is made pursuant to (i) a seniority system; (ii) a merit system; (iii) a system which measures earnings by quantity or quality of production; or (iv) a differential based on any other factor other than sex

29 U.S.C. § 206(d)(1) (1976) (emphasis added).

alleging sex-based compensation discrimination under title VII were thus required to prove that they were paid lower wages than employees of the opposite sex for "equal work,"⁴³ that is, work involving equal skill, effort, and responsibility, and performed under similar working conditions.⁴⁴ Under this view of title VII, even a direct showing of discriminatory intent would not suffice to establish sex-based compensation discrimination unless the plaintiff proved that a member of the opposite sex was paid more for performing equal work.⁴⁵

An alternative interpretation of the Bennett Amendment, however, was adopted in 1979 by the Ninth Circuit in *Gunther v. County of Washington*,⁴⁶ and in 1980 by the Third Circuit in *International Union of Electrical Workers v. Westinghouse Electric Corp.*⁴⁷ Under this interpretation, the Bennett Amendment merely incorporated the four affirmative defenses available under the Equal Pay Act⁴⁸ into title VII for sex-based compensation discrimination cases. The Bennett Amendment, according to these cases, did not incorporate the Equal Pay Act's equal work requirements into title VII, and therefore did not alter the substantive requirements for a prima facie case under title VII.⁴⁹

2. County of Washington v. Gunther

Gunther involved a suit under title VII by four female prison guards who claimed that the county paid them lower wages than male

42. *E.g.*, *Lemons*, 620 F.2d at 229-30; *Ammons*, 448 F.2d at 119-20.

43. Under the "equal work" standard, jobs "need not be identical in every respect" but must be "substantially equal." *Corning Glass Works v. Brennan*, 417 U.S. 188, 203 n.24 (1974).

44. *Id.* at 195; 29 U.S.C. § 206(d)(1) (1976) (quoted *supra* note 41).

45. Such was the petitioner's position in *County of Washington v. Gunther*, 452 U.S. 161, 166 & n.8, 178-79 (1981).

46. 602 F.2d 882 (9th Cir. 1979), *reh'g denied*, 623 F.2d 1303 (9th Cir. 1980) (supplemental opinion), *aff'd*, 452 U.S. 161 (1981). Although the Supreme Court affirmed the Ninth Circuit's holding, the Court did not specifically discuss the Ninth Circuit's alternative interpretation of the Bennett Amendment. See *infra* note 56 and accompanying text.

47. 631 F.2d 1094, 1101 (3d Cir. 1980). In *Westinghouse*, female plaintiffs claimed that Westinghouse intentionally set the pay rates for female-dominated jobs at a lower level than the rates for male-dominated jobs even though the jobs were of comparable difficulty as determined by Westinghouse's own job evaluation system. The Third Circuit held that such facts, if proven, would constitute a violation of title VII, and that the Bennett Amendment did not limit title VII compensation claims to those alleging equal work. *Id.* at 1096-97, 1107.

See also *Fitzgerald v. Sirloin Stockade, Inc.*, 624 F.2d 945, 953 (10th Cir. 1980). In *Fitzgerald*, the Tenth Circuit upheld a trial court's finding of sex-based compensation discrimination under title VII even though the female plaintiff did not perform work equal to that of male employees. The Tenth Circuit held that the Equal Pay Act standards do not apply to title VII cases even though the Bennett Amendment does make Equal Pay Act defenses available under title VII. *Id.* at 953-54 & n.2.

48. 29 U.S.C. § 206(d)(1)(i)-(iv) (1976) (quoted *supra* note 41). For a discussion of the four affirmative defenses available under the Equal Pay Act, see *infra* notes 127-31 and accompanying text.

49. *Gunther*, 452 U.S. at 178-80; *IUE*, 631 F.2d at 1101; *Gunther*, 602 F.2d at 888-89.

prison guards, and that part of the pay differential was due to intentional sex discrimination. While the male and female guards' jobs were not "equal" within the meaning of the Equal Pay Act,⁵⁰ the female guards claimed that the county set their pay rates, but not the male guards' pay rates, "at a lower level than that warranted by its own survey of outside markets and the worth of the jobs."⁵¹ The district court dismissed the complaint, holding that satisfaction of the Equal Pay Act requirements was a prerequisite to recovery under title VII for sex-based compensation discrimination.⁵² The Ninth Circuit reversed, holding that the Bennett Amendment did not limit sex-based compensation cases under title VII to those alleging equal work.⁵³

The Supreme Court affirmed,⁵⁴ emphasizing the narrowness of its holding.⁵⁵ The Court stressed that the *Gunther* facts did not require it directly to address the issue of comparable worth.⁵⁶ The Court did not state requirements for a *prima facie* case or lay down standards for the conduct of litigation,⁵⁷ and the Court did not define "the precise contours of lawsuits challenging sex discrimination in compensation under title VII."⁵⁸ On the other hand, the Court's stated unwillingness to deprive victims of discrimination of a remedy⁵⁹ and the Court's references to the broad policy goals of title VII⁶⁰ indicated a broad view of the potential contours of title VII litigation involving sex-based compensation discrimination.

The *Gunther* holding specifically established "direct evidence" of "intentional discrimination"⁶¹ as a possible approach to proving compensation discrimination under title VII. The *Gunther* Court's use of the phrase "direct evidence" is susceptible to the interpretation that the Court was drawing a distinction between *direct* evidence of intent, such as statements by the employer suggesting a discriminatory motivation,

50. The district court in *Gunther* concluded that the male and female guards' jobs were not "equal" under the Equal Pay Act and this conclusion was affirmed by the Ninth Circuit as "not clearly erroneous." 602 F.2d at 887. The Supreme Court did not review this issue. 452 U.S. at 165.

51. 452 U.S. at 165.

52. *Gunther v. County of Washington*, 20 Fair Empl. Prac. Cas. (BNA) 788, 791 (D. Or. 1976), *rev'd*, 602 F.2d 882 (9th Cir. 1979), *aff'd*, 452 U.S. 161 (1981).

53. 602 F.2d at 889-91.

54. 452 U.S. at 178-80.

55. *See, e.g.*, 452 U.S. at 166 & n.8.

56. "Respondents' claim is not based on the controversial concept of 'comparable worth' . . . Rather, respondents seek to prove, by direct evidence, that their wages were depressed because of intentional sex discrimination . . ." *Id.* at 166 (footnote omitted).

57. *Id.* at 166 n.8.

58. *Id.* at 181.

59. *Id.* at 178.

60. *Id.*

61. *Id.* at 166.

and *circumstantial* evidence of intent, the type of evidence used to demonstrate discrimination under either the disparate treatment or disparate impact theory. However, dicta in the case indicate that the Court did not reject disparate treatment. In its opinion, the Court not only supported the idea that title VII relief should not be denied in the hypothetical case where an employer *admits* that sex was a factor in salary setting, but the Court also stated that relief under title VII should not be denied in the hypothetical case where an employer uses "a transparently sex-biased system for wage determination" that the plaintiff can prove is a "pretext for discrimination."⁶² This second hypothetical closely resembles the traditional disparate treatment case, exemplified by *McDonnell Douglas* and *Burdine*.⁶³

In cases subsequent to *Gunther*, a number of courts of appeals have explicitly relied on disparate treatment theory to analyze sex-based compensation discrimination cases under title VII, by direct analogy from hiring and promotion cases.⁶⁴ This use of disparate treatment theory in sex-based cases is consistent with the prior use of disparate treatment in race-based cases involving compensation.⁶⁵

62. *Id.* at 178-79.

63. See *supra* text accompanying notes 25-26.

64. *Wilkins v. University of Houston*, 654 F.2d 388, 395, 405-07 (5th Cir. 1981) (class action sex-based compensation discrimination case based on a statistical showing of a "pattern or practice" of discrimination (a variation of the disparate impact analysis used in individual-plaintiff cases), where the court relied on *Teamsters*, a hiring case) (citing *Teamsters*, 431 U.S. at 335 n.15); *Boyd v. Madison County Mut. Ins. Co.*, 653 F.2d 1173, 1177-78 (7th Cir. 1981) (sex-based compensation discrimination case under title VII involving female employees who were eligible for attendance bonuses while male employees were not, where the court relied on *McDonnell Douglas* and *Burdine*, the two classic disparate treatment cases involving hiring); *Orahood v. Board of Trustees of University of Arkansas*, 645 F.2d 651, 655-56 (8th Cir. 1981) (sex-based compensation discrimination case involving the refusal of a salary increase for a female employee, where the court specifically labeled the case a "disparate treatment case" and relied on hiring cases such as *Teamsters*, *Burdine*, and *McDonnell Douglas*); accord *Briggs v. City of Madison*, 536 F. Supp. 435, 443-47 (W.D. Wis. 1982) (sex-based compensation case where the female plaintiffs established a prima facie case of compensation discrimination under title VII by direct analogy the disparate treatment standards set out in *McDonnell Douglas*).

Most courts continue to apply Equal Pay Act standards to wage discrimination claims brought under title VII where the plaintiff alleges that he or she performs work *equal* to that performed by an employee of the opposite sex. See *Piva v. Xerox Corp.*, 654 F.2d 591, 598-99 & n.5 (9th Cir. 1981); *Odomes v. Nucare, Inc.*, 653 F.2d 246, 250 (6th Cir. 1981); *Melanson v. Rantoul*, 536 F. Supp. 271, 286 (D.R.I. 1982); *Walter v. KFGO Radio*, 518 F. Supp. 1309, 1316 (D.N.D. 1981). But see *Scott v. Oce Indus.*, 536 F. Supp. 141, 148 (N.D. Ill. 1982) (court applied disparate treatment analysis in title VII case involving substantially equal work).

65. See *supra* text accompanying note 38. *Gunther* seems to imply that because both race-based and sex-based compensation discrimination cases rest on the same statutory basis, they therefore should be analyzed in the same way. The only difference is that Equal Pay Act defenses are available to defendants in sex-based but not in race-based compensation cases. See *infra* notes 127-31 and accompanying text.

3. *Disparate Impact*

In contrast to the numerous cases in which courts have relied on disparate treatment theory to analyze sex-based compensation discrimination cases,⁶⁶ only one appellate court has relied on disparate impact theory to analyze a case of sex-based compensation discrimination under title VII. In *Bryant v. International Schools Services, Inc.*⁶⁷ the Third Circuit reviewed a claim by two women teachers who were granted less lucrative contracts than those awarded five male teachers at the American School in Iran. The school hired teachers under two types of contracts: the "ISS-sponsored" contracts, which were generally used to hire teachers in America who were then sent to Iran, and the "local-hire" contracts, which were used to hire teachers already in Iran who applied for work there.⁶⁸ Almost all of the teachers hired under the local-hire contracts, including the plaintiffs, were women. The ISS-sponsored contracts were equally divided between men and women. The ISS-sponsored contracts were more lucrative than the local-hire contracts.

While the Third Circuit did not specifically designate the case as one involving "compensation" discrimination, compensation was clearly the issue involved. The court, by direct analogy from the hiring and promotion cases,⁶⁹ analyzed this compensation case like any other title VII case, stating "[a] prima facie case of employment discrimination may be proved under a theory of disparate impact or disparate treatment."⁷⁰

In analyzing the plaintiffs' disparate impact claim, the Third Circuit appeared willing to accept the same statistical approach to proving disparate impact in this compensation case as is generally used in hiring and promotion cases.⁷¹ The court held that the plaintiffs did not demonstrate a prima facie case in this instance, however, because the particular statistics they provided were inadequate.⁷² Thus, up to this time, no plaintiff has successfully proven sex-based compensation discrimination under title VII using the disparate impact theory.

66. See *supra* note 64.

67. 675 F.2d 562 (3d Cir. 1982).

68. *Id.* at 566-67.

69. *Id.* at 571-73 (citing *McDonnell Douglas*, *Burdine*, *Griggs*, *Dothard*, and other title VII cases involving hiring and promotion).

70. *Id.* at 571.

71. *Id.* at 573-74.

72. *Id.* While the appellants showed that 97 out of 98 of the less favorable local-hire contracts went to married women, they presented no data on the number of males or females who applied for local-hire contracts. *Id.* at 573.

II

THE NEED FOR AND JUSTIFICATION OF DISPARATE IMPACT
THEORY IN COMPENSATION DISCRIMINATION
CASESA. *Inadequacy of Disparate Treatment Theory*

Thus far, the only doctrinal approach that has been used successfully to prove compensation discrimination under title VII has required plaintiffs to produce evidence of the defendant's discriminatory intent, as shown under the disparate treatment theory. This approach is not equipped to deal adequately with all instances of compensation discrimination. If an employer establishes a pay hierarchy that is largely based on market rates rather than the employer's own assessments of the relative worth of its jobs, the employer can effectively evade liability under current title VII law by blaming any inequities in the pay hierarchy on "neutral" market forces.

Employers of appreciable size generally use one of two basic methods to establish wage scales.⁷³ Under a pure market rate system, the employer relies on salary surveys of other employers in its general location to determine the prevailing market rate paid to employees in various jobs. The employer then establishes its own hierarchy of wages based directly on these market rates.⁷⁴ Under a job evaluation system, in contrast, an employer rates each job according to its own set of "compensable factors" such as skill, effort, responsibility, and working conditions. In a typical system, points are awarded for varying degrees of these factors and the points associated with each job are then translated into dollars, thus establishing the pay hierarchy.⁷⁵

It is easy to see that job evaluation systems are much more susceptible than market rate systems to attack under title VII, since employers using such systems frequently provide the very evidence necessary to show that wage inequities exist.⁷⁶ The job evaluation process is designed to determine the worth of various jobs to the employer. If two

73. See Blumrosen, *supra* note 1, at 428-57. These methods are related in that both rely ultimately on the market to establish guidelines for wage setting, but they differ in terms of the degree of reliance on the market. See *infra* notes 74-75 and accompanying text.

74. See Blumrosen, *supra* note 1, at 441-42; Murlis, *Making Sense of Salary Surveys*, 13 PERSONNEL MGMT. 30, 33 (1981). Under a typical market rate system, not every salary is set based on salary survey data. Rather, certain benchmark jobs are compared with similar jobs in the market to establish a wage framework. The other jobs are assigned wages by more-or-less subjective comparison to the benchmark jobs. This is the type of system the University of California uses. See *infra* text accompanying notes 155-56.

75. See WOMEN, WORK, AND WAGES, *supra* note 3, at 71-72; R. SMYTH & M. MURPHY, JOB EVALUATION AND EMPLOYEE RATING 16 (1946); Blumrosen, *supra* note 1, at 429-34. Point factor job evaluation systems may be tied to market wages by adjusting the compensable factors so that the system reflects market wages. WOMEN, WORK, AND WAGES, *supra* note 3, at 72.

76. For example, the plaintiffs in both *Gunther* and *IUE* relied on the employer's job evalua-

jobs are assigned similar point ratings through the job evaluation process, they have comparable worth according to the employer's own criteria. Discrimination can therefore be inferred if it can be shown that the employer compensates jobs dominated by a certain race or sex at a rate lower than the compensation for jobs of admitted comparable worth dominated by other racial and sexual groups.

In contrast, under a market rate salary scheme the employer does not assign its own value to any job, but merely relies on the market to provide that value. The resulting compensation hierarchy may well mirror the discrimination in the marketplace,⁷⁷ but the employee will not easily be able to provide evidence of the extent or even the existence of this discrimination.⁷⁸

Employers seeking to avoid comparable worth wage adjustments are rapidly becoming aware of the advantages of maintaining market rate compensation systems and the dangers of performing job evaluations to set wages. When the City of San Jose, California conducted a job evaluation, the resulting study revealed substantial pay differences between male- and female-dominated jobs.⁷⁹ The city refused to raise the wages of female-dominated jobs accordingly, and a strike ensued. The city eventually settled, increasing the wages of certain female-dominated jobs by as much as thirty percent.⁸⁰ The Los Angeles school board has since rejected demands by labor groups to conduct a similar job evaluation.⁸¹ It is likely that other major employers will respond similarly. Employers have no incentive to conduct such a study if they are already using a market rate system. A study is expensive and may well result in large financial exposure.⁸² Because of the potential strike

tion as a way of proving that the employer was discriminating against them. *Gunther*, 452 U.S. at 180-81; *IUE*, 631 F.2d at 1097.

77. See *WOMEN, WORK, AND WAGES*, *supra* note 3, at 62-65.

78. See, e.g., *Briggs v. City of Madison*, 536 F. Supp. 435, 444-45 (W.D. Wis. 1982), where the district court rejected the thesis proposed by Blumrosen. Blumrosen posited that whenever there is job segregation, the same forces that determine that certain jobs will be reserved for women and minorities determine that the economic value of such jobs is low, and therefore a prima facie case of compensation discrimination may rest on the mere showing that jobs are traditionally segregated by race or sex. Blumrosen, *supra* note 1, at 401. The court, however, indicated its doubt that anyone could "identify the extent to which the factor of discrimination has contributed to, or created, sex-segregated jobs" 536 F. Supp. at 444.

79. Carroll, *Tough Talk in 'Feminist' San Jose Strike*, San Francisco Chron., July 7, 1981, at 1, col. 1. For example, legal secretaries' jobs were rated equal to those of instrument repair technicians, but the primarily female secretaries earned \$9432 per year less than the primarily male technicians. *Id.* at 7, col. 5.

80. See *supra* note 10. See also Fischer, *Pay Equity and the San Jose Strike: An Interview with Patt Curia*, 106 LIBRARY J. 2079, 2084 (1981) (librarians fight for a 30% pay increase).

81. Lublin, *supra* note 10, at 33, col. 6.

82. For example, San Jose's study cost the city \$500,000 to complete, and the ensuing settlement with striking employees cost the city \$4.5 million. See Carroll, *supra* note 79; Lublin, *supra* note 10.

and litigation dangers associated with a published job evaluation system, even employers who are already using a job evaluation system have a strong incentive to switch to a market rate system.

With the exception of *Bryant*, title VII compensation discrimination cases have focused solely on disparate treatment as the legal theory through which discrimination may be proved.⁸³ The disparate treatment presumption can capably address comparable-worth wage inequities resulting from job evaluation systems. For example, in *International Union of Electrical Workers*, Westinghouse used a job evaluation system to assign grades to sex-segregated jobs. When Westinghouse changed to a new grading system, male-dominated jobs were regraded higher than the previously grade-equivalent female-dominated jobs. The court held that the job evaluation system provided evidence of disparate treatment.⁸⁴

The disparate treatment doctrine is not, however, capable of addressing comparable-worth wage inequities resulting from a market rate system for setting salaries. Under a market rate system, the employer uses the same neutral policy—reliance on market rates—to establish wages for all jobs. Disparate treatment theory would be unavailing because the employer ostensibly has treated all employees equally. In fact, the employer who uses a market rate system may impose a pay hierarchy even more discriminatory in terms of impact than one susceptible to a disparate treatment attack because of the substantial effects of past discrimination and present discrimination in the marketplace.⁸⁵ Market rate systems, by their very nature, are retrospective; such systems surely “operate to ‘freeze’ the status quo of prior discriminatory employment practices.”⁸⁶

B. Justification for Disparate Impact Theory

Disparate impact is the legal doctrine that can adequately address compensation discrimination resulting from market rate salary systems.

83. See cases cited *supra* note 64.

84. *IUE*, 631 F.2d at 1108.

85. Ann Miller, head of the National Academy of Sciences research group commissioned by the EEOC to study issues of job evaluation and wage discrimination, had this to say:

Many jobs held by women pay less in large part because they are held by women The substantial influence of institutional arrangements and traditional pay differentials, established when discriminatory wages were legal and widely accepted, make it impossible to view current wage rates as set solely by the free play of neutral forces operating in the classical open market.

BUREAU OF NAT'L AFFAIRS, THE COMPARABLE WORTH ISSUE 42 (1981); *accord* WOMEN, WORK, AND WAGES, *supra* note 3, at 65 (“The main conclusion of our analysis of labor markets is that observed market wages incorporate the effects of many institutional factors, including discrimination.”).

86. *Griggs*, 401 U.S. at 430.

The use of disparate impact analysis would permit a plaintiff to establish a prima facie case by showing that an employer's facially neutral market rate compensation policy resulted in a disparate negative impact on employees of the plaintiff's race or sex.⁸⁷ An employer could defend such a policy on business necessity grounds by showing that the policy was genuinely job-related,⁸⁸ or, in a case involving sex discrimination, that the policy satisfied one of the Equal Pay Act defenses.⁸⁹ Four reasons support the introduction of disparate impact theory into title VII compensation cases.

First, introduction of disparate impact theory into the compensation context would be consistent with the direct intent and disparate treatment theories presently applied to compensation cases. After the Supreme Court in *Gunther* held that a showing of "equal work" was not necessary for a prima facie case of sex-based compensation discrimination under title VII,⁹⁰ the courts looked to "classic Title VII analysis"⁹¹ in order to establish a framework for analyzing compensation discrimination. Three courts of appeals have already explicitly applied disparate treatment analysis to compensation cases by direct analogy to hiring and promotion cases,⁹² and one other federal appellate court has done the same with disparate impact analysis.⁹³ Disparate impact theory is just as much imbedded in title VII hiring and promotion case law as is disparate treatment theory, and the courts have used the two doctrines in tandem effectively to combat discrimination. Not only is it consistent with established case law to extend disparate impact into the compensation discrimination arena, but refusing to utilize one doctrine of this pair will create a loophole that undermines the other doctrine.⁹⁴

Second, the substantive reasoning that supports the use of dispa-

87. This use of disparate impact theory in compensation cases would be analogous to its use in hiring and promotion cases, such as *Dothard*, 433 U.S. at 329 (discussed *supra* note 36) and *Griggs*, 401 U.S. at 432 (discussed *supra* text accompanying notes 31-36). *Bryant*, 675 F.2d at 572 n.17, 573-74, has already used disparate impact in the compensation context, as discussed *supra* text accompanying notes 67-72.

88. *Griggs*, 401 U.S. at 431 (discussed *supra* note 33 and accompanying text).

89. *Gunther*, 452 U.S. at 168-71. These four defenses are enumerated in 29 U.S.C. § 206(d)(1)(i)-(iv) (1976) (quoted *supra* note 41) and are discussed *infra* notes 127-31 and accompanying text.

90. *Gunther*, 452 U.S. at 178-80; *supra* notes 49 & 54 and accompanying text.

91. *Boyd v. Madison County Mut. Ins. Co.*, 653 F.2d 1173, 1177 (7th Cir. 1981) (discussed *supra* note 64).

92. See *supra* note 64.

93. *Bryant*, 675 F.2d at 572 n.17, 573-74 (discussed *supra* text accompanying notes 67-72).

94. Employers would be able simply to switch from policies that explicitly differentiate on the basis of race or sex to those that are facially neutral but produce the same result. For example, instead of refusing to hire women, an employer could refuse to hire anyone under 6 feet tall. In the compensation context, an employer could switch from a job evaluation system to a market rate system.

rate impact theory to establish a prima facie case of discrimination in the hiring and promotion context is equally applicable in the context of compensation discrimination. In the unanimous *Griggs* hiring discrimination case, in which the Supreme Court first embraced the theory of disparate impact, the Court relied on title VII's basic premise that a facially neutral policy could have a neutral effect only on those in an equal position to benefit from the policy.⁹⁵ The Court pointed out that historical disadvantages such as lack of comparable educational opportunities could place a particular ethnic group at a serious employment disadvantage with respect to a seemingly neutral hiring policy such as a high school diploma requirement.⁹⁶ Similarly, historical discrimination against women and minorities in the wage market may turn a neutral compensation policy, such as a market rate system, into one with a discriminatory impact.

In adopting the disparate impact theory in *Griggs*, the Court balanced concern about the disparate consequences of employment practices against the interest in protecting business autonomy. The Court recognized Congress' obvious intent that title VII not be used to require employers to hire unqualified applicants.⁹⁷ By allowing the mere showing of disparate impact to establish an inference of discrimination, the Court maximized the potential reach of title VII to remedy the consequences of discrimination. Yet, by establishing a business necessity defense, the Court provided for business autonomy to the extent that it did not result in "artificial, arbitrary, and unnecessary barriers"⁹⁸ to equal employment opportunity. Using disparate impact theory in the compensation context provides for the same balancing of goals. Compensation policies with discriminatory consequences would be eliminated to the extent they are not justified by a job-related business necessity.

Third, in *Gunther* the Court reaffirmed its view of title VII's broadly remedial purposes.⁹⁹ The Court stated that "Title VII's prohibition of discriminatory employment practices was intended to be broadly inclusive, proscribing 'not only overt discrimination but also practices that are fair in form but discriminatory in operation.'"¹⁰⁰ The fact that the *Gunther* Court cited the very language from *Griggs* that established the disparate impact theory suggests that this theory

95. 401 U.S. at 429-31.

96. *Id.* at 430-31 & n.6.

97. *Id.* at 431, 434.

98. *Id.* at 431.

99. "As Congress itself has indicated, a 'broad approach' to the definition of equal employment opportunity is essential to overcoming and undoing the effect of discrimination." 452 U.S. at 178 (citing S. REP. NO. 867, 88th Cong., 2d Sess. 12 (1964)).

100. 452 U.S. at 170 (citing *Griggs*, 401 U.S. at 431).

exemplifies the type of broad approach that title VII requires. *Gunther*, admittedly, emphasized the narrowness of its holding.¹⁰¹ In order to effectuate the remedial goals of title VII, however, *Gunther* should be read broadly to authorize application in the compensation discrimination context of the full panoply of legal weapons the Court had earlier established to fight discrimination in the hiring and promotion context. The *Gunther* Court stated generally that "[w]e must . . . avoid interpretations of Title VII that deprive victims of discrimination of a remedy, without clear congressional mandate."¹⁰² The courts have used the disparate impact theory in hiring and promotion cases for over ten years with congressional approval.¹⁰³ Thus, absent a clear indication to the contrary, the broader view of title VII should be taken and the disparate impact presumption should be introduced into the area of compensation discrimination.

Finally, common law principles regarding the appropriate placement of the burden of proof also support the use of disparate impact theory. Traditionally, it is the plaintiff's burden to prove that he or she has been harmed by the defendant. In most injuries to a plaintiff, the plaintiff usually has the most information available concerning any harm done, and it is the plaintiff who seeks a remedy by alteration of the status quo. Therefore, in most instances it is appropriate to place the burden on the employee-plaintiff to prove that he or she has been harmed by an allegedly discriminatory policy.¹⁰⁴ On the other hand, because information concerning how the plaintiff's harm was brought about is uniquely within the possession of the defendant, courts have traditionally created presumptions to shift the burden of proof to the defendant as to how that harm came about, once the plaintiff has established a prima facie case of harm.¹⁰⁵ Accordingly, courts agree that in

101. See *supra* notes 55-58 and accompanying text.

102. 452 U.S. at 178.

103. Prior to the 1972 amendments to title VII, Equal Employment Opportunity Act of 1972, Pub. L. No. 92-261, 86 Stat. 103, there was congressional discussion approving the *Griggs* decision and the disparate impact doctrine. Bartholet, *Application of Title VII to Jobs in High Places*, 95 HARV. L. REV. 945, 982 (1982); see H.R. REP. NO. 238, 92d Cong., 1st Sess. 8, 21-22 (1971); S. REP. NO. 415, 92d Cong., 1st Sess. 5 n.1, 14 (1971); 118 CONG. REC. 7166-69 (1972).

104. See MCCORMICK'S HANDBOOK OF THE LAW OF EVIDENCE § 337, at 786 (E. Cleary 2d ed. 1972) [hereinafter cited as MCCORMICK].

105. *Teamsters*, 431 U.S. at 359 n.45. In *Teamsters*, a title VII hiring and promotion case, the Supreme Court stated: "Presumptions shifting the burden of proof are often created to reflect judicial evaluations of probabilities and to conform with a party's superior access to the proof." *Id.* (citing MCCORMICK, *supra* note 104, §§ 337, 343). The Court also pointed out that:

the employer was in the best position to show why any individual employee was denied an employment opportunity. Insofar as the reasons related to available vacancies or the employer's evaluation of the applicant's qualifications, the company's records were the most relevant items of proof. If the refusal to hire was based on other factors, the employer and its agents knew best what those factors were and the extent to which they influenced the decisionmaking process.

title VII disparate impact cases the defendant employer has at least the burden of production,¹⁰⁶ and possibly the burden of persuasion,¹⁰⁷ that business necessity justified its employment policy. In the compensation context, the employer is in a unique position to obtain information concerning the needs of its business and the industry as a whole, comparative job requirements, and applicant pools.¹⁰⁸ Therefore, it is appropriate for the courts to shift the evidentiary burden to the employer once the plaintiff has demonstrated injury through disparate impact.

III

THE APPLICATION OF DISPARATE IMPACT THEORY TO MARKET RATE COMPENSATION CASES

A. Meeting the Evidentiary Burden of Showing Disparate Impact

In order to apply disparate impact theory, a plaintiff must produce evidence of disparate impact.¹⁰⁹ As discussed earlier,¹¹⁰ market rate compensation systems present an evidentiary dilemma. Since the employer does not assign an objective value to any job but rather relies on the market to establish a pay hierarchy, the employee cannot expect to find any readymade evidence that wages paid do not reflect the true relative worth of jobs as viewed by the employer. The plaintiff must therefore conduct some sort of independent analysis of job worth in order to prove the disparate impact of the employer's pay hierarchy.

Id.; accord *Briggs*, 536 F. Supp. at 443. In *Briggs*, a compensation case under title VII, the district court stated: "Essentially the prima facie case is a means of ordering proof that reflects both a judicial evaluation of the probabilities of the situation and the expectation that the defendant employer has superior access to the proof that will either rebut or support plaintiff's prima facie case." *Id.* See F. JAMES & G. HAZARD, CIVIL PROCEDURE (2d ed. 1977), where the authors state that "[a]ccess to evidence is often the basis for creating a presumption," *id.* § 7.9, at 257, and state that the burden of proof is frequently placed on the party with "readier access to knowledge about the fact in question," *id.* § 7.8, at 251; 9 J. WIGMORE, EVIDENCE § 2486, at 290 (Chadbourn rev. ed. 1981). *Cf., e.g.,* *Ybarra v. Spangard*, 25 Cal. 2d 486, 490, 154 P.2d 687, 689 (1944) (defendant doctor has burden of producing evidence relating to injury of patient who was unconscious at the time the injury was inflicted since the evidence of the true cause is accessible to the doctor but inaccessible to the injured person).

106. See *NAACP v. Medical Center, Inc.*, 657 F.2d 1322, 1333-36 (3d Cir. 1981) (en banc).

107. *Johnson v. Uncle Ben's, Inc.*, 657 F.2d 750, 753 (5th Cir. 1981), *cert. denied*, 103 S. Ct. 293 (1982); Bartholet, *supra* note 103, at 1004.

108. *Uncle Ben's*, 657 F.2d at 753; *cf. Briggs*, 536 F. Supp. at 446 (dictum) ("If there is another, nondiscriminatory reason for the wage disparity, such as the employer's need to compete in the marketplace for employees with particular qualifications, the employer is in the best position to produce this information at trial.").

109. *EEOC v. Greyhound Lines, Inc.*, 635 F. 2d 188, 192 (3d Cir. 1980), where the court said: [N]o violation of Title VII can be grounded on the disparate impact theory without proof that the questioned policy or practice has had a disproportionate impact on the employer's workforce. This conclusion should be as obvious as it is tautological: there can be no disparate impact unless there is a disparate impact.

110. See *supra* Part II, Section A.

Given the amount of information employers typically write down about their jobs, however, second-guessing an employer's judgment of the relative worth of jobs is likely to be difficult or impossible. A plaintiff employee wishing to invoke disparate impact theory should therefore be permitted to meet his or her initial evidentiary burden by a somewhat lesser showing than a full-scale independent evaluation of the employer's jobs.

An employee wishing to prove disparate impact typically has only one significant source of information about an employer's conception of its jobs. That source is the employer's written job descriptions. In order to support an independent evaluation of the employer's jobs, the descriptions must be detailed and accurate, covering every factor the employer would use if it were to conduct a job analysis of its own.¹¹¹ Published job descriptions rarely meet all of these requirements, and the employee is usually not in a position to supply the missing information.¹¹²

Nonetheless, a plaintiff employee should be permitted to establish a *prima facie* case based on statistics sufficient to establish a reasonably strong *inference* of discrimination,¹¹³ even if those statistics do not elim-

111. R. HENDERSON, JOB DESCRIPTIONS—CRITICAL DOCUMENTS, VERSATILE TOOLS 2 (1976).

112. Arguably, the plaintiff could get the EEOC to assist him or her in the search for this information, since information obtained through the EEOC's investigatory powers is available to the plaintiff-employee. *EEOC v. Associated Dry Goods Corp.*, 449 U.S. 590, 596-98 (1981). However, even the investigatory powers of the EEOC typically cannot unearth an employer's own assessments of the relative value of various job factors such as skill, effort, and responsibility, or of how these factors are reflected in the duties of each job, simply because the information never has been generated or never has been written down. Frequently, job descriptions themselves must be rewritten prior to formal job evaluation in order to include the specific factors the employer values and wishes to compensate. A plaintiff employee or the EEOC would have to take the discovery process to the extreme to force an employer to generate all new job descriptions.

113. The courts of appeals appear to be divided on the issue of what a plaintiff must prove to make out a *prima facie* case under the disparate impact theory in the hiring and promotion context. The Third Circuit, in *NAACP v. Medical Center, Inc.*, 657 F.2d 1322 (3d Cir. 1981), has taken the position that a plaintiff need only offer "evidence adequate to create an inference that an employment decision was based on a discriminatory criterion," *id.* at 1334 n.14 (quoting *Teamsters*, 431 U.S. at 358), but "[t]he ultimate burden of persuasion on the issue of illegal discrimination always remains with the plaintiff," *id.* at 1333. Thus, in the Third Circuit's view, an inferential showing of discrimination is sufficient to place on the defendant a burden of producing evidence to refute the inference, although the burden of persuasion remains with the plaintiff. The Fifth Circuit, in contrast, in *Uncle Ben's*, 657 F.2d at 753, held that "the plaintiff must not merely prove circumstances raising an inference of discriminatory impact; he must prove the discriminatory impact at issue." The court, however, held that the defendant had the burden of *persuasion* as to a business necessity defense for the challenged practice, since "[k]nowledge of a legitimate business reason is uniquely available to the employer . . ." *Id.*

In the compensation context, since information on the employer's view of the relative value of different job factors is uniquely available to the employer, it is reasonable to require only an inferential showing of discriminatory impact, as supported by the holding in *NAACP* and the reasoning in *Uncle Ben's*.

inate every conceivable nondiscriminatory explanation for the employer's policies.¹¹⁴ The Supreme Court has made clear in the disparate treatment cases that the burden of establishing a prima facie case is not onerous.¹¹⁵ Similarly, in disparate impact cases the courts have frequently accepted statistics that only loosely approximate the actual impact of an employer's policies where more precise statistics are not readily available.¹¹⁶ When the plaintiff has met this initial burden, the burden shifts to the employer to refute the plaintiff's inference of discrimination.¹¹⁷ The employer may do so by producing countervailing statistics, or it may identify flaws in the plaintiff's statistical showing.¹¹⁸ Thus, if the plaintiff produces data sufficient to establish an inference of discrimination using the only information readily available to him or her, the employer should be put to the task of bringing out the information uniquely available to it so that the factfinder, as well as both the plaintiff and the defendant, can see a complete picture of the employer's salary-setting system.¹¹⁹

This Comment proposes that the employer's stated minimum requirements of education and experience for each of its jobs be used as a correlate of the job's worth for the purpose of satisfying the plaintiff's initial burden of proving disparate impact.¹²⁰ This use of stated mini-

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The plaintiffs in a case such as this are not required to exhaust every possible source of evidence, if the evidence actually presented on its face conspicuously demonstrates a job requirement's grossly discriminatory impact. If the employer discerns fallacies or deficiencies in the data offered by the plaintiff, he is free to adduce countervailing evidence of his own.

Dothard, 433 U.S. at 331.

115. *Burdine*, 450 U.S. at 253. The plaintiff's prima facie case under disparate impact doctrine is much the same as under disparate treatment doctrine in cases involving a class-wide attack on an employment system. *Bartholet*, *supra* note 103, at 965 & n.58, 1004; *see NAACP*, 657 F.2d at 1334; *cf. Teamsters*, 431 U.S. at 335 n.15 ("Either theory may, of course, be applied to a particular set of facts.").

116. *Dothard*, 433 U.S. at 331; *Griggs*, 401 U.S. at 430 & n.6. Courts have favored the use of general statistical inferences to establish a prima facie case where the statistics provide the only available evidence of covert discrimination. *See United States v. Ironworkers Local 86*, 443 F.2d 544, 551 (9th Cir. 1971).

117. 433 U.S. at 329.

118. *Id.* at 331.

119. Such a procedure would promote the remedial purposes of title VII and is appropriate under common law notions of shifting burdens of production. *See supra* note 105 and accompanying text.

120. Conceivably, the idea of using minimum requirements as a correlate of job worth has implications in disparate treatment theory as well. In fact, use of minimum requirements methodology could be viewed as a way of invoking the disparate treatment presumption. While this application of the disparate treatment presumption might be a useful extension of current law, it probably still would not enable a plaintiff-employee successfully to challenge a market rate salary system under a disparate treatment cause of action. As one commentator has said:

Under the disparate treatment doctrine, the employer need only explain the differential treatment, and unless the plaintiff can show that this explanation is a pretext masking intentional discrimination, the plaintiff loses. Under the disparate impact theory, by

minimum requirements is supported by a number of considerations.

First, the information is generally available. Minimum requirements of education and experience are a near universal feature of job descriptions,¹²¹ which in turn are at least discoverable through the use of the EEOC's investigatory power if they are not already available to employees.¹²² The importance of the availability to plaintiffs of a legally sufficient quantum of information cannot be overemphasized. Title VII cases are, as a general rule, complex and expensive to litigate. Disparate impact cases present particular difficulties, for such cases generally entail gathering statistical evidence and enlisting the aid of experts to interpret it. Most employee-plaintiffs simply cannot afford this type of litigation, so their ability to aid in the enforcement of title VII will be limited to the extent they can persuade private attorneys to take their cases on a contingency basis. If plaintiffs are allowed to establish a *prima facie* case with information readily available to them, it will be more likely that they will be able to induce private attorneys to take cases of this type.¹²³

Second, the information is precise and quantifiable. Minimum requirements are typically stated in terms of a specific number of years of education and experience. The fact that the information is numeric greatly facilitates the use of statistical analysis to support or to refute an inference of discrimination.

Third, minimum requirements tend objectively to reflect the employer's own conception of the relative difficulty of different jobs. If two job descriptions on their face appear to describe two positions of vastly different difficulty, but the employer states that only a high school diploma and no experience is required to do either, the natural inference is that the two jobs are more comparable than the employer is willing to admit.

contrast, the employer must prove the job-relatedness and business necessity of his selection devices.

Bartholet, *supra* note 103, at 1004 (footnote omitted). Since reliance on the market is a facially neutral reason that can explain a differential salary treatment, a plaintiff bringing a disparate treatment case against a market rate system would probably lose whether or not he or she could use minimum requirements as a correlate of job worth. In contrast, if the plaintiff is permitted to bring a disparate impact case against a market rate system, the plaintiff should win if the employer's sole defense is to argue "job-relatedness and business necessity" based on its reliance on the market. See *infra* text accompanying notes 132-49.

121. R. HENDERSON, *supra* note 111, at 7.

122. See *supra* note 112.

123. Comment, *Beyond Equal Employment Opportunity Commission v. Associated Dry Goods Corp.: A New Defense of the EEOC's Role in the Title VII Enforcement Process*, 70 CALIF. L. REV. 816, 832 (1982).

An additional incentive to private attorneys is provided by the fact that disparate impact cases are particularly suited for class action treatment. *Wetzel v. Liberty Mut. Ins. Co.*, 508 F.2d 239 (3d Cir.), *cert. denied*, 421 U.S. 1011 (1975); see FED. R. CIV. P. 23(b)(2).

Another advantage of using minimum requirements methodology is that an employer whose compensation hierarchy is being challenged may be forced to conduct a job evaluation in order to refute the plaintiff's showing. Although the employer could defend itself by asserting that its stated minimum job requirements are not good indications of the worth it actually attaches to its jobs, such a tactic is not likely to have a forceful impact on a factfinder in view of the employer's obvious alternative of conducting a job evaluation itself. If the employer does conduct the evaluation, it will be forced to come to grips with the factors it actually takes into account in evaluating jobs. This exercise may not only lead to settlement of the case at hand, but also to a reevaluation of the employer's pay structure to reflect realistic values and eliminate concealed biases.

Use of minimum requirements to establish job worth thus takes advantage of the information most universally and reliably available to the employee where the employer has not conducted a formal job evaluation. When this methodology gives rise to an inference of discriminatory impact, the burden should shift to the defendant to come forward with the evidence to counter the plaintiff's *prima facie* showing.

B. The Employer's Defenses

In order to assess whether the disparate impact theory as presented in this Comment will be effective in uncovering latent discrimination encased within a market rate system, it is necessary to consider whether reliance on the market itself could be a valid defense to a disparate impact claim. Three types of defenses are potentially applicable to a disparate impact compensation case: evidentiary defenses, which are basically refutations of the plaintiff's case; Equal Pay Act affirmative defenses, applicable only in sex-based discrimination cases; and business necessity defenses, which generally are regarded as affirmative defenses. This Section will demonstrate that an employer's reliance on market wage rates, without more, should not constitute a defense under any of these three categories.

1. Evidentiary Defenses

One way an employer can defend against a disparate impact showing is by presenting evidence refuting the inference of discrimination raised by the plaintiff's statistical showing of disparate impact. The employer could produce countervailing statistics to show that its policies in fact have not resulted in an adverse impact upon the plaintiff's

class.¹²⁴ If a plaintiff had demonstrated disparate impact by showing that a comparison of the employer's pay hierarchy and the stated minimum requirements for its jobs revealed discrepancies suggesting race- or sex-based discrimination, then the employer would have the opportunity to refute that showing either by conducting its own job evaluation based on factors it considered more representative of job worth or by offering evidence tending to show that its stated minimum job requirements are not good indications of the worth it actually attaches to its jobs.

In either case, however, an employer should not be able to refute a showing of disparate impact by arguing that the only true measure of a job's worth is its market rate, and that there is no disparate impact when all employees are paid according to market worth. The thrust of the plaintiff's showing is that market wages do not reflect the true relative value of the jobs to the employer as revealed by the employer's own stated minimum job requirements. The widely recognized existence of market imperfections resulting from social factors and historically legal discrimination¹²⁵ lends weight to the plaintiff's inference that the "invisible hand" of the marketplace operates to set wages in a discriminatory manner.¹²⁶

2. *Equal Pay Act Defenses*

The four affirmative defenses in the Equal Pay Act apply to title VII cases involving sex-based compensation discrimination.¹²⁷ These defenses provide that compensation discrimination is legal if based on seniority, merit, quantity or quality of production, or "any other factor other than sex."¹²⁸ A market rate system is not a compensation system based on seniority, merit, or quantity or quality of production,¹²⁹ but it is arguably a system based on a "factor other than sex." This argument was laid to rest, however, by *Corning Glass Works v. Brennan*.¹³⁰ In that case, the Supreme Court held that reliance on the market was not a

124. *Dothard*, 433 U.S. at 331; *Uncle Ben's*, 628 F.2d at 424 (employer may rebut the prima facie case with evidence showing "the total unacceptability" of the plaintiff's statistical proof).

125. BUREAU OF NAT'L AFFAIRS, *supra* note 85, at 42 (comments of Ann Miller).

126. Accordingly, many courts have held that a bare reliance on the market is no defense to an Equal Pay Act claim. See cases collected *infra* at note 130.

127. *Gunther*, 452 U.S. at 167.

128. 29 U.S.C. § 206(d)(1)(i)-(iv) (1976).

129. Considerations of seniority, merit, or quantity or quality of production may supplement wage rates determined using the market alone. To the extent that these three factors explain wage differences and are applied evenhandedly, they constitute an affirmative defense. The employer may still be accountable for wage discrepancies not explained by these three factors.

130. *Corning Glass*, 417 U.S. at 204-05. Other courts have consistently rejected market rates as a "factor other than sex." *Laffey v. Northwest Airlines, Inc.*, 567 F.2d 429, 451 (D.C. Cir. 1976), *cert. denied*, 434 U.S. 1086 (1978); *Brennan v. Victoria Bank & Trust Co.*, 493 F.2d 896, 902 (5th Cir. 1974); *Hodgson v. Brookhaven Gen. Hosp.*, 436 F.2d 719, 726 (5th Cir. 1970); *Di Salvo v.*

"factor other than sex" within the meaning of the Equal Pay Act.¹³¹ It follows, then, that reliance on the market is no defense under the Bennett Amendment to title VII.

3. *Business Necessity Defenses*

As established in *Griggs*, an employer may legally use a policy with disparate impact if it is justified by "business necessity."¹³² The precise definition of business necessity is a subject of debate.¹³³ The narrowest view of the defense requires an employer to produce evidence that a policy that causes a disparate impact is an "irresistible demand" that is "essential" to the goals of safety and efficiency.¹³⁴ A broader view mandates a showing that the importance of the business purpose is "sufficiently compelling to override any racial [or sexual] impact" and that no acceptable alternatives exist that could result in a less disparate impact.¹³⁵ The broadest view merely requires that the business policy be "job related."¹³⁶ Under all three views, the plaintiff employee can rebut the defendant's showing of business necessity by demonstrating that another policy with a less discriminatory effect would "serve the employer's legitimate interest in efficient and trustworthy workmanship."¹³⁷

An employer's bare reliance on prevailing market wages to set salary rates should not qualify under any definition of business necessity including the broad "job related" standard. Even assuming that a market rate salary system could pass muster under that standard, however, such a system will not thereby be justified under title VII if the plaintiff can show that a bona fide job evaluation is a less discriminatory alternative to a market rate salary system.

Chamber of Commerce, 416 F. Supp. 844, 853 (W.D. Mo. 1976), *aff'd as modified*, 568 F.2d 593, 597 (8th Cir. 1978).

131. *Corning Glass*, 417 U.S. at 204-05.

132. 401 U.S. at 431.

133. *See, e.g.*, *Contreras v. City of Los Angeles*, 656 F.2d 1267, 1275-76 (9th Cir. 1981) (Ninth Circuit comments that courts differ on this issue, and then reviews different views taken within the Ninth Circuit as to the requirements for showing business necessity); Comment, *The Business Necessity Defense to Disparate-Impact Liability Under Title VII*, 46 U. CHI. L. REV. 911, 912 (1979) (citing cases that have adopted a "liberal," "narrow," or "balancing" approach to the definition of business necessity).

134. *United States v. Bethlehem Steel Corp.*, 446 F.2d 652, 662 (2d Cir. 1971); *accord* *Green v. Missouri Pac. R.R.*, 523 F.2d 1290, 1295-98 (8th Cir. 1975).

135. *Robinson v. Lorillard Corp.*, 444 F.2d 791, 798 (4th Cir.), *cert. dismissed*, 404 U.S. 1006 (1971).

136. *New York City Transit Auth. v. Beazer*, 440 U.S. 568, 587 (1979); *see Contreras*, 656 F.2d at 1280 (in which the court relaxes its standards for showing business necessity); Comment, *supra* note 133, at 933 (arguing that business necessity means nothing more than a legitimate business purpose).

137. *Dothard*, 433 U.S. at 329 (citing *Albein Paper Co. v. Moody*, 422 U.S. 405, 425 (1975)).

To take an example, the stated purpose of the University of California's market rate salary system is successfully to "recruit, retain and motivate competent employees."¹³⁸ Most employers relying on a market rate system have a similar business purpose as the objective of their compensation systems.¹³⁹ While a market rate system is arguably "related" to employee recruitment, retention, and motivation, it is certainly not the only acceptable alternative for achieving that purpose. Many major businesses and public sector employers across the country employ job evaluation techniques in order to set salaries,¹⁴⁰ yet they still successfully recruit, retain, and motivate competent employees. Furthermore, a job evaluation salary system will probably be a less discriminatory method of establishing a pay hierarchy, since such a system not only identifies the factors that the employer uses in wage setting but provides most, if not all, of the information necessary for the employer to adjust its pay hierarchy to eliminate discriminatory factors.¹⁴¹

In addition to recruitment, retention, and motivation of employees, employers may favor market rate systems because job evaluations are expensive. It is arguable, then, that market rate systems serve the business-related interest in cost efficiency. Courts, however, have generally rejected the contention that a discriminatory result may be justified by the administrative cost or inconvenience of alternatives.¹⁴² In the hiring and promotion context, courts have consistently required the use of specific job-related testing and similar requirements to replace hiring criteria that are shown to have a discriminatory impact, such as a

138. UNIVERSITY OF CAL., SALARY ADMINISTRATION MANUAL §1, at 2 (1977) [hereinafter cited as SALARY ADMINISTRATION MANUAL].

139. See U.S. EQUAL EMPLOYMENT OPPORTUNITY COMM'N, HEARINGS ON JOB SEGREGATION AND WAGE DISCRIMINATION 53, 65 (1980) (testimony of G. Sape and D. Wessinger, management consultants); Blumrosen, *supra* note 1, at 428.

140. WOMEN, WORK, AND WAGES, *supra* note 3, at 71: "At the present time in the United States many large private companies, the federal government, and many state governments make use of some form of formal job evaluation"

141. *Id.* at 95 ("In our judgment, job evaluation plans provide measures of job worth that, under certain circumstances, may be used to discover and reduce wage discrimination for persons covered by a given plan.").

142. *E.g.*, City of Los Angeles Dep't of Water & Power v. Manhart, 435 U.S. 702 (1978), a sex discrimination case under title VII involving a challenged pay differential caused by the employer's policy of requiring women to contribute more to its pension fund than men did, in which the Supreme Court rejected the employer's justification of the policy on the basis of cost, stating: "That argument might prevail if Title VII contained a cost justification defense comparable to the affirmative defense available in a Robinson-Patman Act price discrimination suit. But neither Congress nor the courts have recognized such a defense under Title VII." *Id.* at 716-17. *Accord* Johnson v. Pike Corp. of Am., 332 F. Supp. 490, 495 (C.D. Cal. 1971) ("The sole permissible reason for discriminating against actual or prospective employees involves the individual's capability to perform the job effectively. This approach leaves no room for arguments regarding inconvenience, annoyance, or even expense to the employer.").

high school diploma requirement.¹⁴³ It now appears to be settled law that the national interest in eliminating employment discrimination overrides the employer's interest in administrative convenience and cost saving.

Similarly, courts have also rejected, as a justification for sex-based wage differentials, the economic argument that the employees in question were simply willing to work for less than the "true value" of their jobs.¹⁴⁴ The same conclusion should apply to race-based wage differentials. The Equal Pay Act cases that rejected market rates as a justification for pay discrimination emphasized that it was Congress' intent to eliminate pay inequities stemming from the "outmoded" view that men, because of their role in society, should be compensated more than women for the same work.¹⁴⁵ The Supreme Court has recognized that the presence of discriminatory factors in the marketplace may force women to work for lower wages than men would demand for the same work.¹⁴⁶ The same market factors operate to force women to accept lower pay for comparable work.¹⁴⁷ Accordingly, the courts have rejected reliance on the market as a defense under the Equal Pay Act.¹⁴⁸ Similarly, the willingness of female or minority employees to work for less has been rejected as a defense in title VII cases involving unequal compensation for equal work.¹⁴⁹ For the same reasons, the market should be rejected as a defense in title VII cases involving comparable worth.

Certain other market factors could, however, potentially justify wage differentials. In a perfectly nondiscriminatory market, a job's market wage would basically be determined by two factors. One would be the relative value of the job to the employer in terms of accomplishing the employer's business goals. The other would be the relative scarcity of willing workers with specialized qualifications that the employer needs. If an employer presents specific evidence of the scarcity of workers with certain qualifications or of the actual difficulty in recruiting workers for a particular job, the law should allow the employer to maintain a wage differential necessary to recruit, retain, and motivate

143. See, e.g., *Griggs*, 401 U.S. at 432; *United States v. City of Chicago*, 549 F.2d 415, 431-32 (7th Cir.), cert. denied, 434 U.S. 875 (1977).

144. See cases collected *supra* note 130.

145. *Corning Glass*, 417 U.S. at 195.

146. See *id.* at 205.

147. Examples of such factors are societal attitudes, outright discrimination, and fewer options available from which women and minorities can choose. Blumrosen, *supra* note 1, at 448-53.

148. See cases cited *supra* note 130.

149. *Di Salvo v. Chamber of Commerce*, 416 F. Supp. 844, 853 (W.D. Mo. 1976). See also *Laffey*, 567 F.2d at 451, 453-54 (market defense rejected under Equal Pay Act, and violations of Equal Pay Act held to be violations of title VII); *Futran*, 501 F. Supp. at 739-40 (same).

competent employees with those needed qualifications.¹⁵⁰ For example, if the employer demonstrates that trained computer programmers are scarce in the market, the employer would be justified in compensating programmers at a relatively high salary level, but only to the extent necessary to offset the shortage. If the market were subsequently flooded by computer programmers seeking jobs, however, this wage differential would no longer be justified.

CONCLUSION

Title VII forbids race- and sex-based compensation discrimination. While plaintiffs thus far have relied on traditional title VII disparate treatment theory to prove claims of compensation discrimination, this theory is inadequate to attack pay differentials based on market rates. The disparate impact theory can redress this problem and should be applied in compensation discrimination cases for the same reasons it has been used in hiring and promotion cases, most significantly because it promotes Congress' objective of eliminating not only the intent to discriminate but also the effects of discrimination.

If disparate impact theory were applied to the compensation discrimination context, employees would be allowed to make out a *prima facie* showing of disparate impact using the employer's stated minimum requirements for its jobs as correlates of job worth. An employer's minimum requirements are likely to reflect the employer's own conception of the difficulty of jobs, are readily available to employees seeking to demonstrate discrimination, and lend themselves easily to the type of quantitative analysis generally called for in disparate impact cases. In addition, allowing plaintiffs to put employers to their proof would prevent employers from perpetuating past and present discrimination by hiding behind the market.

Employers would not need to labor under the threat of comparable worth litigation if they make their compensation policies objective and explicit. When they do, it would be obvious, both to their employees and to themselves, whether their policies are genuinely job-related or unlawfully discriminatory. Wage setting systems that compensate in proportion to job difficulty would certainly be genuinely job-related. Premium pay for scarce skills could similarly be justified as job-related. Where comparable worth is used to show disparate impact, employers would not, as has been suggested, be required to raise the compensation of minority and female workers preferentially so as to equalize the

150. Of course, the employer would have to provide premium pay to scarce employees in an evenhanded manner. For example, scarce employees in female-dominated fields such as nursing would have to be given the same type of pay adjustments provided for employees in male-dominated jobs that are similarly scarce.

average wages of male, female, minority, and white employees.¹⁵¹ Employers simply would be asked to demonstrate that differences in wages that operate to discriminate against an identifiable group are justified by genuine business necessity, and that there are no viable alternative policies with a less discriminatory impact.

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151. Note, *Sex-Based Wage Discrimination Under the Title VII Disparate Impact Doctrine*, 34 STAN. L. REV. 1083, 1099 (1982).

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APPENDIX

This Appendix sets out an empirical study of the comparable-worth concept as applied to nonacademic staff salaries at the University of California. The purpose of this study was to apply the principles developed in the foregoing Comment to an employer that uses a market rate system to set salaries. Simple and multiple regression analyses were used to gauge the relationship, for a given level of worth, between the sex and race of the employees in a job class and the wage paid to that job class. The methodology of this study should be widely applicable for the determination of whether wage structures contain race- and sex-based pay differentials for jobs of comparable worth.

The results of this study indicate that the University of California's salary setting system, although facially neutral, has an adverse disparate impact on women. This disparate impact should be sufficient to establish a *prima facie* case of discrimination under title VII. While the University's salary system appears to have a disparate racial impact as well, the impact on salary due to race is, on average, substantially less than that due to sex. Because the relationship between race and salary is confounded with job worth, the presence or lack of race discrimination cannot generally be inferred with respect to all of the jobs studied.

A. Background

The University of California was chosen as the focus of this study because it is a major employer with a wide variety of job categories, and because it bases its salary setting system on prevailing market rates.¹⁵² Federal affirmative action guidelines ensured that the necessary personnel data would be available. This study is based on October 1981 data¹⁵³ covering full-time nonacademic staff members¹⁵⁴ working

152. The university has never conducted a formal job evaluation. Salary-setting authority for the University of California is vested in the Regents under CAL. CONST. art. IX, § 9. The Regents, via their Standing Order 101.1a, delegated the salary setting responsibility to the President of the university. According to the University's Salary Administration Manual, the primary stated objective of the university's salary setting policy is "successfully to recruit, retain and motivate competent employees." SALARY ADMINISTRATION MANUAL, *supra* note 138, § 1, at 2. Its secondary objective is to provide equal salary rates for positions "of the same relative value . . . as necessary and feasible." *Id.* Because most of the university's funds are provided by the State of California, the university has chosen to follow state standards for salary setting contained in CAL. GOV'T CODE § 19826 (West Supp. 1982). These standards require that "like salaries shall be paid for comparable duties and responsibilities," but also that "consideration shall be given to prevailing rates for comparable service in other public employment and in private business." *Id.* § 19826(a). The data in this study reflect pre-collective bargaining wage rates.

153. Data on the number of employees, by race and sex, occupying University job categories are contained in university computer document Summary of Ethnic and Sex Employment—All Campuses Staff Including Office of the President as of 10/31/81, PER-1068.

154. The university classifies its employees into three categories: academic staff, nonacademic staff, and management.

at all nine University of California campuses statewide as well as the university laboratories and the Systemwide Administration offices, a total of 44,900 employees.

The University of California bases its staff wage scale on prevailing market wage rates. The university utilizes a variety of salary surveys¹⁵⁵ to determine prevailing rates, and uses these rates to determine the salaries of a set of "key" university staff jobs. Of the university's 811 job classes, approximately 60 are designated "key classes." About two-thirds of these key classes are actually compared with external salary surveys, and the others are compared internally with other university jobs. The wages of the remaining 750 job classes are set by comparison with the key classes.¹⁵⁶

B. Technical Definitions

1. Population

As of October 1981, the university's 811 nonacademic staff job classifications contained from 1 to 1924 employees, with a median of 55 employees per job category. For purposes of this study, a study population of 203 "major jobs" was chosen with the aim of including all job categories with a large number of employees, and of including at least one representative job category for each general type of work done by university employees. These jobs constituted 25% of all classified nonacademic staff job categories and included 36,936 employees, 82% of the university's total nonacademic staff work force. These jobs also accounted for approximately 80% of the university's nonacademic staff budget of nearly \$90 million per month.

The population of major jobs was chosen using the following criteria: (1) all job categories containing 50 or more employees; (2) all job categories containing 20 or more employees in which the "Career Weighted Average Salary" (CWAS)¹⁵⁷ equalled or exceeded \$2000 per month; and (3) all key job categories. Group (1) contains primarily entry-level and mid-level job categories. It was necessary to include group (2) in order to cover a reasonable number of advanced job categories. Group (3) was included both to ensure the diversity of the jobs

155. These salary surveys include, among others, the Bay Area Wage and Salary Survey, the Los Angeles Wage and Salary Survey, the Statewide Cooperative Wage and Salary Survey, and the State Personnel Board's Summary of Salary Data. SALARY ADMINISTRATION MANUAL, *supra* note 138, § 4, at 2-3, 6.

156. *Id.* § 4, at 2-3.

157. Career weighted average salary data were contained in university computer document entitled SP-3 Career Weighted Average Salary Report (Oct. 1981). CWAS figures represent the average salary paid to career (not temporary) University employees in a particular job class, weighted by the number of hours actually worked, so that each salary figure represents monthly pay based on a 40 hour workweek.

examined and because the university bases its entire salary-setting framework on wage rates for key jobs. Most key jobs contained a large number of employees and thus were already included in groups (1) and (2).

From the set of job categories selected by the above criteria, job categories were eliminated where either wages for the job category were established by a union scale (this applied to only three job categories), or the job description for the job did not state specific minimum educational or experience requirements but instead gave nearly unlimited discretion to the department doing the hiring. The remaining 203 major jobs formed the focus of this study.

Table 1: Composition of University of California Staff Workforce, by Race and Sex

Employee Group	Entire Staff Work Force		Major Jobs Only	
	Head Count	Percent of Total	Head Count	Percent of Major Jobs
Males	14,939	33%	10,891	29%
Females	29,961	67%	26,045	71%
Whites	30,246	67%	24,718	67%
Minorities	14,654	33%	12,218	33%
White Males	9,742	22%	6,916	19%
Minority Males	5,197	12%	3,976	11%
White Females	20,504	46%	17,802	48%
Minority Females	9,457	21%	8,243	22%
Total	44,900		36,936	

2. Characterization of Job Classes

For general purposes of comparison in this study, job classes were initially characterized in terms of the racial and sexual characteristics of the employees within them. "Female-dominated" jobs were defined as those in which 70% or more of all employees in the job class were female. Similarly, "male-dominated" jobs were those in which 70% or more of all employees were male.¹⁵⁸ Jobs that fell into neither category were classified as "sex-neutral." "White-dominated" jobs were defined as those containing 70% or more white employees, while "minority-dominated" jobs were defined as those in which 50% or more of all employees were racial minorities.¹⁵⁹ Job categories that were neither

158. These definitions are consistent with Department of Labor definitions of sex-segregated jobs. Blumrosen, *supra* note 1, at 461.

159. A figure of 50% was arbitrarily chosen to define minority-dominated jobs because very few university jobs contained 70% or more minorities. This definition allows comparison of wages of jobs that had a relatively large number of minorities with wages of jobs with a relatively large number of whites.

white-dominated nor minority-dominated were referred to as "integrated" job categories. Other job categories were defined by drawing from previously established categories: "white-male dominated" jobs, for example, were those jobs that were both white-dominated and male-dominated.¹⁶⁰

Table 2: Occupational Segregation in University of California Job Categories

Dominating Classification	No. of U.C. Jobs	% of All U.C. Jobs	No. of Major Jobs	% of Major Jobs ¹⁶¹
Total	811	100%	203	100%
Male	378	47%	67	33%
Female	238	29%	77	38%
Sex-Neutral	195	24%	59	29%
White	514	63%	119	59%
Minority	152	19%	34	17%
Race-Integrated	145	18%	50	25%
White Male	259	32%	43	21%
Minority Male	70	9%	10	5%
White Female	140	17%	42	21%
Minority Female	47	6%	13	6%
Integrated Male	49	6%	14	7%
Integrated Female	51	6%	22	11%
Sex-Neutral White	115	14%	34	17%
Sex-Neutral Minority	35	4%	11	5%
Sex-Neutral Integrated	45	6%	14	7%

3. Choosing the Correlate of Job Worth

As this Comment argued above, the minimum requirements given in a job description are, in a study of this sort, appropriate correlates of job worth.¹⁶² Therefore, for the purposes of this study, job worth was defined as the minimum number of years of education and experience required for adequate performance of the particular job. This number was ascertained by inspecting the written description of each job.¹⁶³ Since it was apparent from examination of alternative minimum re-

160. Table 2 shows that occupational segregation at the university was extensive. About three-quarters of the jobs were dominated by a single sex and a single race. Only 6% of the jobs were racially integrated and sex-neutral.

161. Columns for each division may not add up to precisely 100% due to rounding error.

162. See *supra* Part III, Section A. In this study, minimum requirements of education and experience were the *only* readily quantifiable job-related factors that could be determined from the university's written job descriptions.

163. The following rules were followed in evaluating minimum requirements:

(1) If the job required only the ability to read, write, and do simple mathematical calculations, an eighth grade minimum educational level was assigned (8 years of education, 0 years of experience).

(2) If the job required additional education, the educational level was converted into a

quirements given in the job descriptions that the university regarded a year of education as roughly interchangeable with a year of experience, years of education and experience could legitimately be added together into a single worth figure for each job.¹⁶⁴

C. Results

As argued above, an inference of discrimination may be raised by a statistical showing that the employer's salary setting procedures result in a wage differential between jobs that is associated with the sex or race of the employees doing the jobs, and that is not explained by differences in education and experience requirements.¹⁶⁵

Simple and multiple regression analyses were used to determine the correlation among the salaries paid for university staff jobs and the race and sex of the workers in those jobs, adjusting for job worth. Multiple regression analysis has been recommended in the legal and social science literature,¹⁶⁶ and has been widely used in cases¹⁶⁷ involving the

number of years. A high school diploma was assigned a value of 12 years, a bachelor's 16, and a master's 18. Vocational training was also counted as education.

(3) The particular specialty, if any, of education or training had no bearing on the total years assigned.

(4) Some judgment was exercised as to whether a particular skill required could have been learned in the normal educational process, or if additional years should be assigned for time required to learn that skill. However, special skills rarely counted. For example, no extra years were assigned for ability to type, take shorthand, or drive where the job description also required a high school diploma.

(5) Where alternative options were given for meeting the minimum qualification requirements and the options were not equivalent as to the total number of years assigned, the option requiring the least total years of education and experience was used. For example, a nursing job requiring Registered Nurse certification was assigned 14 years of education, although many nurses now graduate with B.S. degrees (16 years).

(6) Achievement of the "operational level" in a crafts job was generally counted as 4 years of training in addition to whatever other education and experience was required.

Application of these rules was fairly simple, as shown in the following example:

Job Category: Senior Student Affairs Officer

Minimum Requirements: Graduation from college with a major in psychology, sociology, social welfare or a related field; and two years of experience in student affairs work; or an equivalent combination of education and experience; and knowledge and abilities essential to the successful performance of the duties assigned to the position.

For this position, the college degree was worth 16 years, and the experience requirement added 2 more, giving a total job "worth" of 18 years.

164. This definition of "worth" also had the additional advantage of eliminating any difficulties caused by ambiguous situations. For example, a year of internship could be counted as either a year of education or a year of experience without affecting the final result.

165. As the Supreme Court stated in *Hazelwood School Dist. v. United States*, 433 U.S. 299, 307-08 (1977), "[w]here gross statistical disparities can be shown, they alone may in a proper case constitute prima facie proof of a pattern or practice of discrimination." Disparate impact cases rely primarily on statistics.

166. Barnett, *An Underestimated Threat to Multiple Regression Analyses Used in Job Discrimination Cases*, 5 INDUS. REL. L.J. 156, 158 (1982); Fisher, *Multiple Regression in Legal Proceedings*,

assessment of individual wage discrimination in class-based cases,¹⁶⁸ but no court has used it to determine if there is comparable-worth wage discrimination. However, it has been used for this purpose in the social sciences.¹⁶⁹ Use of multiple regression analysis in the comparable-worth context rests on the same assumptions that support its present use in class-based wage discrimination cases.¹⁷⁰ In those cases, data on salary, education, and experience of *individual* employees are analyzed to determine if an additional factor—sex or race—aids in explaining the variation among salaries. Although the approach used in this study makes comparisons across job lines,¹⁷¹ comparable-worth methodology in general addresses whether wages for particular *job categories* (rather than individuals) are set entirely according to job-related factors, or whether wages are determined, at least in part, according to the race or sex composition of the workers in the job category. Because race or sex is presumably not job-related, a wage differential associated with race or sex composition would be evidence of wage discrimination.

1. Simple Regression Results

Initially, the salary rates of major jobs were examined using simple regression analysis. Regression analysis was applied to the entire set of major jobs as well as its different race- and sex-related subsets (white-dominated jobs, for example). Regression analysis was performed using career weighted average salary (CWAS) as the dependent variable Y and minimum number of years of education and experience ("worth") as the independent variable W. Thus, salary was assumed to be linearly dependent on worth according to the equation

$$Y = a + bW + E.$$

80 COLUM. L. REV. 702, 721 (1980); Note, *Beyond the Prima Facie Case in Employment Discrimination Law: Statistical Proof and Rebuttal*, 89 HARV. L. REV. 387, 395 (1975).

167. *E.g.*, *Coble v. Hot Springs School Dist.* No. 6, 682 F.2d 721, 731-32 (8th Cir. 1982); *Wilkins v. University of Houston*, 654 F.2d 388, 402-05 & n.18 (5th Cir. 1981); *Valentino v. United States Postal Serv.*, 511 F. Supp. 917, 943-45, 955-57 (D.D.C. 1981), *aff'd*, 674 F.2d 56 (D.C. Cir. 1982); *Greenspan v. Automobile Club of Mich.*, 495 F. Supp. 1021, 1061-65 (E.D. Mich. 1980); *Rosario v. New York Times Co.*, 84 F.R.D. 626, 630 (S.D.N.Y. 1979); *see Finkelstein, The Judicial Reception of Multiple Regression Studies in Race and Sex Discrimination Cases*, 80 COLUM. L. REV. 737 (1980).

168. For example, a class of female employees claims that their individual wages are set below those of individual male employees with equal qualifications.

169. *See, e.g.*, studies cited in WOMEN, WORK, AND WAGES, *supra* note 3, at 28-31.

170. *See Trout v. Hidalgo*, 517 F. Supp. 873, 878-79 (D.D.C. 1981); *Vuyanich v. Republic Nat'l Bank*, 505 F. Supp. 224, 261-68 (N.D. Tex. 1980).

171. The court's refusal to permit cross-job comparisons made it impossible for the plaintiff to show wage discrimination in *Valentino v. United States Postal Serv.*, 674 F.2d 56, 70-71 (D.C. Cir. 1982). *Accord Agarwal v. Arthur G. McKee & Co.*, 19 Fair Empl. Prac. Cas. (BNA) 503, 505-06 (N.D. Cal. 1977). Cross-job comparison was permitted in *Trout*, 517 F. Supp. at 883, and *Vuyanich*, 505 F. Supp. at 280-85.

In this equation, a is a constant, b represents the average wage increase associated with each additional year of job worth, and E is an error term representing the salary variation that is not explained by job worth alone. The values of a and b , calculated by least-squares regression, are presented in Table 3. Also in that table are values of the R^2 statistic (the coefficient of determination), and r , the correlation coefficient, which indicates how closely salary is related to worth.

Table 3: Simple Regression Results, CWAS vs. Worth

Dominating Classification	a	b	Correlation Coeff. (r)	R ² Statistic
All Jobs	-165.6	132.7	0.756	0.571
Male	119.5	135.5	0.764	0.584
Female	-506.0	141.2	0.794	0.630
White	-474.5	154.2	0.686	0.471
Minority	1024.	25.48	0.273	0.074
White Male	-28.40	147.0	0.658	0.433
Minority Male	557.7	92.96	0.547	0.299
White Female	1382.	198.3	0.821	0.674
Minority Female	866.3	28.70	0.625	0.390

Table 3 shows that changes in the worth coefficient, b , affect salary equally in male- and female-dominated jobs. The base pay, a , in female-dominated jobs is lower than that in male-dominated jobs, however, so that female-dominated jobs are paid (on average) less than male-dominated jobs at each level of worth. Table 3 also shows that the worth coefficients, b , and the correlation coefficients, r , relating salary to worth, vary substantially between white- and minority-dominated jobs. The relationship between worth and salary is not nearly as strong in minority-dominated jobs as it is in other categories. That the effect of worth on wages is not the same for minorities as for whites may well evidence discrimination.¹⁷²

A comparison of some of these regression results is presented in Figures 1 and 2. Figure 1 shows superimposed least-squares regression lines calculated separately for male-dominated and female-dominated major jobs, with the upper regression line corresponding to male-dominated jobs. At virtually every level of worth, male-dominated jobs predominate at the highest pay levels, and female-dominated jobs predominate at the lowest pay levels. The vertical distance between the regression lines indicates that, on average, male-dominated jobs pay \$500 to \$600 more per month than female-dominated jobs of equal worth. The horizontal distance between the lines indicates that, on average, female-dominated jobs require four more years of education or experience than male-dominated jobs to achieve equal pay. The nearly

172. See Fisher, *supra* note 166, at 724.

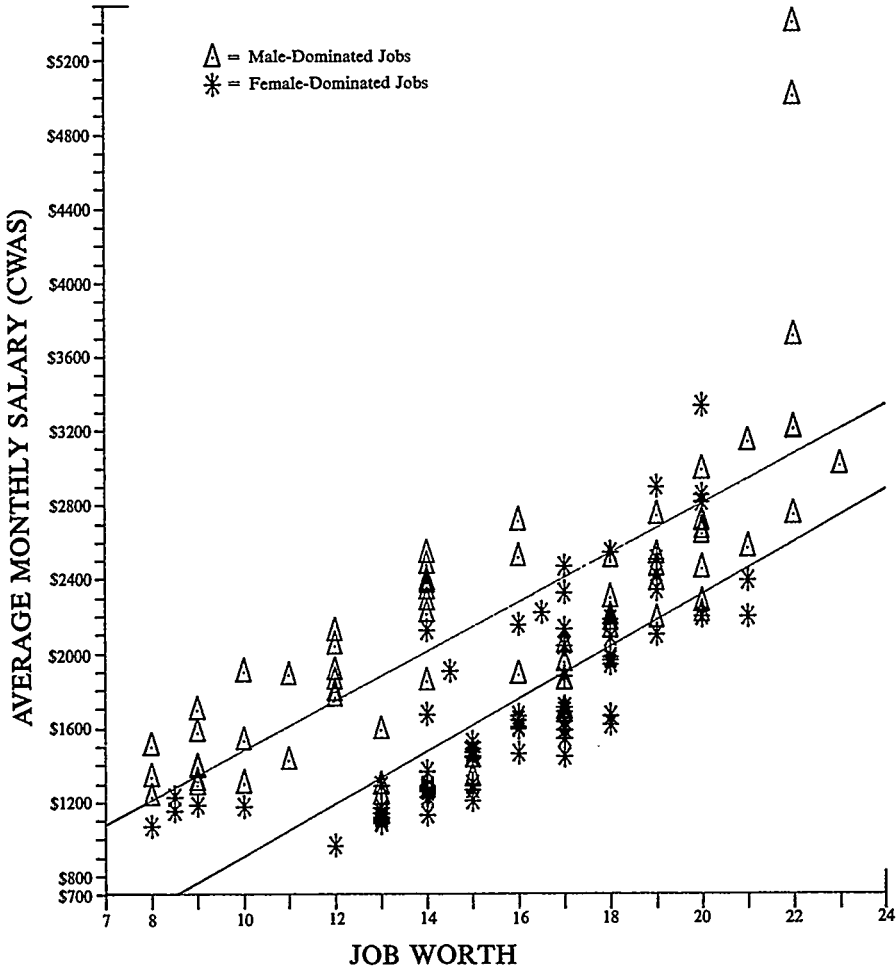


Figure 1. Scatterplot of monthly salaries versus job worth, for major male-dominated and female-dominated staff jobs at the University of California. The upper least squares regression line represents male-dominated jobs. The lower regression line represents female-dominated jobs.

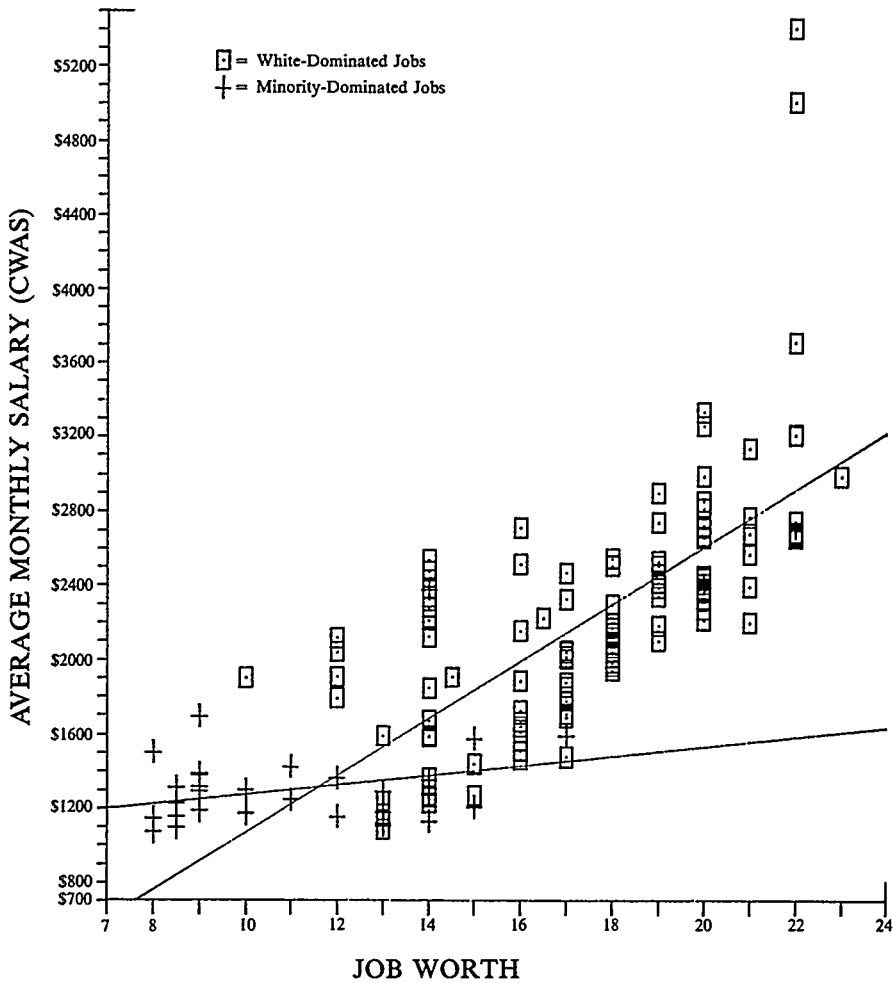


Figure 2. Scatterplot of monthly salaries versus job worth, for major white-dominated and minority-dominated staff jobs at the University of California. The more steeply sloping least squares regression line represents white-dominated jobs. The more horizontal regression line represents minority-dominated jobs.

parallel position of the regression lines indicates that the sex composition of the workers in a particular job has a nearly uniform impact on salary over jobs of all levels of worth.

Figure 2 shows superimposed regression lines for white-dominated and minority-dominated major jobs, with the more nearly horizontal line corresponding to minority-dominated jobs. The two groups of jobs are more difficult to compare in comparable-worth terms because minority-dominated jobs are, by and large, clustered at lower levels of worth than the white-dominated jobs. Where they overlap, however, minority-dominated jobs are consistently among the lowest paid, while white-dominated jobs are almost always the highest paid, at any given level of worth. But unlike the previous comparison between male- and female-dominated jobs, the differing slopes of the two regression lines here make it impossible simply to take the vertical distance between the lines to get an average value for the comparable worth pay discrepancy.

2. Multiple Regression Results

Multiple regression analysis allows a more sophisticated examination of the relationship between salary and the racial and sexual composition of university jobs. Multiple regression permits more than one explanatory variable to enter the mathematical model at once, facilitating the use of more powerful statistical tests¹⁷³ that use the entire set of 203 major jobs, as opposed to qualitative comparisons of results from various subsets of the major jobs. The mathematical models used in the multiple regression analyses were designed to test the hypothesis that race and/or sex is a significant factor in addition to job worth in explaining the differences in salaries among major jobs.

Three general mathematical models were used to test this hypothesis. These three models were used in regressions with two or more independent variables and one dependent variable. In Model 1, the dependent variable Y was salary (CWAS). The independent variables were W (the worth value in years) and D (a binary variable¹⁷⁴ representing race- or sex-domination). For example, if the regression tested the effects of female job domination on salary, D would equal 1 for a female-dominated job and 0 otherwise. Once again, a linear relationship was assumed between salary and the variables of worth, sex, and race. The regression equation takes the following form:

173. T. WONNACOTT & R. WONNACOTT, *INTRODUCTORY STATISTICS* 287, 310 n.16 (2d ed. 1972).

174. Binary or "dummy" variables frequently have been used in regression studies presented to the courts. See, e.g., *Trout*, 517 F. Supp. at 878-79; *Vuyanich*, 505 F. Supp. at 271 n.57, 279, 300-04. Such studies have also appeared in the legal and social science literature. T. WONNACOTT & R. WONNACOTT, *supra* note 173, at 308-13; Fisher, *supra* note 166, at 722.

$$Y = a + b_1W + b_2D + E$$

where a is a constant, b_1 is the coefficient associated with worth, and b_2 is the coefficient associated with race or sex, as indicated in Table 4, and E is a error term, as before.

The results of regressions done using Model 1 are presented in Table 4 (race or sex alone) and Table 5 (race and sex). The R^2 statistic is a measure of the percentage of variation in the dependent variable explained by the independent variables used in the model. The F-statistic¹⁷⁵ is a measure of the effect of adding race or sex (in the form of the race- or sex-domination term b_2D) to the model, and the significance level is the statistical expression of confidence that the result is not due to statistical or sampling error; that is, a .05 significance level means that there is less than a 5% chance that salary is in fact not related to the sex or race variable. "NS," an acronym for "not significant," means that the results are not significant at the 20% level, which would not be considered reliable enough under conventional social science standards of statistical certainty.

Table 4: Linear Bivariate Regression, Model 1 Results

$$Y = a + b_1W + b_2D + E$$

Independent Variables	a	b_1 (Worth)	b_2 (Race)	b_2 (Sex)	R^2	F Stat.	Signif. Level
Worth	-163.5	132.6	----	----	.571	----	—
Worth, Minority	-157.7	132.3	-5.80	----	.571	0.003	NS
Worth, White	-48.45	116.6	235.4	----	.592	10.2	.005
Worth, Male	-402.8	137.7	----	488.9	.684	71.3	.005
Worth, Female	6.37	129.9	----	-335.5	.628	30.7	.005

Table 5: Linear Trivariate Regression, Model 1 Results

$$Y = a + b_1W + b_2D_{\text{race}} + b_3D_{\text{sex}} + E$$

Independent Variables	a	b_1 (Worth)	b_2 (Race)	b_3 (Sex)	R^2	F Stat.	Signif. Level
Worth, Minority & Male	-465.3	140.9	61.0	492.7	.684	0.50 71.6	NS .005
Worth, Minority & Female	32.09	128.6	-25.6	-336.1	.628	0.07 30.07	NS .005
Worth, White & Male	-313.6	126.4	162.6	468.9	.693	6.3 66.0	.05 .005
Worth, White & Female	111.2	114.9	221.6	-328.6	.646	10.4 30.8	.005 .005

175. A theoretical basis for the use of significance tests based on the F-statistic in a setting such as this one, where the data were not gathered by random sampling, is provided in Freedman & Lane, *Significance Testing in a Nonstochastic Setting*, in A ZEITSCHRIFT FOR ERICH L. LEHMANN 185 (1983). Such tests may be used to reject the null hypothesis that a particular factor has no effect on the dependent variable, but should not be used to support the predictive use of regression models.

These results may be interpreted in a fairly straightforward manner. For example, the last line of Table 5 provides the following information: the average base pay rate of a university job is \$111.20 per month. On average, salary rates increase by \$114.90 for each year of education or experience required to do a job. In addition, salary rates increase by an average of \$221.60 if a job is white-dominated and salary rates decrease by an average of \$328.60 if the job is female-dominated. These results show that significant decreases in salary accompany job domination by women. In contrast, while minority composition appears to have a similar effect, that effect is not statistically significant.

In Model 2, the dependent variable Y and the independent variable W were the same as in Model 1. This time, however, the other independent variable was P , the percentage of minorities or women in the job.¹⁷⁶ That is, if the regression is used to test minority domination, P would equal the percentage of minority workers in any job. The assumed mathematical relationship¹⁷⁷ was

$$Y = a + b_1W + b_2P + E.$$

Model 2 presumably has one advantage over Model 1. Model 2 takes account of more information than Model 1, since actual percentage compositions rather than binary variables are entered into the model, eliminating the arbitrariness inherent in choosing a percentage composition level above which a job will be termed race- or sex-dominated.

Table 6: Linear Bivariate Regression, Model 2 Results

Independent Variables	$Y = a + b_1W + b_2P + E$						Signif. Level
	a	b_1 (Worth)	b_2 (Race)	b_2 (Sex)	R^2	F Stat.	
Worth	-163.5	132.6	----	----	.571	----	----
Worth, Minority	456.8	107.9	-7.74	----	.597	13.0	.005
Worth, Female	180.9	133.6	----	-7.17	.696	82.8	.005

176. Percentage composition was used in the Hartmann study cited in WOMEN, WORK, AND WAGES, *supra* note 3.

177. A more complex variation of Model 2 was also tested. This nonlinear model contained a minority percentage-job worth interaction term (b_4WP_{race}) along with the other Model 2 terms, hence: $Y = a + b_1W + b_2P_{\text{race}} + b_3P_{\text{sex}} + b_4P_{\text{race}}W + E$. The interaction regression showed that at low levels of worth, jobs with relatively more minorities were paid above average, but that at high levels of worth, they were paid below average. Specifically, the regression yielded the following equation: $\text{Salary} = -367.7 + 173.7W + 20.5P_{\text{race}} - 6.11P_{\text{sex}} - 1.79P_{\text{race}}W + E$. All terms were significant at the .005 level. This means that minority concentration depresses salary only at high levels of worth. See *infra* text accompanying notes 200-02.

Table 7: Linear Trivariate Regression, Model 2 Results

$$Y = a + b_1W + b_2P_{\text{race}} + b_3P_{\text{sex}} + E$$

Independent Variables	a	b ₁ (Worth)	b ₂ (Race)	b ₃ (Sex)	R ²	F Stat.	Signif. Level
Worth, Minority & Female	519.1	119.4	-4.45	-6.78	.705	5.61 72.6	.05 .005

Interpretation of these results proceeds along the same lines as before. For example, the second line of Table 6 provides the following information: the average base pay of a university job is \$456.80 per month. On average, salary rates increase by \$107.90 for each year of education or experience required by a job. Salary rates decrease by \$7.74 for each percentage point of minority composition of the employees; for example, if the workers are 10% minority, the decrease is \$77.40. Once again, significant decreases in salary correlate with job domination by women and minorities.

In Model 3, the same variables were used as in Model 2, but the assumed mathematical relationship was multiplicative:

$$\log(Y) = A + B_1W + B_2P + E$$

which is equivalent to

$$Y = a (1 + b_1)^W (1 + b_2)^P E'$$

where a is a constant, b_1 is the worth coefficient, and b_2 is the race or sex coefficient, and E' is an error term. Under this model, worth and percentage composition of the test classification are assumed to have a percentage effect on salary. Models based on the logarithm of salary are frequently used in the legal and social science literature¹⁷⁸ and have been used in court to represent the effects of productivity factors such as education and experience on individual salaries,¹⁷⁹ since individuals' salary increases are usually granted on a percentage basis.¹⁸⁰ Similarly, it is plausible to assume that salary rates would increase on a percentage basis that corresponds to the number of years of education and experience.

178. *E.g.*, WOMEN, WORK, AND WAGES, *supra* note 3, at 23; Barnett, *supra* note 166, at 165; Corcoran & Duncan, *Work History, Labor Force Attachment, and Earnings Differences Between the Races and Sexes*, 14 J. HUM. RESOURCES 1, 3-20 (1979); Fisher, *supra* note 166, at 724.

179. *Trout*, 517 F. Supp. at 886; *Vuyanich*, 505 F. Supp. at 275 n.64, 287, 302.

180. Barnett, *supra* note 166, at 163 & n.34.

Table 8: Nonlinear Bivariate Regression, Model 3 Results

$$\log(Y) = A + B_1W + B_2P + E$$

which is equivalent to

$$Y = a(1 + b_1)^W(1 + b_2)^P E'$$

Independent Variables	a	b ₁ (Worth)	b ₂ (Race)	b ₂ (Sex)	R ²	F Stat.	Signif. Level
Worth	624.3	7.02	----	----	.626	----	----
Worth, Minority	915.6	5.41	-0.476	----	.668	25.2	.005
Worth, Female	743.0	7.08	----	0.362	.760	111.8	.005

Table 9: Nonlinear Trivariate Regression, Model 3 Results

$$\log(Y) = A + B_1W + B_2P_{\text{race}} + B_3P_{\text{sex}} + E$$

which is equivalent to

$$Y = a(1 + b_1)^W(1 + b_2)^{P_{\text{race}}}(1 + B_3)^{P_{\text{sex}}}$$

Independent Variables	a	b ₁ (Worth)	b ₂ (Race)	b ₃ (Sex)	R ²	F Stat.	Signif. Level
Worth, Minority & Female	944.2	6.01	-0.315	-0.334	.777	15.6 98.1	.005 .005

Interpretation of these results proceeds on a percentage basis: each coefficient *b* represents the average percentage salary increase associated with a unit increase in the explanatory variable. For example, the last line of Table 8 indicates an average base pay of \$743.00 per month. Pay is increased by an average of 7.08% compounded for every year of education or experience required, and pay is decreased by an average of 0.315% compounded for every percentage point of female composition of that job. These results once again show that salary decreases with increasing job domination by women and minorities.

3. Discussion

a. Sex Discrimination

The regression analyses above present strong evidence of the disparate negative impact of the University of California's salary setting policy on the wages of female staff employees in major jobs. This disparate impact should be sufficient to support a *prima facie* case of sex-based wage discrimination. These models explain 60% to 70% of the observed salary variation between jobs studied, a relatively high percentage of explained variance for a study in the social sciences.

The reliability of these regression results is supported by the fact that female percentage is not significantly correlated with worth.¹⁸¹ Therefore, the models need not have a perfect "fit" to produce valid indications that an increase in the percentage of women in a job nega-

181. $r = 0.016$.

tively affects salary.¹⁸² Examination of the residuals revealed no serious abnormalities.¹⁸³ Professor Arnold Barnett has suggested that the choice of the wrong functional form to represent the relationship of explanatory variables to salary may produce misleading indications of salary discrimination.¹⁸⁴ In this study several models of varying form are presented, each of which indicates the existence of wage discrimination.¹⁸⁵ These models vary only in their precise calculations of the dollar impact. The ranges of pay discrepancy suggested are similar. The choice of which of these functional forms produces the most reliable results should rest on a reasonable theory of how wages for jobs should actually be computed in relation to productivity factors, rather than a mere comparison of R^2 values.¹⁸⁶ Such considerations are beyond the scope of this study. What matters here is that sex-based wage disparities are consistently shown, and that sex amounts to a several hundred dollar per month discrepancy, on average, between male-dominated and female-dominated jobs.

It is possible that other factors not considered in this study could influence job worth. As discussed in the text, however, any other factors would have to be identified and made available by the employer.¹⁸⁷ In *Trout v. Hidalgo*,¹⁸⁸ a sex-based wage discrimination case, the plaintiffs' evidence of discrimination consisted principally of a sta-

182. In contrast, see illustration of "tilt" yielding spurious results illustrated in Barnett, *supra* note 166, at 163-64. In Professor Barnett's example, females were correlated with low productivity factors.

183. For example, neither the female percentage factor nor the minority percentage factor was significantly correlated with the size or sign of the residuals in the model $Y = a + b_1W + b_2P_{sex} + b_3P_{race} + b_4P_{race}W + E$. While worth appeared to influence error size slightly, this would not affect the implication of wage bias where the proportion of women in a job is unrelated to worth. Backwards regressions, using worth as the dependent variable and salary, race, and sex as the independent variables yielded a positive coefficient for sex, further confirming the results produced in the other regressions. This method of confirming results is discussed in Finkelstein, *supra* note 167, at 747-49.

184. Barnett, *supra* note 166, at 159.

185. In addition to the models presented above, a more complicated quadratic model was examined: $Y = a + b_1W + b_2W^2 + b_3P_{sex} + b_4P_{sex}^2 + b_5P_{race} + b_6P_{race}^2 + b_7P_{race}W + E$ (variables as defined under Model 2). Such a model was presented to the court in *Agarwal v. Arthur G. McKee & Co.*, 19 Fair. Empl. Prac. Cas. (BNA) 503, 506 (N.D. Cal. 1977). While this model has no relationship in any intuitive sense to the way salary managers would actually compute salaries, see Barnett, *supra* note 166, at 167, it illustrates the improvements in model "fit" achievable through the use of many explanatory variables ($R^2 = .785$). This model indicates that an increase from 0% to 10% in the percentage of women in a job category results in a net pay decrease of \$213.60. This result is consistent with the inference of discrimination and tends to confirm that the evidence of pay discrepancies presented in this Comment is not a product of the choice of the functional form of the regression model.

186. See Barnett, *supra* note 166, at 169-70.

187. See *supra* text accompanying notes 124-26.

188. 517 F. Supp. 873 (D.D.C. 1981).

tistical showing based on multiple regression analysis.¹⁸⁹ The court held that the plaintiffs could not "legitimately be faulted for gaps in their statistical analysis when the information necessary to close those gaps was possessed only by the defendants."¹⁹⁰ Furthermore, the court upheld the plaintiffs' statistics as supporting a *prima facie* case despite the defendant's objections that additional explanatory factors should have been included in the regression. The court placed the burden on the defendants to show that the inclusion of missing factors would have altered the statistical inference of discrimination. The court stated, "[I]t would be erroneous to impose upon the party relying upon this technique the burden of incorporating every conceivable refinement and disproving every contingency."¹⁹¹ Similarly, in *Vuyanich v. Republic National Bank*,¹⁹² another wage discrimination case using multiple regression analysis, the court held that "a plaintiff is not required to produce a perfectly designed model in order to make out a *prima facie* case."¹⁹³ The court pointed out that no model in the social sciences ever meets all of the requirements for perfect regression analysis and that crude statistical modeling has been permitted by law.¹⁹⁴ The *Vuyanich* court also placed the burden on the defendant to come forward and demonstrate how any supposed errors in the methodology biased the model sufficiently to affect the validity of the model's findings of discrimination.¹⁹⁵

Given the type of statistical showing presented here, the consistency of the results with those of other social science studies,¹⁹⁶ and the limited requirements of a *prima facie* case under title VII, evidence such as that presented in this study should support a *prima facie* case of discrimination.

b. Race Discrimination

While the multiple regression analyses in this study indicate that the percentage of minorities in a job category has a statistically significant effect on wages, the inference of discrimination from these statistics must be assessed with caution. Regression of worth against minority percentage reveals that worth is correlated with race,¹⁹⁷ con-

189. *Id.* at 877-78.

190. *Id.* at 883. See also Finkelstein, *supra* note 167, at 744-45.

191. 517 F. Supp. at 881-83 & n.32. "One clear purpose of discrimination law is to force employers to bring their employment processes into the open." *Id.* at 883 n.33.

192. 505 F. Supp. 224 (N.D. Tex. 1980).

193. *Id.* at 314 (emphasis in original).

194. *Id.* at 306.

195. *Id.* at 306-07. See also Finkelstein, *Regression Models in Administrative Proceedings*, 86 HARV. L. REV. 1442, 1466-67 (1973).

196. See, e.g., studies cited in WOMEN, WORK, AND WAGES, *supra* note 3.

197. $r = 0.656$.

trary to the mathematical assumption of the regression model that the explanatory variables are independent. This situation is called multicollinearity.¹⁹⁸ Multicollinearity tends to affect R^2 values.¹⁹⁹ Because multicollinearity is substantial in the race-discrimination case, regression cannot reliably separate the effects of worth and race.²⁰⁰ Some improvement over the linear model is provided by the model containing a race-worth interaction term.²⁰¹ Because this term is negative, while the minority term is positive, it seems that on the average minority percentage becomes a net negative factor at worth levels 12 and above. This result is consistent with the graph of minority-dominated jobs in Figure 2. The functional form does matter in this case, and the model containing the minority-worth interaction term appears to have the greatest explanatory value.

The effect of minority composition on job salary differs from the effect of sex composition. While jobs with relatively more females are underpaid on the average, at all levels of worth, jobs with relatively high minority composition are paid above average at low levels of worth, but they are paid below average at higher levels of worth. This finding is less compelling than the finding of sex-based wage differentials, though it may still be sufficient to support a *prima facie* case of race-based discrimination.²⁰² Such a situation was described by the court in *Vuyanich*²⁰³ as a "mixed" case, and the court did not decide its legal implications.²⁰⁴ Some courts have required each component of an employment policy to be free of disparate impact.²⁰⁵ Others have focused on the net effect.²⁰⁶ Given that title VII protects individuals,²⁰⁷ it would seem unfair to balance out the favorable wages paid minority employees in one job class with low wages paid in another. In any case, it is arguable that where an employer compensates one racial group in a different pattern with respect to productivity factors than

198. Fisher, *supra* note 166, at 713.

199. See H. THEIL, INTRODUCTION TO ECONOMETRICS 134 (1978).

200. Fisher, *supra* note 166, at 713.

201. See *supra* note 177.

202. *Vuyanich*, 505 F. Supp. at 278.

203. *Id.* at 278 n.69.

204. See Waintroob, *The Developing Law of Equal Employment Opportunity at the White Collar and Professional Level*, 21 WM. & MARY L. REV. 45, 98-103 (1979).

205. See, e.g., *League of United Latin Am. Citizens v. City of Santa Ana*, 410 F. Supp. 873, 894-95 (C.D. Cal. 1976) (disparate impact on minorities of one employment test was sufficient to show discrimination because minorities who could not pass that test could not balance their low score by a better score on another test).

206. See, e.g., *Smith v. Troyan*, 520 F.2d 492 (6th Cir. 1975), *cert. denied*, 426 U.S. 934 (1976) (favorable minority impact of veterans' preference cancelled out negative impact of test scores).

207. 410 F. Supp. at 895.

another, disparate treatment discrimination is shown.²⁰⁸

4. *Study Conclusions*

This study presents a possible methodology for establishing a prima facie case of race- or sex-based wage discrimination under the disparate impact theory by showing that, despite a facially neutral market wage policy, jobs of comparable worth do not receive equal pay. The methodology suggested relies on information that should be readily available to most plaintiffs. The type of statistical showing presented here should be enough to shift the evidentiary burden to the employer to justify any policies that produce a wage discrepancy. One hopes that requiring employers to make their salary determinations explicit and job-related will make these determinations more fair.

208. Cf. Fisher, *supra* note 166, at 724 ("It would be evidence of discrimination if the effect of aptitude tests on wages was not the same for men as for women.").