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Class Pay Discrimination and Multiple Regression Proofs

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Class Pay Discrimination and Multiple Regression Proofs

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I. INTRODUCTION

In the last ten years there have been litigated a number of class
action claims of compensation discrimination that have involved multiple regression proofs.\footnote{1} Regressions have been submitted by plaintiffs attempting to make a prima facie case, by defendants attempting to rebut that case, or, most often, by both parties attempting to show the merit of their respective positions. Some of these cases involved only claims of pay (I use this term synonymously with “salary” and “wage rate”) discrimination; others included claims of hiring, assignment, or promotion discrimination as well.

An interesting issue is whether these multiple regression proofs of pay discrimination enhance the administration of justice. Do they help the courts detect the existence of pay discrimination? This issue gets at questions such as whether the courts require regression models to conform to the law, whether the courts understand regression methods and results, and how they choose between two or more competing regressions.

A reading of the published cases makes evident, however, that more is involved. The use of multiple regression proofs in class pay claims under Title VII of the Civil Rights Act of 1964\footnote{2} cannot be critiqued without resolving a larger issue, one intimately connected to the proper use of regressions. That issue, in its broadest form, is: what is class pay discrimination? The United States Supreme Court provided some clarification of that issue in its 1981 decision in \textit{County of Washington v. Gunther},\footnote{3} where it decided that sex-based pay claims under Title VII are not required to meet the Equal Pay Act\footnote{4} standard of showing “substantially” equal work for the males and females being compared.\footnote{5} This decision opened the door to broader claims of pay discrimination under Title VII than are possible under the Equal Pay Act, but provided little guidance about the kinds of claims now authorized. Court opinions in class pay cases, decided both before and after \textit{Gunther}, indicate that confusion exists about what constitutes pay discrimination.

The courts espouse two general answers to this question in a multiple regression context. The first is that class discrimination exists when there remains a difference between the average salary of male and female (or black and white) employees within an establishment after the gross difference in average salary has been adjusted for any sexual differences that may exist in general labor market qualifica-

\footnotetext{1}{These claims are discussed generally in B. Schlei \& P. Grossman, \textit{Employment Discrimination Law} 1342 (2d ed. 1983).}
\footnotetext{3}{452 U.S. 161 (1981).}
\footnotetext{5}{This decision is discussed in W. Fogel, \textit{The Equal Pay Act: Implications for Comparable Worth} 99 (1984).}
tions, such as years of schooling and experience. The second answer is similar, except for the crucial difference that the sexual difference in average salary must also be adjusted for male-female differences in job level before discrimination can be proven. The first view authorizes establishment-wide comparisons of male and female pay after controlling for the pay influences of general labor market qualifications. The second authorizes pay comparisons only after the pay influence of the employee's job level is taken into account; in other words, only within job levels.

These differing views are complicated further by the fact that some courts will only permit establishment-wide pay comparisons without job level controls to be evidence relevant to discrimination in job allocation (hiring, assignment, and promotion), rather than in pay, while others have ruled that these establishment-wide comparisons can make a prima facie case of pay discrimination.

Since court decisions about multiple regression evidence follow court views about what constitutes pay discrimination, analysis and conclusions about the latter issue are prerequisites for a review of regression usage. Consequently, this Article deals with both the nature of class pay discrimination and the proper use of multiple regression proofs for class pay claims. Since class pay claims usually start with average salary differences, the Article first describes the structural sources of class salary differences within establishments. Part III examines these sources within the context of pay discrimination law, and develops the law of class pay discrimination. Part IV considers the purported explanations (models) of employee pay differences that are the foundations of multiple regression analyses, while Part V looks at the fit between multiple regression proofs and the law of pay discrimination. In parts VI and VII the Article reviews the decisions of the courts in pay cases that have involved regressions. Finally part VIII draws conclusions about both pay discrimination law and multiple regression proofs.

Throughout, I shall refer principally to sex-based claims. Female claims have been predominant within this kind of action, but my reference to sex-based litigation is largely for stylistic convenience. Ex-
cept as indicated the analysis applies as readily to pay discrimination charges made by any other protected class.

II. ESTABLISHMENT OF PAY DIFFERENCES

Given the wide disparity in the earnings of men and women for the nation as a whole, it can be safely said that the average salary of women in most establishments (private firms and government agencies) is well below that of men. Class actions on pay begin with that fact. There are three structural sources of a sexual difference in average salary within establishments.

First, the most commonly cited cause of a sexual pay difference is that women are concentrated in low paid jobs relative to men. A very large part of establishment pay differences between the sexes can ordinarily be attributed to these differing job distributions. This means, of course, that equalizing the percentages of men and women employed on all jobs would essentially eliminate a sexual difference in average pay within an establishment.

Second, from an alternative point of view, sexual pay differences in an establishment are due to the fact that there are wage or salary differences among the establishment's various jobs, with top management people usually receiving pay that is many times larger than that of the lowest paid employees. Conceivably, discrimination law could be used to reduce the size of these job pay differentials, and thereby reduce sexual pay differences. In the extreme situation, if all jobs provided the same salary, there would be no pay differences between men and women (abstracting from differences in time worked).

Finally, sex differences in average salary can occur because of the pay variation that can occur around the wage or salary rate for each job in an establishment. The compensation system in most establishments includes not only the basic salary of a job, but also provisions for salary increases to individual job-holders based on job performance, length of employment, or other criteria. Most systems formalize these provisions by grouping all jobs into job levels (or pay grades), each of which will have a basic salary and a specified salary range to accommodate individual pay increases. The basic salary and range will apply to all jobs included in a job level. Disparate treatment can occur within this structure through differences in initial placement within the salary range and differences in the timing and size of dis-


cretionary pay increases. Ordinarily, the contribution of pay variation within job levels to a sex difference in average pay for an entire establishment is small because differences between the basic and maximum salary of a salary range are small—25 to 40 percent—compared to the differences that exist in salaries across job levels.11

In order to reduce sexual pay differences markedly, female distributions among an establishment's jobs must come to more nearly match those of men, or the pay differentials among an establishment's jobs must be reduced. Litigation to this point has concentrated on the former, through suits to ensure equal access for women and other protected classes to all jobs. Discrimination in job allocation—hiring, assignment, and promotion—is a concept that is relatively easy for litigants and the courts to grasp, because it implies that an employer is treating the objective job qualifications of women differently than those of men. Job pay differentials, on the other hand, tend to be seen as largely beyond an employer's control because they are set by labor market processes over which the individual employer has little influence. In short, our economic system is seen as giving employers much more control over hiring and promotion than over pay differentials. Furthermore, aside from the market, there is no objective basis for determining what are equitable pay differentials among jobs; equitable employment distributions seem easier to determine.

Recently, however, because women are making only slow gains in job access, they have begun to challenge job pay differentials as well as unequal job distributions.12 The next section considers possible statutory remedies for sexual pay differences due to all three of the structural causes: unequal job distributions, job pay differentials, and disparate treatment within job levels.

III. STATUTORY REMEDIES FOR SEXUAL PAY DIFFERENCES

The simple fact that there is a difference in the average salaries of the male and female employees in an establishment is ambiguous with respect to the possible discriminatory cause of the difference (and, of course, does not indicate whether the pay difference is a product of

11. T. PATTEN, JR., PAY: EMPLOYEE COMPENSATION AND INCENTIVE PLANS 281 (1977). Some employers, notably IBM, have larger salary ranges, making possible sizeable employee pay differences within job levels:

[E]ach position in IBM is assigned a two digit salary level. At each salary level there is a set range of possible salaries, which is adjusted annually for industry competitiveness. The maximum figure in the range is 60 percent higher than the minimum figure which allows the company to reward the more effective employee.


discriminatory or nondiscriminatory causes). In particular, the two major possible sources for the pay difference—unequal job distributions and unequal pay rates—are actually opposite sides of the same coin and, therefore, are completely interdependent. In the abstract, that is without additional facts, either can be viewed as the discriminatory source of the salary difference: women have low pay because they are unlawfully concentrated in low paying jobs, or because the pay for the jobs they are concentrated in is unlawfully set at low levels, or because of a combination of these causes. And, as discussed, disparate treatment within pay grades (job levels) can contribute to the salary differences, although, usually, only to a minor degree.

Ordinarily, in this context, the particular discrimination claim made by plaintiffs to remedy class salary differences could be expected to depend, in an uncomplicated way, upon the nature of the facts that go beyond the simple one of an average salary difference between the sexes. But uncertainty exists about what constitutes a pay discrimination claim, and this uncertainty carries over to the evidence, particularly multiple regression evidence, needed for attacking each of the three possible sources of a sexual pay difference in an establishment. In this section I will attempt to clarify, with only brief reference to regression evidence, the connections between a sex difference in average salary and the discrimination claims that can be made against each of the three possible sources of the sexual salary difference. This legal framework will later be used to assess the use of multiple regression evidence in pay claims.

A. Unequal Job Distributions

The fact that there is a difference between the average salary of male and female employees in an establishment is, of course, hardly evidence of anything. But to the extent that this fact is given any weight, it is credited by the courts as indicative of unequal job distributions between the sexes that may have been arrived at either by the employer's intentionally disparate treatment of women in job allocations—hiring, assignment, and promotion—or by the unintentional effect of a neutral but unnecessary employment practice (disparate impact). The fact of the sexual salary difference is not considered suggestive of pay discrimination. One typical trial court opinion noted that a difference in the average salaries of males and females for an entire establishment may be crudely suggestive of discrimination in job allocation, but does not provide evidence of "independent salary discrimination, (that is, a salary disparity which does not accrue merely via mechanical operation of discrimination in placement and
promotion). . . .”

Logically, there is little reason why an average pay difference between the sexes is more indicative of discrimination in job allocation than in pay setting. A priori, it would seem that rates of pay for an employer's jobs could be established on the basis of sex as easily as jobs could be assigned on the basis of sex. The court view that a sexual salary difference is more likely to be caused by the latter has three bases. First, the courts, like policy makers generally, view the major employment problem of protected groups to be that of underrepresentation in good jobs, and view Title VII as enacted chiefly to remedy this problem, rather than to interfere with wage setting. Second, the courts believe that employers have more control over job allocation than over wage rates, with the latter determined by a labor market that the employer must accede to in order to maintain a work force. Third, the courts may realize that an inference from a sexual difference in average pay to pay discrimination—rather than job allocation discrimination—implies a judgment that the salaries for at least some jobs that predominantly employ women are discriminatory relative to those for male dominated jobs, and that such a judgment necessarily implies comparisons of salaries and work requirements or contributions across different jobs and is, therefore, unauthorized by Title VII. This point will be developed further in the next section.

It is apparent that sexual salary differences associated with unequal job distributions can be reduced if employer discrimination in job allocation can be shown. Multiple regressions that adjust average salary differences for sexual differences in job qualifications have been used for this purpose, as will be described later. Unfortunately, some courts have considered precisely the same kind of regression evidence as also probative for a claim of pay discrimination. I will argue later that the latter is wrong under Title VII.

Aside from the need to properly order proofs and claims, the importance of this distinction between job allocation and pay discrimination goes to the remedy. If average salary evidence (refined by

14. "The objective of Congress in the enactment of Title VII is plain from the language of the statute. It was to achieve equality of employment opportunities and remove barriers that have operated in the past to favor an identifiable group of white employees over other employees." Griggs v. Duke Power Co., 401 U.S. 424, 430-30 (1971).
regression) is considered evidence of unequal job distributions arrived at by discrimination in job allocation, the remedy will be to provide equal access to all jobs for women (in addition to back pay for the job discrimination). If, on the other hand, courts view the average salary evidence as indicative of pay discrimination, the remedy will be an increase in the relative pay of female dominated jobs.

B. Job Pay Rate Differences

Until the Supreme Court's 1981 *Gunther* decision it was widely held that a sex-based pay discrimination claim could not be made about the pay differences between two or more jobs unless the plaintiffs also alleged that the work of the jobs being compared was equal. The 1963 Equal Pay Act had prohibited the payment of unequal wages or salaries to women who were doing work equal to that of men in the same establishment. The courts correctly interpreted Congressional intent for the meaning of "equal work" to encompass only jobs that are substantially similar in work content, i.e., have a substantial core of common tasks and require equal skill, effort, and responsibility, and similar working conditions for the noncommon tasks. Thus, the Equal Pay Act does not permit so-called comparable worth claims: that is, that the pay differences between men and women employed on unequal jobs are discriminatory when seen in the light of the skill and other requirements of the jobs.

Until 1981 sex-based pay claims (and race-based in some courts) under Title VII had to meet the Equal Pay Act standard of proving equal work, thus blocking the possibility of comparable worth claims under the former as well as the latter. This interpretation existed because of a provision (the "Bennett Amendment") inserted into Title VII just prior to its 1964 enactment stating that sexual pay differentiations "authorized" under the Equal Pay Act were also lawful under Title VII. The courts nearly unanimously interpreted that provision to mean that pay claims involving unequal jobs were not permitted under Title VII because they were not permitted under the Equal Pay

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22. The provision states in part: "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 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]." 42 U.S.C. § 2000e-2(h) (1982).
Act. In its Gunther decision, however, the Supreme Court decided (by a five to four margin) that the Equal Pay Act "authorized" only the Act's four affirmative employer defenses for wage differentials between the sexes, and did not authorize pay differentials based on sex among jobs that did not involve equal work. The Court kept its decision narrow, stating only that claims of intentional pay discrimination that did not involve assertions of equal work could be brought under Title VII, and explicitly stated that it was not authorizing comparable worth claims.

Since Gunther, the law of pay discrimination has been roughly sketched, if not firmly drawn. Gunther, and nearly all lower court decisions that have found sexually based pay differentials between employees performing unequal work, have focused on narrow proofs of the sexual basis for the pay difference. The proofs have provided direct evidence of intent to discriminate, by showing that women were paid less relative to men than they would have been paid had existing job evaluations, conducted or paid for by the employer, been followed. Certainly, job evaluations are not the only possible means of

23. Exceptions to that interpretation were Int'l Union of Elec. Workers v. Westinghouse Elec. Corp., 631 F.2d 1094 (3d Cir. 1980) (Bennett Amendment merely incorporates into Title VII the four exceptions noted in the Act but is not limited, as is the Act, to situations where equal or substantially equal work is being performed); Gunther v. County of Wash., 623 F.2d 1303 (9th Cir. 1979) (Title VII is broader in scope than the Equal Pay Act), aff'd, 452 U.S. 161 (1981).

24. The affirmative defenses for unequal pay are: 1) a seniority system; 2) a merit system; 3) a piece rate or incentive system; and 4) "any other factor other than sex." 29 U.S.C. § 206(d)(1) (1982).


27. In American Fed'n of State, County & Mun. Employees v. State of Wash., 578 F. Supp. 846 (W.D. Wash. 1983), there was the additional evidence that state officials, including two governors, had admitted that the pay for female dominated jobs was inequitable and had unsuccessfully attempted to obtain remedial legislatively appropriates. Id. at 890-92. Thus, there was evidence suggesting that wage-setting for female dominated jobs was discriminatory; court judgments about the relative worth of different jobs or the proper bases for job pay differences were not necessary to reach this conclusion. The trial court was convinced by this evidence that the State of Washington had intentionally discriminated against women in pay setting. The court of appeals decided otherwise, finding that the state's failure to pay women their job evaluation wage rates was legitimately motivated by the desire to pay (lower) market rates. State of Wash. v. American Fed'n State, County & Mun. Employees, 770 F.2d 1401, 1406 (9th Cir. 1985). The conflict between the two decisions demonstrates the difficulty of proving an employer motive to discriminate in the face of an asserted reliance upon the market. See also American Nurses Ass'n v. State of Ill., 606 F. Supp. 1313 (E.D. Ill. 1985). There, the court found that the employer was not bound to implement job evaluations that it had commissioned, distinguishing the case from Gunther on the
proving sex-based pay differentials. Conversations, memoranda, meetings, etc., showing that an employer was influenced in setting wage rates for jobs by the female proportion of employment in them, would also suffice. Nonetheless, the scope of possible proofs appears to be limited.

Specifically, claims that require courts to infer a sexual basis for pay differentials based upon court comparisons of job tasks and qualifications, or based on judgments about what are permissible bases for pay differences, were not authorized by Gunther and have not been allowed in subsequent lower court decisions. The only exception to this conclusion has been a trial court decision, Briggs v. City of Madison, where the court found prima facie sex-based pay discrimination based on its comparison of the work requirements for public health nurses (females) and sanitarians (males). The defendant ultimately prevailed with a “market” defense for the pay differential. This decision has not been followed by any other court.

Sex-based claims that require courts to make judgments about job pay differentials appear to be barred by the history of the Equal Pay Act—particularly the replacement of the requirement in the original legislation of equal pay for “comparable” work with that of equal pay for “equal” work—and by the Bennett Amendment’s obvious purpose of reconciling Title VII with the Equal Pay Act. It is not clear that the Gunther decision is contrary to that view. The Supreme Court rightly decided in Gunther that the Bennett Amendment did not bar all claims that pay differences between unequal jobs are based on sex. That decision was correct because Congress in passing the Equal Pay

 grounds that the County of Washington had “adopted” the job evaluation system that it failed to implement for female matrons, while the State of Illinois had made no such adoption. Id. at 1317. The Ninth Circuit endorsed this distinction in AFSCME. The distinction fails, I believe, because the facts do not indicate employer “adoption” of the subject job evaluation system in Gunther. Of the three employers, the State of Washington appears to have gone farthest in adopting a job evaluation system that became central to plaintiff’s charges of intentional pay discrimination. It failed to implement the job evaluation system only because the funds to do so were not appropriated. American Fed’n of State, County & Mun. Employees v. State of Wash., 578 F. Supp. 846, 860-63 (W.D. Wash. 1983). See generally Fogel, Intentional Sex-Based Pay Discrimination: Can It Be Proven?, 37 LABOR L.J. —— (1989) (forthcoming).


29. 536 F. Supp. 455 (W.D. Wis. 1982).

Act had not comprehensively considered the subject of pay differentials among unequal jobs, but had only decided not to authorize pay claims that were based on work comparisons of dissimilar jobs. It is also true that the Court did not issue a ruling that the Equal Pay Act and its legislative history, in conjunction with the Bennett Amendment, do not bar claims of pay discrimination under Title VII that are based solely on unequal job comparisons; it did not consider that question. In the absence of such a ruling, I believe that the legislative histories of the Equal Pay Act and the Bennett Amendment are formidable barriers to such claims under both the Equal Pay Act and Title VII.

Of course, the Equal Pay Act does not govern pay discrimination that has any basis other than sex. Nevertheless, the courts show no propensity to find that Title VII authorizes them to make comparisons of unequal jobs for wage-setting purposes under claims brought on another basis, race, for example. Conceivably, judgments to this effect are influenced by the restrictive scope of sex-based pay claims that Congress wrote into the Equal Pay Act and the Bennett Amendment. More likely, they are based on the view that the judiciary ought not to engage in wage-setting judgments that bypass the market system of wage determination unless clear legislative authority for doing so is provided. In Vuyanich v. Republic National Bank of Dallas, the court advanced a burden-of-proof barrier and combined this with a "market" hurdle to erect formidable obstacles to judicial wage-setting, even in non-sex cases:

Concluding that at least for race-based wage discrimination cases we are not restricted to claims of unequal pay for equal work does not mean that we adopt a policy of independently setting out entire scales of relative wages for dissimilar jobs according to the court's perception of each job's "worth," a hopelessly involved task inappropriate of judicial resolution. . . .

Courts need not engage in this sort of independent wage-setting even in the absence of Equal Pay Act restrictions because of the basic principle that it is the plaintiff's burden to prove discrimination in compensation. It would be difficult for a plaintiff to prove that jobs dissimilar in duties and pay are of the same "worth" to the employer. . . . Moreover, even were the first job

31. See W. FOGEL, supra note 5, at 102.
33. But see cases cited supra note 21.
35. See supra note 21. One court has stated: "We cannot conceive of any rationale for applying a different legal standard in Title VII actions brought for compensation discrimination based on sex than would be applicable in actions brought for compensation discrimination based on race." Patterson v. Western Dev. Labs, 13 Fair Empl. Prac. Cas. (BNA) 772, 776 (N.D. Cal. 1976).
"worth" the same as the second to a race-blind employer, the market may price those two jobs differently.37

It is clear that, while abstractly, a sex difference in average pay within an establishment can suggest discrimination in job pay rates, this is not so under the reality of pay discrimination law because that suggestion necessarily implies a judgment that the rates of pay for predominantly female jobs are sex-based. That judgment has been authorized by Gunther where there exists direct evidence of intent to discriminate, but it has not been authorized when the only evidence is a sex difference in average salary, even when the difference is adjusted for employee qualification differences through regression procedures. The ultimate conclusion is that sex differences in average salary are not likely to be reduced much by claims of pay discrimination.

C. Pay Discrimination Within Job Levels

As described earlier, disparate pay treatment can occur within the pay variation that extends beyond the basic wage rate or salary of a job. In keeping with the class emphasis of this Article, I will limit my discussion of this topic to the pay variation that occurs within the job levels (or salary grades) that larger firms establish to systematize their pay practices.38 Each job level encompasses at least several jobs that are different in their work tasks, but have roughly similar qualification requirements as assessed by the level of skill, effort, and responsibility required. Since the base salary and salary range are the same for all jobs included in a job level, the kind of pay discrimination that can occur within a job level cannot involve differential job wage rates or salaries—there are none. Rather, discrimination can take place through disparate initial placement of women within the salary range or disparate movement through it. Prima facie evidence of sex discrimination within job levels would be provided by a sexual difference in the average pay of employees included within the job level. Regression analyses can make this evidence more probative.

Whether courts will authorize claims of pay discrimination within job levels is uncertain, but seems likely based on the preponderance of rulings that have been made. Such claims are not authorized under the Equal Pay Act because the jobs included within a job level do not ordinarily involve equal work as that term is defined by the statute. Prior to Gunther, several courts ruled that these claims, when based

37. Id. at 284.
38. Where jobs are not grouped into levels or grades, class claims of disparate pay treatment can be based upon, among other things, comparisons of the size and timing of pay increase of men and women. The comparisons can be on an establishment-wide basis, across unequal jobs, since they are not of job wage or salary rates.
on sex, are also not authorized under Title VII because of the Bennett Amendment's incorporation of the Equal Pay Act into Title VII. At least two trial courts extended that judgment to race claims of pay discrimination within job levels, even though the scope of the Equal Pay Act does not include race. In contrast, both before and after Gunther, a number of court opinions have authorized, or commented favorably on, race-based pay claims within job levels. It is likely that similar claims based on sex will be permitted because of the Gunther ruling. The Bennett Amendment notwithstanding, Title VII permits these claims, based on sex as well as race, because they make pay comparisons only within a standard salary range. They do not require comparisons of different wage rates or salaries for different jobs, and are thus distinguished from comparable worth claims.

The touchstone of this kind of pay claim is that class pay comparisons are made only for employees who are under the same salary range, even though they hold unequal jobs. Pay comparisons among employees who are under different salary ranges are not authorized (unless accompanied by a claim of equal work) even where employers, atypically, group these employees into the same job level or grade. While a number of courts have permitted claims of discrimination across unequal jobs within job levels, to my knowledge none have articulated this test of permissibility—that the pay comparisons be made within a standard salary range. Consequently, it is uncertain whether these courts tacitly apply this test or merely require that the comparisons be made within job levels regardless of whether the levels encompass different salary ranges. The latter standard of permissibility, conceivably, could be premised on a view that it is all right for courts to make judgments about the proper pay for similar (but, under the Equal Pay Act, unequal) jobs, but not for dissimilar ones. Neither is authorized by Title VII.

In summary, it is evident from this discussion that there are different kinds of claims that can be made to remedy class differences in average salary that are the product of establishment discrimination.

42. This view is espoused in Briggs v. City of Madison, 536 F. Supp. 435, 446 (W.D. Wis. 1982).
There are claims of discrimination in job allocation and in compensation. Generally, average salary evidence will be probative of the former because pay claims that encompass unequal jobs are authorized only on a limited basis: when there is direct evidence that pay differentials have been established on the basis of sex, as in Gunther, where female employees were not paid in accord with extant employer evaluations of their jobs, while men were. Another possible pay claim is that women are treated disparately within the standard salary range of job levels, but such treatment usually can be only a minor source of sexual pay differences.

IV. PAY REGRESSIONS

Statistical analyses, particularly in the form of multiple regression, are frequently used to prove or disprove class claims of compensation discrimination. Multiple regression is a mathematical and statistical tool, widely used in scientific research, for analyzing complex relationships between a set of factors (hence the term “multiple”) and a phenomenon that they are thought to influence. Specifically, it can isolate the influence of a factor (variable) on individual employee wages or salaries; it can separate the influence of one factor, sex for example, from the influences of other factors that are alleged to influence pay. This capacity would appear to be ideal for analyzing wage discrimination because it permits separation of the class membership influence on salaries, if any, from other influences. However, regressions only compute the quantitative relationships between explanatory variables and the dependent variable that is to be explained. The cause of variation in the dependent variable cannot be determined by the regression itself, but must be established by reasoning and experimentation in combination with regression analysis.

The usual procedure in pay regressions is to develop (“model”) an equation for estimating employee pay that includes the variables thought to influence pay. The equation is then “fitted” to the actual observations (data) that exist for all employees or a sample of employees on each variable. The regression procedure will assign each explanatory variable a “coefficient” that indicates the quantitative association between the variable and employee pay. Sex, of course, is a dichotomous variable; therefore, the sex coefficient will indicate the average loss or gain in pay, minus $1000 annually for example, associated with being a female rather than male employee (assuming that the sex scale is 1 = female and 0 = male). The sex coefficient will be net of other influences; that is, will indicate the pay effect of being female after other influences on pay, that may or may not be corre-

43. For more complete discussions of this technique, see Fisher, Multiple Regression in Legal Proceedings, 80 COLUM. L. REV. 702 (1980); Rubinfeld & Steiner, Quantitative Methods in Antitrust Litigation, 46 LAW & CONTEMP. PROBS. 69 (1983).
lated with sex, have been taken into account. The sex coefficient will be tested for statistical significance to determine the likelihood that it has resulted from sampling variation. If it is statistically significant, the sex coefficient is submitted as evidence of pay discrimination against women.

Unfortunately, it is easy to error in both the technical use of regression analysis and in its application to discrimination law. This section discusses regression models of pay largely from a social science perspective. The next section then considers the merits of this technique for adjusting pay discrimination claims under Title VII.

A. The Regression Model

Multiple regression proofs begin with a purported or hypothesized explanation of individual pay variation within a business or government establishment. This model specification is extremely important because the influence of sex or race cannot be confidently assessed unless all other important influences on pay have been accounted for. Some courts have erred by concluding that it is not important to include variables in the model or pay estimation equation that are difficult to quantify. If any important influence on salary, quantifiable or otherwise, is omitted from the regression, a confident assessment of the influence of sex on pay cannot be made, unless it can be shown that the omitted variable is uncorrelated with sex. If an important pay influence is omitted and evidence that it is uncorrelated with sex is not available, a regression showing that sex affects pay may be false because the omitted variable rather than sex is the true pay influence.

Putting this another way, when the purported explanation of salaries is incomplete, the influence of sex may be more apparent than real because the more fundamental salary determinant omitted, job performance ratings for example, may be correlated with sex as well as salary. Of course, the error may also go in the other direction. If the pay model includes a variable that is correlated with pay but is influenced by sex, such as job level (where the level into which a job is placed depends on its female proportion of employment) the true effect of sex on pay will be understated.

Questions of statutorily cognizable claims aside, when courts deal with pay discrimination allegations based on sex differences in aver-

44. If this likelihood is one out of 20 or less (5 percent), courts generally accept the coefficient as statistically significant.
45. Rubinfeld & Steiner, supra note 43, at 90.
47. See generally Bloom & Killingsworth, Pay Discrimination Research and Litigation: the Use of Regression, 21 INDUST. RELATIONS 318 (1982).
age salary they must ask two questions. First, what are the non-
discriminatory determinants of salary in the subject establish-
ment? Second, after the influence of these nondiscriminatory factors has
been accounted for, does sex influence salary? It is obvious that the
extent to which nondiscriminatory variables explain salary variation
can affect the possibility that sex is important. In the extreme case, if
salary variation is fully accounted for by nondiscriminatory variables,
sex cannot possibly have anything to do with pay.

Because model specification is so important to regression analyses,
court opinions typically devote much attention to it, usually discussing
the models of both parties. Two general approaches can be identified
from the reported cases: human capital and establishment oriented.

B. Human Capital

This approach to individual pay determination is based on the
views that certain “investments,” such as schooling and job training,
increase one’s “human capital” and, therefore, one’s productivity; and
that employers value this productivity and pay more for greater
amounts of it.48 Human capital theory hypothesizes generally that in-
dividual pay is determined by one’s completed years of schooling and
years of work experience.49 Occasionally other variables are added,
such as special training received and investments made in health care.
The theory has a productivity base because schooling and job experi-
ence are perceived as increasing an employee’s productivity. Note,
however, that these purported pay determinants are, more fundamen-
tally, simply work or general labor market qualifications, and are only
assumed correlates of productivity, rather than actual measures of
productivity in particular establishments.

It is important to understand that this theoretic construct was de-
veloped by academicians to explain variation in the earnings of indi-
viduals in the entire society. Because of its generality, it can help to
explain pay variation in a variety of circumstances. The human capi-
tal model by itself, however, does not ordinarily include pay
determinents that are specific to employing establishments. There-
fore, the usefulness of this approach for explaining pay variation
within a given establishment is suspect. It is suspect, also, because
human capital models do not explain pay variation very well even for
the society as a whole. They typically account for no more than one-
third of earnings differences among male full time workers in the
United States.50 Such models are too general to explain very well em-

48. A succinct discussion of the human capital approach is in Vuyanich v. Republic
49. See generally G. BECKER, HUMAN CAPITAL (1964).
50. Mincer, Progress in Human Capital Analyses of the Distribution of Earnings, in
ployee differences in pay within establishments.

Nonetheless, some courts have given substantial deference to human capital regressions in pay discrimination cases.51 The principal reason for this is a concern that a more establishment oriented model, which ordinarily would be viewed as determining employee pay, may be “tainted” by discrimination because the establishment oriented variables, instead of accurately assessing productivity and other bases of pay, are manipulated against the interests of women or other protected groups.52 On the other hand, a number of courts have accepted more establishment oriented models of pay determination,53 to which I now turn.

C. Establishment Oriented

This view of pay determination emphasizes the job to be performed rather than the general qualifications of individual employees.54 The pay of employees is dependent upon the jobs they hold; secondary determinants are their job tenure and quality of job performance.

In this view, human capital such as schooling and work experience are not rewarded directly, but are compensated only to the extent that the more demanding jobs in an establishment tend to be the better paid jobs and are usually held by employees with relatively large amounts of schooling and experience. Schooling and pay levels of employees in an establishment will ordinarily be correlated, but the relationship may not be a close one.55

Establishment oriented pay models derive from the mechanics of establishment pay setting. The salary or wage attached to any particular job is given by the market salary required to hire people into the job; or by the employer's assessment of the relative worth of the job, in terms of its importance to the establishment and its requirements (for example, skill, effort, and responsibility); or, most likely, by some combination of both methods. Most medium and large sized firms will have a system of job evaluation or classification that assesses the comparative worth of its jobs and sets pay accordingly. Nonetheless, market prices may alter the salaries of some jobs that have been established through job evaluation, or may influence the initial evalu-

52. See, e.g., cases cited supra note 51.
54. The establishment oriented view of pay determination emphasizes the demand for labor, while the human capital approach emphasizes its supply.
atations themselves.\textsuperscript{56} Similarly, firms that claim to have pay systems geared strictly to the market are, nonetheless, likely to be slow to alter traditional establishment pay relationships because of changes in market wages. Thus, employee pay rates are likely to be the product of both market forces and equity considerations. This is also true where pay rates are established through a collective bargaining process.

Precisely how the salaries for an establishment’s jobs are set is not important to the establishment model of pay determination that is used for assessing discrimination. The important facts are that pay rates are attached to all jobs, and that these job pay rates determine what the individual job-holder is paid, except for variation due to the employee’s length of service and perceived job performance. In larger firms, jobs with similar pay rates or similar job evaluation scores will be grouped into a job level or pay grade, for which a standard base pay rate and range is established. Then in the establishment oriented view, pay regressions that purport to explain employee pay must include a job level variable.

The social science (but not necessarily legal) problem with this formulation of pay is that it may not explain individual pay except tautologically. Saying that employees pay is determined by the job levels at which they are employed is correct, but it can be argued that the statement says very little because it does not disclose how the level, and thus pay, of a job is determined.\textsuperscript{57} Employers can contend that the level and associated salary of a job are based on the productivity contributions to the establishment that are made through the job, but unless the particular productivity elements and their contributions are shown, this rationale must be accepted on faith.

This objection may be met where jobs have been formally evaluated. A pay regression with job evaluation points as a variable is an attempt to explain pay in terms of evaluation factors that have both a productivity and equity base; typically, skill, effort, responsibility, and working conditions. Such a regression was well received by the court in \textit{Vuyanich vs. Republic National Bank of Dallas}.\textsuperscript{58} However, if the job evaluations have been influenced by market considerations (as I suggested above), this means that, to some degree, the salaries that the market requires, in order to hire people for the establishment’s various jobs, are actually determining the evaluation points of the jobs employees hold.\textsuperscript{59} The regression will then be defective in the sense that

\textsuperscript{56} See W. Fogel, \textit{supra} note 5, at 111.
\textsuperscript{57} See, e.g., Stastny v. Southern Bell Tel. & Tel. Co., 458 F. Supp. 314, 324 n.3(b) (W.D.N.C. 1978), rev’d on other grounds, 628 F. 2d 267 (4th Cir. 1980).
\textsuperscript{58} 505 F. Supp. 224, 284 (N.D. Tex. 1980).
\textsuperscript{59} Causation runs from salary paid to job evaluation points, rather than the reverse.
the explanatory contributions of the job evaluation variable will be exaggerated.

A somewhat analogous argument can be made against job level variables generally. If the level (and pay) at which jobs are placed depends upon whether they are perceived as a “male” or “female” job, then sex is the more fundamental determinant of salary, and a job level variable will obscure that fact in a regression equation—it will lower the negative pay coefficient of sex due to its correlation with both pay and sex.

In addition to a job level variable, establishment oriented pay regressions will often include a job tenure variable because employers generally increase pay with tenure, and a job productivity or performance variable on the grounds that the employer both wants to and does reward superior job performance. Of course, many regression models contain a mixture of establishment and human capital variables. In this Article my distinction between the two general models turns on the treatment of the job level variable. A regression that includes it is establishment oriented; one that does not is a human capital regression.60

Establishment oriented regressions usually account for a large part of the variation in employee pay—over 90 percent in one instance61—and do not show a statistically significant sex effect on pay. In contrast human capital regressions usually explain a much smaller proportion of establishment pay variation, and do produce a statistically significant sex effect. The difference is that the low pay of women cannot be accounted for by sexual differences in general qualifications (human capital), but can be accounted for by a job level variable.

V. PAY REGRESSIONS AS PROOF

It is evident that neither the human capital nor establishment oriented regressions provide a fully satisfactory explanation of pay differences within establishments. The former omits specific establishment influences, while the latter often provides little more than a tautological understanding. A court is not a social science laboratory, however. When these two approaches to pay determination are considered within the law of Title VII, it becomes clear that the establishment approach is useful for detecting the existence of pay discrimination and the human capital approach is not. This conclusion derives from my views that claims founded on comparisons among unequal jobs, whether analyzed by means of multiple regression or not, are not al-

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60. A model that does not fall within these two categories, because it includes many establishment variables but not a job level variable, was submitted by the defendant in Vuyanich v. Republic Nat’l Bank of Dallas, 505 F. Supp. 224, 300 (N.D. Tex. 1980).

allowable under Title VII, while claims of discriminatory treatment within job levels are permitted. Establishment oriented regressions provide evidence about the latter, allowable claim, while human capital regressions do not.

A. Human Capital Proofs

Multiple regressions based on a human capital model of pay determination—one that excludes a job level variable—will invariably find discrimination against women, by means of a statistically significant sex coefficient that shows women receiving lower pay than men after controlling for the effects of the other variables in the regression—usually years of schooling and experience, and variants thereof. There are two reasons why this result should not be accepted as evidence of pay discrimination.

First, the result is obtained through comparison of salaries paid to employees for performing unequal jobs, and this is a form of comparable worth comparison that is not authorized under Title VII. The salaries received by individual employees who hold unequal jobs throughout the establishment are the focus (dependent variable) of the regression analysis. Since the human capital regression does not include job level among its explanatory variables, different salaries for unequal jobs remain the focus throughout the analysis, regardless of how many measures of employee qualifications are entered as explanatory variables for existing pay differences.

Second, a regression that does not include a job level variable is implicitly judging the comparative worth of the establishment's unequal jobs. The human capital regression, in effect, states that the "proper" difference between the average pay (earnings) of male and female employees (and the differences among all employees) is that which can be accounted for by sexual differences in schooling and experience. Invariably, the actual pay difference between the sexes is greater than this prescribed difference because women tend to hold low paid jobs relative to their schooling and experience. Thus, with a human capital regression there emerges an "improper" margin of male over female average earnings. The regression, because it does not include a job level variable, attributes this margin to sex. Since the "improper" margin comes about through low pay for many of the jobs held by women, attributing it to sex—an unlawful basis—rather than to the low wage rates (by means of a job level variable) implicitly finds that the low wage rates, themselves, are unlawful: they are too low for the schooling and experience of the female employees. That comparative worth judgment is not authorized under Title VII.

It can be seen that even if pay comparisons among employees hold-

62. See infra Table 1.
ing unequal jobs were permitted by Title VII, the human capital regression model would still be inconsistent with it. This is because the model is normative rather than descriptive of the employer's pay scheme. The model says that employers should base employee pay on years of schooling and experience, and then, when it turns out that employers do not do this very closely because they base pay on other considerations as well, the model proceeds to produce a negative association between being female and pay. If, somehow, Title VII were to permit comparative worth judgments, they would have to be based upon whether the establishment is sexually neutral in following its own pay determinants, not upon whether external criteria, even if socially praiseworthy, are adhered to.

B. Ambiguity of Human Capital Regressions

An additional problem of human capital regressions is that their interpretation is necessarily ambiguous because the sex coefficient produced by these regressions incorporates all three of the sources of sexual salary differences described at the outset of this Article: job distribution differences, job pay differentials, and disparate treatment within job levels. Given this fact, it is not surprising that courts that have received evidence from human capital regressions sometimes appear to be uncertain as to the particular discrimination claim that the regressions are probative of.

One possible interpretation of the sex coefficient in human capital regressions is that it is evidence of discriminatory pay differentials among an establishment's jobs. But, as indicated throughout this Article, court acceptance of that interpretation, in the absence of direct evidence of intent to discriminate, is unlikely because that interpretation credits a conclusion (statistical) about the pay relationships among unequal jobs (that they are based on sex rather than the human capital of jobholders) and, therefore, appears to go beyond the prohibitions of Title VII.

A more likely interpretation of the sex coefficient is that it is indicative of discrimination against women in job allocation. However, that makes the plaintiff's claim one of discrimination in job allocation rather than pay. Furthermore, even as evidence of discrimination in job allocation, the sex coefficient in a human capital regression has


limitations: a) the coefficient includes the pay effects of discriminatory treatment within job levels, as well as the pay effects of discrimination in job allocation; b) as a standard for job allocation, the human capital model carries the same defects that it has as a model for pay determination—Title VII does not require employers to allocate jobs among employees on the basis of their years of schooling and experience; and c) direct evidence, regression or otherwise, which gets at the placement and promotion processes, would seem to be a better proof of discrimination in job allocation than a human capital salary regression. For all of these reasons, human capital regressions appear to offer only secondary, suggestive evidence of discrimination in job allocation. They are, nonetheless, frequently used to make out a prima facie case of such discrimination.

It can be argued that I am being unnecessarily complex; that human capital pay regressions carry no discriminatory implications about pay differentials among unequal jobs, but simply show, after certain general employee qualifications are taken into account, that women are not paid as much as they are worth relative to men, and this constitutes pay discrimination. But this assertion amounts to an unusual form of a comparable worth claim, where the focus is shifted from the relative worth of jobs to the relative worth of employees. Title VII does not, however, authorize judgments about the relative worth of employees in pay terms any more than it authorizes judgments about the relative worth of jobs.

In sum, human capital regressions submitted in support of establishment-wide pay claims are improper evidence because they involve comparisons of pay for employees who hold different jobs, and that is apparently unauthorized by Title VII. The fact that the regression comparisons take into account employee differences in general labor market qualifications does not negate the fact that the existing sex difference in pay results from salary differences among the establishment's jobs. The counter assertion that the sexual pay difference results from the concentration of females in low paid jobs, beyond the extent explicable by sexual differences in general qualifications, is equally correct, but that is a claim of discrimination in job allocation, not pay.

Why some courts have permitted pay comparisons among employees who hold different jobs, under the guise of multiple regression analysis, is not apparent. One reason may be that multiple regression

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is a fairly complex method of analysis and some courts have failed to see that, when it is employed with human capital models, its implications for pay discrimination arise from the pay differentials that exist among an establishment's jobs. Another reason may be that courts view the human capital regressions as offering nothing more than evidence of placement and promotion discrimination. Some courts have made this view clear, but others have found defendants guilty of pay discrimination based on human capital regressions. These different interpretations have produced confusion about what constitutes pay discrimination.

C. Establishment Oriented Proofs

The basic fact about establishment oriented pay regressions is that they include a job level variable, and therefore confine their analyses of class pay discrimination to that which can take place within the job levels of an establishment. Thus, they are consistent with Title VII in that they do not incorporate judgments about the proper bases for pay differentials among different jobs in an establishment, but rather accept the existing job differentials as beyond inquiry (absent direct evidence that they are based on sex). In contrast, human capital regressions, because they do not include a job level variable, make improper judgments that employee (and job) pay differences should be based upon schooling and work experience.

Establishment oriented regressions provide only limited understanding of employee pay differences within an entire establishment for the reasons previously discussed: the job level variable may be only loosely connected to productivity; job level may be salary determined as well as salary determining; and sex may influence job level. Thus, the high degree of "explanation" of establishment pay variation achieved by some establishment regressions is partly tautological. However, that fact has no relevance for any cognizable pay claim because Title VII does not authorize claims that require court judgment about the proper bases for employee or job pay differences (comparable worth judgments). For that reason, I concluded in the previous section that the human capital regression analyses that have been used in some instances to establish a prima facie case of pay discrimination are inconsistent with Title VII law. If this is correct, the failure of establishment oriented regressions to satisfactorily rebut human

capital explanations of pay differences among employees in unequal jobs is unimportant; if such claims are not allowed, there is no need for their rebuttal.

Claims of pay discrimination within job levels are allowable, however, and establishment oriented regressions, because they include a job level variable, are useful for detecting this kind of discrimination. When job level is controlled and the regression includes the non-discriminatory variables that determine within-level pay, the coefficient of the sex variable will be a measure of pay discrimination against women, effectuated by their disparate treatment within job levels, presumably in terms of initial placement and subsequent progression through the salary range.

A variety of establishment oriented regression models can be used to detect within-level pay discrimination, as long as a variable that controls for job level is included. The variables may be taken from the establishment's own pay system, for example, job tenure and performance rating. Or they may be more remote, and include such factors as years of schooling, if this variable is thought to influence salary success through employee job performance.

A performance evaluation variable in a regression poses a dilemma for the courts. On the one hand, establishments want to encourage high performance and, therefore, may make movement through a salary range partially or totally dependent upon performance evaluations. In such cases, performance evaluations are likely to explain a great deal of the pay differences that exist within job levels. On the other hand, if an establishment discriminates against women, that discrimination is likely to affect evaluations of their performance, and inclusion of this variable in a pay regression would be improper. Some courts seem to decide this issue based on a gestalt view of the establishment. If discrimination is found in hiring, assignment, promotion, and other areas, it may be correct to exclude performance ratings from pay regressions on the ground that they, also, have been influenced by discrimination. Other courts have apparently excluded performance evaluations, not because inferential evidence of their bias exists, but simply because they are subjective. Most performance appraisals are necessarily subjective, in the sense that they represent judgment by a supervisor of a subordinate's unmeasurable job performance. That does not necessarily make them biased against a protected class. Judgments to that effect, without substantiating evidence, are unjustified.

70. See e.g., James v. Stockham Valve & Fittings Co., 559 F.2d 310, 332 (5th Cir. 1977).
and can amount to convicting a defendant of pay (or promotion) discrimination through an assumption of discrimination in performance evaluations.\textsuperscript{74}

D. Value of Regressions

I have concluded that neither human capital nor establishment oriented regressions provide fully satisfactory explanations of average pay differences between the sexes within entire establishments. A model that combines general labor market qualifications with reliable indicators of employee contributions to the establishment is needed for this purpose,\textsuperscript{75} but the latter is frequently not available.

The absence of a satisfactory pay model does no damage to enforcement of statutory prohibitions on pay discrimination. First, the meaning of establishment-wide pay discrimination is not clear; often it appears to be another term for discrimination in the allocation of jobs, for which rather clear proofs exist. Second, to the extent that establishment-wide pay discrimination refers to the comparative worth and pay rates of dissimilar jobs, it refers to inquiry that is not authorized by Title VII or any other statute.

There are still functions for regression analyses. They can be useful to detect discrimination within job levels, either by including a job level variable in an establishment-wide regression or by running separate regressions for each job level. Human capital regressions can also be used to help make a statistical prima facie case of job allocation discrimination and to compute the pay losses of women because of that discrimination.

Acceptance of these views by the courts would simplify their tasks in pay cases. Human capital regressions would be viewed as providing evidence only for job assignment and promotion charges. Pay claims would require evidence from establishment oriented regressions that control for job level (or nonregression evidence). Among other things, this distinction would clarify the nature of class pay discrimination.

VI. COURT RESOLUTION OF THE JOB LEVEL ISSUE

The most important issue that courts face when regressions are submitted in salary discrimination litigation is whether a job level va-

\textsuperscript{74} Cf. Becker, supra note 66, at 1130 (alleging that if performance differences exist between the sexes, absent discrimination, a rule excluding subjective "proxies" may be equivalent to a rule that plaintiff prevails); Cox, supra note 63, at 136, 139 n.242, 144; Freed & Polsby, Comparable Worth in the Equal Pay Act, 51 U. Chi. L. Rev. 1078, 1108 (1984) (inadmissibility of subjective performance evaluations puts defendant into a position of not being able to use any performance factors to rebut plaintiff's allegations of discrimination established by salary differentials).

\textsuperscript{75} See, for example, the defense's regression in Vuyanich v. Republic Nat'l Bank of Dallas, 505 F. Supp. 224, 300 (N.D. Tex. 1980).
variable should or should not be included in the regression equation. The issue is crucial, also, for a correct application of pay discrimination law because, as I have argued throughout this Article, a proper pay discrimination charge or defense requires inclusion of a job level variable in regression evidence. A regression that does not include this variable does not provide evidence about pay discrimination, although it may be deemed probative of discrimination in job allocation.

A. Job Level and Case Outcomes

Typically in class pay claims, the plaintiff presents a human capital pay regression that does not include a job level variable, and the defendant counters with an establishment oriented regression that includes some form of that variable. The court must then decide which regression is more probative. Occasionally, only one side submits a regression, but the court must still face the job level issue.76

Table 1 presents information about seventeen pay discrimination cases in which the trial court (circuit court in three instances) opinion discusses both the issues and results that accompanied the submission of salary regression evidence. (Vuyanich v. Republic National Bank of Dallas is listed twice—it made separate pay discrimination decisions based on sex and race.) Nearly all of the cases listed in Table 1 encompassed a broad array of discrimination charges, including that of discrimination in job allocation. While compensation discrimination was included among the charges filed by the plaintiffs in all of these cases, the courts did not always decide the compensation issue. In two instances, the courts made no finding on the compensation question and appear to have considered the salary regression solely as evidence of discrimination in job allocation.77 In other instances, findings were issued on the compensation charge, but it is not clear that, in the process, a distinction was made between discrimination in pay and in job allocation.78 A merging of these two kinds of discrimination is more

### Table 1. Court Decisions in Pay Regression Cases

<table>
<thead>
<tr>
<th>A. Decisions Finding Pay Discrimination</th>
<th>Job level variable credited or required</th>
<th>Statistically significant discrimination coefficient in credited regression?</th>
<th>Discrimination in job allocation found?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Craik v. Minnesota State University Board⁷⁹</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>2. Greenspan v. Automobile Club of Michigan⁸⁰</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>3. James v. Stockham Valve &amp; Fitting Co.¹¹</td>
<td>no</td>
<td>no reg. credited</td>
<td>yes</td>
</tr>
<tr>
<td>4. Mecklenburg v. Montana State Board of Regents¹²</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>5. Melani v. Board of Education of the City of New York¹³</td>
<td>no</td>
<td>yes</td>
<td>informally</td>
</tr>
<tr>
<td>6. Segar v. Civiletti¹⁴</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>7. Trout v. Hidalgo¹⁵</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>8. Vuyanich v. Republic National Bank of Dallas (race)¹⁶</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
</tbody>
</table>

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⁷⁹ 731 F.2d 465 (8th Cir. 1984).
⁸¹ 559 F.2d 310 (5th Cir. 1977). The court did not make a finding of pay discrimination independent of the finding of discrimination in job allocation.
### TABLE I (continued)

<table>
<thead>
<tr>
<th>Job level variable credited or required</th>
<th>Statistically significant discrimination coefficient credited in regression?</th>
<th>Discrimination in job allocation found?</th>
</tr>
</thead>
</table>

#### B. Decisions Not Finding Pay Discrimination

| 9. | *Agarwal v. McKee & Co.* | yes | no reg. credited | no |
| 10. | *Coser v. Moore (SUNY)* | yes | no | no |
| 11. | *EEOC v. IBM Corp.* | yes | no | no |
| 13. | *Presseisen v. Swarthmore College* | yes | no | no |
| 14. | *Sobel v. Yeshiva University* | yes | no | no |
| 15. | *Valentino v. United States Postal Service* | yes | no | no |
| 17. | *Wilkins v. University of Houston* | yes | yes | no |

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95. 654 F.2d 388 (5th Cir. 1981), *reh'y denied*, 662 F.2d 1156 (5th Cir.), *vacated on other grounds*, 459 U.S. 809 (1982).
evident in the decisions that found pay discrimination than in those that did not. In the former, human capital regressions that produced significant sex coefficients were the basis for the findings of salary discrimination, but it is not clear that the salary discrimination was seen as something more than a discriminatory allocation of jobs.

It is clear from Table 1 that a judgment for inclusion of a job level variable in the regression analysis is almost perfectly correlated with a finding for the defendant on the pay discrimination issue; a job level variable was credited in all nine of the findings that pay discrimination was not shown (Part B, column 1). Conversely, in only one of the decisions that found pay discrimination was a job level variable credited (Part A, column 1). The direct effect of the job level variable on regression statistics is readily observed in the Table. Where the job level variable was included, the credited regression did not produce a statistically significant sex coefficient, with one exception (Part B, column 2). Where the credited regression excluded the job level variable, a discriminatory sex coefficient was produced (Part A, column 2). Table 1 also shows that a court finding for or against pay discrimination is nearly always accompanied by the same finding with respect to discrimination in job allocation (column 3).

Clearly, the decision on whether job level should be included in the pay regression analysis controls the outcome of the analysis and, consequently, the outcome of the pay discrimination charge. The exclusion of this variable disqualifies the major explanation for sexual salary differences within establishments—differences in level of job held. With job level excluded, sex is certain to be important in explaining pay wherever women are concentrated in low salary jobs. In other words, women are underrepresented in high salary jobs and the consequent establishment average salary difference between men and women cannot be explained by human capital variables—male and female employees don’t differ that much in regard to quantities of schooling and experience. Therefore, a regression that includes human capital variables, but not job level, will produce a significant sex coefficient because of the negative correlation that exists between sex and the omitted variable, job level. When a job level variable is included, it will explain most of the male-female salary difference so that little or no independent sex effect will be found.

Valentino v. United States Postal Service,96 illustrates the effect of a job level variable on regression results. The plaintiff’s regression included only years of government service, years of schooling, and sex. The sex coefficient was significantly negative for females, but the regression accounted for only 28 percent of the existing variation in employee salaries. The defense’s regression included job level, among other variables, and accounted for 88 percent of salary variation; the sex coefficient was not significant.

B. The Job Level Rationale

Courts that have rejected inclusion of a job level variable in a salary regression have done so on two grounds. The first is that the establishment's initial assignment and subsequent promotion of women are discriminatory. Thus, in *Greenspan v. Automobile Club of Michigan,*\(^{97}\) the court gave little weight to defendant regressions conducted within salary grades (this procedure is equivalent to that of using a job level variable in an establishment-wide regression) after the plaintiffs had shown that, if job assignment had been based on human capital characteristics, 67 percent of the female employees would have been in high salary grades, compared to the actual figure of 12 percent.\(^{98}\)

The second ground used to exclude a job level variable is that job placement and promotion are subject to the control of the employer, and therefore *may* be "tainted" with discrimination. In *Trout v. Hidalgo,*\(^{99}\) the court rejected a defendant's regression that included grade-level-when-hired as an explanatory variable, and noted: "It is commonly accepted that it is inappropriate to include as an independent variable a factor within defendant's control unless it has been established that they did not discriminate in exercising that control."\(^{100}\)

These rationales for exclusion of job level are not cogent, because whether that variable should be included in a regression depends entirely upon the discrimination claim that is made. If the claim is discrimination in job allocation, the assignment of men and women to job levels is at issue and a job level variable cannot, therefore, be included in a regression designed to determine whether male-female salary differences are suggestive of discriminatory job placement and promotion. On the other hand, if the issue is pay discrimination, a job level variable must be included in the regression in order to control for the pay influence of that variable and, thus, focus the regression on a cognizable claim: disparate pay treatment within job levels. It makes no difference for pay claims that assignment of employees to job levels is or may be discriminatory; the focus of the pay claim must be on disparate class treatment within job levels, and a regression that includes the job level variable achieves that focus even if women are discriminated against in job assignment.

Nearly all of the reported cases fail to recognize that it is the nature of the discrimination claim that must determine whether a

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98. Id. at 1063.
100. Id. at 886 n.47.
human capital or establishment oriented regression is more probative. Even most rulings that have credited the inclusion of a job level variable in a pay regression have been made on the irrelevant ground that employee pay differences within an establishment are partly due to job level differences. Establishment-wide employee pay differences are not a proper focus of a pay claim, except as described earlier (where there is direct evidence that the underlying job pay differences were established on the basis of sex). This exception aside, a regression with a job level variable must be used for a pay claim in order to confine the claim to discrimination within job levels, not to contribute to the explanation of establishment-wide pay differences. In this sense, it is unimportant whether the model of establishment-wide pay determination is sound; there is no reason to “explain” establishment-wide pay.

C. University Cases

Seven of the cases listed in Table 1 were brought against universities. Evidence relative to the pay claim in each focused on salary regressions with and without a job level variable, referred to as “rank” in universities. Since it has been generally found that different ranks, e.g., assistant and associate professor, do not encompass equal work, the pay issue in each of the university cases was the same as that in proprietary cases: what kind of regression, human capital or establishment oriented, is appropriate for analyzing pay discrimination? The difference between the university and proprietary job-pay structures—that rank differences in the former are more directly associated with putative productivity than are job level differences in the latter—provides, perhaps, greater justification for inclusion of the job level variable in university pay regressions, but the controlling justification for this variable in either case is that pay claims are ordinarily restricted to within job levels.

In three of the listed university cases, however, the courts rejected regressions that included rank on the ground that the university defendants had discriminated against women in promotion to the higher ranks; all three cases resulted in findings of pay discrimination based on the sex coefficients in human capital regressions. In my view, the human capital regressions in these cases supplied only suggestive evidence of discrimination in promotion, and the rejection of regres-

102. The Table 1 identification numbers for these cases are: 1, 4, 5, 10, 13, 14, and 17.
sions with a rank variable prevented the courts from even considering the proper pay claims: whether there was pay discrimination against women within ranks. That claim should have been examined independently of whether women were treated unfairly in promotions.

The adjudicatory effects of rulings on the rank variable are illustrated by contrasting two recently decided university cases in which the evidence considered was largely from multiple regression analyses. In *Melani v. Board of Higher Education of the City of New York*, the plaintiffs' regressions did not include faculty rank; they produced negative sex coefficients of $500 to $1800 of annual salary for females and a judgment of sex-based pay discrimination. The court rejected the defense's regression, which included rank, based on a showing by the plaintiff that women were overrepresented among instructors and underrepresented among full and associate professors.

In *Sobel v. Yeshiva University*, the plaintiffs withdrew their claims of discrimination in the promotion of women to the various university ranks. The court then credited the defendant's regression that included a rank variable as an indicator of employee productivity (in lieu of more direct measures of productivity that the court would have preferred). Although the decision to credit a regression that included rank was correct, the ground for doing so—that rank is a productivity determinant of pay—was not. Rank had to be included, not to improve the pay model, but to hold constant the effect of rank on pay so that the pay analysis was confined to within ranks. Inclusion of the rank variable reduced the sex coefficients in the plaintiff's regressions to statistically insignificant levels, and the court found for the defendant.

Although sex-based pay discrimination was found in *Melani* and not in *Sobel*, the evidentiary difference in the two cases was essentially that there may have been job assignment discrimination in the former but not the latter. Women were disproportionately employed in the lower academic ranks in both instances. In *Melani*, the court evidently regarded this as evidence of promotion discrimination (but no formal judgment to that effect was made) and proceeded to find pay discrimination. In *Sobel* the plaintiffs dropped the promotion discrimination charge and the court found no pay discrimination. The differing results of these two cases may or may not have been capricious, but

105.  Id. at 775.
106.  Id. at 783.
108.  Id. at 1180 n.36.
109.  Id. at 1180.
if women were treated differently in the two universities, it was through job placement and promotion, not pay discrimination.

The Melani and Sobel decisions turned on judgments about the kinds of regressions that were appropriate: the human capital regression preferred by the Melani court could not possibly have accounted for the job allocation based difference in male and female average salaries; the Sobel court's judgment for a regression that controlled job level substantially reduced the plaintiff's chances of finding sex discrimination in pay. The finding of discrimination in pay was effectively made when the Melani court ruled that, due to discrimination in job allocation, a job level variable could not be included in the pay regression; the Melani court then credited regression evidence of discrimination in job allocation to find pay discrimination. Whether a finding of discrimination in job allocation rather than pay in Melani would have produced different remedial consequences may be doubtful; nonetheless the adjudication process is inevitably weakened by misalignment of claims and proofs.

VII. COURT TREATMENT OF OTHER REGRESSION ISSUES

A. Performance Appraisals

Satisfactory employee productivity is ordinarily a requirement for the continued success of business and, presumably, government establishments. Then it follows that employers will attempt to set up pay systems that encourage high employee productivity, by basing pay at least partly on employee output and other aspects of job performance. However, relatively few jobs lend themselves to a direct incentive system where pay can be varied directly with measured output (a piece rate or commission system). Consequently, most employers try to tie pay to productivity through job performance appraisals (evaluations), whereby supervisors judge the performance of their subordinates. Human nature being what it is, these systems never work perfectly, and sometimes work poorly. No doubt, systematic bias based on sex or race is sometimes present in the evaluation process. Yet, it should be remembered that the raison d'être for an evaluation system is the achievement of high job performance by employees to maintain or increase establishment productivity. To the extent that bias enters the system, achievement of these objectives is weakened. Therefore, if any assumption is appropriate about the value of performance appraisals for explaining pay variation, it is that appraisals contribute to such explanation, rather than the assumption that they do not.

Several courts, however, have made the latter assumption, rejecting or discrediting the use of performance evaluations in regression or other kinds of analyses of pay discrimination. In Stastny v.

111. See supra note 73.
Southern Bell Telephone Company, the trial court discredited the defendant’s appraisal system with the conclusion that “[T]he operation of an opinion-based appraisal system, largely controlled by one sex, such as the one at Southern Bell, provides an ideal environment for disparate treatment of sexes.” This court went on to find that the higher appraisal ratings received by men than women in the defendant firm constituted evidence that disparate treatment did, indeed, exist.

Perhaps the court’s conclusions are consistent with a broad interpretation of disparate impact doctrine that would require the employer to show the validity of appraisals used for pay determination and promotions. But where employee job performance cannot be measured, so that only judgments of performance are possible, it is not apparent that the validity of the appraisal judgments can be established. Then, according to the Stastny court, appraisals that produce different performance ratings between the sexes are discriminatory.

That reasoning can invalidate one of the most important determinants of pay within an establishment, one that is especially important to pay variation within job levels, and, consequently, can produce a finding of sex discrimination in pay where none exists. To find defendants guilty of pay discrimination because they cannot prove the validity of a major determinant of pay, when there is no known method for doing so, places a harsh burden of proof on defendants, essentially requiring them to prove their innocence.

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113. Id. at 331.
115. The majority opinion in a recent case, Coates v. Johnson & Johnson, 756 F.2d 524 (7th Cir. 1985), attempted clarification of this matter:

[W]e think that once a defendant offers statistics using an allegedly biased factor [explanatory variable] the plaintiff must bear the burden of persuading the factfinder that the factor is biased. Placing the burden on the defendant . . . would be inconsistent with the principle that the plaintiffs in a Title VII case retain the ultimate burden of persuasion on the issue of discrimination.

Id. at 544. The concurring opinion disagreed with these conclusions:

In the ordinary course of things, the defendant should not be allowed to appeal to a factor within his control as an explanation unless he can show that it is not biased, and a complete lack of evidence either way should ordinarily work to the detriment of the defendant and not the plaintiff.

Id. at 555 (Cudahy, D.J., concurring).

The latter view seems to assert, as a matter of law, that, for example, where job performance can be assessed only subjectively, the average job performances of men and women must be assumed to be equal and, therefore, unconnected to sexual pay differences. Then sexual pay differences that correspond to sexual
As mentioned earlier, a gestalt view of whether the employer is discriminating against a class of employees may govern court decisions about the value of performance evaluations for explaining pay. Thus, in Equal Employment Opportunity Commission v. International Business Machines Corporation,\(^\text{116}\) where the court dismissed all discrimination charges, it found IBM’s subjective performance evaluation system to be nondiscriminatory despite the fact that blacks consistently received lower ratings than whites.\(^\text{117}\) On the other hand, several cases where discrimination charges were generally upheld have rejected the use of performance evaluations to explain salary differences (in regressions or otherwise) on the ground that the evaluations were subjective and subject to manipulation by the employer.\(^\text{118}\) Perhaps the courts are making sound intuitive decisions when they reject the use of appraisals for salary analyses, but the statutory or logical bases for these decisions are not apparent.

B. Other Productivity Variables

Courts differ markedly in their regard for establishment oriented productivity variables in pay regressions. One trial court criticized both the plaintiff’s and defendant’s regressions for failure to include many factors that affect salaries “such as quality of experience and education, job performance, leadership, skill, and effort.”\(^\text{119}\) On the other hand, Melani rejected productivity variables for academics—quality of teaching, quantity and quality of publications, and community service—because of concern that these variables could incorporate the effects of discriminatory decisions rather than provide independent measures of productivity.\(^\text{120}\)

Another trial court made explicit a wrong understanding of regression proofs that appears to be shared with other courts. In Segar v. Civiletti the court stated: “Plaintiffs cannot be expected to include all possible variables in their regression analyses. Rather, only those variables that are both objective in nature and quantifiable need be included.”\(^\text{121}\) This conclusion is wrong even if an establishment-wide (across job levels) focus for the analysis of pay differentials is accepted as proper. It is absurd and beyond the law to require employers to
explain their class pay differences with the objective and quantifiable, general labor market variables of years of schooling and experience, and to find them guilty of pay discrimination when they cannot do so. Pay for job performance is both desirable and necessary for the economic success of enterprises; performance assessment necessarily requires subjective and nonquantifiable judgments.

C. The Amount of Pay Variation Explained

The courts have generally concluded that the proportion of employee pay variation explained by a regression model (designated as "R^2") is unimportant.\textsuperscript{122} This is not an entirely accurate view. While it is true that a complete explanation of pay differences is not necessary to determine whether sex or race has an effect,\textsuperscript{123} it is also true that the greater the explanatory power of the model, the more confident one can be that the apparent influence of sex or race on pay is also a true influence. When a regression model explains just a small proportion of pay variation it is very possible that there exist unobserved variables that are correlated with both pay and sex, because so much of pay variation remains unexplained. Then the apparent influence of sex on pay may be false because it is brought about by the correlation between sex and the true, but not observed, influence on pay. As R^2, the explained variation in pay, increases, the chances of a spurious correlation between sex and pay declines.

The opposite danger is that a regression model may include an explanatory variable that produces a high level of pay explanation (high R^2) but obscures the true effect of sex because of its correlation with sex and pay. This could occur, for example, if job tenure were the dominant determinant of salaries within job levels, and all female employees were terminated after three years of employment. Alternatively, one could conclude that in this example women were the victims of discharge, rather than pay, discrimination.

Courts must judge the probative value of sex coefficients from the logic of the regression model. They should be wary of these coefficients, however, when they appear in regressions that explain little pay variation.\textsuperscript{124}


\textsuperscript{123} Fisher, supra note 43, at 725.

D. Regression Interpretation

While a number of courts have shown remarkable comprehension of the results of complex multiple regressions, there have been enough misinterpretations to conclude that court interpretation of regression results is problematic.

In *Segar v. Civiletti*, the court mistakenly interpreted $R^2$ as a measure of "total variance in the dependent variable that is associated with variations in the independent variable," race in this instance. Consequently, the court attributed all of the explained variance in pay ($R^2$ values ranged from .21 to .52) to race, not realizing that other independent variables also contributed.

In *James v. Stockham Valve & Fitting Co.*, the court of appeals rejected the use of years of schooling in a pay regression because schooling was not a hiring requirement in the firm. While this variable is often of limited value for explaining employee pay differences, it may well be that, within job levels, years of schooling and job performance are positively correlated regardless of whether schooling is a hiring requirement. The relevant question is whether employees with greater schooling receive more pay, after controlling for other pay determinants. That inquiry can only be answered by including quantity of schooling in a pay regression. Forcing elimination of the schooling variable may produce a spurious discrimination coefficient.

The lengthy analysis of multiple regression in *Vuyanich* was generally commendable but, unfortunately, was wrong in an aspect crucial to the court's finding of pay discrimination based on race. One of the plaintiff's regression models in that case included job evaluation points as a variable for controlling job level. This variable reduced the race coefficient from approximately -20 percent of white male pay in the regressions without it, to approximately -10 percent in the regressions that included job evaluation points. In other words, the plaintiff's regression found less pay discrimination when job level was controlled than when it was not. The defendant then submitted a regression that included many establishment oriented variables and showed no effect of race on pay. The defense's regression did not, however, include job evaluation points or any other job control variable, and for this reason, the court ruled that the defendant had failed to rebut the plaintiff's regression results. As a matter of law, the

126. *Id.* at 697.
130. *Id.* at 308.
court was correct that job level should have been controlled in order to assess the pay discrimination claim. But the court should have been able to see that inclusion of a job level variable in the defense's regressions would not have increased the race coefficient of pay from the fact that when a job level variable was added to the plaintiff's regressions, it reduced the race coefficients. Therefore, the conclusion that the defense's regression did not show nondiscrimination in the salaries of nonwhite employees, because of the absence of a job level control variable, was nonsensical. The defense, surprisingly, had shown nondiscrimination in pay without using a job level variable.\(^{131}\) Its procedure was wrong under my interpretation of Title VII law, but presumably made the defense more difficult than it would have been with a job level control. The defense's showing of nondiscrimination should not have been rejected because it did not employ a variable that could have only worked in its favor.

Perhaps the most peculiar interpretation of a pay regression was by the fifth circuit in *Wilkins v. University of Houston*.\(^{132}\) The plaintiff at trial had presented only nonregression statistics; however, the defense had submitted a regression that showed a negative effect on annual salary of $694 for being female!\(^{133}\) This coefficient was statistically significant, but the appeals court disregarded it, for a reason discussed below, and because the addition of the sex variable to the regression equation only raised the proportion of pay variation explained from .52 to .53. The court stated that the plaintiff had not shown that sex was not independent of the other explanatory variables; therefore, the contribution of the sex variable to \(R^2\) was not understated and that very small contribution was insufficient to prove discrimination.\(^{134}\)

While the court's interpretation of these results was theoretically possible, it was highly unlikely. It was much more likely that sex was correlated with one or more of the other independent variables, and that was why the addition of the sex variable increased \(R^2\) so little despite the sizeable sex coefficient of pay. Regardless, the sex coefficient itself, not its contribution to \(R^2\), is the proper indicator of whether discrimination exists, as long as the pay model is conceptually sound. Why a correlation matrix (showing the correlations among all independent variables) was not submitted to the trial court, so that the intercorrelation question could be answered definitively, is not clear.

Following this decision, the plaintiffs petitioned for a re-hearing,

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131. Perhaps job level was omitted to avoid the criticism (invalid) that job assignments were based on sex and race and, therefore, should not be included in the pay regression.
132. 654 F.2d 388 (5th Cir.), reh'g denied, 662 F.2d 1156 (5th Cir. 1981), vacated on other grounds, 459 U.S. 809 (1982).
133. *Id.* at 403.
134. *Id.* at 403-04.
relying in part on a document submitted by the university, *Suggestion of Error in Presentation of Statistical Evidence*, in which the university admitted an error in testimony by its expert.\(^{136}\) The expert had testified that his regression without a sex variable showed that equal proportions of men and women were "underpaid" and "overpaid" when comparisons were made between actual salaries paid and those estimated from the fitted regression equation. In fact, it was his regression with a sex variable that showed equal pay for men and women (the negative sex coefficient "accounted" for the actual lower pay of women), while the regression without a sex variable showed that women were underpaid relative to men. The court had relied upon this expert's testimony as one of the justifications for its conclusion that the -$694 sex coefficient did not prove discrimination.\(^{136}\) With a better understanding of regression analysis, both the trial and circuit courts would have realized that where a regression equation produces a -$694 sex coefficient for the sex variable, female salaries estimated from a regression equation that excludes this variable will systematically overestimate female salaries compared to their actual salaries (i.e., most women, but not men, will be underpaid relative to what the pay model says they should earn).

Nonetheless, the fifth circuit refused a rehearing because the "thrust" of its original conclusion remained unchanged: that (1) sex increased the proportion of pay variation explained by less than one percent; and (2) "plaintiffs have failed to demonstrate the validity of the regression model as a whole."\(^{137}\) The court wrote:

> Since multiple regression analysis is subject to misuse, courts cannot be expected to accept at face value conclusions derived from such a model absent expert testimony concerning the validity of the model itself. In this case, the class plaintiffs are attempting to use the university's own data to establish a case of discrimination in faculty compensation. At trial, however, only one expert attempted—on the university's behalf—to lay a foundation for the validity of the model used. As we have seen, the value of this expert's testimony is now doubtful at best. Yet when the class plaintiffs purported to use the university's statistics for their own purposes, they did not fulfill their burden of showing that the multiple regression analysis model employed was valid. Without guidance, this court cannot be expected to resolve in the class plaintiff's favor fundamental questions relating to the model itself.\(^{138}\)

It is an understatement to say that the court's ultimate decision was ironic. The defense submitted a regression that provided evidence of pay discrimination (the pay model used included a job rank variable and was otherwise sound), yet the defense's expert was able to discredit his own evidence in the eyes of confused trial and appeal courts (and an apparently confused plaintiff) through testimony that was

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\(^{135}\) Wilkins v. University of Houston, 662 F.2d 1156 (5th Cir. 1981).

\(^{136}\) Wilkins v. University of Houston, 654 F.2d 388, 404 (5th Cir. 1981).

\(^{137}\) Wilkins v. University of Houston, 662 F.2d 1156, 1157 (5th Cir. 1981).

\(^{138}\) Id.
technically doubtful (the R² interpretation) and admittedly erroneous (the regression salary estimation). Upon learning that the defense expert had testified wrongly about his regression, instead of reaching the seemingly required conclusion that the -$694 sex coefficient was proof of discrimination, the court instead seized upon the defense expert’s, no doubt, inadvertent lapse to conclude that no expert support now existed for the probative value of that coefficient. Since the defense had the opportunity to try all kinds of models in its pre-trial regression analyses of pay, and apparently was unable to avoid a result that showed discrimination, the court should have accepted that result.

VIII. CONCLUSIONS

Confusion prevails about what constitutes pay discrimination under Title VII. The confusion is not over so-called comparable worth claims. Nearly all courts agree that these claims, insofar as they require a court to judge the comparative value, worth, or work requirements of jobs, are not cognizable. Pay discrimination claims involving unequal jobs are allowable, but, as in Gunther, the claims must be based upon direct evidence that the pay differentials were established on the basis of sex or race, and cannot be based merely upon job comparisons.

Rather, the existing confusion comes about through court assessment of multiple regression evidence submitted in pay claims. Some courts credit regressions that compare the different salaries of employees who hold unequal jobs, while other courts reject this evidence and only credit regressions that control for the job level of employees.

I have contended in this Article that regressions that compare the salaries and characteristics of employees in unequal jobs are improper evidence of pay discrimination under Title VII because, as evidence of pay claims, these regressions implicitly judge the comparable worth of unequal jobs, to the effect that salary differences among an establishment’s jobs must correspond to differences in the schooling and experience of the employees who hold these jobs. Even if comparable worth judgments were authorized, these establishment-wide human capital regressions would be of no evidentiary value for pay claims because they impose on employers pay criteria—usually quantities of schooling and experience—that have no statutory basis. Establishment-wide regressions that encompass unequal jobs may constitute inferential evidence of discrimination in job allocation; courts that have credited these regressions for pay claims appear not to distinguish between discrimination in pay and in job allocation. Even for job allocation claims, however, the sex coefficient in establishment-wide pay regressions is ambiguous, because it incorporates sexual pay differ-

139. For the only exception known to me, see supra text accompanying note 24.
ences within job levels as well as across them. Consequently, the coefficient cannot distinguish between discrimination in job allocation and in pay treatment within job levels.

Disparate pay treatment, in terms of initial salary and salary progression, is a cognizable pay claim, even when the employees compared hold unequal jobs. Regressions that control for job level get at this kind of discrimination and do not produce comparable worth comparisons as long as each job level has just one basic salary and range.

Resolution of this conflict over the regression evidence that is proper for pay claims will be important for the success of class pay claims. If the first view were to prevail—that regressions over unequal jobs are proper—plaintiffs success would be largely assured since human capital regressions cannot ordinarily explain the sex differences in pay that accompany concentration of females in low paid jobs. On the other hand, if the view prevails that job level must be taken into account (controlled), plaintiffs chances for showing pay discrimination would be much less. I believe that the latter view is correct under Title VII law. If the courts adopt that position, the principal statutory remedy for the low average earnings of females will remain claims of discrimination in job allocation.

Multiple regression is a powerful and indispensible tool for the adjudication of pay, as well as other discrimination claims, but it is not a simple one. The courts have made errors in their application and interpretation judgments when dealing with regression evidence, but there is no reason why this tendency cannot be kept at normal error levels as familiarity with regression techniques increases. The possibilities for judicial error arise more from issues about the correct application of regression evidence to pay discrimination law than from issues about the technical aspects of this statistical tool itself.