

## **Post-Hire Employment Discrimination toward Workers with Disabilities: Development of a Prediction Model for Merit Claims**

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A significant portion of workers with disabilities perceive themselves to be the victims of discriminatory policies and practices, yet only a small minority of allegations filed with the Equal Employment Opportunity Commission (EEOC) are resolved in favor of the worker. This study investigates allegations of employment discrimination under Title I of the Americans with Disabilities Act that occur following the point of hire. Specifically, a JMP Partition Model analysis was conducted to determine factors that predict allegations that are determined to be with merit by EEOC investigators. The findings show that only two variables were significantly related to the criterion variable: Time period in which the case was resolved and geographic region of the Respondent against whom the allegation was charged. Implications of the findings are presented.

Discrimination continues to be a significant barrier to employment for many individuals with disabilities. Surveys of individuals with various types of disabilities have consistently shown that many feel that they have experienced discrimination (Bishop & Allen, 2001; Cook, 2006; Martin, Brooks, Ortiz, & Veniegas, 2003; Rumrill, Roessler, & Koch, 1999).

In response to an online survey of 522 workers with disabilities conducted by Harris Interactive (2007) for CareerBuilder.com and Kelly Services, 44% of respondents indicated that they have felt discriminated against or treated unfairly by their coworkers or supervisors because of their disabilities. The most frequently cited incidents included discrimination in pay, assignments, training, and promotion, as well as hostile comments from coworkers and supervisors, exclusion from office social activities, and refusal to provide accommodations. Moreover, 61% of survey respondents indicated that when they had reported discriminatory or unfair treatment to their employer, no action was taken against the alleged offender.

Title I of the Americans with Disabilities Act of 1990 (ADA) prohibits discrimination in hiring, promotions,

and terminations toward qualified persons with disabilities. "Qualified" defines individuals who can perform the essential functions of a job or could do so with reasonable accommodation. The ADA defines the term disability with respect to an individual as "(A) a physical or mental impairment that substantially limits one or more of the major life activities of such individual; (B) a record of such an impairment; or (C) being regarded as having such an impairment;" the ADA also covers workers who have a relationship or an association with an individual with a disability, such as a spouse or parent (42 U.S.C. §12102). The ADA applies to public and private employers with 15 or more employees, with the exception of religious organizations or private clubs. Labor unions and employment agencies, to the extent that they influence hiring, are also bound by the ADA.

To receive the protections and accommodations under the ADA, the job seeker or employee must disclose that he or she has a disability. Because many disabilities are not visible (e.g., psychiatric disabilities, learning disabilities), individuals with those types of disabilities sometimes choose not to disclose for fear they

will be subject to discrimination. However, if an individual wants the rights and protections afforded by the ADA, disclosure and documentation of disability must occur at some point in the period of employment.

Some (Acemoglu & Angrist, 2001; Beegle & Stock, 2003; DeLeire 2000a, 2000b) have argued that one of the unanticipated consequences of the ADA has been a decrease in earnings and job opportunities for job-seekers with disabilities, particularly among males, resulting in harm to the Act's intended beneficiaries. In addition, Acemoglu and Angrist (2001) analyzed data from the Current Population Survey (CPS) from 1988 to 1997 and found no evidence that the ADA affected separation rates for employees with disabilities. They conclude that this finding suggests that the ADA has not achieved its purposes for protecting individuals with disabilities after the point of hire.

Since 1992, the Equal Employment Opportunity Commission (EEOC) of the U.S. Department of Justice has investigated allegations of employment discrimination under Title I, as well as allegations brought under other federal employment statutes not directly related to disability, including the Civil Rights Act, Equal Pay Act, Age Discrimination in Employment Act, and the Family and Medical Leave Act. The EEOC's Integrated Mission System (IMS), from which the data for this study were extracted, provides a unique opportunity to examine workplace discrimination in terms of both its perception (i.e., the allegation brought by the individual with a disability) and its merit or lack thereof as determined by an impartial EEOC investigator.

- Numerous studies of the IMS have been conducted and have yielded results of importance to policy-makers, employers, and individuals with disabilities, including the following:
- The majority of allegations investigated by the EEOC are decided to be without merit (McMahon & Shaw, 2005).
- The anticipated impacts of the U.S. Supreme Court's Sutton trilogy decisions, i.e., decreases in the number and percentage of decisions in the claimant's favor, have not been seen; the percentage of merit claim decisions increased for claimants with epilepsy following the Sutton decisions (West, Dye, & McMahon, 2006).
- Patterns of allegations and resolutions vary by sex, race, and age, which are also areas in which employees are protected from discrimination under Federal law, suggesting that perceptions of discrimination may be influenced by a combination of personal characteristics of the alleging party, not just his or her disability (Davis, West, & McMahon, 2008).
- Post-hire allegations constitute the majority of claims filed by claimants, in large part be-

cause injured workers constitute a far larger proportion of claimants than was expected in the early years of ADA implementation (Bell, 1993; McMahon & Shrey, 1992). Therefore, individuals claiming discrimination as an employee (rather than as a job-seeker) have a higher likelihood of having a known disability, either through disclosure or through the occurrence of workplace injury. Addressing the EEOC experiences of this group will help shed light on the employment retention and career advancement barriers they face. This is particularly relevant in light of increasing rates of workplace disabilities and rising costs for disability claims in recent years for both Social Security Disability Insurance and private disability insurance carriers, and subsequently the growing need to retain injured and disabled workers in the workplace through disability management programs (McQueen, May 1, 2007).

The purpose of this study was to analyze IMS data related to post-hire allegations of discrimination under Title I. Specifically, IMS variables were used to develop a prediction model for a decision favorable to the claimant, i.e., that discrimination had occurred against a qualified employee.

## Method

### Data Source

The data used in this study were drawn from a database maintained by the EEOC of ADA Title I allegations closed between July 26, 1992 (the first effective date of ADA Title I) and September 30, 2005, the last year for which data were available. From the database, a study data set of 331,701 records was extracted that were allegations of discrimination occurring post-hire. Each record, and thus the unit of analysis for this study, is an allegation, not an individual filing an allegation, or Charging Party (CP). A single CP may make more than one allegation in a single complaint or may make the same allegation on more than one occasion. Each allegation made by a CP represents one of the records. Study data were strictly limited to allegations brought under Title I of the ADA. Not considered were charges brought under state antidiscrimination statutes due to wide variations in definitions of disability, discrimination, or remedies for breach. Also not considered were allegations of retaliation, because these are not a directly related to the existence or consequence of disability.

To maximize confidentiality, all information regarding the CP and the Respondent (the employer against which the allegation is made) was purged except for descriptive data. For the CP, this included age, race

and ethnicity, gender, and the disability basis of the allegation. For the Respondent, the data included the type of organization, number of employees, and location by broad geographic regions as used by the U.S. Department of Education. In addition, the IMS contains a variable describing the nature of the discrimination alleged to have occurred, known as "issues." The possible post-hire discrimination issues were reduced to three types of post-hire discrimination:

- Failure to provide reasonable accommodations to a qualified employee;
- Discriminatory job actions (e.g., disciplinary measures, terminations, wages, denial of training opportunities or promotions, failure to reinstate following layoff); and
- Hostile or unfavorable work environment or conditions (e.g., harassment, intimidation, segregation, unpleasant work assignments, constructive discharge, inequitable work terms or conditions).

When an allegation is closed, it becomes a resolution either with merit or without merit. Merit resolution indicates that evidence of discrimination based on disability has been found whether or not the Respondent accepts the remedy for breach (penalty, remediation, or consequence) prescribed by the EEOC. A resolution without merit indicates that there is insufficient evidence to conclude that actual discrimination did occur, or the matter was closed for a technical or administrative reason. Examples of the latter might include the following: the Respondent was not covered under ADA Title I, the allegation was withdrawn, or the CP was not a qualified person with a disability.

### **Dependent and Independent Variables**

The dependent variable in this study will be resolution of the investigation with merit. The predictor variables include (a) the claimant's disability classification (i.e., the "basis" of the allegation), (b) age, (c) sex, (d) race, (e) the type of issue as described previously, (f) the location of the Respondent by region, (g) the type of Respondent by Standard Industrial Classification (SIC) code, and (h) the size of the Respondent organization in terms of number of employees. In addition, because of the previous finding of increasing rates of merit decisions following the U.S. Supreme Court's 1999 Sutton trilogy decisions (West, Dye, & McMahan, 2006), the year of closure was also included as a predictor variable, dichotomized as 1992 - 1999 and 2000-2005.

IMS basis classifications were collapsed into the following categories: Physical disabilities, sensory disabilities, behavioral impairments (i.e., chemical dependencies and psychiatric disorders), neurological impairments, and other disorders. Those workers who met the definition of disability using other prongs (i.e.,

having a record of impairment, regarded as having an impairment, or having a relationship or association with an individual with an impairment), were excluded from this analysis.

Because of the small numbers of CPs in some racial classifications, these data were collapsed and recoded into the following groups: Caucasian, African-American, Hispanic, and Other. Age groupings were (a) under age 21, (b) 21-35, (c) 36-50, (d) 51-64, and (e) age 65 and older.

Size of the Respondent (number of employees) was classified using the following groups: (a) 15-100, (b) 101-200, (c) 201-500, and (d) 501 and over. Respondent regions and SIC codes were defined as shown in Table 2.

### **Statistical Analyses**

First, descriptive data for the CP and the Respondent were aggregated, as well as the closure status of allegations. Second, data were analyzed using a data mining approach, the JMP Partition Model. Data mining refers to analysis of large data sets for discovery of relationships. The JMP Partition platform is commonly used when exploring relationships without a prior model, and can be used for both continuous and categorical values (Sall, Creighton, & Lehman, 2005). JMP Partition Model recursively partitions the data according to relationship between the dependent variable and the independent variables. In brief, it finds a set of cuts (continuous variables) or groupings (categorical variables) of values that best predict the criterion value by forming a tree of decision rules until the desired fit is reached or additional variables fail to improve the prediction model. The splits are determined by maximizing the LogWorth value, which reflects degree of separation for a potential split. For continuous variables, LogWorth is related to the sum of squares due to the differences between means. For categorical variables, it is related to the likelihood ratio chi-square statistic.

## **Results**

### **Descriptive Analyses**

Tables 1 and 2 present information regarding CPs and Respondents, respectively. Table 1 shows that individuals with physical impairments and those between the ages of 36 and 50 constituted the largest segment of CPs (44.1% and 46.8% respectively). Males and females were almost equally represented. Minorities represented approximately 38% of CPs, substantially higher than their representation in the U.S. according to Census data (20%).

Nearly half of all allegations were made in two regions: The Southeast (23.1%) and the Midwest

Table 1. CP Characteristics

	N	%
<b>Disability Classifications</b>		
Sensory	15,284	5.3%
Physical	127,586	44.1%
Neurological	33,853	11.7%
Behavioral	53,318	18.4%
Other	59,370	20.5%
<b>Sex</b>		
Male	168,193	50.9%
Female	162,197	49.1%
<b>Age</b>		
Under 21	34,118	10.3%
21-35	62,498	18.8%
36-50	155,231	46.8%
51-64	73,762	22.2%
65 and over	6,092	1.8%
<b>Race</b>		
Caucasian	180,072	62.1%
African-American	59,705	20.6%
Hispanic	19,703	6.8%
Other	30,684	10.6%

(23.6%), most likely because of the large populations in these two regions. Most CPs were employed in large organizations, with 43.5% working in organizations with over 500 employees. Respondent organizations were largely in the manufacturing, retail, and service industries.

Table 3 presents frequencies for the type of allegations made by CPs. This table shows that the majority of allegations (53.9%) were related to discriminatory job actions. Hostile or unfavorable work environment or conditions were alleged in 26.3% of allegations, and 19.8% were for failure to accommodate a qualified employee.

Overall, 21.0% of all allegations were closed with merit and 79.0% were closed without merit. This is consistent with other findings from IMS studies for all CPs and for subsets of the IMS database.

#### Partition Model

Findings from the JMP Partition Model are presented in Figure 1. Only two variables were found to predict the criterion value. Period of closure was the strongest predictor, with 17.8% of allegations closed with merit from 1992 to 1999 and 24.4% closed with merit from 2000 to 2005, a difference of approximately 38%. The second predictor variable was region of the Respondent. For cases closed in the Northwest, Midwest, and New England in years 2000 to 2005, the merit resolution rate was 27.4% as opposed to 23.3% in the other regions. For cases filed in the years 1992 to 1999,

Table 2. Respondent Characteristics

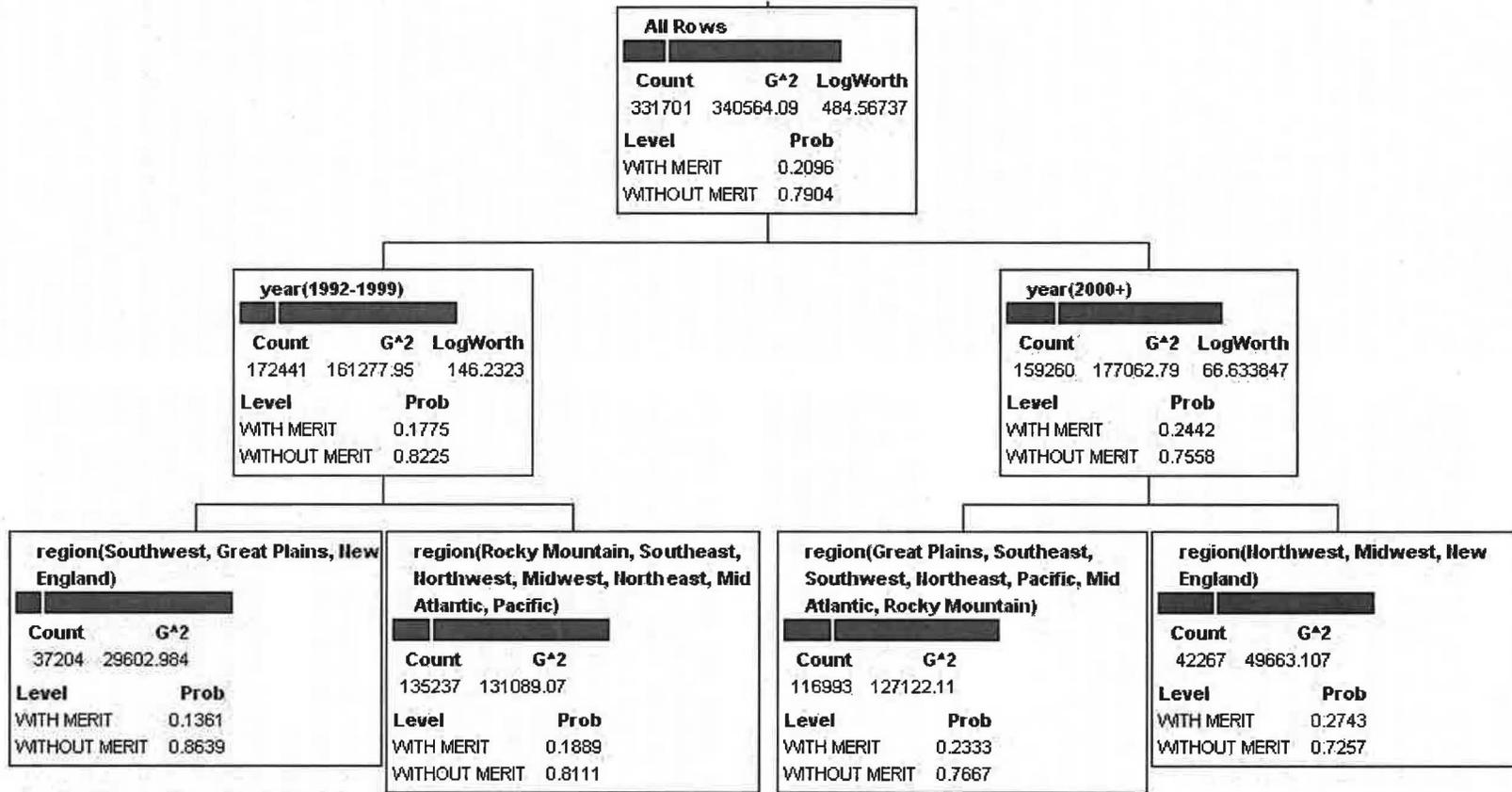
	N	%
<b>Region</b>		
Southwest	52,510	15.8
Southeast	76,587	23.1
Rocky Mountain	11,301	3.4
Pacific	38,452	11.6
Northwest	6,035	1.8
Northeast	18,107	5.5
New England	4,655	1.4
Midwest	78,366	23.6
Mid-Atlantic	32,692	9.9
Great Plains	12,998	3.9
<b>Size</b>		
15-100	104,386	33.1
101-200	37,996	12.1
201-500	35,318	11.2
501 and over	136,923	43.5
<b>SIC Code</b>		
Agriculture (010-099)	1,934	0.6
Mining (100-149)	2,375	0.7
Construction (150-199)	5,908	1.9
Manufacturing (200-399)	57,306	18.6
Transportation/Utilities (400-499)	29,227	9.5
Wholesale (500-519)	5,921	1.9
Retail (520-599)	30,982	10.0
Financial/real estate (600-659)	14,837	4.8
Services (660-909)	90,878	29.5
Public administration (910-980)	28,690	9.3
Not classified	40,350	13.0

Table 3. Allegation Types

	N	%
Failure to provide reasonable accommodations	65,624	19.8
Discriminatory job actions	178,720	53.9
Hostile or unfavorable work environment or conditions	87,357	26.3

those filed in the Southwest, Great Plains, and New England regions had a merit resolution rate of only 13.6% compared to 18.9% for all other regions. No other variable contributed to the prediction model. Overall, the prediction model was very weak, with an RSquare value of .009.

Figure 1. Results of the JMP Partition Model



## Discussion

### Limitations of the Study

The source of data for this study, the EEOC IMS database, was not developed for research purposes. Its primary purpose is to inform the EEOC and Congress of discrimination issues, and therefore, there are some limitations with regard to research investigations that use the data. For example, the database includes only allegations that are reported to the EEOC, not those that are settled internally between the employee and employer prior to the employee making an EEOC claim, or those that employees choose not to pursue. Nor does the database include allegations brought at the state level. Finally, as with all databases of this nature, there are finite options for each data element and sometimes coding judgment decisions have to be made, in this case on the part of EEOC investigators, from the individuals and circumstances presented.

### Discussion of Findings

The initial finding of this study, as in other studies using the EEOC IMS data system, was that the overwhelming majority of allegations of discrimination under Title I were found to be without merit. Only 21% of allegations were found to be qualified under the ADA and to have experienced discrimination based on their disability.

As Mudrick (1997) notes, the low success rate for EEOC claims by individuals with disabilities is not substantially different from those charging discrimination on the basis of race, sex, or other factors. However, this is small consolation to those workers with disabilities who perceive themselves to be the victims of discrimination and who have expectations of a finding in their favor. While it cannot be ruled out that some unknown number of intentionally false or frivolous allegations were filed, the more likely assumption is that it is difficult for many employees who are protected under the ADA, the Civil Rights Act, and other protective legislation to either (a) adequately prove their claim, or (b) distinguish between job actions that are disagreeable but allowable and those that are discriminatory.

The JMP Partition Model analysis found that CPs have had much higher success rates, in terms of merit resolutions, in the years following the Sutton trilogy Supreme Court decisions in 1999. This finding has significant implications for workers with disabilities. First, this finding supports and expands upon the finding of West, Dye, and McMahan (2006) for CPs with epilepsy, that these decisions have not had the anticipated negative effects on workers with disabilities.

Prior to these decisions, the EEOC issued guidelines stating that mitigating measures such as medications and assistive devices should not be considered when determining whether or not an individual has a disability as defined by ADA. In *Sutton v. United Air Lines* (1999), the Supreme Court held that the use of corrective eyeglasses could be considered in deciding whether or not two sisters were disabled, because with corrective eyewear their visual acuity was normal. The Supreme Court followed similar lines of reasoning in deciding *Murphy v. United Parcel Service* (1999) involving an employee with high blood pressure, and *Albertson's, Inc. v. Kirkingburg* (1999) involving a worker with monocular vision. Following these decisions, the EEOC rescinded its interpretive guidance related to mitigating factors.

There were many dire predictions following these decisions, and rightly so. These decisions created a Catch-22 in that a worker with disabilities whose functional limitations were mitigated through medication, assistive technology, accommodations, etc., could no longer qualify for protection under the ADA. However, without mitigation, he or she would be unable to perform essential job duties. Ultimately, according to advocates for individuals with disabilities, Sutton would lead to even fewer cases of true discrimination decided in favor of the claimant and . Indeed, lower courts followed the Supreme Court's precedent in ADA cases involving cancer, muscular dystrophy, epilepsy, diabetes, depression, and even multiple sclerosis. .

These were court cases, however, and not EEOC investigations and resolutions. Also, new EEOC guidance recommended increased use of the "regarded as" prong of the ADA definition and those allegations were excluded from this study. In part, however, this study found that the key predictor for a merit resolution was that the claim was resolved following the Sutton Decision. Thus, allegations of workplace discrimination had a much higher probability of a merit resolution post-Sutton, although the odds still favor the employer. Factors contributing to the increasing rate of merit resolutions are a topic of future research.

The second predictor, the location of the Respondent, appears to be an anomaly despite population variances. The possibility exists that this is an artifact of variance in EEOC investigator decision-making and their assigned regions, but that is speculation and is belied by the training and guidance provided by the EEOC to its investigative teams. Regional variance in case resolutions is another area for future research.

What can also be taken from this study is that most of the variables were not found to be predictive of a merit resolution, including CP sex, race, age, disability basis, and the type of discrimination alleged. This finding suggests that cases were decided, if usually not to the satisfaction of the worker with disabilities, with

consistency across claimants, allegations, and circumstances.

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