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**WORKPLACE ACCOMMODATIONS:
EMPIRICAL STUDY OF CURRENT
EMPLOYEES***

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I. INTRODUCTION

Integral to employment for people with disabilities is the Americans with Disabilities Act's (ADA)¹ workplace accommodation provision that allows qualified individuals to perform essential job functions.² Title I of the ADA prohibits employers from discriminating against qualified individuals with disabilities in hiring, retention, promotion or termination. One form of prohibited discrimination is failing to make reasonable accommodations for a qualified job applicant or employee's physical or mental limitations, unless the accommodations would impose an undue hardship on the business.³ Through the ADA's "interactive process," employers and employees collaborate to identify and implement workplace accommodations that are within reason.

Little empirical evidence is available to understand employers' decisions to provide accommodations. This article continues our line of empirical study and explores employee and employer factors associated with employers' decisions to accommodate current employees. Building on our previous re-

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¹ Americans with Disabilities Act (ADA), 42 U.S.C. § 12101 et seq. (2000).

² *Id.* § 12112(b)(5)(A). See generally PETER BLANCK ET AL., DISABILITY, CIVIL RIGHTS LAW, AND POLICY: CASES AND MATERIALS (Louis Higgin ed., 2005).

³ ADA § 12112(b)(5)(A).

search,⁴ the present analyses are based on data from interviews with employers who contacted the Job Accommodation Network (JAN) concerning workplace accommodations for current employees.

In the following sections, we first describe workplace accommodation requirements and analysis, before and after ADA passage in 1990. Next, we examine the extent to which employers' accommodation decisions are linked closely to the ADA's definition of disability for a qualified employee or other factors. Lastly, we discuss the implications of the present findings for our ongoing line of study.

II. WORKPLACE ACCOMMODATIONS PRIOR TO AND AFTER ADA PASSAGE

The employment provisions of the ADA largely are derived from prior vocational rehabilitation laws.⁵ Vocational rehabilitation laws, originally enacted to provide rehabilitation and employment services for servicemen returning from WWI,⁶ were broadened to include citizens with disabilities in 1920.⁷ Nondiscrimination provisions in employment were introduced by Title V of the subsequent Rehabilitation Act of 1973.⁸ Section 504 defined disability discrimination, providing that “[n]o otherwise qualified individual with a disability . . . shall, solely by reason of her or his disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. . . .”⁹

⁴ See Helen A. Schartz et al., *Workplace Accommodations: Evidence Based Outcomes, Work* (forthcoming); see also D.J. Hendricks et al., *Cost and Effectiveness of Accommodations in the Workplace: Preliminary Results of a Nationwide Study*, 25 DISABILITY STUD. Q., (Number 4) (Fall 2005), available at <http://www.dsqsds.org> (last visited Apr. 3, 2006).

⁵ See generally BLANCK, *supra* note 2, at 22 (discussing the origins and history of the ADA's workplace accommodation provisions).

⁶ See Smith-Sears (Vocational Rehabilitation) Act of 1918, 65 Pub. L. No. 178, ch.

Although Section 504 established a seemingly broad definition of disability discrimination, legal recourse for individuals with disabilities was limited in practice. To qualify for the antidiscrimination protection, the individual's disability must have been related to employment.¹⁰ Furthermore, the Act applied only to federal executive branch agencies (Section 501),¹¹ federal government contractors and subcontractors

107, 40 Stat. 617 (providing for the “vocational rehabilitation and return to civil employment of disabled persons discharged from the military or naval forces”); *see also* Peter Blanck, *Civil War Pensions and Disability*, 62 OHIO ST. L.J. 109 (2001) (discussing history of veterans pension and vocational rehabilitation laws).

⁷ Rehabilitation Act of 1973, 29 U.S.C. § 701 et seq. (2000) (originally enacted as Fess-Kenyon (Vocational Rehabilitation) Act of 1920, Pub. L. No. 66-236, 41 Stat. 735 (codified as amended at 29 U.S.C. § 31-45 (1928) (repealed 1973)) (providing “for the promotion of persons disabled in industry or in any legitimate occupation and their return to civil employment . . .” including people “who, by reason of a physical defect or infirmity, whether congenital or acquired by accident, injury, or disease [are], or may be expected to be, totally or partially incapacitated for remunerative occupation.”).

⁸ Revisions established the Rehabilitation Services Administration and programs for rehabilitation training, research, and evaluation activities. *See* Rehabilitation Act of 1973, Pub. L. No. 93-112, §§ 100-130, 87 Stat. 355, 363-74 (Title I, “Vocational Rehabilitation Services”); Rehabilitation Act of 1973, Pub. L. No. 93-112, §§ 200-204, 87 Stat. 355, 374-77 (Title II, “Research and Training”); Rehabilitation Act of 1973, Pub. L. No. 93-112, §§ 300-306, 87 Stat. 355, 377-85 (Title III, “Special Federal Responsibilities”); Rehabilitation Act of 1973, Pub. L. No. 93-112, §§ 400-407, 87 Stat. 355, 385-90 (Title IV, “Administration and Program and Project Evaluation”); *see also* 29 U.S.C. § 791(b) (2000) (requiring departments and agencies of the executive branch to submit affirmative action plans “for the hiring, placement, and advancement of individuals with disabilities. . . . Such plans shall include a description of the extent to which and methods whereby the special needs of employees who are individuals with disabilities are being met.”), *and* 29 U.S.C. § 793 (2000) (requiring similar plans for government contractors).

⁹ Rehabilitation Act of 1973 (Section 504), 29 U.S.C. § 794 (2000).

¹⁰*See* Rehabilitation Act of 1973, § 7(6), Pub. L. 93-112, 87 Stat. 355 (codified as amended 29 U.S.C. § 705(20)(A) (2000)) (defining “handicapped individual” as having a disability which constitutes or results in “substantial handicap to employment” and “can reasonably be expected to benefit in terms of employability from vocational rehabilitation services”).

¹¹Rehabilitation Act of 1973 (Section 501), 29 U.S.C. § 791 (2000).

(Section 503),¹² and activities that received Federal financial assistance and those conducted by an Executive branch or the U.S. Postal Service.

The Section 504 requirement that the disability to be related to employment would be removed by subsequent amendments and implementing regulations.¹³ However, the ADA's subsequent three major categories of disability (i.e., actual disability, regarded as having a disability, and record of a disability)¹⁴ may be traced to the 1974 amendments of Section 504.¹⁵ Subsequent interpreting regulations for Section 504, developed by the Department of Health, Education and Welfare, included the concepts of "reasonable accommodation," "qualified . . . employee" and "undue hardship."¹⁶

The ADA extended the Rehabilitation Act requirement to provide reasonable workplace accommodations to private employers. Small employers, those with less than fifteen employees, however, are excluded from coverage.¹⁷ To be a covered

¹²Rehabilitation Act of 1973 (Section 503), 29 U.S.C. § 793 (2000).

¹³See Rehabilitation Act Amendments of 1974, § 111(a), Pub. L. No. 93-651, 89 Stat. 2-3 (codified as 29 U.S.C. § 705(20)(B)(i)-(iii) (2005)), and 34 C.F.R. § 104.3(j) (2000).

¹⁴ADA, 42 U.S.C. § 12102(2) (2000) (defining "disability").

¹⁵See Rehabilitation Act Amendments of 1974, § 111(a), Pub. L. No. 93-651, 89 Stat. 2 (codified as amended in 20 U.S.C. § 705(20)(B)(i)-(iii) (2000)) (defining a handicapped individual as one "who (A) has a physical or mental impairment which substantially limits one or more of such person's major life activities, (B) has a record of such an impairment, or (C) is regarded as having such an impairment."); see also BLANCK, *supra* note 2, at 28 (arguing that "Congress may not have expected Section 504 to have a major impact").

¹⁶See 34 C.F.R. § 104.12(a) (2005) (requiring that recipients of federal funds "make reasonable accommodation to the known physical or mental limitations of an otherwise qualified handicapped applicant or employee unless the recipient can demonstrate that the accommodation would impose an undue hardship on the operation of its program or activity."); see also 34 C.F.R. § 104.3(1)(1) (2005) (defining "qualified handicapped person" as "a handicapped person who, with reasonable accommodation, can perform the essential functions of the job in question").

¹⁷See ADA, 42 U.S.C. § 12111(5) (2000) (defining "employer" as "a person engaged in an industry affecting commerce who has 15 or more employees for each working day in each of 20 or more calendar weeks in the current or preceding calendar year, and any

individual, an employee or job applicant must be a “qualified individual with a disability.”¹⁸ To be qualified requires the employee have a defined ADA disability and be able to perform the essential job functions with or without the provision of reasonable accommodations.

Pertinent to accommodating employees, disability is defined primarily as having “a physical or mental impairment that substantially limits one or more of the major life activities of such individual.”¹⁹ Whether an individual has an ADA defined disability is dependent on the individual's limitations in “major life activities.” “Major life activities” include “functions such as caring for oneself, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working.”²⁰ Although working is listed as a major life activity in the legislation, simply having a work limitation in one job may not constitute a disability for purposes of the ADA.²¹ To date, the federal courts are split as to whether individuals “regarded as” having a disability or those “with a record of” a disability are ensured workplace accommodations under the ADA.²²

agent of such person” and exempting from the classification of employer “the United States, a corporation wholly owned by the government of the United States, or an Indian tribe; or . . . a bona fide private membership club (other than a labor organization) that is exempt from taxation under section 501(c) of title 26.”); *see also* Clackamas Gastroenterology Assocs. v. Wells, 538 U.S. 440, 448-51 (2003) (applying the EEOC's definition of employee to physician-shareholders to determine if a clinic qualified as an employer under the ADA); BLANCK, *supra* note 2 at 159 (discussing Title I covered employers).

¹⁸See ADA § 12111(8) (defining “qualified individual with a disability”).

¹⁹ADA § 12102(2)(A). The ADA definition of disability also includes those with a record of an impairment or those who are regarded as having an impairment. ADA § 12102(2)(B)-(C). However, these situations are unlikely to require workplace accommodations to complete the essential functions of a job.

²⁰28 C.F.R. § 35.104 (2005). Additionally, the Supreme Court has held that reproduction and childbearing are major life activities under the ADA. *Bragdon v. Abbott*, 524 U.S. 624 (1998).

²¹See *Toyota Motor Mfg. v. Williams*, 534 U.S. 184, 198 (2002) (questioning whether work should be considered to be a major life activity).

²²*Compare* *Weber v. Strippet, Inc.*, 186 F.3d 907, 916 (8th Cir. 1999) (reasoning that requiring employers to accommodate employees who are only regarded as having a

As mentioned, if an individual is a qualified individual with a disability for purposes of the ADA, the employer is required to provide accommodations, unless doing so would impose an undue hardship for the business.²³ Figure 1 summarizes this decision process.²⁴

INSERT FIGURE 1 HERE

disability “would lead to bizarre results”), *and* Mack v. Great Dane Trailers, 308 F.3d 776, 783 n.2 (7th Cir. 2002) (noting the split in circuits and deciding not to address the issue), *and* Workman v. Frito-Lay, Inc., 165 F.3d 460, 467 (6th Cir. 1999), *and* Newberry v. E. Tex. State Univ., 161 F.3d 276, 280 (5th Cir. 1998) (holding that employers do not have to accommodate employees who they only think have an impairment), *and* Barnes v. Nw. Iowa Health Ctr., 238 F. Supp. 2d 1053, 1090 (N.D. Iowa 2002) (holding that an employer is not required to provide accommodations for employee who has a record of a disability and is not “actually disabled” under the ADA), *with* Katz v. City Metal Co., 87 F.3d 26, 33-34 (1st Cir. 1996) (reasoning that the statutory language defining a qualified individual under the ADA does not distinguish between individuals who are regarded as having a disability and those who have an actual disability), *and* Hartog v. Wasatch Acad., 129 F.3d 1076, 1084 (10th Cir. 1997) (stating that reasonable accommodations need not be provided for non-disabled individuals who have a relationship or association with a disabled person).

²³ADA §§ 12112(b)(5)(A).

²⁴The ADA requires that reasonable accommodations be provided to job applicants as well as current employees. This discussion is limited to current employees.

Whether an accommodation defined under the ADA is “reasonable” is determined on a case-by-case basis and by example.²⁵ Relevant to accommodating current employees, Equal Employment Opportunity Commission (EEOC) regulations provide examples of reasonable accommodations, including:

(ii) Modifications or adjustments to the work environment, or to the manner or circumstances under which the position held or desired is customarily performed, that enable a qualified individual with a disability to perform the essential functions of that position; or

(iii) Modifications or adjustments that enable a covered entity's employee with a disability to enjoy equal benefits and privileges of employment as are enjoyed by its other similarly situated employees without disabilities.²⁶

However, just as the outcome of any legal case is determined by the facts, the reasonableness of the accommodation is determined by the particular circumstances of the employee and employer. For example, working from home has been considered a reasonable accommodation for a computer programmer who could maintain his productivity, but not reasonable for other employees who require more direct co-employee collaboration and supervision.²⁷ Inherent in this example is the principle that a reasonable accommodation may alter, within bounds, the way in which a job is performed *without* altering or reducing the expected and essential work outcomes.

Alternatively, one employee may be allowed to start work early and end work earlier in the day for medical or therapy appointments (i.e., flex-time scheduling). That employee would

²⁵See ADA § 12111(9) (defining reasonable accommodations).

²⁶29 C.F.R. § 1630.2(o)(1)(ii)(iii) (2004).

²⁷*Compare* Vande Zande v. Wis. Dep't of Admin., 44 F.3d 538, 544-45 (7th Cir. 1995) (holding unreasonable an accommodation request to work full-time at home), *with* Langdon v. Dep't of Health and Human Servs., 959 F.2d 1053, 1060-61 (D.C. Cir. 1992) (holding that an accommodation request to work full-time from home was reasonable for a computer programmer).

work the same number of hours and, therefore, maintain production, but would work at a different time than other employees, assuming the schedule change would not impact essential job functions such as interacting with customers. Likewise, rather than using a standard telephone, one employee with a hearing impairment may be provided TTY/TDD access and use a relay service to communicate with customers, business associates, or other employees.

The ADA does not require a workplace accommodation to be financially justified, nor does it allow for a cost-benefit analysis to justify the individual employee's value to the organization. The ADA permits denial of an accommodation when it creates an undue hardship, that is, it is not reasonable under the circumstances.²⁸ Undue hardships are those actions which require "significant difficulty or expense."²⁹

The ADA outlines factors to be considered in determining whether providing an accommodation would be an undue hardship. Such factors include as the nature and cost of the accommodation, the financial resources of the facility making the accommodation and number of persons employed on expenses and resources of the facility, the type of operation of the employer, and the impact of the accommodation on the business.³⁰ Thus, in determining reasonableness, although net cost of the accommodation may be one factor, it is balanced by size of the employer and the resources available to it.³¹ An accommodation

²⁸EQUAL EMPLOYMENT OPPORTUNITY COMMISSION, ENFORCEMENT GUIDANCE: REASONABLE ACCOMMODATION AND UNDUE HARDSHIP UNDER THE AMERICANS WITH DISABILITIES ACT (2000), available at <http://www.eeoc.gov/policy/docs/accommodation.html> (last visited Mar. 23, 2006) [hereinafter EEOC]; see also *Morton v. United Parcel Serv., Inc.*, 272 F.3d 1249, 1257 (9th Cir. 2001) (restricting reasonable accommodations to those which do not impose an undue hardship).

²⁹ADA § 12111(10)(A).

³⁰EEOC, *supra* note 28; see also ADA § 12111(10)(B); 29 C.F.R. § 163(p)(2), pt. 1630 app. § 1630.2¶ (2004).

³¹See *Lovejoy-Wilson v. NOCO Motor Fuel, Inc.*, 263 F.3d 208, 221 (2d Cir. 2001) (comparing the difficulty of the accommodation to the size of the employer and the and resources available to it); see also EEOC, *supra* note 28 (arguing that net cost of the ac-

that might be prohibitively expensive for a small business may not be so for a large corporation.

Some critics³² have argued that the ADA's accommodation provision creates an employment privilege or subsidy for individuals with disabilities. Although the factors for determining whether an accommodation is an undue burden do not include benefits to the company, such critics presume, all else being equal, the net costs of accommodations typically exceed the benefits to employers and individuals with disabilities.³³

Yet, prior studies show the costs associated with employee turnover and workplace injury tend to outweigh the direct costs associated with accommodation.³⁴ When an accommodation has no net cost to the employer, an employer should be willing to provide the accommodation regardless of legal requirements because the net benefit to the employer is a more productive and loyal employee.³⁵ Our prior research³⁶ and that of others shows workplace accommodations are typically low cost, effective, and net beneficial for employers.

Building on our previous studies,³⁷ we explore here new

accommodation to the employer should take into consideration funding from outside sources, such as state rehabilitation agencies, tax credits or deductions and, when appropriate, resources from the disabled individual).

³²See CAROLYN L. WEAVER, *Incentives Versus Controls in Federal Disability Policy*, in *DISABILITY AND WORK: INCENTIVES, RIGHTS AND OPPORTUNITIES* 3-17 (Carolyn L. Weaver ed., 1997).

³³See generally Peter David Blanck, *The Economics of the Employment Provisions of the Americans with Disabilities Act: Workplace Accommodations*, in *EMPLOYMENT, DISABILITY, AND THE AMERICANS WITH DISABILITIES ACT: ISSUES IN LAW, PUBLIC POLICY, AND RESEARCH* 201 (Peter David Blanck ed., 2000) (discussing economic models of the ADA).

³⁴Peter David Blanck, *The Economics of the Employment Provisions of the Americans with Disabilities Act: Workplace Accommodations*, 46 *DEPAUL L. REV.* 877 (1997).

³⁵See Ellen S. Fabian, et al., *Reasonable Accommodations for Workers with Serious Mental Illness: Type, Frequency, and Associated Outcomes*, *PSYCHOSOCIAL REHABILITATION J.*, Oct. 1993, at 163 (reporting that providing accommodations was significantly and positively correlated with employee tenure).

³⁶Schartz, *supra* note 4; see also Hendricks, *supra* note 4.

³⁷See Schartz, *supra* note 4; see also Hendricks, *supra* note 4.

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empirical evidence on the accommodation decision making process. Described in detail elsewhere,³⁸ the present analysis is based on the nationwide sample of employers who contacted the Job Accommodation Network (JAN) about workplace accommodations. Because the majority of employers in the sample requested information concerning a current employee, we have restricted the present analysis to those cases.

³⁸See Hendricks et al., *supra* note 4 (describing sample characteristics and methodology in more detail).

III. EVIDENCE OF ACCOMMODATION DETERMINATIONS—THE JAN INTERVIEW STUDY

In partnership with JAN and the Burton Blatt Institute, the Law, Health Policy, and Disability Center has been conducting follow-up telephone interviews of JAN customers to assess their business needs and the practical usefulness of the accommodation solutions discussed.³⁹ JAN is a free consulting service, funded by the U.S. Department of Labor's Office of Disability Employment Policy (ODEP). It provides individual consultations about workplace accommodation solutions, self-employment options, and technical assistance about disability-related legislation.⁴⁰ JAN serves large and small employers; individuals with disabilities; rehabilitation, medical, and legal professionals; and families and friends of individuals with disabilities.

A. *The Interviews*

³⁹See Hendricks, *supra* note 4; see also Schartz, *supra* note 4.

⁴⁰Job Accommodation Network, *available at* <http://www.jan.wvu.edu/> (last visited on Oct. 5, 2005).

The interviews conducted for this study include a series of forced-choice and open-ended questions. Separate interview scripts are prepared for each group (e.g., employers; individuals with disabilities; rehabilitation, medical, and legal professionals; families and friends of individuals with disabilities; and others). Participants answer demographic and disability-related questions about the person who is the subject of the consultation, along with questions about the accommodations considered and about the company. For accommodations implemented, employers are asked about the direct and indirect costs and benefits and the effectiveness of the accommodations. Questions about satisfaction with and effectiveness of the JAN services are included in the interview scripts. Interviews take place between forty-five and sixty days after the JAN consultation in order to give employers time to consider and possibly implement accommodations.

The data reported here are derived from a subset of follow-up interviews that took place between January 2004 and June 2005 with employers who consulted JAN about accommodating a current employee. The majority of JAN consultations about accommodation solutions come from employers.⁴¹ Of the 1241 employer contacts provided by JAN, 890 completed the interview, resulting in a 71.7% completion rate.⁴² Of the 890 interviews, the majority (75.2%) were employers requesting information about accommodating a job applicant or current employee. Other calls were for information about the ADA, other laws, or company policies.⁴³

⁴¹Hendricks, *supra* note 4.

⁴²Participants for the follow-up interviews were initially recruited by JAN consultants. At the end of the individualized consultation, the JAN consultants offer the caller an opportunity to participate in a follow-up interview. Participation in the interview is voluntary. These callers are contacted by LHPDC approximately forty-five to sixty days after the consultation, allowing time for employers to decide on and possibly implement accommodation solutions.

⁴³Of the 890 employer interviews, 665 (74.7%) requested information on the ADA or other disability legislation or company policies. Most calls (52.6%) concerned multiple requests, including both information on accommodating an applicant or employee and

Of the consultations concerning workplace accommodations, the vast majority concerned accommodating a current employee. More than three-fourths (82.4%) of these consultations focused on retaining an employee and an additional 1.8% concerned promoting a current employee. Accommodation inquiries for job applicants made up a small percentage of the sample (4.6%), as did inquiries about hiring new employees (1.6%). Some inquiries did not concern a particular employee, but rather, involved a company-wide issue (4.5%). The analyses below are restricted to employer consultations concerning accommodations for retaining or promoting a current employee.

B. The Employees

Employers reported demographic information on the employees who were the subject of the consultation. The “typical” employee was female, a high school graduate, and in her mid-forties to mid-fifties. On average, the employee worked for the company about seven years and earned \$36,000 per year. We found that these employers likely viewed the employee at issue as having substantial limitations of non-work and work activities.

Specifically, employers requested JAN's assistance with accommodations for substantially more female (60.9%) than male (39.1%) employees.⁴⁴ Employees were likely to be in their mid-forties to mid-fifties (24.7%), mid-thirties to mid-forties (22.6%), or mid-twenties to mid-thirties (15.8%). The oldest employees in the sample (more than fifty-five years of age, 10.0%) and youngest (less than twenty-six, 5.2%) were less likely to be the subject of the consultation. Employees discussed were likely to have a high school diploma or GED (38.6%) or a college degree (28.5%). Few had an Associate's Degree (12.2%), a graduate or professional degree (12.2%), only a high school certificate (5.9%), or did not complete high school (2.7%).

On average, employees that were discussed had worked with the

legislation or policy information.

⁴⁴In subsequent analyses, we will examine job type and income levels (among other factors) as functions of gender to assess this accommodation rate difference.

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company for more than seven years (i.e., mean 7.7 years, median 5.0 years, range of less than one year to thirty-eight years). Annual wages ranged from \$1,560 to \$135,000 with a mean of \$36,128.⁴⁵ As predicted, higher annual wages were significantly correlated with employee's age, gender (with male employees), level of education, and company tenure. Table 1 displays the intercorrelations among the employee demographic variables.⁴⁶

INSERT TABLE 1 HERE

⁴⁵Sample size (N) = 332.

⁴⁶Employee demographic variables were compared using Pearson Correlations. A Pearson Correlation (r) is a statistical measure of the linear relationship between two variables. It can range from +1, perfect positive linear relationship, to -1, perfect negative linear relationship.

Employers were asked whether the employee at issue had a physical, mental, or other health condition that substantially limited a major life activity (i.e., mirroring the ADA's definition of disability). Separate questions were asked for substantial limitations in major life activities other than working, such as breathing, thinking, walking, talking, seeing, hearing, and so on, (i.e., a non-work related, but ADA covered disability), and the kind and amount of work limitation. Of the 521 employers who reported on an employee's limitation, the majority (79.7%) of employees had substantial limitations in a major life activity (either work related, non-work related, or both). For purposes of these analyses, employees with substantial limitations, either in work or non-work major life activities, were considered to meet the ADA disability definition. Thus, employees were classified based on whether the employer regarded them as having a substantial limitation of a major life activity and thus, a person with a disability for purposes of the ADA.

As expected, disability status was associated with age.⁴⁷ Employees with disabilities therefore were more likely to be older, in their mid-forties to mid-fifties, compared to those without substantial limitations. Figure 2 provides the distribution of employees by age and disability status. Importantly, disability status was not significantly related to other employee demographic variables such as race or gender.

⁴⁷Pearson correlation (r) = .097, $p < .05$, $N = 416$.

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INSERT FIGURE 2 HERE

C. Company Demographics

A range of employers participated in the interviews. Company size ranged from small (e.g., five employees) to those with almost one million employees. The mean company size was large, with 13,652 employees. The median company size was 1300 employees. Pertinent to whether they are subject to ADA requirements, the majority (98.3%) had fifteen or more employees; a few (1.7%) had less than fifteen employees. One-third (30.9%) had consulted with JAN before.

Company size, as a function of number of employees, was significantly related to employee gender ratios and wages (i.e., larger companies had a higher percentage of male employees and paid higher wages, relative to smaller companies). Table 2 summarizes these correlations between company size and employee demographic variables.⁴⁸

⁴⁸Sub-analyses found that the size of company positively correlated with wages for female employees ($r = .188$, $p < .05$, $N = 175$) but not for male employees ($r = .095$, n.s., $N = 133$.) In other words, female employees working in larger companies have relatively higher wages than females working in smaller companies.

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D. Accommodation Decisions

For more than half of the consultations, workplace accommodations were made subsequent to the consultation with JAN. Of the 540 employers who provided feedback, accommodations had been made (or were pending implementation) after more than half (55.2%) of the consultations. Accommodations had not been made in 44.8% of the cases.

The prevalent reason reported for not making an accommodation was when the company determined it was not required under the ADA or another law (58.5%). In other cases, the decision to accommodate was pending (19.9%) at the time that the employer was interviewed. In fewer cases, the accommodation had been rejected (15.4%) or the employee decided it was not necessary (2.5%). In less than one percent of cases (0.4%), an accommodation was reported as not possible.

The reported reason for not making the accommodation differed depending on disability status (i.e., having a substantial limitation on a major life activity or not).⁴⁹ Table 3 summarizes employers' given reasons for not providing the accommodation by disability status. The follow-up statistical analysis revealed that accommodation-decision differences by disability status were functions of employees without substantial limitations; being more likely to have decided that the accommodation was not necessary, as compared to employees with substantial limitations.⁵⁰ One possible explanation for this difference is that employees without substantial limitations may have been more likely to have short-term impairments (e.g., recovering from surgery or complications in pregnancy) that would not have been seen to be covered under the ADA.

⁴⁹Chi-square test for independence (χ^2) is a nonparametric statistical test used to determine if there is a relationship between two variables using frequency data. Comparison of reasons accommodation was not made by employee status, $\chi^2(5, N=213) = 14.194$, $p < .05$.

⁵⁰"Determined not needed by employee" compared to aggregate of all other reasons, $\chi^2(1, N = 213) = 10.082$, $p < .01$.

INSERT TABLE 3 HERE

E. Factors Associated with Accommodation Decision

Under the ADA, the decision to accommodate is made for an employee with a covered disability. A substantial limitation of a major life activity is one requirement of the ADA's definition of disability. Therefore, an employer's report or perception of whether the employee at issue has a substantial limitation

should predict, in part, whether an accommodation actually was made. Employers are not required to provide accommodations for individuals who are not defined as having a disability (i.e., a substantial limitation of a major life activity).

As expected, accommodations were most likely to be made for employees who were considered to have a substantial limitation of a major life activity.⁵¹ Accommodations were made in more than half (61.2%) of the 402 consultations for employees with substantial limitations. Though significantly fewer cases, accommodations were also made in a considerable number of cases (42.6% of 101) for employees whom the employer reported did not have a substantial limitation of a major life activity.

Under the ADA, employers are required to provide reasonable accommodations only for *qualified* employees with covered disabilities (i.e., employees who can perform the essential functions of the job with or without accommodations).⁵² For employees with work-related substantial limitations, employers were asked to rate the employee's functional limitations both with and without accommodations. We hypothesized that employers' decisions to accommodate would be related to employees' functioning with, rather than without, accommodations. As mentioned, under the ADA, an employer is required to provide a reasonable accommodation to an employee who can do essential job functions given the accommodation.⁵³ An employer would not be required to provide a reasonable accommodation if the employee could not perform the essential functions even with the accommodation. Assuming employers were adhering to the ADA analysis, the decision to accommodate should not be based on the employee's ability to work without accommodations; rather it should be based on the employee's essential job abilities with accommodations.

As predicted, whether an accommodation was made significantly correlated with employers' ratings of the employee's functional ability to work *with* accommodations. Using a 5-point scale with

⁵¹ $\chi^2(1, N = 503) = 11.449, p < .01$.

⁵²ADA, 42 U.S.C. § 12112(b)(5)(A) (2000).

⁵³*Id.*

1 as “not limited” and 5 as “substantially limited,” employers rated the particular employee's functional ability to work with and without accommodations. We found that employers rated employees as significantly less limited in their ability to work with accommodations than without.⁵⁴ The rating of an employee's functional ability to work given accommodations therefore is related significantly to whether an accommodation was made.⁵⁵ In other words, employers were more likely to provide accommodations for individuals whose work limitations would be mitigated by the accommodations. Conversely, they were less likely to provide accommodations if they reported the employee to be substantially limited even with the accommodations. Consistent with the ADA definition, provision of accommodation was not associated with the employee's work-related functional limitations without accommodations.⁵⁶

To determine whether other factors, potentially not relevant to ADA, related to the provision of accommodations subsequent to the JAN consultation, the variable “Accommodation Decision” (i.e., yes or no) was correlated with demographic and company variables. As expected, employee demographic variables and company variables were not significantly related to whether an accommodation was made. Moreover, accommodation decisions were not related to employee age, gender, education, annual salary or wages, or years with the company. The accommodation provision was not significantly correlated with the size of the company or whether the employer had previously contacted JAN. Table 4 summarizes these findings.

⁵⁴Mean rating of functional limitation without accommodations was 3.69, and mean rating with accommodations was 2.19, Paired Samples t-test (252) = 19.124, $p < .001$. A t-test is a statistical test used to determine if there is a significant difference between the means of two variables. The Paired Samples version is used when the samples are related. In this case, the samples are related because it is a repeated measures design.

⁵⁵Pearson correlation (r) = .224, $N = 251$, $p \leq .001$.

⁵⁶Pearson correlation (r) = .051, $N = 283$, n.s.

INSERT TABLE 4 HERE

F. Accommodation Direct Costs and Benefits

To further assess the reasons why employers provide workplace accommodations to employees without “substantial limitations,” we analyzed employer reports of direct costs and benefits associated with providing the accommodations. Cost and benefit data were available only in those situations in which the employer had decided to provide the accommodation. Of the respondents who made an accommodation, 226 were able to provide the actual or estimated direct cost of the accommodation.

Costs were classified by type of cost: no cost, one-time, annual, or both one-time and annual costs. To include both one-time and annual cost estimates, a “First Calendar Year Direct Accommodation Cost” was calculated using the one-time cost reports and one year's worth of the annual cost reports. We found that approximately half (49.1%) of the accommodations made had no cost. Almost three-quarters (74.8%) had a First Calendar Year Cost of \$500 or less. Of the 115 that had a cost, the median First Calendar Year Cost was \$500.

The “First Calendar Year Direct Accommodation Cost” was associated with disability status. Accommodations for employees with disabilities (i.e., substantial limitations of a major life activity) were significantly more expensive than those for employees without disabilities.⁵⁷ The proportion of accommodations without a cost did not differ by disability status.⁵⁸ However, for accommodations that had a cost, the median accommodation cost for employees with substantial limitations was \$629, which was significantly greater than the median of \$100 for employees without substantial limitations. Table 5 summarizes these

⁵⁷First Calendar Year Direct Accommodation Cost data were positively skewed because of the high frequency of zero responses. Therefore, data were transformed using $\ln(x + 1)$ to reduce the skewness of the data. Groups were compared using an independent samples t-test, $t(57.75) = 2.336$, $p < .05$. The independent samples version is used when the two samples are not related.

⁵⁸ $\chi^2(1, N = 222) = 1.326$, n.s.

findings.

INSERT TABLE 5 HERE⁵⁹

⁵⁹The cost estimates presented in Table 5 are only for accommodations made and not for those rejected.

The results suggest that for employees without substantial limitations, presumably individuals for whom employers may not have an ADA obligation to provide accommodations, employers may be willing to provide accommodations when the costs are low. For employees without ADA defined disabilities, more expensive accommodations may be rejected by the employer at higher rates.

Almost all employers reported that providing the accommodation benefited the company by allowing it to retain (91.6%) and/or promote (11.3%) a qualified employee. Other direct benefits reported included eliminating the cost of training a new employee (59.5%), saving on worker's compensation or insurance costs (43.0%), increasing the accommodated worker's productivity (76.7%), improving the accommodated worker's attendance (53.3%), increasing the diversity of the company (41.4%), and "other" direct benefits (20.1%).

Of the eighty-three employers who provided monetary estimates, more than half (57.8%) reported their company benefited more than \$1,000 from providing the accommodation. The median or typical direct benefit to the company was \$1,800. Direct benefit estimates ranged from \$0 to \$100,000.

Of the seventy-five employers who provided benefit and cost estimates, net benefit was calculated from estimated direct benefits minus calendar year direct cost estimates. For the majority (81.3%) of these employers, the estimated benefits of providing the accommodation offset the costs of the accommodation. For over half (61.3%), net benefits were positive, meaning that the benefits gained from providing the accommodation outweighed the cost of the accommodation. For one-fifth (20.0%), benefits were equal to the cost of the accommodation. For the remaining 18.7%, accommodation costs exceeded benefits to the company.

Although estimated direct benefit did not differ by type of limitation,⁶⁰ there was a trend for net benefits to be greater for

⁶⁰Direct benefit data were positively skewed. Therefore, data were transformed using $\ln(x + 1)$ to reduce the skewness of the data. Groups were compared using an

accommodations for employees with substantial limitations than for those without substantial limitations.⁶¹ Further analyses revealed that benefit differences occurred for accommodations with zero cost and not for those with greater than zero cost. For accommodations with no cost, direct benefit estimates were significantly greater for employees with substantial limitations compared to those without. For the subset of accommodations which had no cost, the median benefit for accommodating employees with a disability was \$3500 compared to a median of \$0 for accommodating employees without a disability. Because there was no cost to the accommodation, the employer received the total benefit. For accommodations with a cost, neither direct benefits nor net benefits differed for employees with, compared to those without, substantial limitations.⁶²

Direct benefits estimates were not significantly related to employee demographics, company size or calendar year direct costs. Not surprisingly, net benefits were significantly associated with wages.⁶³ In other words, the company reported greater net benefits associated with accommodating those employees with higher wages. Employees with higher wages likely are more expensive to replace (e.g., recruitment, training, and start-up costs may be greater), and in providing accommodations, the employer avoids those costs and realizes a net benefit.

IV. CONCLUSIONS AND IMPLICATIONS

The present study's core findings may be summarized as follows:

1. Consistent with the ADA's requirements, current employees with substantial limitations of major life activities are substan-

independent samples t-test, $t(77) = 1.258$, n.s.

⁶¹ χ^2 median test (1, $N = 73$) = 3.425, $p = .064$. This statistical test uses a chi-square to compare frequency of scores greater than median to those less than median for two groups.

⁶²Independent samples t-test on transformed direct benefit data, equal variances assumed, $t(34) = -.711$, n.s.

⁶³Pearson correlation ($r = .402$, $p < .005$, $N = 59$). Independent samples t-test on net benefits, equal variances assumed, $t(34) = .330$, n.s.

tially more likely to receive accommodations, compared to those without substantial limitations.

2. Employers are more likely to provide accommodations for employees whose work-related limitations are mitigated by effective accommodations.

3. Factors not relevant to the ADA accommodation decision process (e.g., age, gender, job tenure, and wage level) did not predict the provision of accommodations.

4. Employers provided accommodations to a substantial number of employees who did not meet the ADA's definition of disability.

5. Accommodations for employees without substantial limitations cost less than those provided to employees with substantial limitations.

6. Overall, accommodation costs are low and benefits relatively high.

The present results, perhaps the first of their kind, provide strong construct validity (i.e., observations that fit the theory) for the rationale underlying the ADA's accommodation process.⁶⁴ If replicated, the findings suggest employer accommodation decisions largely are based on factors consistent with the ADA model—a focus on employees with substantial limitations of a major life activity, and on the ability to perform essential job functions with the provision of accommodations. Demographic factors that are not directly relevant to the accommodation process (e.g., gender or age) did not predict the provision of accommodations.

Employers provided accommodations to a considerable number of employees who did not meet the substantial limitation requirement under the ADA. In this study, almost half (43%) of accommodated employees did not have substantial limitations of a major life activity. Certainly, a number of these employees may have been covered by the ADA because they were regarded as

⁶⁴See KENNETH S. BORDENS & BRUCE B. ABBOTT, *RESEARCH DESIGN AND METHODS: A PROCESS APPROACH* (2d ed., 1991) (defining construct validity as a means to assess how well the data fit a hypothetical construct).

having a record of a disability. In other cases, employers may have been required to provide accommodations under a state law that exceeded the ADA's requirements.⁶⁵ Although those factors may account for a subset of these cases, it is likely that employers perceive the net benefit from accommodation, especially if the cost of the accommodation is relatively low and the cost of turnover is high. Although the accommodation process does not turn on a cost-benefit analysis, employers clearly seem to be considering costs and benefits when providing accommodations to an individual without a covered disability.

For employees without substantial limitations, the findings are more in line with employers performing a cost-benefit analysis. Accommodations provided to employees without substantial limitations were found to cost relatively less than those provided to employees with substantial limitations. Of course, employers are not required under law to provide accommodations to all employees; in the context of the ADA, employers are required to provide accommodations only to those qualified employees with defined disabilities. Employers are free to reject or dismiss requests from non-disabled employees, and they are likely do so at a great rate, especially for costlier accommodations. It may also be that employees without substantial limitations tend not to request accommodations (or at least not costlier ones), believing they do not have a legal basis for the request.

Further research is needed to examine the reasons employers choose to accommodate disabled and non-disabled employees, and what factors govern those decisions. In addition, more research is needed to assess who asks for accommodations and why. Outcomes to assess include the provision accommodations and net cost or benefit to the employer.

Lastly, our findings continue to support the general conclusion that most accommodation costs are low and the resultant

⁶⁵See, e.g., California Fair Employment and Housing Act, CAL. GOV'T CODE §§ 12900-12996 (West 2005) (prohibiting discrimination based on disability by public and private employers and requiring reasonable accommodations); see also CAL. GOV'T CODE § 12926(k)(1)(B)(i) (West 2005) (defining physical disability as a condition that "limits" rather than substantially limits a major life activity).

benefits relatively high. Almost half of the accommodations studied here were made at no cost for current employees with ADA defined disabilities and more than half for current employees without reported substantial limitations. Employers themselves report substantial benefits from the provision of accommodations.

The present line of study lends itself to use in employer ADA awareness programs to convey the low costs and high benefits of accommodating qualified individuals with disabilities. Despite such findings that accommodations are inexpensive and effective, many qualified individuals with disabilities remain unemployed because of an unwillingness on the part of employers to accommodate. Those employers in this study who contacted JAN may not be representative of many others who chose not to engage in the accommodation process.

As employers continue to provide effective accommodations at low cost with a significant positive return on the investment, there may be a growing willingness to make accommodations. Future studies will continue to refine and document the “business case” for accommodations. As employers and persons with disabilities recognize the potential value of workplace accommodations, employment rates may improve for all qualified individuals.