

Empirical Study of the Americans with Disabilities Act: Employment Issues From 1990 to 1994

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The Americans with Disabilities Act (ADA) of 1990 is the most comprehensive federal civil rights law addressing discrimination against one-fifth of the American population. This article is meant to contribute to the emerging dialogue on ADA implementation by presenting information from a longitudinal investigation of employment integration and economic opportunity under the employment provisions of the ADA, set forth in Title I of the act. The broader relevance of the investigation to emerging questions under Title I law is described. Thereafter, the investigation's seven core findings are presented, and then the implications for future investigation of the ADA are examined.

I. INTRODUCTION

The Americans with Disabilities Act of 1990 (ADA)¹ has played a significant role in enhancing labor force participation of qualified persons with disabilities and in reducing dependence on governmental entitlement programs. Despite these advancements, systematic evaluation of the lives of persons with disabilities under ADA implementation is lacking.² The promise of the ADA to integrate into the work force millions of Americans makes this lack of information particularly troubling.³

Many critical of the ADA argue that there is little empirical evidence that ADA-mandated measures have resulted in larger numbers of qualified persons with disabilities participating in the workplace.⁴ To address these issues, President Bill

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¹ Americans with Disabilities Act of 1990, 42 U.S.C. §12101 *et seq.*

² PETER D. BLANCK, COMMUNICATIONS TECHNOLOGY FOR EVERYONE: IMPLICATIONS FOR THE CLASSROOM AND BEYOND (White Paper and CDROM) (The Annenberg Washington Program 1994).

³ See NATIONAL ACADEMY OF SOCIAL INSURANCE, PRELIMINARY STATUS REPORT OF THE DISABILITY POLICY PANEL 135 (1994).

⁴ E.g., Sherwin Rosen, *Disability Accommodation and the Labor Market*, in DISABILITY AND WORK: INCENTIVES, RIGHTS, AND OPPORTUNITIES 18, 22 (Carolyn L. Weaver ed., 1991).

Clinton formed a task force in 1994 to examine the implementation of federal disability policy. Senator Bob Dole has indicated the need for Congress to establish a National Commission on the Future of Disability, charged with studying and evaluating disability policy into the next century.⁵ These efforts reflect the belief that effective disability policy—set forth in the ADA and other laws—must be studied, monitored, and updated. Adequate information is necessary to rebut the myriad of myths and misconceptions about persons with disabilities, in the employment context and elsewhere.⁶

This article is meant to contribute to the emerging dialogue on disability policy by presenting information from an investigation of employment integration and economic opportunity under the ADA. The program of study has three goals: to foster meaningful and informed dialogue about the ADA; raise awareness about the lives, capabilities, and needs of people with disabilities; and forestall or minimize disputes about ADA implementation by providing information to improve communication.⁷

Begun in 1989, the investigation examines the implementation of the employment provisions of the ADA as set forth in Title I of the Act.⁸ The investigation follows the lives of some 4000 adults and children with mental retardation by collecting information on individual, economic, and legal measures.⁹ The information described here was first collected in 1990, two-and-a-half years before the July 26, 1992, effective date of Title I. Earlier articles in the series describe the array of information collected each year since 1990.¹⁰

This article highlights the findings from the first five years of study, focusing on changes in the participants' social and economic positions as indicators of progress. The findings are descriptive, presenting a view over time of the participants' backgrounds, attitudes, and behaviors relevant to employment integration and economic opportunity under the ADA. They also are exploratory, documenting and charting trends prior to and after Title I implementation.¹¹

In the investigation, there are two types of dependent or outcome measures: The first is a measure of employment integration, as assessed by employment category in 1994 and by changes in employment category from 1990 to 1994. The second

⁵ See Bob Dole, *Are We Keeping America's Promise to People with Disabilities?—Commentary on Blanck*, 79 IOWA L. REV. 925, 928 (1994).

⁶ See *ADA Watch Year One: A Report to the President and the Congress on Progress*, in IMPLEMENTING THE AMERICANS WITH DISABILITIES ACT 3 (National Council on Disability 1993).

⁷ ABA COMMISSION ON MENTAL AND PHYSICAL DISABILITY LAW AND COMMISSION ON LEGAL PROBLEMS OF THE ELDERLY, TARGETING DISABILITY NEEDS: A GUIDE TO THE AMERICANS WITH DISABILITIES ACT FOR DISPUTE RESOLUTION PROGRAMS 3 (1994); Francine S. Hall & Elizabeth L. Hall, *The ADA: Going Beyond the Law*, 8 ACAD. MGMT. EXEC. J. 17 (1994).

⁸ 42 U.S.C. §§12101-17 (Supp. IV 1992); 47 U.S.C. 225, 611 (Supp. IV 1992).

⁹ Based on a sample size of 1127 adults, the demographics are: 57% ($n=643$) men and 43% women ($n=484$); 84% ($n=950$) white and 16% ($n=177$) minority. Ages ranged from 18 to 72 years.

¹⁰ Peter D. Blanck, *The Emerging Work Force: Empirical Study of the Americans with Disabilities Act*, 16 J. CORP. L. 693 (1991); Peter D. Blanck, *Employment Integration, Economic Opportunity, and the Americans with Disabilities Act: Empirical Study from 1990 to 1993*, 79 IOWA L. REV. 853-939 [hereinafter "Empirical Study"].

¹¹ See also Peter David Blanck, *Assessing Five Years of Employment Integration and Economic Opportunity under the Americans with Disabilities Act*, 19(3) MENTAL & PHYSICAL DISABILITY L. REP. 384-392 (1995) (describing other findings for the present investigation).

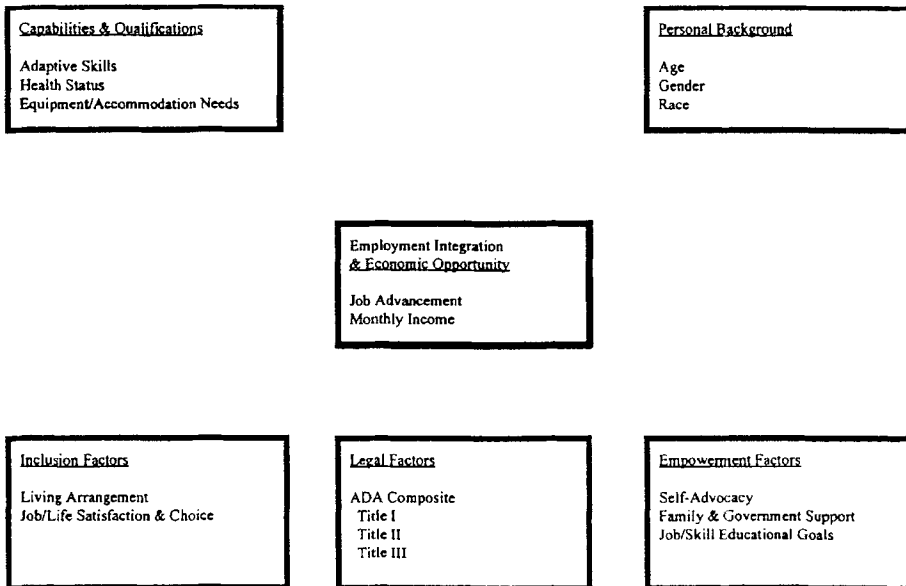


Figure 1 Model of employment integration and economic opportunity

measure, economic opportunity, is defined by measures of earned income in 1994, and by changes in gross monthly income from 1990 to 1994. A framework for the study of employment integration and economic opportunity is presented above as Figure 1.

Several measures in the model are used to identify trends in employment integration and economic opportunity. These predictor variables include assessments of the participants' personal backgrounds, capabilities and qualifications, inclusion and empowerment in society, and perceptions of ADA implementation.

Seven core findings identified here may be summarized:

1. *Employment Integration*: Although over time the majority of individuals remain in the same type of employment, by 1994, one-third are employed in more integrated and competitive settings.

2. *Economic Opportunity*: Although the average gross incomes of all participants rises, over time, men show consistently higher levels of earned income.

3. *Individual Growth*: Individuals improve substantially in their capabilities and qualifications, and level of inclusion and empowerment in society.

4. *Black Hole Effect*: Most participants not employed or employed in non-integrated settings in 1990 remain in these settings in 1994.

5. *Perceptions of ADA Implementation*: Although from 1990 to 1992, perceptions of rights and access increase, by 1994, reported levels of ADA rights and accessibility drop to levels comparable to those reported in 1990.

6. *Complex Relationships in the Model*: The findings show predictive relationships on measures in the model, individually and in combination, relevant to an improved understanding of employment integration and economic opportunity.

7. *The "Emerging" Workforce*: Analyses of the sub-group of individuals ages 21-24 in 1994 ("first-generation ADA pioneers") reflect an emerging group of young, qualified persons with disabilities.

With these core findings in mind, and assuming familiarity with the ADA, the next section describes the broader relevance of the investigation to emerging questions under Title I law. Section III then describes the findings from 1994, and Section IV examines their implications for future investigation.

II. ASSESSING TITLE I OF THE ADA

Title I prohibits covered entities from discriminating against a qualified person with a disability in any aspect of employment. Discrimination under Title I includes the failure to provide reasonable accommodations to a qualified person with a disability, unless doing so creates an undue hardship.

Despite attempts at clarification by the EEOC and guidance from the developing case law, there remains ambiguity in the concept of discrimination with regard to ADA compliance.¹² As a consequence, interpretations of the ADA as an employment discrimination law often have been misguided and incomplete.¹³ Some commentators view the ADA as extending the guarantees of equal employment opportunity well beyond the scope of previous anti-discrimination laws.¹⁴

Professor Donohue argues that the ADA distorts the market value of labor to employers. Donohue contends that the law requires employers to presumptively take "affirmative" measures to accommodate persons with disabilities.¹⁵ He concludes that the trend in employment discrimination law, evidenced most recently in the ADA, is toward an expanded definition of equality in the work place, at the expense of economic efficiency.¹⁶ To address such concerns, in-depth examination, via quantitative and qualitative study, of the scope of the anti-discrimination provisions of Title I must be a central goal of future study.¹⁷

Covered persons with disabilities encompass a wide range of individuals. The now familiar definition—a person with a disability either has a known physical or mental condition or impairment that "substantially limits major life activities," "a record of" a physical or mental condition, or is "regarded as" having such a condition—has spawned a wide range of unanticipated legal claims, some justified, some not.¹⁸

¹² See George Rutherglen, *Discrimination and its Discontents*, 81 VA. L. REV. 117 (1995); see also *The Lawyer's Friend*, *Fortune*, May 29, 1995, at 176 (noting confusion as to meaning of ADA's terms).

¹³ John J. Donohue III, *Employment Discrimination Law in Perspective: Three Concepts of Equality*, 92 MICH. L. REV. 2583 (1994).

¹⁴ *Id.* at 2608-2611.

¹⁵ *Id.* at 2611.

¹⁶ *Id.* at 2586 (arguing that this trend poses a concern because expanding the category of protected persons carries a risk of diluting protection to groups already defined as members of the protected group).

¹⁷ To stimulate this dialogue, the EEOC has issued guidelines for analysis of the statutory definition of disability. See EEOC COMPLIANCE MANUAL, *Definition of the Term Disability* §902, Mar. 15, 1995, available in Westlaw, BNA-DLR, File No. 51 d30, (Directives Transmittal Full Text).

¹⁸ See, e.g., *Zande v. State Dept. of Admin.*, 44 F.2d 538 (1995) (discussion of concept of disability, qualified individual, and reasonable accommodation).

The framework illustrated in Figure 1 helps identify the variables that need to be studied to achieve understanding of an individual's particular disability and its relation to employment opportunity and advancement. Disability is viewed as a function of the skills of the person (*e.g.*, highlighted in Figure 1 by factors such as "capabilities and qualifications") and the environment (*e.g.*, highlighted by factors such as "inclusion" and "empowerment").

Questions such as the following arise and may be studied:

- (1) What constitutes a disability for purposes of ADA analysis?¹⁹
- (2) What constitutes a substantial limitation on the major life activity of work?²⁰
- (3) How may substantial limitations on major life activities change over time for individuals with different disabilities and different job skills?
- (4) To what extent do individual empowerment strategies enhance work place rights and advancement?
- (5) How do the living environments of individuals with different disabilities support their ability to attain and retain work?²¹, and
- (6) What are opportunities and barriers facing the emerging workforce of young persons with disabilities?

The concept of a "qualified individual with a disability" is central to the ADA's goal of equality of economic opportunity. In establishing employment qualifications and essential job functions, the applicant's experience and skills are considered without the provision of accommodations. An individual with a disability is "qualified" if the individual satisfies the prerequisites for the job, such as educational background or employment experience, and can perform essential job functions.²² Adequate information on the relation between the type of disabling condition and essential skills required to perform certain jobs or work functions is emerging.²³ In the absence of such information, for many persons with disabilities employment qualification decisions often are based on myths about individual potential.

The investigation explores individual job skills and other factors (*e.g.*, empowerment and inclusion) necessary for interpreting the term "qualified individual with a disability" in the employment context. Two measures explore individual capabilities and qualifications (*e.g.*, job skill and health status) and reflect one working definition of the term qualified within the meaning of Title I.²⁴ To

¹⁹ Cf. *Coghlan v. H.J. Heinz Co.*, 851 F. Supp. 808 (N.D. Tex. 1994) (job applicant with controlled insulin dependent diabetes not constitute per se disability under the ADA, but requires factual determination); with EEOC COMPLIANCE MANUAL, *supra* note 17, at §902.

²⁰ See Peter D. Blanck & Robert Folberg, *The Americans with Disabilities Act: Emerging Issues for Ophthalmologists*, 101 OPHTHALMOLOGY 1635, 1635 (1994).

²¹ See, *e.g.*, *Helen L. v. DiDario*, 46 F.3d 325 (3d Cir. 1995) (Title II of the ADA requires services for persons with disabilities in most integrated community settings).

²² 29 C.F.R. §1630.2(m & n) (1991).

²³ See, *e.g.*, Peter D. Blanck, *The Americans with Disabilities Act: Issues for Back and Spine Related Disability*, 19 SPINE 103 (1994).

²⁴ The skill measure contains items that assess an individual's functioning and growth. For each participant a skill score is generated (*e.g.*, reflecting abilities in employment, selfcare, mobility, and communication). See Empirical Study, *supra* note 10, at 876-79. The health-status measure assesses the participants' general medical needs. Many persons with mental retardation and good health status face limitations in employment integration and advancement as a result of discrimination. See Paula M. Minihan & Deborah H. Dean, *Meeting the Needs for Health Services of Persons with Mental Retardation Living in the Community*, 80 AM. J. PUB. HEALTH 1043, 1046-48 (1990).

date, the most common approach has been to define qualifications retroactively, on a case-by-case basis.²⁵

Another area of potential study involves the enforcement mechanisms of Title I, which are guided primarily by reliance on good faith efforts by covered entities to comply (*e.g.*, with monitoring by the EEOC and the Justice Department). In the absence of clear enforcement standards, attempts at proactive compliance may be enhanced by data, rather than by retroactive interpretations of the Act made on a case-by-case basis.²⁶ Study is needed to address questions, such as:

(1) How will "the shadow of the law" affect employers' ability to maintain a qualified work force and economic competitiveness?²⁷

(2) In what ways will the ADA enhance employment opportunity and economic growth for qualified women and men, younger and older workers, workers from different ethnic groups, and workers with varying disabilities?

(3) How will structural labor market forces and an increasingly global economy affect employment integration and the rights of persons with disabilities in this country and abroad?²⁸

(4) How will the EEOC and the courts assess compliance with the law?²⁹, and,

(5) What is the perception and reality of ADA effectiveness, implementation, and compliance experienced by persons with different disabilities?

III. ASSESSING EMPLOYMENT INTEGRATION AND ECONOMIC OPPORTUNITY: CORE FINDINGS

Earlier articles in this series set forth the investigation's research design.³⁰ The information is derived from questionnaire, interview, and observational measures collected annually. The research team explored drop-out rates, measure reliability, and selection issues, and examined ethical concerns of confidentiality, informed consent, and privacy.³¹ The investigation attempts to balance the complex issues involved in conducting longitudinal research with the development of meaningful information on the participants' lives.

Interpretations of the findings focus on general trends in the data. Although statistical testing techniques provide an estimate of the relationship among the measures, causal inferences and generalizations about the findings are made with caution. Many measures, in addition to those set forth here, must be studied to

²⁵ 29 C.F.R. §1630.5 (1991).

²⁶ See PETER D. BLANCK, COMMUNICATING THE AMERICANS WITH DISABILITIES ACT: TRANSCENDING COMPLIANCE: A CASE REPORT OF SEARS ROEBUCK AND CO. (Annenberg Washington Program Report 1994).

²⁷ See, *e.g.*, *Zande v. State Dept. of Admin.*, 44 F.2d 538 (1995) (holding employer has no duty under the ADA "to expend even modest amounts of money to bring about an absolute identity in working conditions between disabled and nondisabled workers.").

²⁸ Peter D. Blanck, Studying Comparative Anti-Discrimination Law: Employment Integration and Economic Opportunity under the ADA from 1990-1994, Presentation at Yale Law School Conference on "Should difference make a difference?" (March 1995).

²⁹ See, *e.g.*, Roy Spiegel, *A Toothless Law*, N.Y. TIMES, Apr. 24, 1995, at A17 (arguing that the ADA is not adhered to because it has no legal force).

³⁰ See generally *Empirical Study*, *supra* note 10.

³¹ See also Robert Rosenthal & Peter D. Blanck, *Science and Ethics in Conducting, Analyzing, and Reporting Social Science Research: Implications for Social Scientists, Judges, and Lawyers*, 68 IND. L.J. 1209, 1221

achieve a full understanding of employment integration and economic opportunity under the ADA.

Several working assumptions guide the investigation: (1) study of disability policy requires interdisciplinary analyses (*e.g.*, from medicine, law, economics, psychology, etc.); (2) disability is a function of limitations in skills or capabilities, but must be studied within the context of the individual's work and living environment; (3) for all people, disabilities coexist with individual strengths and capabilities; (4) with appropriate supports, the functioning of qualified persons with disabilities improves;³² and (5) disability is a natural part of the human experience.³³

With this background, this Section describes the investigation's findings to date:

1. Employment Integration

Four categories of employment type are defined and arranged from less to more integrated³⁴—no employment, sheltered employment,³⁵ supported employment,³⁶ and competitive employment.

Table 1 shows movement among the four categories of employment from 1990 to 1994 and reports cell percentages and sample sizes.³⁷ Examination of the findings in the diagonal cells in Table 1 (*i.e.*, the four cells with no employment movement) show that 159 of 1131 adult participants (14%) were not employed in 1990 and remained unemployed in 1994. Forty percent remained in nonintegrated sheltered workshops from 1990 to 1994. Two percent of those in supported or competitive employment in 1990 remained in these categories in 1994.

From 1990 to 1994, the majority of individuals show no change in their employment category (56%), while one-third (34%) improve and approximately one-tenth (11%) regress in their employment category. Moreover, more than half of the participants (54%) *remain* in nonintegrated employment settings, while only two percent are *retained* in more integrated settings.

Table 1 reflects other trends. From 1990 to 1994, relative unemployment levels decrease (*i.e.*, absolute drop of 16%, from 36% in 1990 to 20% in 1994).³⁸ According to labor force data from the State of Oklahoma on 1.5 million individuals, the state unemployment rate increased from 5.6% in 1990 to 6% in

³² See AMERICAN ASSOCIATION ON MENTAL RETARDATION, MENTAL RETARDATION: DEFINITION, CLASSIFICATION, AND SYSTEMS OF SUPPORT 1 (1992).

³³ Tom Harkin, *The Americans with Disabilities Act: Four Years Later—Commentary on Blanch*, 79 IOWA L. REV. 935, 936 (1994).

³⁴ For more detailed discussion of the four employment types, see *Empirical Study*, *supra* note 10, at 870–74.

³⁵ For example, work or training in a non-integrated setting in which wages are usually half of the minimum wage.

³⁶ For example, employment with services of a job coach; at least minimum wages are paid.

³⁷ In each cell of Table 1, hypothetical weights are assigned to the cells to calibrate employment movement. These weights range from –3 to +3, reflecting the magnitude of potential movement over time from one employment category to another category as follows: 0 for no employment, 1 for sheltered employment, 2 for supported employment, and 3 for competitive employment.

³⁸ Chi Square test of changes in marginal unemployment rates=98.47, $p<0.0001$. Additional Chi Square tests show significant declines in marginal unemployment rates with the following results: (1) for all women ($n=484$), $\chi^2=42.05$, $p<0.001$, reduction from 34% to 18%; (2) for all men ($n=645$), $\chi^2=57.99$, $p<0.001$, reduction from 37% to 21%; (3) for all minorities ($n=177$), $\chi^2=31.04$, $p<0.001$, reduction from 43% to 21%; and (4) for all nonminorities ($n=952$), $\chi^2=69.83$, $p<0.001$, reduction from 34% to 20%.

Table 1. Employment Movement: Sample Sizes

		None	Sheltered	Supported	Competitive	Row Total
Employment Status in 1990	None	14% (159)	19% (219)	1% (16)	1% (8)	36% (402)
	Sheltered	6% (64)	40% (450)	8% (91)	3% (36)	57% (641)
	Supported	0% (2)	2% (25)	1% (10)	1% (10)	4% (47)
	Competitive	0% (2)	2% (17)	1% (10)	1% (12)	4% (41)
	Column Total	20% (227)	63% (711)	11% (127)	6% (66)	100% (1131)

Note: Reported above are percentages of participants in a particular cell with sample sizes in parentheses. 56% no change; 34% improve; 11% regress.

1993, with the average Oklahoma unemployment rate at 6%.³⁹ From 1990 to 1993, the national unemployment rate increased from 5.5% to 6.8%, with average unemployment at 6.6%.⁴⁰

The column and row totals in Table 1 show that in 1990, 4% of the participants were in competitive employment and that by 1994 this group increased to 6%. This trend is evidenced for supported employment programs, with participation increasing from 4% in 1990 to 11% in 1994.⁴¹ Table 1 illustrates that employment movement from the category of unemployed in 1990, to sheltered workshop settings in 1994, is most common (*i.e.*, 219 individuals, or 19% of the total).

Separate correlational analyses using the factors identified in Figure 1 show that individuals in integrated employment in 1994 show higher capabilities and qualifications ($r=0.43$), reflected in better job skills ($r=0.47$) and health status ($r=0.27$).⁴² Examination of the inclusion factors reveal that those in integrated employment are more likely to reside independently in the community ($r=0.33$). This finding supports the view that independent living is central to full inclusion into society for many persons with disabilities.⁴³ In addition, those in more integrated employment are more satisfied with their jobs and daily life activities ($r=0.21$),⁴⁴ a finding also consistent with studies showing that meaningful employment results in increased self-esteem for persons with disabilities.⁴⁵

³⁹ The 1994 Harris Survey of Americans with Disabilities, commissioned by the National Organization on Disability, shows an increase in the unemployment rate of working age adults with disabilities between 1986 and 1994, from 66% to 68%. LOUIS HARRIS & ASSOCS., SURVEY OF AMERICANS WITH DISABILITIES 37 (1994).

⁴⁰ Oklahoma Employment Sec. Comm'n, Economic Research and Analysis Div. (1994).

⁴¹ Cf. SUPPORTED EMPLOYMENT: STRATEGIES FOR INTEGRATION OF WORKERS WITH DISABILITIES 15 (Paul Wehman *et al.* eds., 1992) (finding growth in numbers of supported employment participants for persons with disabilities in Oklahoma during years 1986-1988) (hereinafter "SUPPORTED EMPLOYMENT").

⁴² For significance testing with sample size of 1127, approximate r of 0.05, $=p<0.10$; r of 0.06, $=p<0.05$; r of 0.08, $=p<0.01$; and, r of 0.10, $=p<0.001$.

⁴³ See Beverly Lozano, *Independent Living: Relation Among Training, Skills, and Success*, 98 AM. J. MENTAL RETARDATION 249 (1993); Julie A. Racino & Judith E. Heumann, *Independent Living and Community Life*, GENERATIONS: AGING & DISABILITIES, Winter 1992, at 45.

⁴⁴ Based on participants' views of their needs and opportunities, obtained from a responding subset. Inclusion into society results in enhanced personal satisfaction and perceptions of choice and control in life. See Wendy Parent, *Quality of Life and Consumer Choice*, in THE ADA MANDATE FOR SOCIAL CHANGE 19, 20, 27 (1993).

⁴⁵ See, *e.g.*, Mary Sinnott-Oswald *et al.*, *Supported and Sheltered Employment: Quality of Life Issues Among Workers with Disabilities*, 26 EDUC. & TRAINING IN MENTAL RETARDATION 388, 388-97 (1991).

Individuals in integrated employment also show higher scores on the empowerment factor ($r=0.24$), are more involved with self-advocacy ($r=0.27$), and receive greater support for their employment activities ($r=0.10$). Yet those in integrated employment report greater problems in access to employment (e.g., ADA Title I score, $r=-0.09$).

2. Economic Growth and Opportunity

These analyses examine earned income in 1994, and changes in average gross monthly income from 1990 to 1994 (e.g., from employment and other sources such as Supplemental Security Income, controlling for inflation) and relates them to other independent variables in Figure 1, such as capabilities and qualifications.

During the 1990 to 1994 period, monthly gross income rises substantially.⁴⁶ Mean monthly gross income, in terms of actual dollars, increased from \$285 in 1990 to \$412 in 1994.⁴⁷ This large increase is attributable primarily to the corresponding decrease in overall unemployment rates.⁴⁸

From 1993 to 1994, Figure 2 shows that while those in integrated employment show consistently higher levels of earned income, there is a trend over time for men in both integrated and nonintegrated employment to earn more than women.⁴⁹ Individuals with higher earned incomes in 1994 also are older ($r=0.08$),⁵⁰ score higher on the capabilities and qualifications composite measure ($r=0.65$), and have better skills ($r=0.73$) and health status ($r=0.41$). Those with higher incomes live in more integrated settings ($r=0.50$) and report greater choice and satisfaction with their jobs and lives ($r=0.26$).

Individuals with higher earned incomes report greater levels of empowerment ($r=0.36$), are more involved in self-advocacy ($r=0.43$), and receive more job-related supports ($r=0.12$). Finally, those with higher incomes report more problems with access to employment (ADA Title I score, $r=-0.14$).

3. Individual Growth

Table 2 shows significant changes on individual growth measures from 1990 to 1994. Along with improvements in employment category and monthly income, individual capabilities and qualifications improve.⁵¹ The number of individuals needing adaptive equipment decreases, and level of inclusion into society is

⁴⁶ Effect size correlation between 1990 and 1994 income levels $=0.44$, $t=12.54$, $p<0.001$ (based on sample size of 639). In all analyses involving income (whether gross or earned), actual dollar amounts are transformed into "log dollars" using the natural log function, thereby reducing the influence of extreme values. See *Empirical Study*, *supra* note 10, at 888; see also ERNEST R. BERNDT, *THE PRACTICE OF ECONOMETRICS: CLASSIC AND CONTEMPORARY* 161 (1991).

⁴⁷ See Table 2, *infra*.

⁴⁸ See Table 1.

⁴⁹ Repeated measures analysis of variance: $F(1, 1982)=3.09$, $p=0.08$ (gender \times year interaction); gender main effect not significant; $F(1,1982)=897.45$, $p=0.0001$ (integration in employment main effect).

⁵⁰ From 1990 to 1994, younger relative to older participants show the greatest gains in total income ($r=0.23$).

⁵¹ Cf. Peter D. Blanck, "Buck versus the Bell Curve," Editorial for the Annenberg Washington Program (1995); RICHARD J. HERNSTEIN & CHARLES MURRAY, *THE BELL CURVE* 162-66 (1994).

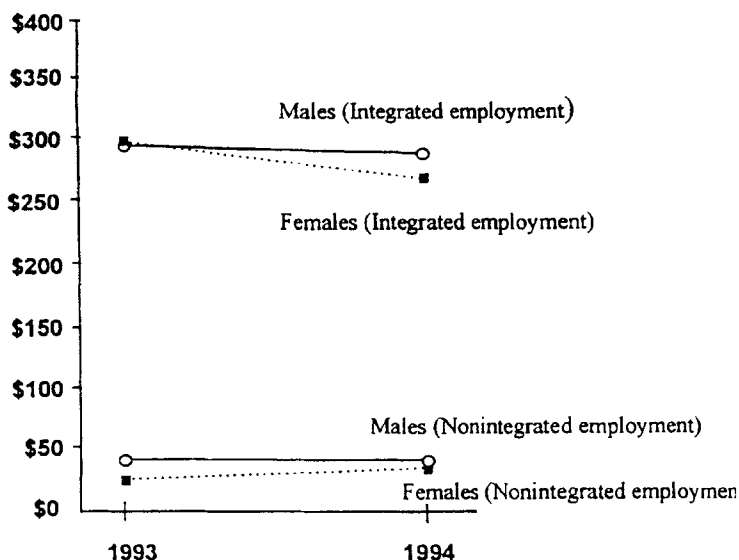


Figure 2 Monthly earned income

Table 2. Testing Differences From 1990–1994: Pre-Versus Post Effective Date of Title I of the ADA

Variable	n ^a	Score ^b		t-value	r ^c	p-value
		1990	1994			
Employment Integration						
Employment Category	1131	0.76	1.03	11.44	0.32	<0.001
Monthly Income						
log dollars ^d	639	4.79	5.58	12.54	0.44	<0.001
actual dollars	639	\$285	\$412			
Capabilities/Qualification						
Adaptive Skills	1097	52.5	55.4	8.54	0.25	<0.001
Health Status	1131	7.5	7.7	1.75	0.05	0.09
Equipment/Accommodation	1131	0.93	0.97	4.55	0.13	<0.001
Inclusion Factors						
Living Arrangement	1123	0.56	1.27	18.57	0.48	<0.001
Job/Life Satisfaction and Choice	207	34.0	37.6	11.76	0.63	<0.001
Empowerment Factors						
Self-Advocacy	1045	0.18	0.33	9.22	0.27	<0.001
Family and Government Support	1122	15.1	17.9	11.40	0.32	<0.001
Job/Skill Educational Goals	1088	9.7	4.2	-20.31	0.52	<0.001
Legal Factors						
Title I Access	1131	0.84	0.93	6.78	0.20	<0.001

^a n=sample size.^b Higher scores indicate more integrated employment and higher income, higher adaptive skills and health status, fewer equipment/accommodation needs, more integrated living arrangement and higher job/life satisfaction and choice, more self-advocacy, family and government support and job/skill educational goals, and more integrated opportunities are defined by the ADA.^c r=Effect size correlation on score between 1990 and 1994.^d 1994 gross monthly income information is derived from the addition of two sources: (1) weekly employment income (multiplied by 4), and (2) monthly entitlement income (e.g., SSI, Social Security, etc.).

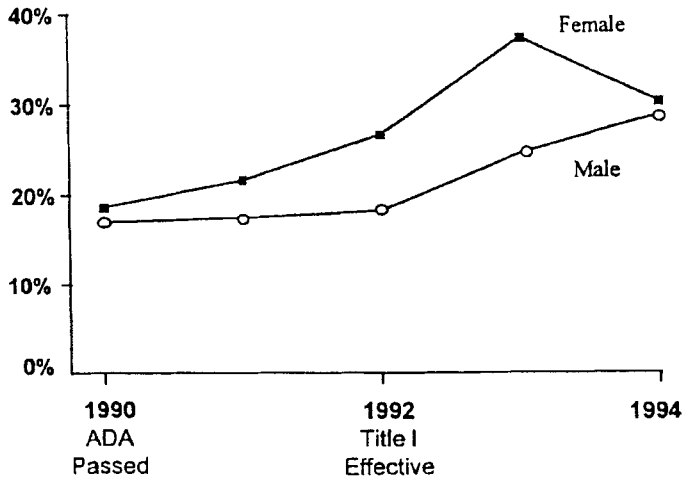


Figure 3 Percentage Participating in Self-Advocacy

enhanced. Living arrangements become more integrated, and perceptions of satisfaction and choice in work and daily life improve.

Empowerment levels also rise—shown by greater involvement in self-advocacy (see Figure 3 above) and by increased family and governmental supports.⁵² These trends reflect increased involvement by families in mainstreamed education, independent living, and competitive employment.⁵³ At the same time, vocational job skill training decreases.⁵⁴ The latter finding illustrates that as individuals are more “qualified” and independent, they require less support from traditional job training programs.

Another important means for exploring inclusion into society and related individual growth is to assess degree of independence in living.⁵⁵ Table 3 shows trends in living type from 1990 to 1994. Four categories of living type are examined and range from less to more independent and integrated⁵⁶—that is, institutional residences,⁵⁷ family homes, group homes with four to twelve other adults, and independent living.

The top left cell of Table 3 shows that 46% of the participants lived in nonintegrated institutional settings in 1990 and in 1994. During this period, however, only 1% resided in independent living settings. Examination of the

⁵² Scores range from 0 to 38.

⁵³ See *Empirical Study*, *supra* note 10, at 891.

⁵⁴ Scores range from 0 to 80.

⁵⁵ Integrated and independent living is central to civil rights for people with disabilities. See Judith E. Heumann, *Building Our Own Boats: A Personal Perspective on Disability Policy*, in *IMPLEMENTATION OF THE AMERICANS WITH DISABILITIES ACT*, at 257 (Lawrence O. Gostin & Henry A. Beyer eds., 1993). People with mental retardation who live in integrated settings show significant advancements in capabilities and participation in society. See *Empirical Study*, *supra* note 10, at 880-82; Carol A. Howland et al., *Independent Living Centers and Private Sector Rehabilitationists: A Dynamic Partnership for Implementing the ADA*, 8 NARPPS J. 75, 75 (1993) (discussing how independent living improves empowerment, inclusion, and self-sufficiency).

⁵⁶ For more detailed discussion of the four living types, see *Empirical Study*, *supra* note 10, at 880-83.

⁵⁷ See *Empirical Study*, *supra* note 10, at 880 (discussing institutional litigation in Oklahoma and possible effect on sample under study).

Table 3. Living Arrangement Movement: Sample Sizes

		Living Arrangement in 1994				Row Total
		Institution	Family/Foster	Group	Independent	
Living Arrangement in 1990	Institution	46% (517)	1% (6)	4% (47)	20% (229)	71% (799)
	Family/Foster	0% (4)	2% (26)	1% (8)	1% (6)	4% (44)
	Group	2% (18)	0% (5)	16% (183)	5% (54)	23% (260)
	Independent	0% (0)	0% (0)	1% (14)	1% (6)	2% (20)
Column Total		48% (539)	3% (37)	22% (252)	26% (295)	100% (1123)

Note: Reported above are percentages of participants cell with sample sizes in parentheses. 65% no change; 31% improve; 4% regress.

diagonal cells in Table 3 shows that from 1990 to 1994, 65% show no change in living category, 31% improve their degree of independence of living, and 4% regress.⁵⁸

From 1990 to 1994, however, almost eight times as many individuals moved into more integrated living settings as compared to those who regressed. Moreover, as the column and row totals show, the proportion of individuals in institutional living dropped substantially, from 71% in 1990 to 48% in 1994, and the proportion in independent living increased substantially (*i.e.*, from 2% to 26%). Over time, women (relative to men) and non-minorities (relative to minorities) show consistently higher placements in community living.⁵⁹

Several measures in Figure 1 explore the concept of individual growth in empowerment.⁶⁰ The self-advocacy component reflects participation in such empowerment programs from 1990 to 1994.⁶¹ Self-advocacy in the field of mental retardation is a crucial means for ensuring full participation in society.⁶²

Figure 3 shows that the proportion of individuals involved in self-advocacy activities increases almost two-fold, from 18% in 1990 to 29% in 1994. Women show more involvement over time in self-advocacy.⁶³ Also, individuals with higher job skills show more involvement in self-advocacy.⁶⁴ As work and daily life become

⁵⁸ Cf. Peter David Blanck, *On Integrating Persons with Mental Retardation: The ADA and ADR*, 22 N.M. L. Rev. 259, 261 (1992).

⁵⁹ Repeated measures analysis of variance: $F(1,3084)=1.56$, $p=0.19$ (gender \times year interaction); $F(1,771)=12.28$, $p=0.0005$ (gender main effect); $F(1,3084)=2.77$, $p=0.03$ (race \times year interaction); $F(1,771)=2.76$, $p=0.10$ (race main effect).

⁶⁰ Cf. 137 Cong. Rec. S11,107 (daily ed. July 26, 1991) (statement of Sen. Harkin) ("[T]he clearly implied promise of ADA is that all Americans with disabilities will be empowered to fulfill their potential. . ."); Justin W. Dart, Jr., *The ADA: A Promise To Be Kept*, in IMPLEMENTING THE ADA, *supra* note 55, at xxi, xxiv-xxv (discussing "empowerment policy").

⁶¹ See *Empirical Study*, *supra* note 10, at 883-85. The analyses examine the amount of meaningful contact by these participants with self-advocacy organizations (e.g., involvement with "People First"). The participants' family and governmental supports also are assessed. To assess job or skill educational goals, the model uses a measure consisting of work, self-care, recreation, independent living, communication, social skills, and citizenship factors.

⁶² See Michael D. West & Wendy S. Parent, *Consumer Choice & Empowerment in Supported Employment*, in SUPPORTED EMPLOYMENT, *supra* note 41, at 29, 38-40.

⁶³ Repeated measures analysis of variance: $F(1,2768)=3.10$, $p=0.02$ (gender \times year interaction); $F(1,692)=6.87$, $p=0.009$ (gender main effect).

⁶⁴ Repeated measures analysis of variance: $F(1,2776)=3.17$, $p=0.02$ (skill \times year interaction); $F(1,694)=202.78$, $p=0.0001$ (skill main effect). Skill level defined as high and low, based on median split.

Table 4. Employment Movement: Relative Percentage Change From 1990 Status

		1994 Employment Status		
		Nonintegrated ^a	Integrated ^b	Row Total
1990 Employment Status	Non-Integrated	86% (892)	14% (151)	100% (1043)
	Integrated	52% (46)	48% (42)	100% (88)

$\chi^2(1)=55.96, p<0.0001$ (test of symmetry).

^a None and sheltered workshop status.

^b Supported and competitive status.

integrated and independent, these individuals focus greater attention on empowerment through self-advocacy.⁶⁵ Further analysis of trends in self-advocacy for persons with different disabilities is warranted because the movement's major objectives are closely related to the goals of the ADA: namely, support for independent living, fair wages, empowering changes in laws, and equitable modifications to entitlement programs.⁶⁶

4. Black Hole Effect

Historically, qualified individuals with disabilities have been segregated from competitive employment—confined to a *black hole* of nonintegrated work settings—leading to a cycle of failure and frustration.⁶⁷ Table 4 above highlights the black hole finding that many qualified persons with disabilities stagnate in nonintegrated employment settings.

Table 4 displays the percentage change in employment status from 1990 to 1994. Employment is categorized as nonintegrated (*i.e.*, no employment or sheltered workshop) or integrated (*i.e.*, supported or competitive). Eighty-six percent of those individuals in nonintegrated settings in 1990 remain in those settings in 1994 (the black hole effect). The comparatively low survival rates for those in integrated employment amplifies this problematic finding (*e.g.*, 48% of those in integrated settings in 1990 remain in this category in 1994).

More than half (52%) of those in integrated employment in 1990 regress to nonintegrated settings by 1994. Only 14% of those in nonintegrated employment in 1990 move to integrated employment by 1994. The findings are consistent with studies suggesting that persons with disabilities experience high levels of movement in and out of the competitive labor market. Empirical study is crucial to assess the

⁶⁵ Repeated measures analysis of variance: $F(1,2768)=12.96, p=0.0001$ (integration in living arrangement \times year interaction); $F(1,692)=157.18, p=0.0001$ (integration in living arrangement main effect).

⁶⁶ Findings for the other empowerment components show that from 1990 to 1994, family and governmental supports improve, reflecting increased involvement by families in mainstreamed education, independent living, and competitive employment. Cf. AMERICAN ASSOCIATION ON MENTAL RETARDATION, MENTAL RETARDATION: DEFINITION, CLASSIFICATION, AND SYSTEMS OF SUPPORT 1, 101–103 (1992).

⁶⁷ JOSEPH P. SHAPIRO, NO PITY: PEOPLE WITH DISABILITIES FORGING A NEW CIVIL RIGHTS MOVEMENT 4 (1993).

relation among effective ADA implementation and long-term, black hole unemployment trends for persons with disabilities.⁶⁸

5. Perceptions of ADA Effectiveness

Views of civil rights and of access to employment and daily life are assessed. The investigation explores perceptions of access to employment (ADA Title I issues), to education, training, and public transportation (ADA Title II issues), and to public accommodations (ADA Title III issues).⁶⁹

The findings, reflected in Figure 4, suggest that from 1990 to 1994, attitudes concerning access to work and daily life have changed. From 1990 to 1992, perceptions of the effectiveness of the ADA and of access to society increase. But starting early in 1992, perceptions of ADA-related rights and access drop, and by 1994, reported levels are almost comparable to those reported in 1990.⁷⁰ Figure 4 shows that, since the 1992 effective date of Title I, persons working in integrated

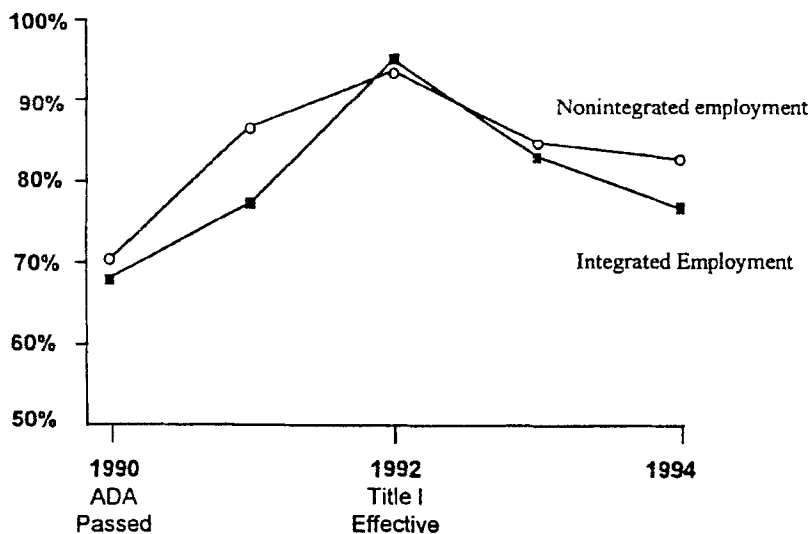


Figure 4 Perceptions of Rights and Access

⁶⁸ Shapiro, *supra* note 67, at 183 ("When disabled people are herded into sheltered workshops to earn below minimum wage salaries for piecework, employers lose the impetus to hire good workers, and taxpayers foot the bill."). See also Parent, *supra* note 44, at 27 (high satisfaction of persons with mental retardation in sheltered employment who move to supported employment).

⁶⁹ The 1994 Harris data show that more persons with disabilities believe access to employment opportunities has improved since 1990 than believe it has regressed (44% vs. 28%). For public transportation the percentages are 60% and 13%, respectively, and for public facilities the percentages are 75% and 6%.

⁷⁰ Although the findings show changes from 1990 to 1992 on many of the measures, after 1992 changes occur at a less dramatic pace. See THOMAS D. COOK & DONALD T. CAMPBELL, *QUASI-EXPERIMENTATION: DESIGN & ANALYSIS ISSUES FOR FIELD SETTINGS* (1979).

employment settings tend to report relatively more problems involving access to work and ADA-related rights.⁷¹

6. Complex Relationships in the Model

Exploratory regression analyses summarize the relationships between the set of predictor measures in Figure 1 (*e.g.*, inclusion, empowerment, etc.) and the two dependent measures (*i.e.*, employment integration and earned income level in 1994). The analyses use ten variables to predict employment integration and earned income in 1994—age, gender, race, skill level, health status, living arrangement, self-advocacy levels, family and government supports, educational goals, and reported ADA effectiveness.

Table 5 shows the findings for the test of the model predicting degree of integration in employment category and Table 6 shows the findings for predicting earned income level in 1994.⁷² The findings in Table 5 and 6 illustrate how changes in the ten predictor measures relate to employment integration and income level. When the measures are considered individually and in combination, the predictive value of the analyses (*e.g.*, the R^2 for multiple regression purposes) is statistically significant. The measures explain a good deal about variations in employment integration and economic opportunity for these individuals—in regression terms, accounting for approximately 25% of the variation in 1994 employment category, and 56% of the variance in 1994 earned income.

Table 5. Test of the Model: Predicting Employment Category (1994)

Variable	Regression Coefficient	t-value	p-value	Explained Variance ^b
Personal Background				
Age	-0.004	-1.59	0.12	0.2%
Female	-0.02	-0.60	0.55	0.03%
Minority	0.04	0.76	0.45	0.06%
Capabilities and Qualifications				
Adaptive Skills	0.01	10.39	0.0001	9.5%
Health Status	0.01	1.12	0.27	0.1%
Inclusion Factor^a				
Living Arrangement	0.08	2.84	0.005	0.8%
Empowerment Factor				
Self-Advocacy	0.10	2.31	0.03	0.5%
Family and Government Support	-0.003	-0.81	0.42	0.06%
Job/Skill Educational Goals	-0.01	-2.52	0.02	0.6%
Title I Access	-0.06	-1.19	0.24	0.1%

For this model, $R^2=0.246$, $F(10, 1025)=33.51$, $p<0.0001$.

^a Job/life satisfaction and choice composite was tested separately because of reduced sample size and found not to contribute significantly to the model.

^b Explained variance is the squared partial correlation, which is the unique variance accounted for by each variable after adjusting for the effects of all other variables in the model.

⁷¹ Repeated measures analysis of variance: $F(1,3120)=3.27$, $p=0.02$ (integration in employment \times year interaction); $F(1,780)=2.70$, $p=0.11$ (integration in employment main effect).

⁷² See *Empirical Study*, *supra* note 10, at 900-07.

Table 6. Test of the Model: Predicting Monthly Earned Income (1994 log dollars)*

Variable	Regression Coefficient Antilog ^b	t-value	p-value	Explained Variance ^d
Personal Background				
Age	0.99	-1.31	0.19	0.2%
Female	0.81	-1.77	0.08	0.4%
Minority	1.28	1.52	0.13	0.3%
Capabilities and Qualifications				
Adaptive Skills	1.05	17.33	0.0001	28.9%
Health Status	1.02	0.54	0.60	0.4%
Inclusion Factor^c				
Living Arrangement	1.38	3.64	0.0003	1.8%
Empowerment Factor				
Self-Advocacy	1.88	4.86	0.0001	3.1%
Family and Government Support	0.99	-1.32	0.19	0.2%
Job/Skill Educational Goals	0.95	-4.63	0.0001	2.8%
Title I Access	0.85	-1.09	0.28	0.2%

For this model, $R^2=0.563$, $F(10, 738)=95.17$, $p<0.0001$.

* Monthly earned income (actual) from employment ranged from \$0 to \$1720, with a mean of \$80. The regression analysis uses log dollars.

^b For each unit change in the independent variables, the corresponding 1994 income should be multiplied by the "regression coefficient antilog." A regression coefficient antilog of 1.0 signifies no effect. Antilogs above 1.0 indicate a positive increase in income associated with an increase in the independent variable. Antilogs below 1.0 indicate a corresponding decrease in income.

^c Job/life satisfaction and choice composite was tested separately because of reduced sample size and was found not to contribute significantly to the model.

^d Explained variance is the squared partial correlation, which is the unique variance accounted for by each variable after adjusting for the effects of all other variables in the model.

The individual findings of the regression analyses show that individuals in integrated employment in 1994 have higher skills, reside in more integrated community settings, are more involved in self-advocacy, and receive less vocational training. Although several combinations of the ten measures predict employment status, individual job skill is the best single predictor of the ability to attain and retain employment (*i.e.*, when holding constant the other variables in the model).

Similarly, several measures predict 1994 earned income: men, with better skills, living in more integrated settings, more involved in self-advocacy, and receiving fewer vocational training goals, tend to earn more income in 1994. Again, individual job skill is the strongest independent predictor of 1994 earned income.

7. The "Emerging" Workforce

Prior articles in this investigation use descriptive analyses to highlight the profiles of participants in integrated and nonintegrated employment.⁷³ This section examines the employment profiles of the sub-group of 289 young adults ages 21 to 24 in 1994.

⁷³ See *Empirical Study*, *supra* note 10, at 907-10; Pat Rogan & Stephen Murphy, *Supported Employment & Vocational Rehabilitation: Merger or Misadventure?*, J. REHAB., Apr./May/June 1991, at 39-42. The profiles do not represent a prescriptive list of the dimensions necessary to predict a participant's employment movement.

Table 7. Summary Employment Profiles of Emerging Workforce: Participants Ages 21 to 24 in 1994

Variable	Nonintegrated Employment 241 (83%)	Integrated Employment 48 (17%)	p-value from Chi-Square test ^c
Total (%)			
Personal Background			
Age (average)	22.6	22.9	0.06 ^d
Female	43%	31%	0.15
Minority	17%	8%	0.19
Capabilities and Qualifications^a			
Adaptive Skills High	43%	89%	0.0001
Health Status High	50%	77%	0.002
Equipment/Accommodation Satisfied	90%	100%	0.02
Inclusion Factor			
Living Arrangement Integrated ^b	59%	92%	0.0001
Job/Life Satisfaction and Choice High	34%	62%	0.02
Empowerment Factor			
Self-Advocacy Involvement	28%	50%	0.006
Family and Government Support	48%	65%	0.04
Job/Skill Educational Goals High	46%	61%	0.08
Legal Factors Satisfied (Title I)	95%	92%	0.32
Monthly Income High	46%	75%	0.004

^a A median-split defined low and high score categories for the measures in the model.

^b Defined by institutional living=low integration; family, group, and independent living=high integration.

^c Chi square test with one degree of freedom.

^d p-value for age is from standard t-test.

Table 7 highlights the findings for those young adults in nonintegrated and integrated work settings in 1994. Several trends emerge. First, 17% (*i.e.*, 48 of 289) of the young adult sub-group are in integrated employment, reflecting the same proportion of the entire sample in this category.⁷⁴ Those young adults in integrated employment tend to be relatively older. The proportion of young men relative to women is particularly high in integrated employment (*e.g.*, 69% young men compared to 31% women). Young adults in integrated employment tend to have better skills and health status, have their accommodation needs met, live more independently, are more involved in self-advocacy, receive more family and government support and educational goals, and have higher monthly incomes.

Exploratory regression analyses also were performed on the young adult sub-group, employing the same model and dependent and independent variables set forth in Tables 5 and 6. When the dependent measure is the degree of integration in 1994 employment category, the $R^2=0.334$, $F(10, 245)=12.29$, $p<0.0001$. The individual findings show that those in integrated employment are older, have higher skills, live more independently, and tend to be more involved in self-advocacy. Individual skill level is the strongest predictor in the model, when holding constant the effects of the other measures.

When the dependent measure is 1994 earned income level, the $R^2=0.503$, $F(10, 200)=20.26$, $p<0.0001$.⁷⁵ The individual findings here show that those young adults earning more income are older, have higher skills, are more involved with

⁷⁴ Thirty percent of the subgroup (46 of 153) are unemployed in 1990 and 1994, compared to 14% of the entire sample.

⁷⁵ Monthly earned income in actual dollars ranged from \$0 to \$1600, with a mean of \$83.

self-advocacy, and have fewer vocational work goals. Again, individual skill level is the strongest single predictor in the model.

Finally, separate analyses assessed differences in measures in the model from 1990 to 1994 for the young adults. During the Title I implementation time period, these young adults show significant growth and improvement in degree of integration in employment and earned income, job skills, independence in living, job and life satisfaction, and self-advocacy.⁷⁶

IV. IMPLICATIONS

This article describes an ongoing investigation of employment integration and economic opportunity for a particular group of individuals with disabilities. One long-term goal is to refine the descriptive model in Figure 1 to include persons with other disabilities, living in rural and urban settings, and participating in different types of employment.⁷⁷

This article has set forth seven core findings that have implications for members of the disability community, employers, policy makers, and courts.

1. Employment Integration

In the United States, current estimates of unemployment levels for persons with disabilities range from fifty to ninety percent.⁷⁸ The lack of access to competitive employment is a primary reason for discrimination against qualified persons with disabilities. The implementation of Title I is a major policy step toward reducing chronic unemployment for millions of qualified persons with disabilities.⁷⁹ The findings show that those individuals attaining integrated employment in 1994 demonstrated a high degree of job skill (*e.g.*, are "qualified") and independence.

Research by others suggests a declining trend in labor market opportunities for low-skilled workers with disabilities in the 1980s.⁸⁰ In the present investigation, however, black hole employment trends were evidenced regardless of individual skill level. Interdisciplinary study addressing the economic factors and structural changes in the labor market that influence employment integration and economic opportunity for persons with and without disabilities, possessing different skill levels, is needed. These analyses should examine (1) types of jobs attained, and required skill level; (2) geographic differences in job markets and hiring patterns; (3)

⁷⁶ For degree of integration in employment ($r=5.38$, $p<0.001$), earned income ($r=6.06$, $p<0.001$), job skills ($r=5.48$, $p<0.001$), independence in living ($r=8.68$, $p<0.001$), job and life satisfaction ($r=2.10$, $p=0.05$), and selfadvocacy ($r=2.35$, $p=0.02$). Also, for family and government support ($r=2.99$, $p=0.003$), and for vocational educational goals ($r=-7.50$, $p<0.001$).

⁷⁷ Cf. William J. Hanna & Elizabeth Rogovsky, *On the Situation of African-American Women with Physical Disabilities*, 23 J. APPLIED REHAB. COUNSELING 39-45 (1992) (25% of black women with disabilities are employed full time, as compared to 77% of white men, 44% of white women, and 57% of black men with disabilities).

⁷⁸ See Paul Wehman, *Employment Opportunities and Career Development*, in THE ADA MANDATE FOR SOCIAL CHANGE 145, 154 (Paul Wehman ed., 1993).

⁷⁹ See Wehman, *supra* note 78, at 54-58.

⁸⁰ See NATIONAL ACADEMY OF SOCIAL INSURANCE, *supra* note 3, at 109-10 ("workers with limited skills who also have disabilities are doubly disadvantaged").

turnover, retention, wage, and promotion rates; (4) availability of transportation to work; and (5) availability of work-related benefits, such as health and life insurance, and pension plan participation.

2. Economic Opportunity

Title I is meant to foster integrated employment opportunities that pay fair wages to qualified employees with disabilities. The findings support the conclusions of others that earned income is a critical factor affecting the quality of life for persons with disabilities.⁸¹

In addition, the findings support previous studies showing rising income levels for persons with disabilities since the mid-1980s.⁸² However, gains in income for persons with disabilities are often unevenly distributed, with women and nonwhites remaining relatively worse off. Over time, these income disparities act as disincentives to work for many qualified individuals with disabilities.

The National Council on Disability finds that women and individuals who are members of minority groups and who have disabilities experience double or even triple discrimination, and further finds that it is difficult to discern the causes of this discrimination.⁸³ Additional study is required to track rates of income growth for women, minorities, and other groups with and without disabilities in comparable jobs.

3. Individual Growth

Several findings are of particular relevance to ADA implementation and policy: The proportion of those in self-advocacy programs increases; self-reported satisfaction with work and daily life increases; reported health status improves; and, the proportion of individuals living independently in community settings rises more than ten-fold. Although questions concerning the quality of individual growth and independence warrant additional study, the trends illustrate progress on variety of individual and social indicators related to the goals of the ADA, such as equal opportunity, access, and satisfaction with work and daily life.

4. Black Hole Effect

Most of the participants not employed or employed in nonintegrated settings in 1990 remain in these settings in 1994. This trend is found regardless of individual job skill level.⁸⁴ Consistent with the present findings, in a 1994 study the President's

⁸¹ LOUIS HARRIS & ASSOCIATES, SURVEY OF AMERICANS WITH DISABILITIES 37 (1994) (adults with disabilities perceive insufficient finances, lack of full social life, and inadequate health insurance, as serious problems).

⁸² See IMPLEMENTATION OF THE AMERICANS WITH DISABILITIES ACT: RIGHTS AND RESPONSIBILITIES OF ALL AMERICANS 3 (Lawrence O. Gostin & Henry A. Beyer eds., 1993).

⁸³ See *ADA Watch*, *supra* note 6, at 63.

⁸⁴ Test of marginal changes in integrated employment from 1990 to 1994, separately for individuals with high and low skills (defined by median split): $\chi^2=11.84$, $p=0.0006$ (for low skill group, with 97% in nonintegrated employment in 1990 and 1994); $\chi^2=45.51$, $p=0.0001$ (for high skill group, with 75% in nonintegrated employment in 1990 and 1994).

Committee on Mental Retardation finds that 70 percent of persons with developmental disabilities are served in the black hole of segregated or non-work related rehabilitation programs.⁸⁵ Moreover, 90 cents of every Federal dollar and 80 cents of every state dollar is devoted to segregated rehabilitation services.

The black hole trends reflect the problems of chronic unemployment and underemployment faced by many qualified persons with disabilities. Enhanced strategies are needed to assist the millions of qualified persons with disabilities entering the work force. Job retention and advancement strategies are needed to help individuals with disabilities keep jobs and achieve their full potential. A major challenge facing America in the next century is to reach the millions of qualified individuals with disabilities stuck in the black hole of unemployment.⁸⁶

In addition to revealing the employment stagnation facing many persons with disabilities, examination of black hole trends may prove useful for addressing concerns expressed by critics of the ADA. The preliminary findings echo the view that the impact of the ADA, at least initially, has not been to "affirmatively" make the disabled equal in employment.⁸⁷ Persons with disabilities have neither achieved "intrinsic equality" nor market equality, based on the guarantee of a person's labor value in a non-discriminatory market.⁸⁸

Initial analyses of the types of complaints filed with the EEOC support this suggestion. To date, the most common type of Title I claim filed with the EEOC involves the discharge or termination of individuals with back and spine impairments.⁸⁹ Roughly another one-third of claims involve a mental or neurologic disability.⁹⁰ In contrast, a smaller percentage of claims involve sensory disabilities (*e.g.*, visual or hearing impairments), or serious life-threatening conditions (*e.g.*, HIV or cancer). Moreover, the majority of Title I claims to date involve traditional employment law litigation issues, while a smaller proportion involve issues of workforce entry (roughly 10%) and accommodations (roughly 16%) for qualified persons with disabilities.⁹¹ Additionally, reverse discrimination claims (*i.e.*, white males disputing alleged "affirmative" actions in the work place) account for less than 2% of the EEOC's total inventory of discrimination claims from 1990 to 1994.⁹²

At bottom, the ADA does not require that employers hire individuals with disabilities who are not qualified, or hire qualified individuals with disabilities over

⁸⁵ REPORT TO THE PRESIDENT: THE NATIONAL REFORM AGENDA AND CITIZENS WITH MENTAL RETARDATION, U.S. DEPT. HEALTH & HUM. SER., PRES. COMM. MENTAL RETARDATION 16-17 (1994).

⁸⁶ Harkin, *supra* note 33, at 936.

⁸⁷ See, *e.g.*, Donohue, *supra* note 13, at 2611 (noting expansion of guarantees to workers covered by the ADA).

⁸⁸ Donohue, *supra* note 13, at 2611.

⁸⁹ See Blanck, *supra* note 23, at 103-104.

⁹⁰ See EQUAL EMPLOYMENT OPPORTUNITY COMMISSION, *National Database Charge Receipt Listing*, Aug. 8, 1993, at 55.

⁹¹ See *Empirical Study*, *supra* note 10, at 921.

⁹² See BNA Management Briefing, *Eeoc: Casellas Says New Litigation Procedure Will Free Commission for More Policy Work*, Apr. 21, 1995 (referring to Labor Department Report finding no widespread abuse of affirmative action, *citing* Alfred W. Blumrosen, *How Courts Are Handling Reverse Discrimination Claims*, 56 DLR d22, AA1, Mar. 23, 1995, at E-1.

equally qualified individuals without disabilities.⁹³ The law requires that covered entities not discriminate against a qualified individual with a disability because of that disability. Discrimination includes denying employment opportunities to a qualified individual with a disability, and basing that denial on the need to make reasonable accommodations for that individual.⁹⁴

5. Perceptions of ADA Effectiveness

From 1990 to 1994, perceptions concerning access to work and daily life fluctuated. From the period that the ADA was signed into law until the effective date of Title I (*i.e.*, from 1990 to 1992), reported effectiveness of the act increased. High expectations for a new and emerging civil rights era were apparent. Barriers to work and society were reported to be declining.

From 1992 to 1994, a different picture emerges. Starting early in 1992, perceptions of ADA-related rights and access drop. By 1994, reported levels of rights and access are comparable to 1990 levels, two years before Title I was effective. These trends suggest that upon passage of the ADA—especially during the initial two year “honeymoon” period from 1990 to 1992—expectations were high for a new civil rights era for people with disabilities. In just two years, however, the reality of implementation appears not to have yet achieved the promise of inclusion and empowerment in society.

It is too early to make definitive conclusions about this trend. But we must ask ourselves, are we as a society keeping the promises reflected in the ADA, for inclusion, empowerment, and equal opportunity to work for qualified individuals with disabilities?⁹⁵

6. Complex Relationships in the Model

Taken together, the findings show predictive relationships on measures relevant to an improved understanding of employment integration and economic opportunity. The findings are not meant to suggest a hard-and-fast method for establishing the employment potential of persons with disabilities. Rather, the more modest goal is to examine a research model and framework for the study of persons with disabilities. The measures tested here, both in combination and individually, explain a good deal of the complexity in predicting employment integration and economic opportunity.

Assessing true employment integration is, of course, a monumental task. No law, even one as far-reaching as the ADA, can be the sole reason for social change. Researchers must assess whether actual change or merely the appearance of change is occurring as a result of the ADA. The developing research cannot yet fully inform

⁹³ See BNA Management Briefing, *supra* note 92, (concluding that EEOC is not an affirmative action agency). *Cf. Milton v. Scrivner*, 1995 U.S. App. LEXIS 9384 (10th Cir. Apr. 21, 1995) (concluding that altering employer's production standards is not reasonable accommodation, and employer may make changes to its business to increase profit even though they impact on persons with disabilities).

⁹⁴ 42 U.S.C. 12112 §102b(5)(B).

⁹⁵ See Wehman, *supra* note 78, at 255.

policy makers, researchers, the disability community, employers, and others about the complex *causal* issues related to ADA implementation.

The individual measures in Figure 1, in combination and alone, are useful starting points for understanding the elements of successful employment integration and economic growth for persons with disabilities. There is more to be learned about this research model and others. The primary means for addressing the emerging questions is to replicate existing studies and to develop new ones.

The multivariate analyses illustrate that for many persons with disabilities, employment integration is a function of experience in, and attempts at, competitive work. At the same time, the findings convey the black hole stagnation facing many qualified persons. In addition, they may reflect the reality that, after the passage of the ADA, many qualified persons with disabilities are subject to the same economic conditions, such as cycles and pressures, as are people without disabilities.

7. The "Emerging" Workforce

Many economic and social benefits and challenges associated with the ADA remain to be discovered and need to be documented. Additional economic data examining the effect of the population of young, qualified persons with disabilities able to join the work force is needed.⁹⁶ This study highlights an "emerging work force" of young, qualified individuals with disabilities, reflecting a new generation of persons who have experienced mainstreamed education and whose families have advocated for their rights.

Empirical information is developing on the long-term economic value of anti-discrimination practices by employers affecting the emerging workforce of qualified persons with disabilities. In a recent two year study on the ADA practices of Sears, Roebuck & Co.—a company with 350,000 employees, 20,000 of whom are considered to be persons with disabilities—the average cost of providing reasonable accommodations to qualified workers with disabilities was only \$121.⁷

Additional economic information on the costs and benefits of accommodating qualified persons is needed to evaluate the scope of the ADA and its implications for employment discrimination law.⁹⁸ Studies indicate that expanding the category of protected persons to include persons with severe disabilities need not reduce the economic and social welfare benefits of the ADA.⁹⁹ The bottom line assessment of ADA practices in the Sears study, for instance, revealed net economic benefits from modest expenditures on accommodations for qualified persons with disabilities.¹⁰⁰

⁹⁶ See generally Alan J. Tomkins & Victoria Weisz, *Social Science, Law, and the Interest in a Family Environment for Children with Disabilities*, TOLEDO L. REV. (forthcoming 1995).

⁹⁷ See Blanck, *supra* note 26. See also Peter D. Blanck, *Communicating the Americans with Disabilities Act: Transcending Compliance: 1996 Follow-up Report on Sears Roebuck and Co.* (Annenberg Washington Program Report, forthcoming 1996).

⁹⁸ See Peter D. Blanck et al., *Implementing Reasonable Accommodations Using ADR Under the ADA: A Case of a White Collar Employee with Bipolar Mental Illness*, 18 MENTAL & PHYSICAL DISABILITY L. REP. 458 (1994) (empirical information provides feedback to employers and employees about ADA implementation, reducing litigation costs).

⁹⁹ See *Empirical Study*, *supra* note 10, at 866–67 (citing studies).

¹⁰⁰ See Blanck, *supra* note 26, at 28–29. Thus, even in under an "intrinsic quality standard" discussed by Donohue, *supra* note 13, an employer as a nondiscriminating market participant may choose to employ a qualified person with a disability and not distort efficient market decision making.

Moreover, work place accommodations for people with disabilities often create a ripple effect throughout an organization, as they lead to cost-effective applications that increase the productivity of other employees without disabilities.¹⁰¹

V. CONCLUSION

A recent legal decision, *Helen L. v. DiDario*,¹⁰² decided in 1995 by the United States Court of Appeals for the Third Circuit, reflects the promise of the ADA. In *Helen L.*, the Court defined unnecessary segregation from society as a form of illegal discrimination under the ADA.¹⁰³ The Court concluded that the ADA ensures that qualified individuals be treated in "a manner consistent with basic human dignity, rather than a manner which shunts them aside, hides, and ignores them."¹⁰⁴

Critics of the ADA argue increasingly that when a person with a disability is hired, it is because of the disability, not the individual's qualifications.¹⁰⁵ Without reliance on hard data, the ADA is cast as an affirmative action initiative, one that is unduly costly and economically inefficient. Much work and study lies ahead to fulfill the promise of the ADA reflected in *Helen L.* and to evaluate its true impact.

¹⁰¹ See Blanck, *supra* note 26, at 34 (Sears study findings).

¹⁰² 46 F.3d 325 (3d Cir. 1995).

¹⁰³ *Id.* at 332 (decided under Title II of the act).

¹⁰⁴ *Id.* at 334.

¹⁰⁵ Cf. Blumrosen, *supra* note 92 (conclusions regarding race and gender employment disputes).