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An empirical investigation of factors that determine employee or independent contractor status in taxation

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AN EMPIRICAL INVESTIGATION OF FACTORS THAT DETERMINE EMPLOYEE OR INDEPENDENT CONTRACTOR STATUS IN TAXATION

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ABSTRACT

The correct classification of workers as either "employees" or "independent contractors" is important because the employer's legal responsibilities vary depending upon the nature of the working relationship. Further, the consequences of misclassification can be severe. For federal tax purposes, the term "employee" is not clearly defined in the Internal Revenue Code or Treasury Regulations.

The Supreme Court has ruled that when a statute does not specifically define the term "employee," the common law should be applied. Revenue Ruling 87-41 and the court in *In re Rasbury* cite over twenty factors for consideration when assessing degree of employer control under common law. However, little insight exists as to how the court system combines these factors into an overall judgment of employment status.

The intent of this research inquiry is to build a parsimonious statistical model of significant factors used by the judiciary in differentiating employees from independent contractors for federal tax purposes. The research sample consists of 137 judicial decisions rendered in Federal District Courts and U.S. Tax Court from 1980 through 2003. Summary statistics indicate that 58 percent of the court decisions resulted in determinations of employee status and 60 percent of the cases were tried in the U.S. Tax Court.

A backward stepwise logistic regression procedure results in an eight variable model able to correctly classify 97.1 percent of the cases. Empirical findings in this study show that it is possible to differentiate between employees and independent contractors based on factors delineated in administrative and judicial rulings. Analysis of variable coefficients reveals that certain variables have a greater impact on the odds of obtaining an independent contractor status ruling. Further, the logistic regression model developed in the study is useful for predictive purposes.

Given that the study spans several decades and involves decisions from several judicial forums, the model is tested for temporal stability and stability between courts. The model appears to be stable over time and between venues. The findings of this study have practical implications for those subject to ambiguous worker classification laws as well as for the writers, enforcers, and interpreters of those laws.

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CHAPTER 1

INTRODUCTION

Background

The traditional American workforce is in the process of transforming itself. Technological advances coupled with economic uncertainty and the ever increasing costs of employment taxes, healthcare, pension benefits, and other workplace fringe benefits have led employers to an extended reliance on non-traditional employment relationships to fill human resource needs. Approximately one out of ten workers, or about thirteen million people, work under alternative employment arrangements (U.S. Department of Labor 2001a). The nontraditional employee has many names including "contingent worker," "outsourced employee," "telecommuter," "leased employee," "contract worker," "temporary worker," "casual worker," "just-in-time worker," "freelancer," and "independent contractor." Despite the numerous "real world" classifications of employment relationships, for purposes of federal law, only two classifications of workers are recognized: the employee and the independent contractor. Correct classification of a worker is important because the employer's legal responsibilities vary depending upon the nature of the employment relationship.

Impact of Federal Laws

Where an employer-employee relationship exists, the employer has numerous responsibilities toward the employee including: withholding, matching, and remitting taxes for old age, survivor, and disability insurance (OASDI), and hospital insurance (HI) under the *Federal Insurance Contributions Act* (FICA) (Internal Revenue Code (I.R.C.) §§ 3101-3128)[1]; withholding and remitting taxes pursuant to the *Federal Unemployment Tax Act* (FUTA) (I.R.C. §§ 3301-3311); withholding and remitting federal income taxes on employee earnings (I.R.C. §§ 3401-3406); filing form W-2 (I.R.C. § 6051); meeting requirements relative to qualified pension plans (I.R.C. § 401); withholding and remitting state income taxes where applicable; providing workers' compensation insurance; and possibly providing fringe benefits including life and health insurance.

Additionally, employers must comply with workplace and nondiscrimination laws regarding employees. Title VII of the *Civil Rights Act* (42 U.S.C. § 2000(e) (1964)) prohibits discrimination in employment decisions on the basis of race, religion, sex, color, or national origin. Minimum wage requirements and overtime pay for employees are mandated under the *Fair Labor Standards Act of 1938* (FLSA) (29 U.S.C. § 201). The *National Labor Relations Act* (NLRA) (29 U.S.C. § 151 (1935)) provides employees with the right of collective bargaining. The *Occupational Safety and Health Act of 1970* (29 U.S.C. § 651) regulates safety in the workplace. The *Employee Retirement Income Security Act of 1974* (ERISA) (29 U.S.C. § 1001), which regulates retirement plans, offers tax benefits to employers and employees under

[1] Unless otherwise noted, all references are to the Internal Revenue Code of 1986 as amended.

qualified retirement plans. Discrimination in employment decisions is prohibited against women on the basis of pregnancy, childbirth, and related conditions under the *Pregnancy Discrimination Act of 1978* (42 U.S.C. § 2000e(k)) and the *Family and Medical Leave Act of 1993* (29 U.S.C. § 2601) requires employers to provide employees with twelve weeks of unpaid leave for medical and family reasons including paternity and illness of a family member. The *Age Discrimination in Employment Act of 1967* (ADEA) (29 U.S.C. § 621) prohibits employer discrimination against employees on the basis of age. The *Americans with Disabilities Act of 1990* (ADA) (42 U.S.C. § 12101) prohibits discrimination against the disabled in employment decisions and requires employers to make accommodations for disabled employees.

Employers' Comparative Obligations

In contrast, employer responsibility toward hired independent contractors is generally limited to obtaining the worker's taxpayer identification number and reporting to the Internal Revenue Service (IRS), via IRS Forms 1099, annual compensation paid if exceeding six hundred dollars (I.R.C. § 6041). The array of workplace and nondiscrimination laws protecting employees generally does not extend to cover the employer-independent contractor relationship. Further, as an independent contractor, the worker is responsible for assessing and remitting his or her own employment taxes. Pursuant to the provisions of the *Self-Employment Contributions Act of 1954* (SECA) (26 U.S.C. § 1401), independent contractors are required to pay self-employment taxes equivalent to the employer plus employee share of FICA taxes (I.R.C. § 1401). The self-employed worker is responsible for quarterly payment of

estimated income taxes and is responsible for securing and funding his or her own health and life insurance and retirement plans. Differences in the level of financial and legal responsibilities dependent upon worker classification offer incentive for employers to look to independent contractors in lieu of employees to fill certain human resource needs.

From the employer's perspective, the flexibility and cost savings available through non-traditional employment relationships are attractive given the competitive environment in which today's businesses operate. Firms that "contract out" for services instead of having such services performed "in house" generally do so because of the associated competitive and economic advantages. From a competitive standpoint, using independent contractors allows a firm to expand and reduce its workforce during periods of fluctuating demand without having to hire or lay-off permanent workers. Contracting out also allows firms access to a pool of highly specialized workers on an as-needed basis while foregoing the costs of recruiting and training.

From an economic standpoint, human resource costs can be significantly reduced since independent contractors generally are not covered under employee benefit plans and there is no requirement to pay or withhold employment taxes on their behalf. This becomes increasingly important as benefit costs, FICA rates, and the wage base to which FICA rates apply increase. For example, benefit costs to employers, stated as a percentage of employee compensation, increased from 3 percent in 1929 to 17 percent in 1955 to 27 percent in 1999 (U.S. Department of Labor 2001b, 80). As illustrated in Table 1.1, the portion of FICA taxes payable by employers has

increased over time from a 1 percent tax levied on annual wages up to $3,000 in 1937 to a 7.65 percent tax levied on up to $51,300 in wages in 1990. For years after 1990, the FICA tax is separated into old age, survivor, and disability insurance (OASDI), and hospital insurance (HI) with assessed rates having remained constant at 6.2 percent and 1.45 percent respectively for a combined rate of 7.65 percent. However, the contribution base to which OASDI tax applies has been adjusted upward annually and beginning in 1994, contribution base limits on the HI portion of FICA taxes were removed. For the year 2004, OASDI tax is payable at the rate of 6.2 percent on wages up to $87,900 for a maximum per employee tax of $5,449.80. HI taxes are applicable, without limit, at the rate of 1.45 percent of employee wages.

TABLE 1.1

FICA Tax – Cost to Employers

Selected Years (Prior to 1991)	**Taxable Wage Base** (a)	**Tax Rate %** (b)	**Maximum Employer Cost per Employee** (a x b)
1937-1949	$ 3,000	1.0	$ 30.00
1950	3,000	1.5	45.00
1955	4,200	2.0	84.00
1960	4,800	3.0	144.00
1965	4,800	3.625	174.00
1970	7,800	4.8	374.40
1975	14,100	5.85	824.85
1980	25,900	6.13	1,587.67
1985	39,600	7.05	2,791.80
1990	51,300	7.65	3,924.45

TABLE 1.1 Continued

Post 1990	OASDI Contribution Base (a)	OASDI Maximum Tax (a x 6.2%) (b)	HI Contribution Base (c)	HI Maximum Tax (c x 1.45%) (d)	Maximum Employer Cost Per Employee (b + d)
1991	53,400	$ 3,310.80	$125,000	$1,812.50	$ 5,123.30
1992	55,500	3,441.00	130,200	1,887.90	5,328.90
1993	57,600	3,571.20	135,000	1,957.50	5,528.70
1994	60,600	3,757.20	Without limit	Without limit	Without limit
1995	61,200	3,794.40	Without limit	Without limit	Without limit
1996	62,700	3,887.40	Without limit	Without limit	Without limit
1997	65,400	4,054.80	Without limit	Without limit	Without limit
1998	68,400	4,240.80	Without limit	Without limit	Without limit
1999	72,600	4,501.20	Without limit	Without limit	Without limit
2000	76,200	4,724.40	Without limit	Without limit	Without limit
2001	80,400	4,984.80	Without limit	Without limit	Without limit
2002	84,900	5,263.80	Without limit	Without limit	Without limit
2003	87,000	5,394.00	Without limit	Without limit	Without limit
2004	87,900	5,449.80	Without limit	Without limit	Without limit

Benefits of Employer-Employee Relationship

Despite the comparatively lower tax and compliance costs associated with retaining independent contractors in lieu of employees, in some instances it is preferable for firms to maintain the traditional employer-employee relationship. An example is when the nature of work is creative. Under the *Copyright Act of 1976* (Copyright Act) (17 U.S.C. § 101), created work is generally deemed to belong to the creator of the work. However, if the work is a "work for hire" then the creator's employer is deemed the owner of the work. A work is considered a "work for hire" if: (1) the work falls under one of several specified categories listed in the *Copyright Act* and there exists a corresponding written signed agreement stating the work is to be considered a work made for hire, or (2) the work is created by an employee within the

scope of employment. Therefore, when dealing with "creators" including artists, writers, photographers, designers, composers, musicians, and computer programmers, a traditional employer-employee relationship may be preferable from the employer's perspective. As noted by Turcik (2001, 337):

> As the workforce becomes less traditional and more workers are creating copyrightable material, such as computer programs, copyright ownership becomes an important consideration in the overall scheme of bargaining between employers and employees. Where conflict is not anticipated, and an employee's status is not otherwise discussed, there is great potential for litigation.

Other often cited disadvantages associated with using independent contractors include: the loss of expertise experienced once the independent contractor completes a project and proceeds with work elsewhere; workplace safety risks associated with lack of safety training and supervision and non-coverage of independent contractors under workers' compensation insurance; security risks relative to potential breaches of confidence where proprietary information is involved; lack of commitment to a company's culture, vision, or goals; and the financial risks of misclassifying a worker as an independent contractor when he or she is, in fact, an employee (Wolfe 1996).

Employee Concerns

From the worker's perspective, working as an independent contractor affords certain intrinsic benefits including the flexibility, independence, and freedom associated with being one's own boss. However, these benefits are realized at the sacrifice of coverage under labor laws typically protecting employees including laws pertaining to minimum wage requirements, family and medical leave, workers' compensation, unemployment insurance, and nondiscrimination requirements. Further, independent contractors are generally not provided fringe benefits offered to a

firm's employees, leaving the independent contractor responsible for individually providing for his or her own life and health insurance and retirement.

Tax Concerns

Regardless of worker classification, all payments to a worker are required to be reported by the worker as income for federal income tax purposes under I.R.C. Section 61. However, to the extent a worker incurs unreimbursed business expenses, the worker's classification affects the tax deductibility of those expenses. A worker classified as an employee must categorize unreimbursed business expenses as miscellaneous itemized deductions. Miscellaneous itemized deductions are deductible from Adjusted Gross Income (AGI) to the extent such expenses in the aggregate exceed 2 percent of AGI (I.R.C. § 67(a)). Conversely, all ordinary and necessary business expenses incurred by a worker designated as an independent contractor are reported as deductions in arriving at AGI (I.R.C. § 62(a)(2)(A) and (B); I.R.C. § 162). Therefore, independent contractors enjoy the full tax benefit of deductible business expenses while the benefit to employees is limited.

Both employees and independent contractors are covered under the United States Social Security and Medicare Systems. The *Federal Insurance Contributions Act* (FICA) currently requires that employers withhold 7.65 percent of an employee's gross earnings, match the withheld amount, and remit the summed 15.3 percent for funding of Social Security and Medicare programs (I.R.C. §§ 3101, 3102(a), and 3111). The *Self- Employment Contributions Act* (SECA) imposes a self-employment tax of 15.3 percent on net income from self-employment (I.R.C. § 1401) to be remitted by the independent contractor also for funding of Social Security and Medicare

programs. The amount paid by the independent contractor is equivalent to the combined amount paid by the employer and employee. As an equity adjustment, one-half of the amounts paid for SECA taxes are deductible for federal income tax purposes as a deduction in arriving at AGI (I.R.C. § 1402(a)(12)) or in computing self-employment earnings (I.R.C. § 164(f)). While both classes of workers are covered under Social Security and Medicare programs, the independent contractor incurs a greater initial out-of-pocket expense for that coverage.

As indicated from the above discussions, the "ideal" categorization for a worker is dependent upon perspective and objective. However, "correct" classification is imperative as "incorrect" classification can result in significant employer liability regarding violations of tax laws and federal labor laws. Particularly, the reclassification of workers from independent contractor status to employee status can result in retroactive employer liability for employment taxes, fines and penalties, under-funded pensions and fringe benefits, and lawsuits arising from violations of labor and nondiscrimination laws.

Reclassification Consequences

Employment Taxes. The term "employment taxes" refers to FICA and FUTA taxes and income taxes withheld from employee wages. When a worker is classified as an employee, the employer is required to: (1) withhold federal income taxes and the employee's share of FICA taxes from the employee's wages, (2) remit a matching amount of FICA taxes on behalf of the employee, and (3) pay federal unemployment taxes. No such requirements exist when a worker is classified as an independent contractor. If, however, an independent contractor is reclassified by the

Internal Revenue Service (hereafter IRS or Service) as an employee, then the employer becomes liable for all employment taxes that should have been withheld from wages had the worker been correctly classified. This includes the taxes that would have been paid by the employee, specifically the employee portion of FICA taxes and income taxes withheld at the source of wages. However, in worker reclassification cases, employer liability may be limited under I.R.C. Sections 3409 and 3509 in regards to the employee's FICA tax responsibilities and income tax withholding deficiency unless "intentional disregard" of withholding obligations is evidenced or unless the employer withheld income taxes but not FICA taxes (I.R.C. § 3509(c) and (d)(2)). As outlined in Table 1.2, the employer remains fully liable for the employer portion of FICA taxes and for FUTA taxes.

Penalties. Upon reclassification of employees, an employer may also be subject to an array of penalties including: failure to withhold employee taxes (I.R.C. § 6672); failure to file a tax return (I.R.C. § 6651(a)(1)); failure to deposit taxes (I.R.C. § 6656); failure to furnish statements to workers (I.R.C. § 6674); and interest (I.R.C. § 6601). Internal Revenue Code Section 6672 also provides that individuals, including corporate officers and employees, with authority over financial matters who willfully fail to collect and remit employment taxes may be held personally liable for the tax deficiency. Further, recasting of employees for federal employment tax purposes is apt to result in a corresponding reclassification for state tax purposes.

TABLE 1.2

Employer Liability for Employment Taxes Resulting from Worker Reclassification

Tax	Employer Liability	Reduced Liability Available Under IRC Sections 3409 & 3509[a]
FICA Employer Portion	7.65% of Employee Social Security Wages[b]	None/Full Liability
FICA Employee Portion	7.65% of Employee Social Security Wages[b]	*If Reporting Requirements Met/ 1099s filed:* 20% of Deficiency *If Reporting Requirements Not Met/ 1099s Not Filed:* 40% of Deficiency[c]
Income Tax Withholding	100% of Deficiency	If Reporting Requirements Met/1099s filed: *1.5% of Employee Wages* If Reporting Requirements Not Met/1099s Not Filed: *3.0% of Employee Wages*[d]
FUTA	100% of Deficiency	None/Full Liability

[a] Not available in cases where "intentional disregard" of withholding obligations is evidenced.
[b] For 2004, FICA rates are 7.65% of the first $87,900 of Social Security wages and 1.45% on any excess.
[c] IRC §§ 3409(a)(2) and (b)(1)(B)
[d] IRC §§ 3509(a)(1) and (b)(1)(A) - If Section 3509 relief is not available to the employer, a request for abatement of tax liability may be made for: (1) actual income tax paid by workers on wages at issue (IRC § 3402(d)), and (2) actual social security taxes paid by workers as self-employment taxes on wages at issue (IRC § 6521(a)). Abatement requirements include obtaining written signed statements from the workers (Form 4669) and disclosing social security numbers.

Benefit Plans. The potential costs associated with misclassifying workers extend beyond the area of employment taxes. The *Employee Retirement Income Security Act of 1974* (ERISA) provides for tax benefits for qualifying retirement plans (I.R.C. §§ 401 & 404). Benefits include: the immediate deduction for employers of retirement plan contributions; deferral of income for employees until actual receipt of retirement plan proceeds; tax exempt status for pension plan earnings; and a tax deduction (exclusion) allowed to employers (employees) for the costs of certain other workplace fringe benefits. ERISA contains certain nondiscrimination (I.R.C. § 401(a)(4)), minimum participation (I.R.C. § 410), and minimum coverage requirements (I.R.C. § 401(a)(26)). The purpose of these requirements is to deter discrimination particularly in favor of highly compensated employees. Minimum funding requirements are also established under ERISA (I.R.C. § 412). Incorrect classification of workers as employees or independent contractors can result in the incorrect inclusion or exclusion of workers relative to a plan, jeopardize the qualified status of the plan, and create funding problems and unanticipated liabilities.

The case of *Vizcaino v. Microsoft* (78 AFTR 2d 96-6690 (9th Cir. 1996)) highlights the imbricate effect of potential consequences of worker misclassification. Microsoft supplemented its staff of regular employees with freelancers, which the company classified as independent contractors. The freelancers signed documents acknowledging they were independent contractors and responsible for their own employment taxes, insurance, and benefits. In 1990, pursuant to an employment tax examination, the IRS determined that based on the common law test of control, several hundred of the freelancers were in fact employees. Microsoft conceded to the

reclassification of the workers for employment tax purposes. Subsequently, a group of the reclassified workers filed a class action lawsuit under ERISA and Washington state law seeking inclusion, as employees, in the company's retirement and stock purchase plans. The courts held that, subject to certain restrictions, the misclassified workers were entitled to participate in the employee benefit plans.[2] Microsoft settled the case in December of 2000 at a cost of $97 million (Donna Vizcaino, et al. v. Microsoft, Class Action Settlement Agreement 2000, 15).

Financial Statement Consequences. Everett, Spindle, and Turman (1995) suggest that the misclassification of workers might have financial statement consequences as well. As defined in Statement of Financial Accounting Standards No. 5 (SFAS No. 5), Accounting for Contingencies, a loss contingency is "an existing condition, situation, or set of circumstances involving uncertainty as to possible . . . loss . . . to an enterprise that will ultimately be resolved when one or more future events occur or fail to occur" (Financial Accounting Standards Board 1975, 1). Pursuant to the provisions of SFAS No. 5, when a loss contingency exists, an assessment must be made as to the likelihood that the loss will be confirmed. If the likelihood of loss is probable (likely to occur) and the amount is estimable, then the estimated liability should be accrued in the financial statements. If the likelihood of loss is reasonably possible (more than remote but less than likely) then the loss contingency should be disclosed in the footnotes to the financial statements. If the

[2] The U.S. Court of Appeals, Ninth Circuit, rendered a decision in favor of the workers on October 3, 1996. (Vizcaino v. Microsoft Corp., 78 AFTR 2d 96-6990, 97 F.3d 1187) ("Vizcaino I"/panel decision). The case was reheard July 24, 1997, en banc, again with a decision in the plaintiffs' favor. (Vizcaino v. Microsoft Corp., 80 AFTR 2d 97-5594, 120 F.3d 1006) (9th Cir. 1997), cert. denied, 120 S. Ct. 844, (2000) ("Vizcaino II"/en banc decision).

likelihood of loss is remote (slight), then neither accrual nor disclosure is required. Accordingly:

> From a theoretical perspective, situations in which large numbers of independent contractors are used could have the potential for some level of disclosure, as the likelihood of an IRS audit may well extend beyond "remote" and reach "reasonably possible" status (Everett, Spindle, and Turman 1995, 11).

The Treasury Department reports, "Misclassification of workers has, in the past, cut across all industries and has involved up to almost 20 percent of the employers comprising some industries" (U.S. General Accounting Office 1995, 2).

Section 530 Relief. Relief from large employment tax liabilities resulting from worker reclassification may be available to employers pursuant to Section 530 of the *Revenue Act of 1978* (92 Stat. 2763, 2885). Congress enacted Section 530 as a "safe harbor" statute aimed at providing relief from the potentially crippling employment tax liabilities to employers resulting from IRS initiated retroactive reclassification of independent contractors to employees. Section 530 provides for relief from employment tax liability relative to a worker incorrectly classified as an independent contractor if the employer: (1) can demonstrate a "reasonable basis" for treating the worker as an independent contractor, (2) consistently treated the worker, or any other worker holding a substantially similar position, as an independent contractor (substantive consistency), and (3) consistently filed all required federal tax returns (including Forms 1099) with respect to the worker (reporting consistency). Many businesses facing reclassification do not qualify for relief under Section 530 since all three tests (reasonable basis, substantive consistency, and reporting consistency) must be met. Further, the provisions of Section 530 apply only to relief

from federal employment tax liabilities and do not extend to state employment tax, pension and benefit plan, or nondiscrimination and labor law liabilities.

Employee Defined

Correctly defining and distinguishing a non-traditional worker as either an employee or independent contractor may be arduous as the statutes are obscure. That is, an employee is defined under ERISA as "any individual employed by the employer." For FICA purposes, an employee is defined generally as an "individual who, under the usual common-law rules applicable in determining the employer-employee relationship, has the status of an employee" (Reg. § 31.3401(c)-1(b)). The definitional ambiguity evidenced in the statutes has resulted in the employee versus independent contractor issue being a highly litigated one. As a practical matter, for determining worker status, the courts apply either the common law test of control, economic realities test of dependency, or a hybrid of the two, depending on the applicable statute. Under the common law test of control, an employer-employee relationship is evidenced when the employer has the right to exercise control within the working relationship both as to end result and means of accomplishing that result. A lack of such right to control is indicative of an employer-independent contractor relationship. Under the economic realities test, an employer-employee relationship is deemed evident if the worker is economically dependent on the employer/business. Likewise, a worker not solely dependent upon one employer for continued employment would indicate independent contractor status. The test applied in judicial determinations of worker status depends upon the statute at issue. As indicated in Table 1.3, the common law test of control is applied for employment tax purposes and

for determinations under the Copyright Act, NLRA, and ERISA. The economic realities test which is more encompassing than the common law test of control, and

TABLE 1.3

Worker Classification Tests Applied by Courts under Various Statutes

Statute	Test Applied	Case Reference
Employment Tax (FICA, FUTA, and Income Tax Withholding)	Common Law	*United States v. W.M. Webb, Inc.*, 397 U.S. 179 (1970)
Employee Retirement Income Security Act (ERISA)	Common Law	*Nationwide Mutual Ins. Co. v. Darden*, 503 U.S. 318, 326 (1992)
National Labor Relations Act (NLRA)	Common Law	*NLRB v. United Ins. Co.*, 390 U.S. 254 , 256 (1968)
Copyright Act	Common Law	*Community for Creative Non-Violence v. Reid*, 490 U.S. 730, 739 (1989)
Fair Labor Standards Act (FLSA)	Economic Realities	*Rutherford Food Corp. v. McComb*, 331 U.S. 722 (1947)
Title VII of the Civil Rights Act of 1964	Hybrid[a]	*Wild v. County of Kandiyohi*, 15 F.3d 103 (8th Cir. 1994)
Age Discrimination in Employment Act (ADEA)	Hybrid[a]	*EEOC v. Zippo Mfg. Co.*, 713 F.2d 32 (3d Cir. 1983)
Americans with Disabilities Act (ADA)	Hybrid[a]	*Birchem v. Knights of Columbus*, 116 F.3d 310, 312 (8th Cir. 1997)

[a] The hybrid test combines both the common law and economic realities tests for assessing a worker's classification (See Chapter 2 pp. 29-38 for a discussion of the common law and economic realities tests). Questions as to the appropriateness of the hybrid test have been raised as a result of the decision rendered in *Nationwide Mutual Insurance Co. v. Darden*, 503 U.S. 318 (1992) (Maltby and Yamada 1997, 253). Further, courts have commented that, as a practical matter, there is little difference between the hybrid test and the common law agency test (*Frankel v. Bally, Inc.*, 987 F.2d 86, 90 (2d Cir. 1993)).

applied is more likely to result in a worker being classified as an employee, is generally the test used in areas of law where employee protection is at issue such as minimum wage and overtime requirements under the *Fair Labor Standards Act*. A

hybrid test has been used with consideration given to both the common law and economic realities tests, with emphasis on the degree of employer control. Such is sometimes the case for claims brought under Title VII of the *Civil Rights Act*, *ADEA*, and *ADA*.

Since the test applicable in determining worker classification may vary depending upon the statute being considered, it is possible for a single worker in any given work relationship to be classified as an employee for the purposes of one law and independent contractor for the purposes of another. This research focuses on examination of the common law test of control specifically as it relates to the determination of worker classification for federal tax purposes.

Significance of the Problem

A major risk for business is the cost associated with reclassification of misclassified workers. Although relief from employment tax liabilities due to worker misclassification may be available to some employers under Section 530 of the *Revenue Act of 1978*, worker classification issues continue to be a major problem. Further, worker misclassification concerns have become a focus of IRS audit efforts. Because independent contractors have been found by the IRS to have a lower tax compliance rate than employees, the IRS initiated its Employment Tax Examination Program (ETEP) in 1986 (U.S. General Accounting Office 1995, 5). The IRS completed 12,983 ETEP audits from 1988 through 1995 resulting in reclassification of 527,000 workers to employee status and proposed tax assessments of $830 million (U.S. General Accounting Office 1996, 3). The Service reported that 90 percent of the businesses audited from 1989 through 1991 had at least one misclassified worker

(U.S. General Accounting Office 1992, 1). Unfortunately, the tax rules governing worker classification are subjective, ambiguous, and confusing at best.

The term "employee" is not defined for employment tax purposes in the Internal Revenue Code. When a statute does not define the term otherwise, the Supreme Court has held it should be inferred that Congressional intent is to incorporate the established meaning of the word from the common law doctrine of agency (*Nationwide Mutual Insurance Co. v. Darden*, 503 U.S. 318 (1992)). Under common law, the distinction between employee and independent contractor is based upon degree of employer control over the worker. The IRS has identified (from an examination of court cases and prior rulings) and published in Revenue Ruling 87-41 (1987-1 C.B. 296) twenty factors for consideration when assessing degree of employer control and for determining worker classification. The courts have held that worker classification is a question of fact to be determined upon examination of the details unique to each case and the application of the law and regulations for a particular case (*Professional & Executive Leasing v. Commissioner*, 89 T.C. 225 (1987)). Accordingly, each of the twenty IRS identified factors will not necessarily be present in each case and the degree of importance of the individual factors will vary depending upon the facts and circumstances unique to each case. The result is a twenty-factor common law test of control that even the Treasury Department testifies is confusing and "does not yield clear, consistent, or satisfactory answers, and reasonable persons may differ as to the correct classification [for a worker]" (U.S. General Accounting Office 1995, 2).

In its tax policy concept statement "Guiding Principles for Tax Simplification," the American Institute of Certified Public Accountants (AICPA) delineates simplicity as being a necessary attribute of a good tax system. Worker classification under the twenty-factor common law test received a "thumbs down" in the report on five of the seven principles listed that should be followed when developing tax legislation (AICPA 2002). A "thumbs down" in the report indicates that guiding principles were violated upon enactment or amendment of the legislative provision. Collectively, the AICPA, American Bar Association Section of Taxation, and the Tax Executives Institute, in a joint press conference, included the employee versus independent contractor issue in their "Ten Ways to Simplify the Code" and recommended replacing the subjective twenty-factor common law test of control with a more objective test (Ferguson 2000).

Recent IRS initiatives aimed at reducing taxpayer burden as it relates to worker classification include the Classification Settlement Program, Early Referral to Appeals, and new IRS Training Materials (IRS, News Release IR 96-7 1996). The Classification Settlement Program is an optional program that establishes procedures for settling worker classification cases as early as possible in the administrative process. Early Referral to Appeals allows early referral of employment tax issues from IRS district level to IRS appeals level for the purpose of resolving issues more expeditiously. The revised IRS Worker Classification Training Materials (hereafter Revised Training Materials) is an attempt to "identify, simplify, and clarify the relevant facts that should be evaluated in order to accurately determine worker classification under the common law" considering that "business relationships and the

work environment change over time" (IRS 1996a). In the Revised Training Materials, the traditional twenty factors considered when applying the common law test of control are categorized as factors evidencing behavioral control, financial control, or the relationship of the parties.

Despite IRS initiatives, worker classification continues to be a problematic issue of concern to U.S. businesses. At the 1995 White House Conference on Small Business, worker classification was listed as the number one issue plaguing small business (U.S. Small Business Administration 1996). Further, in the National Taxpayer Advocate's Annual Report to Congress, the employee versus independent contractor issue was listed among the top ten tax issues most litigated by taxpayers for fiscal year 2000 (IRS 2000, 66).

Recent legislative attempts at simplifying worker classification rules and providing a more objective test for determining worker status have included: The *Independent Contractor Tax Simplification Act of 1996* (U.S. Congress, Senate 1996a); *Independent Contractor Tax Reform Act of 1997* (U.S. Congress, Senate 1997); *Independent Contractor Simplification and Relief Act of 1999* (U.S. Congress, Senate 1999); and the *Independent Contractor Determination Act of 2001* (U.S. Congress, Senate 2001a). While these legislative attempts have not progressed beyond committee, consistent legislative sponsorship of the acts is indicative of the currency, urgency, and magnitude of the employee versus independent contractor problem.

Objectives of the Study

The primary objective of this study is to identify factors used by the judiciary, as final interpreter of the law, in distinguishing between employees and independent contractors for federal tax purposes. The ambiguity inherent in current legislative and administrative guidelines necessitates a subjective application of those guidelines resulting in frequent disagreements between employer taxpayers and the Internal Revenue Service as to correct worker classification, with the end result being a considerable amount of litigation. Although the IRS has identified at least twenty factors to be considered when making worker classification determinations, little insight exists as to how the courts combine these factors into an overall judgment of employment status. Prior empirical research has examined the variables considered by Federal District Courts and Court of Claims (now U.S. Court of Federal Claims) in employee versus independent contractor cases (Stewart 1980). However, no empirical research has been conducted in this area in over twenty-four years, during which time the employment landscape has changed dramatically and the Internal Revenue Service has issued significant guidance (e.g., Revenue Ruling 87-41; Revised Training Materials). Further, no empirical research of this issue has been conducted considering decisions rendered by the U.S. Tax Court. The intent of this study is to fill these voids by addressing four major research questions.

Research Focus

Research Question 1

The first research question presented for investigation is: Which of the factors or variables delineated in administrative and judicial rulings explain court

determinations of worker classification in employee versus independent contractor disputes?

Regulations require that, under common law rules, the facts of each case be examined when determining the nature of the relationship between an employer and a worker (Reg. § 31.3121(d)-1(c)(3)). Based upon examination of judicial decisions and revenue rulings, the Service identified twenty factors to be considered when making such a determination. The District Court in the case of *In re Rasbury* (69 AFTR 2d 92-1056 (N.D. Ala. 1992)) held that the IRS's twenty-factor test was not all-inclusive and applied an additional four factors when determining the IRS had incorrectly reclassified independent loggers as employees. No empirical research of worker classification has been conducted since Stewart's 1980 study, the release of Revenue Ruling 87-41, and the decision in *Rasbury*.

It is the position of the Service that certain of its identified factors are more important than others but the IRS concedes that it is difficult to assign relative weights to the numerous factors (IRS, Revenue Ruling 87-41 1987; Revenue Ruling 66-274 1966). Further, each factor will not apply to every case, leaving the employer and/or revenue agent to subjectively evaluate which factors apply and their relative importance in the overall assessment of a worker's employment status.

The classification of a worker as an employee or independent contractor is a determination of fact. The ultimate resolution of disputes between employers and the Internal Revenue Service as to worker classification rests with the courts. It is an objective of this research to build a parsimonious statistical model of judicial decision-

making based on IRS and court identified factors to aid decision makers when classifying workers.

Research Question 2

The second research question explored is: Can the demarcated factors from administrative and judicial rulings be used to predict employment status for tax purposes? The ambiguity inherent in current legislative and administrative guidelines relative to worker classification necessitates a subjective application of those guidelines with the result being a considerable amount of litigation. An objective of this research is to statistically model judicial decision making of worker classification cases for prediction purposes.

Research Question 3

The third research question considered is: Do different courts of original jurisdiction (district courts and U.S. Court of Federal Claims versus U.S. Tax Court) consider similar factors when rendering decisions in cases of worker classification?

Employee versus independent contractor cases are tried in several different judicial forums including Federal District Courts, U.S. Court of Federal Claims (formerly the U.S. Court of Claims and U.S. Claims Court), and the Tax Court. Prior research indicates that for decisions involving the valuation of large blocks of publicly traded stock, opinions of the district courts and Court of Claims vary significantly from those of the Tax Court (Kramer 1982). This inconsistency may be due to differences in the courts. The Tax Court is comprised of nineteen judges with tax practice backgrounds who hear only tax cases. Accordingly, these judges are seen as experts in the area of taxation. Taxpayers choosing to litigate in the Tax Court may do

so without first paying IRS assessed taxes, penalties, and interest. In contrast, the district courts and U.S. Court of Federal Claims include a much larger number of judges who come from diverse backgrounds, are not necessarily tax specialists, and who hear primarily non-tax cases. Taxpayers filing suit in the district courts or U.S. Court of Federal Claims are required to pay in advance any IRS assessed deficiencies including penalties and interest and subsequently sue for a refund. Accordingly, selection of judicial forum may affect the outcome of a case.

The single prior empirical work in the area of worker classification for employment tax purposes, conducted by Stewart (1980), found no significant difference due to legal forum when comparing Federal District Courts to Court of Claims decisions. Tax Court decisions were not analyzed by Stewart because of the limited number of cases available at the time and the lack of jurisdiction of the court over employment tax matters. Since 1980, the Tax Court has decided a significant number of employee versus independent contractor cases and the *Taxpayer Relief Act of 1997* (26 U.S.C. § 7436) officially expanded the jurisdiction of the Tax Court to include employment tax issues. This study is the first to consider Tax Court and U.S. Court of Federal Claims[3] decisions in analyzing the importance of legal forum relative to worker classification for federal tax purposes.

[3] Prior to October 1, 1982 (the period corresponding with Stewart's case analysis), the U.S. Court of Federal Claims was known as the U.S. Court of Claims. Disputed decisions before this forum were appealed directly to the U.S. Supreme Court. From October 1, 1982 to October 29, 1992, the Court was known as the U.S. Claims Court. Currently, decisions from the U.S. Court of Federal Claims are initially appealed to the U.S. Court of Appeals for the Federal Circuit (Smith, Harmelink, and Hassleback 2003, 2-12)

Research Question 4

The final research question explored is: Have the factors considered by courts in worker classification cases changed over time? The data used in this study span a twenty-four year time period during which the employment landscape has changed dramatically, critical administrative guidance has been promulgated, and significant judicial guidance has been issued. Accordingly, the stability of the model and its predictive ability over time need to be tested.

Organization of the Dissertation

This dissertation is divided into six chapters. Chapter 1 serves as an introduction to the topic of worker classification and includes a discussion of the importance of the issue and associated problems. Purposes of the study are also presented.

Chapter 2 presents the relevant legislative, judicial, and administrative guidelines for worker classification and discusses the variables to be analyzed in this research. Also, included is a discussion of proposed legislation aimed at providing a more objective test for determining worker status. Chapter 3 reviews prior analytical, legal, and empirical research in the area of worker classification.

Chapter 4 presents the research questions and hypotheses to be investigated and discusses the data analyzed and the statistical techniques used in the study. Chapter 5 reports the empirical findings of the experiment. Results of the tests of hypotheses are given and descriptive statistics are reported.

Chapter 6 contains a discussion of the research findings. Conclusions and ideas for future research are presented. In addition, limitations of the study are disclosed.

CHAPTER 2

AUTHORITATIVE GUIDELINES

The purpose of this chapter is to present the relevant authoritative guidelines on worker classification. The historical events and legislative acts preceding the codification of present employment tax law are discussed first. Second, current legislative, judicial, and administrative authority on the subject is discussed. Third, is a review of relief provisions available to taxpayers faced with the challenge of complying with an employment tax law with ambiguous definitional elements. Finally, current proposals aimed at simplifying the employee versus independent contractor issue and providing more objective criteria for determining worker status are discussed.

Historical Background

Social Security Act of 1935

The period of severe economic downturn known as the Great Depression resulted in a decline in the American stock market of nearly 90 percent from 1929 to 1932 and a rise in unemployment from an approximate annual rate of 3.3 percent from 1923 through 1929 to 25 percent in 1933 (U.S. Department of Labor 2001b, 69). President Franklin D. Roosevelt, intent on reviving the U.S. economy, initiated a wave of social welfare legislation known as the New Deal. This legislation included the

Social Security Act of 1935 (49 Stat. 620), which provided a compulsory and contributory nationwide system of social insurance for the purpose of protecting workers from wages lost due to old age or unemployment.

The original *Social Security Act* contained eleven "titles." Six of the titles contained provisions for gifts to the states for various purposes including state pensions, aid to dependent children, and public health. The provisions of Title II dealt with federal old age benefits. The Social Security Board was established pursuant to the provisions of Title VII, and Title XI included definitions. Title VIII, now known as the *Federal Insurance Contributions Act*, provided for the funding of a federal retirement system via the levy of tax (on both employees and their employers) with respect to employment. Title IX, now known as the *Federal Unemployment Tax Act,* provided for compensation to workers during sustained periods of unemployment as funded by an excise tax levied upon employers with eight or more employees. Section 811 of Title VIII and Section 907 of Title IX defined employment, aside from a list of exceptions, as "any service, of whatever nature, performed within the United States by an employee for his employer" (U.S. Social Security Administration n.d.). Title XI, the definitional section of the *Social Security Act*, failed to offer a definition for the term "employer" and only vaguely defined the term employee as "including an officer of a corporation." Thus, while the social security legislation accentuated the need for classification of working relationships (employment or not) and workers (employees or not), the legislation offered little guidance for accomplishing the task. As noted by Compton (1940, 129), "The absence of any elaborate definition of 'employment' indicates the willingness of Congress to limit the application of the payroll tax laws to

wages paid for 'employment' as defined by the courts." Historically, the courts have relied on the common law of agency when resolving worker classification issues.

Current Tax Payment Act of 1943

Prior to World War II, annual federal income taxes were, for any given taxable year, payable (by upper level wage earners only) as a lump sum due in the succeeding year (Allman 1999). The war resulted in an increased need for tax revenues and subsequently, a major expansion of the base of individuals to be taxed. North (1978, 780) discusses that:

> As a result of World War II, the income tax became a mass tax that affected taxpayers of every economic strata. The five million taxpayers in 1920 became fifty million during the war and increased to ninety million by 1951. The need for a pay-as-you-go system was obvious, not only to assure payment by low income employees but also to restrict inflation by reducing purchasing power. (footnotes omitted)

The first income tax withholding provisions were enacted as part of the *Current Tax Payment Act of 1943* (57 Stat. 126). Compliance with the provisions required employers to withhold and remit taxes at the rate of 20 percent of employees' wages. According to the Treasury Regulation issued pursuant to the act, common law principles were to be applied when defining and identifying "employees" for purposes of compliance with the withholding requirements (North 1978, 780).

Common Law Control Test

Common law is that body of law based on the customs, practices, and consent of the people. Common law is often referred to as "case law," established through judicial precedent, as opposed to statutory law. Within the body of common law of agency is the concept of liability of the "master" for torts of the "servant" under the

doctrine of respondeat superior. The Restatement of the Law of Agency (Second) (1958, 12) offers the following explanation:

> (1) A master is a principal who employs an agent to perform service in his affairs and who controls or has the right to control the physical conduct of the other in the performance of the service.
>
> (2) A servant is an agent employed by a master to perform service in his affairs whose physical conduct in the performance of the service is controlled or is subject to the right to control by the master.
>
> (3) An independent contractor is a person who contracts with another to do something for him but who is not controlled by the other nor subject to the other's right to control with respect to his physical conduct in the performance of the undertaking. He may or may not be an agent.

Tort Law. Early examples of the application of the common law control test to tort law include *Railroad Co. v. Hanning* (82 U.S. 649 (1872)) and *Singer Manufacturing Co. v. Rahn* (132 U.S. 518 (1889)). In the 1872 U.S. Supreme Court case of *Railroad Co. v. Hanning* (82 U.S. 649), the Court found the company liable for injury caused to a third party due to negligence of a contractor it hired to rebuild the company's wharf. The company reserved the right to control the work of the contractor and consequently was deemed the contractor's master, liable for the tort of its servant. The court reasoned:

> The rule extracted from the cases is this: The principal is liable for the acts and negligence of the agent in the course of his employment, although he did not authorize or did not know of the acts complained of. So long as he stands in the relation of principal or master to the wrongdoer, the owner is responsible for his acts. When he ceases to be such and the actor is himself the principal and master, not a servant or agent, he alone is responsible. Difficult questions arise in the application of this rule. Nice shades of distinction exist, and many of the cases are hard to be reconciled. Here the general management and control of the work was reserved to the company. . . . The reservation of authority is both comprehensive and minute. . . .The contractor undertakes in general terms to do the work well. The company reserve[s] the power not only to direct what shall be done, but how it shall be done. This is an important test

> of liability. (footnotes omitted) (*Railroad Co. v. Hanning*, 82 U.S. 649, 657 (1872))

In the 1889 case of *Singer Manufacturing Co. v. Rahn* (132 U.S. 518), Singer was held liable for injury to a pedestrian caused by a salesman driving a company supplied wagon pulled by the salesman's horse. Even though the salesman was paid via commissions and responsible for his expenses, he had agreed to work exclusively for Singer and was subject to various rules, instructions, and directions of the company. The court explained:

> The relation of master and servant exists whenever the employer retains the right to direct the manner in which the business shall be done, as well as the result to be accomplished, or, in other words, "not only what shall be done, but how it shall be done." (132 U.S. 518, 523 (1889) quoting *Railroad Co. v. Hanning*, 82 U.S. 649, 656 (1872))

The court determined the salesman to be a servant of Singer and held the company liable since it reserved the right to control not only what work the salesman did but how he accomplished that work.

In current statutes, the term "master" ("servant") has largely been replaced by the term "employer" ("employee"). The common law control test, the established basis for determining employer liability under the concept of respondeat superior, has also emerged as the standard for determining worker classification in employment issues (Carlson 2001, 310). The Supreme Court applied the test in 1926 when ruling that compensation of consulting engineers engaged by a state and local government was not exempt from income tax under the *War Revenue Act*. The *War Revenue Act of 1917* (40 Stat. 300, 303) provided for the assessment of a tax on net income, but exempted from the income tax the compensation or fees of officers and employees

under any state or local subdivision thereof. The court held that the engineers were not employees but independent contractors since:

> Performance of their contract involved the use of judgment and discretion on their part and they were required to use their best professional skill to bring about the desired result. This permitted to them liberty of action which excludes the idea of that control or right of control by the employer which characterizes the relation of employer and employee and differentiates the employee or servant from the independent contractor. (*Metcalf & Eddy v. Mitchell*, 269 U.S. 514, 521 (1926))

Social Welfare Legislation. With the passage of New Deal legislation, the focus of issues of employment status changed from employer liability under tort law to employee protection under social welfare legislation. In this environment, the courts were faced with determining whether the common law control test was sufficient for determining worker classification under protective statutes. In the case of *National Labor Relations Board v. Hearst Publications* (322 U.S. 111 (1944)), publishers of four Los Angeles daily newspapers refused to bargain with a union representing "newsboys" hired to distribute newspapers claiming that the right to collective bargaining afforded employees under the *National Labor Relations Act* (NLRA) did not apply in this case as the carriers were not company employees. The court noted:

> Few problems in the law have given greater variety of application and conflict in results than the cases arising in the borderland between what is clearly an employer-employee relationship and what is clearly one of independent, entrepreneurial dealing. This is true within the limited field of determining vicarious liability in tort. It becomes more so when the field is expanded to include all of the possible applications of the distinction. (footnote omitted) (*NLRB v. Hearst*, 322 U.S. 111, 121 (1944))

The court reasoned, "It will not do, for deciding this question as one of uniform national application, to import wholesale the traditional common-law conceptions. . . ." and declared that the "statute's purpose" and "economic facts of the

relation[ship]" were pertinent to the determination that the newsboys were in fact employees for purposes of the *National Labor Relations Act* (*National Labor Relations Board v. Hearst*, 322 U.S. 111, 127-128 (1944)). This decision triggered a struggle between administrative, judicial, and legislative powers as to what criteria (statutory purpose test, economic realities test, or common law control test) should prevail in worker classification determinations.

Congress criticized the reasoning in the *Hearst* decision and the use of the statutory purpose and economic realities tests stating that:

> It must be presumed that when Congress passed the Labor Act, it intended words to have the meanings that they had when Congress passed the act. . . . In the law there has always been a difference, and a big difference between "employees" and "independent contractors." (U.S. Congress, House 1947)

Congress amended the *NLRA* via the *Taft-Hartley Act* (29 U.S.C. § 141 (1947)), also known as the *Labor-Management Relations Act*, to expressly exclude coverage to independent contractors thus reaffirming the appropriateness of the common law control test.

Employment Law. Questions regarding the use of criteria beyond the established common law control test for determining a worker's classification also emerged with respect to the application of Social Security legislation. In 1947, the Supreme Court granted certiorari to three employment tax cases: *United States v. Silk*, *Harrison v. Greyvan Lines*, and *Bartels v. Birmingham*. The *Silk* and *Greyvan Lines* cases (331 U.S. 704) were decided together in June of 1947. The *Silk* case involved unloaders and truckers working for a coal company. The *Greyvan Lines* case involved truck drivers/owners working for a moving company. For determining whether the

workers were independent contractors or employees for purposes of the *Social Security Act*, the court enounced that "the same rules are applicable as were applied by this Court to the National Labor Relations Act in *Labor Board* v. *Hearst Publications*" (331 U.S. 704 (1947)). The court held the truckers in both instances to be independent contractors and the unloaders to be employees. Unloaders were paid an agreed upon price per ton, furnished their own tools, worked their own schedules, and were free to work for others at will. Nevertheless, they were deemed employees since they provided only picks and shovels, had no opportunity to gain or lose except from the work of their hands, and worked in the course of the employer's business. The court felt that the term "employment" and "employee" should be construed to accomplish the purposes of the legislation (statutory purpose test) and that the unloaders were of the group that the *Social Security Act* was intended to aid. Truckers were paid on a per unit basis, hired assistants, owned their trucks, were responsible for their expenses, and "depended upon their own initiative, judgment and energy for a large part of their success." Facts of the cases failed to establish the existence of control over the truckers as to the "method and means" of their work as is necessary to establish an employment relationship.

Bartels v. Birmingham (332 U.S. 126 (1947)) involved band musicians hired to play for limited engagements for a dance hall. At issue, in this case, was the proper employer. That is, were the musicians employees of the bandleader or dancehall? The Circuit Court of Appeals concluded, based on the common law control test, that the dancehall operators had a contractual right, whether or not exercised, to control the musicians and the bandleader and thus the musicians and bandleader were employees

of the dancehall. The Supreme Court reminded that in *United States* v. *Silk* (331 U.S. 704 (1947)), it held that:

> The relationship of employer-employee, which determines the liability for employment taxes under the Social Security Act, was not to be determined solely by the idea of control which an alleged employer may or could exercise over the details of the service rendered to his business by the worker or workers. Obviously control is characteristically associated with the employer-employee relationship, but in the application of social legislation employees are those who as a matter of economic reality are dependent upon the business to which they render service. (*Bartels v. Birmingham*, 332 U.S. 126, 130 (1947))

The Court, applying the economic realities test, held the bandleader to be an independent contractor. The musicians were deemed to be employees of the bandleader, who set salaries and schedules, provided music and uniforms, employed and discharged musicians, made payments to the workers, paid expenses, and who was at risk for profit or loss.

Common Law versus Economic Realities and Statutory Purpose.

The Treasury Department proposed regulations in 1947 that would establish the economic realities test (a multi-factor test of which control is one factor) as the key determinant for establishing employee or independent contractor status (U.S. Treasury Department 1947). Congress responded in 1948 by passing, over President Truman's veto, the *Status Quo Amendment* (U.S. Congress, House 1948) which reaffirmed the common law control test and rejected the economic realities test (North 1978, 784). Also, in 1948, the *Social Security Act* (49 Stat. 620) as it was adopted in 1935 was amended to refine the definition of "employee." In the original act, the term was specified merely as to "include an officer of a corporation" (Social Security Act 1935, § 1101(a)(6)). As amended, the term also includes any individual who, under the

usual common law rules applicable in determining the employer-employee relationship, has the status of an employee (U.S. Congress, House 1948). In 1950, the Social Security Administration attempted to instate the economic realities test as the primary determinant of employee status and proposed repeal of the *Status Quo Amendment*. Congress rejected this attempt but provided, via the *Social Security Act Amendments of 1950* (64 Stat. 477), expansion of the definition of employee to include certain full-time life insurance and traveling salesmen.

The opinions in several cases following the passage of the *Status Quo Amendment* accentuated the apparent intent of Congress to establish the common law control test as the standard by which employee versus independent contractor disputes should be resolved. The Court in *United States v. W.M. Webb*, an employment tax case considering whether maritime law standards rather than common law standards should prevail, noted Congress' intent to "reestablish the usual common-law rules, realistically applied" (397 U.S. 179, 186 (1970)). In *Community for Creative Non-Violence v. Reid*, a case of copyright ownership, the Supreme Court observed that where a statute containing the term "employee" does not helpfully define it, the court must presume that "Congress intended to describe the conventional master-servant relationship as understood by common-law agency doctrine" (490 U.S. 730, 740 (1989)).

The Supreme Court's 1992 decision in *Nationwide Mutual Insurance v. Darden* (503 U.S. 318), an ERISA case, effectively served to end the concept of "statutory purpose" as a consideration in worker classification cases and reemphasized the foundational basis of the common law test in such issues. Contracts between

Nationwide Mutual Insurance Company and Darden provided that Darden, as an insurance agent for the company, would be covered under the company's retirement plan subject to forfeiture if upon termination Darden sold insurance for a Nationwide competitor within one year. After working with the company for eighteen years, Darden was terminated and began selling insurance for certain competitors. Nationwide charged that this disqualified Darden from receiving his retirement plan benefits. He subsequently sued claiming the benefits were vested and therefore not forfeitable under the terms of ERISA. The District Court held that Darden was not covered under the provisions of ERISA because, under common law agency principles, he was an independent contractor rather than an employee. The Court of Appeals reversed the District Court's decision even though the court noted that Darden probably would not qualify as an employee under common law. The appellate court gave consideration to ERISA's "statutory purpose" and a test of "expectations" citing *NLRB v. Hearst Publications, Inc.*, and *United States v. Silk.* On certiorari, the United States Supreme Court reversed and remanded. The Supreme Court recognized that ERISA nominally defined the term employee as "any individual employed by an employer," but deemed the appellate court to have erred in relying on *Hearst* and *Silk* which interpreted "employee" for purposes of the *National Labor Relations Act* and *Social Security Act*, respectively, to imply something broader than the common law definition. The Court declared *Hearst* and *Silk* "feeble precedents for unmooring the term ['employee'] from the common law," and noted that after each opinion Congress "amended the statute so construed to demonstrate that the usual common-law

principles were the keys to meaning" (503 U.S. 318, 324 (1992)). The Court reminded:

> In determining whether a hired party is an employee under the general common law of agency, we must consider the hiring party's right to control the manner and means by which the product is accomplished. Among the other factors relevant to this inquiry are the skill required; the source of the instrumentalities and tools; the location of the work; the duration of the relationship between the parties; whether the hiring party has the right to assign additional projects to the hired party; the extent of the hired party's discretion over when and how long to work; the method of payment; the hired party's role in hiring and paying assistants; whether the work is part of the regular business of the hired party; whether the hiring party is in business; the provision of employee benefits; and the tax treatment of the hired party. . . . Since the common-law test contains "no shorthand formula or magic phrase that can be applied to find the answer, . . . all of the incidents of the relationship must be assessed and weighed with no one factor being decisive." (503 U.S. 318, 323 (1992) citing 490 U.S. at 751-752 & 390 U.S. at 258)

Following is a review of the current authoritative guidelines on worker classification for employment tax purposes in light of the common law control test.

Legislative, Judicial, and Administrative Guidelines

Internal Revenue Code and Treasury Regulations

The term "employment taxes" refers to three taxes under Subtitle C, Employment Taxes and Collection of Income Tax, of the Internal Revenue Code of 1986: Chapter 21- *Federal Insurance Contributions Act* (Code §§ 3101 – 3128); Chapter 23 – *Federal Unemployment Tax Act* (Code §§ 3301 – 3311); and Chapter 24 – Collection Of Income Tax At Source (Code §§ 3401 – 3406). Each chapter with its attending Code Sections and applicable regulations are discussed in turn.

Code Section 3121(d). Section 3121 of the 1986 Code contains definitions pertinent to interpreting the *Federal Insurance Contributions Act*. For FICA purposes, the term "employee" is defined as:

> (1) any officer of a corporation; or
>
> (2) any individual who, under the usual common law rules applicable in determining the employer-employee relationship, has the status of an employee; or
>
> (3) any individual (other than an individual who is an employee under paragraph (1) or (2) who performs services for remuneration for any person—
>
> (A) as an agent-driver or commission-driver engaged in distributing meat products, vegetable products, fruit products, bakery products, beverages (other than milk), or laundry or dry-cleaning services, for his principal;
>
> (B) as a full time life insurance salesman;
>
> (C) as a home worker performing work, according to specifications furnished by the person for whom the services are performed, on materials or goods furnished by such person which are required to be returned to such person or a person designated by him; or
>
> (D) as a traveling or city salesman, other than as an agent-driver or commission-driver, engaged upon a full-time basis in the solicitation on behalf of, and the transmission to, his principal (except for side-line sales activities on behalf of some other person) of orders from wholesalers, retailers, contractors, or operators of hotels, restaurants, or other similar establishments for merchandise for resale or supplies for use in their business operations; if the contract of services contemplates that substantially all of such services are to be performed personally by such individual; except that an individual shall not be included in the term "employee" under the provision of this paragraph if such individual has a substantial investment in facilities used in connection with the performance of such services (other than in facilities for transportation), or if the services are in the nature of a single transaction not part of a continuing relationship with the person for whom the services are performed; or
>
> (4) any individual who performs services that are included under an agreement entered into pursuant to section 218 of the Social Security Act.

Pursuant to the provisions of the Code, there are four broad categories of workers considered employees for FICA purposes: corporate officers; workers in certain occupational groups statutorily included as employees; workers included pursuant to an agreement under section 218 of the Social Security Act (a voluntary agreement between a state and the Commissioner of Social Security extending FICA coverage to state and local government employees); and workers qualifying under common law. It is the determination of employment status under common law rules that is the focus of this study.

Treasury Regulation 31.3121(d)-1(c). The corresponding Treasury Regulation provides additional guidance:

> (c) Common law employees.—(1) Every individual is an employee if under the usual common law rules the relationship between him and the person for whom he performs services is the legal relationship of employer and employee.
>
> (2) Generally such relationship exists when the person for whom services are performed has the right to control and direct the individual who performs the services, not only as to the result to be accomplished by the work but also as to the details and means by which that result is accomplished. That is, an employee is subject to the will and control of the employer not only as to what shall be done but how it shall be done. In this connection, it is not necessary that the employer actually direct or control the manner in which the services are performed; it is sufficient if he has the right to do so. The right to discharge is also an important factor indicating that the person possessing that right is an employer. Other factors characteristic of an employer, but not necessarily present in every case, are the furnishing of tools and the furnishing of a place to work, to the individual who performs the services. In general, if an individual is subject to the control or direction of another merely as to the result to be accomplished by the work and not as to the means and methods for accomplishing the result, he is an independent contractor. An individual performing services as an independent contractor is not as to such services an employee under the usual common law rules. Individuals such as physicians, lawyers, dentists, veterinarians, construction contractors, public stenographers, and auctioneers, engaged in the pursuit of an independent trade, business, or profession, in which they offer their services to the public, are independent contractors and not employees.

> (3) Whether the relationship of employer and employee exists under the usual common law rules will in doubtful cases be determined upon an examination of the particular facts of each case.

A definite distinction is made in the regulation between a common law employee and an independent contractor based on the level of control exercised, or exercisable, by the employer over the worker. While certain professionals who offer their services to the public are listed as typically qualifying as independent contractors (e.g., physicians, lawyers, dentists, veterinarians, construction contractors, public stenographers, and auctioneers), and certain factors are listed as typically indicating an employment relationship (e.g., employer's right to discharge and employer furnishing of tools and a workplace), the level of control of the employer over the worker is the determining element of an employment relationship. Where the employer has the right to control (whether or not this right is exercised) both the result to be accomplished and the means and methods by which the work is accomplished, then an employment relationship exists. If the right to control does not extend to the means and methods by which the work is accomplished, then an employment relationship does not exist and the worker should be classified as an independent contractor for FICA purposes. The distinction between employee and independent contractor is similarly made for FUTA and withholding purposes.

Code Section 3306(i). Section 3306 of the Code contains definitions pertinent to interpreting the *Federal Unemployment Tax Act*:

> For purposes of this chapter, the term "employee" has the meaning assigned to such term by Section 3121(d), except that paragraph (4) and subparagraphs (B) and (C) of paragraph (3) shall not apply.

The definition of employee for FUTA purposes is the same as for FICA purposes except that full-time insurance salespersons and certain home-workers are not included as statutory employees. Further, the related Treasury Regulation (Reg. § 31.3306(i)-1) is the same, in all material respects, to Regulation Section 31.3121(d)-1(c), indicating that consistent with FICA requirements, for FUTA purposes the distinction between employee and independent contractor hinges upon assessing the right of control of the employer over the worker.

Code Section 3401(c). Code Section 3401 provides definitions pertinent to interpreting the provisions for withholding of income tax from employee wages:

> For purposes of this chapter, the term "employee" includes an officer, employee, or elected official of the United States, a State, or any political subdivision thereof, or the District of Columbia, or any agency or instrumentality of any one or more of the foregoing. The term "employee" also includes an officer of a corporation.

Promulgated is the inclusion of corporate officers and certain government officers, employees, and officials as employees for withholding purposes. In reference to the general employer-employee relationship, the wording of Regulation Section 31.3401(c)-1 is substantially similar to that found in the Regulations applicable to FICA and FUTA provisions. Again, the determining element in establishing or refuting an employment relationship is control.

It should be noted that just as there are statutorily defined employees, regardless of status under common law, there are also statutorily defined non-employees. Included in this category are real estate agents and direct sellers (I.R.C. § 3508), and companion sitters (I.R.C. § 3506).

In summary, an employee is generally defined for employment tax purposes as either being a corporate officer, a statutory employee, or an employee under the common law. Statutory employees are considered employees for purposes of FICA and FUTA but employers are not required to withhold income taxes from the wages of these employees. An individual is considered an employee under common law if "the relationship between him and the person for whom he performs services is the legal relationship of employer and employee" (Reg. § 3121(d)-1(c)(1)). Such a relationship is deemed to exist when the person for whom services are provided has the right of control over the work to be accomplished, both as to modus and result (the common law control test). While related Treasury Regulations cite certain factors indicative of control and list certain professionals typically considered not to be employees, determining whether an employer-employee relationship exists under common law is highly subjective and can only be determined "upon an examination of the particular facts of each case" (Reg. § 31.3121(d)-1(c)(3)).

Revenue Ruling 87-41

As an aid for determining worker status under common law rules, the Internal Revenue Service compiled and published, as Revenue Ruling 87-41 (1987-1 C.B. 296), a list of twenty factors identified from examining court cases and revenue rulings, which are indicative of control in employment relationships. Following is a discussion of the twenty factors listed in Revenue Ruling 87-41 (Ruling) and the authorities cited for each factor.

Instructions/Supervision. The "instructions" or "supervision" factor is defined as the employer's right to require a worker to comply with instructions as to when, where, and how work is to be performed. A worker who is required to comply with such instructions is ordinarily an employee. Cited as authority for this factor are Revenue Ruling 68-598 (1968-2 C. B. 464) and Revenue Ruling 66-381 (1966-2 C.B. 449).

The situation addressed in Revenue Ruling 68-598 involved a driving school that retained individuals as driving instructors. The company trained the individuals, paid them on commission, required them to conform to basic standards, set minimum rates for services, required the use of the company name and automobiles, and could terminate instructors for failing to follow the standards established for training students. Accordingly, the level of control over the instructors was deemed sufficient enough to warrant employee status.

The decision reached in Revenue Ruling 66-381 was that "car shuttlers" designated as independent contractors were in fact employees even though most of the drivers generally held regular employment elsewhere, performed shuttle services in their spare time, and generally were hired only during peak rental periods when the company's regular employees could not handle the increased work load. The fact that the company maintained the same degree of control over the work of the shuttlers as over its regular employees was sufficient to establish employee status.

Training. Training is described as having an experienced employee work with a worker, corresponding with a worker, having the worker attend meetings, or

using some other method of training. Training a worker indicates the service recipient wants the services performed in a particular method or manner. The authority cited for this position is Revenue Ruling 70-630 (1970-2 C.B. 229). The situation addressed in Revenue Ruling 70-630 involved a service company that trained salesclerks and provided them to retail stores as temporary workers when needed. The question presented was whether the workers were employees of the service company or the retail establishments. Since the service company trained the workers, placed a supervisor in each store in which workers were provided, and subjected the workers to instructions and control of the supervisor, the service company was held to be the employer.

Integration. Integration is described in the Ruling as follows:

> When the success or continuation of a business depends to an appreciable degree upon the performance of certain services, the workers who perform those services must necessarily be subject to a certain amount of control by the owner of the business. (1987-1 C.B. 296, 298)

This factor is supported by the decision rendered in *United States v. Silk* (331 U.S. 704). In this 1947 Supreme Court decision, unloaders for a retail coal dealer were held to be employees even though they were paid on a per ton basis, furnished their own picks and shovels, worked when they pleased, and were free to work for others. The unloaders were an integral part of the retailer's business and had no opportunity for independent gain or loss.

Services Personally Rendered. If the requirement exists that services be rendered personally by the worker, then one must assume the service recipient is

interested in not only the end result of the work but also the methods used to accomplish the work. In other words, absence of the "right to delegate" the work is indicative of employer control over the worker. Revenue Ruling 87-41 cites as authority for this factor Revenue Ruling 55-695 (1955-2 C.B. 410). The example given is of an individual who, upon retirement, was retained by her former employer for the purpose of training a replacement. The agreement between the parties stipulated the worker to be an independent contractor and consultant but required that she devote all of her working time, skill, and knowledge to the business. She performed the same services as before her retirement while simultaneously training her replacement. The Service held the worker to be an employee of the company.

Hiring, Supervising, and Paying Assistants. When a job requires the use of assistants, the party who retains the assistants provides evidence supporting the worker's status as employee or independent contractor. Where a worker employs his own assistants, independent contractor status is indicated. If the company for which the worker performs services retains the assistants, the worker and any assistants appear to both be employees of the company. The Ruling cites as a comparison the findings in Revenue Ruling 55-593 (1955-2 C.B. 610) and Revenue Ruling 63-115 (1963-1 C.B. 178).

The situation described in Revenue Ruling 55-593 involved an appliance company that traditionally had employed truck drivers to deliver appliances in company owned trucks. The company entered into an agreement with some of the truck drivers stipulating that the company would sell the trucks, finance the sale, and pay the drivers a flat rate based upon deliveries. The owner-drivers were to keep

custody of the trucks and be responsible for the costs of upkeep, maintenance, gasoline, licenses, and taxes. Additionally, the owner-drivers were responsible for the employment of any helpers that might be needed. It was decided the owner-drivers were independent contractors and consequently the employers of any assistants they retained. In Revenue Ruling 63-115, the IRS takes the position that unloaders retained by a company's employee truck driver were also employees of the company.

Continuing Relationship. If the working relationship continues only for a set period of time or until completion of a specific job, then independent contractor status is indicated. Conversely, a continuing relationship between the worker and service recipient suggests an employer-employee relationship even when the work relationship exists at frequently occurring but irregular intervals. Reliance is placed on the position taken in *United States v. Silk* (331 U.S. 704 (1947)). In this decision, the fact that coal unloaders did not work regularly was not held significant in determining them to be employees.

Set Hours of Work. The establishment of set hours of work by the service recipient is evidence indicative of control over the worker. Conversely, an independent contractor normally sets his own hours. Authority cited for this factor is Revenue Ruling 73-591 (1973-2 C.B. 337), dealing with the employment status of a beautician. The beautician leased space from a beauty salon. The salon furnished and maintained the equipment, materials, supplies, accessories, and tools typical to the trade. The beautician was paid based on a percentage of her daily receipts. Salon rules required the beautician to work from 8:00 A.M. to 6:00 P.M. on the weekdays

that she was scheduled to work and until noon on Saturdays. Accordingly, the beautician was held to be an employee of the salon.

Full Time Required. In Revenue Ruling 87-41, the full time factor is described as follows:

> If the worker must devote substantially full time to the business of the person or persons for whom the services are performed, such person or persons have control over the amount of time the worker spends working and impliedly restrict the worker from doing other gainful work. An independent contractor, on the other hand, is free to work when and for whom he or she chooses. (1987-1 C.B. 296, 299)

Revenue Ruling 56-694 (1956-2 C.B. 694) is cited as authority for this element. Experienced home photographers, identified as the result of a newspaper advertisement, were engaged to take photographs primarily of children in their homes. The photographers were held to be employees based on numerous factors, including the fact the photographers were engaged on a full time basis by the corporation.

Work Location. Revenue Ruling 87-41 provides the following description pertaining to the location of work:

> If the work is performed on the premises of the person or persons for whom the services are performed, that factor suggests control over the worker, especially if the work could be done elsewhere. . . . Work done off the premises of the person or persons receiving the services, such as at the office of the worker, indicates some freedom from control. However, this fact by itself does not mean that the worker is not an employee. The importance of this factor depends on the nature of the service involved and the extent to which an employer generally would require that employees perform such services on the employer's premises. Control over the place of work is indicated when the person or persons for whom the services are performed have the right to compel the worker to travel a designated route, to canvass a territory within a certain time, or to work at specific places as required. (1987-1 C.B. 296)

This factor is illustrated by reliance on Revenue Ruling 56-660 (1956-2 C.B. 693) and Revenue Ruling 56-694 (1956-2 C.B. 694). The circumstance discussed in Revenue Ruling 56-660 is of a writer, engaged full time by an organization to write a book about its history. It was concluded that the writer was an employee of the organization. One of the many details supporting this conclusion was the fact the writer performed his services on the organization's premises during regular working hours in an office provided by the organization. The example in Revenue Ruling 56-694 involved experienced home photographers, identified as the result of a newspaper advertisement, who were engaged by a home portrait corporation to take photographs primarily of children in their homes. The company assigned appointments to the photographers thereby controlling their place of work.

Order or Sequence of Tasks Set. Revenue Ruling 56-694 (1956-2 C.B. 694) is given as support regarding the sequencing of work. The illustration again is of experienced home photographers engaged by a home portrait corporation to take photographs primarily of children in their homes. The photographers were given instructions as to the methods of operation and required to follow a set pattern of poses depending upon the ages of the children being photographed. Occasionally, a corporate representative would accompany the photographers to check their operating methods for the purpose of helping the photographers improve their handling of children or actual photographing. The photographers were held to be employees. Revenue Ruling 87-41 offers the following explanation for this factor:

> If a worker must perform services in the order or sequence set by the person or persons for whom the services are performed, that factor shows that the worker is not free to follow the worker's own pattern of work but must follow the

> established routines and schedules of the person or persons for whom the services are performed. Often, because of the nature of an occupation, the person or persons for whom the services are performed do not set the order of the services or set the order infrequently. It is sufficient to show control, however, if such a person or persons retain the right to do so. (1987-1 C.B. 296)

Oral or Written Reports. Where a business requires that a worker submit regular or written reports, the indication is that the business exercises a degree of control over the worker. Reliance is placed upon Revenue Ruling 70-309 (1970-1 C.B. 199) and Revenue Ruling 68-248 (1968-1 C.B. 431) in support of this factor. Workers described in Revenue Ruling 70-309 were oil well pumpers engaged to watch over oil wells and to turn on and gauge tanks. The pumpers were not required to work prescribed hours or follow a set routine, but they were required to submit written reports to the company on a regular basis. Workers depicted in Revenue Ruling 68-248 were experienced piano repairmen engaged on a part-time basis under oral agreement. The repairmen required no supervision and were not required to adhere to a fixed schedule or routine. They were, however, required to complete service invoices, equivalent to a report, for each job. It was decided in both instances that the workers were employees.

Method of Payment. Payment to a worker by the job or on straight commission indicates independent contractor status. Conversely, payment by the hour, week, or month indicates employee status, provided this method of payment is not simply made as a more convenient way of paying a lump sum cost of a job. Authority cited in support of this factor is Revenue Ruling 74-389 (1974-2 C.B. 330).

This ruling depicts that when yacht and ship salesmen were compensated strictly on a commission basis, they were held to be independent contractors.

Unreimbursed Expenses. If a company ordinarily pays or reimburses a worker for business and traveling expenses, that worker is generally an employee. To be able to control expenses, the employer "generally retains the right to regulate and direct the worker's business activities" (1987-1 C.B. 296). Authority cited is Revenue Ruling 55-144 (1955-1 C.B. 483). This situation involved an individual retained by a used car dealer to drive automobiles to a distant auction. The dealer set the sales price for the cars, paid the worker's trip expenses, and compensated the worker based on sales. Despite the fact the worker performed similar services for another used car dealer, the worker was deemed an employee.

Furnishing Tools and Materials. An employer-employee relationship is indicated when the employer furnishes significant tools, materials, and other equipment. The illustration relied on in Revenue Ruling 71-524 (1971-2 C.B. 346) is of a leasing company that furnished tractor-trailer rigs and a driver to another corporation. The driver was declared an employee of the leasing company considering, among other things, the leasing company supplied the tractor-trailer rigs and furnished major repairs, tires, and license plates for the trucks.

Significant Investment. Significant investment as a factor is explained in Revenue Ruling 87-41 as follows:

> If the worker invests in facilities that are used by the worker in performing services and are not typically maintained by employees (such as the

> maintenance of an office rented at fair value from an unrelated party), that factor tends to indicate that the worker is an independent contractor. On the other hand, lack of investment in facilities indicates dependence on the person or persons for whom the services are performed for such facilities and, accordingly, the existence of an employer-employee relationship. (1987-1 C.B. 296, 299)

Noted in the Ruling is that when considering the use of certain types of facilities, such as home offices, special scrutiny is required. Authority cited in support of this factor is Revenue Ruling 71-524 (1971-2 C.B. 346). The holding of employee status in Revenue Ruling 71-524 involved the case of a leasing company that furnished tractor-trailer rigs and a driver to another corporation. Specifically, the driver was in control of and responsible for the tractor-trailer, not subject to supervision or review, and required to pay ordinary expenses of driving and operating the vehicle. The leasing company owned and supplied the tractor-trailer rigs for the driver and paid for major repairs and expenses. Noted in Revenue Ruling 71-524 is that "the driver [was] not engaged in an independent enterprise requiring capital outlays or the assumption of business risks, but rather his services [were] a necessary and integral part of the leasing company's business" (1971-2 C.B. 346).

Opportunity for Profit or Loss. Revenue Ruling 70-309 (1970-1 C.B. 199) is offered as an example of the realization of profit or loss as a determinant of employee status. A decision that oil well pumpers were employees and not independent contractors of a company was in part based on the fact that the workers were "not engaged in a[n] independent enterprise in which they assume[d] the usual business risks" (1970-1 C.B. 199). The opportunity for the realization of profit or loss by a worker is discussed in Revenue Ruling 87-41 as follows:

> A worker who can realize a profit or suffer a loss as a result of the worker's services (in addition to the profit or loss ordinarily realized by employees) is generally an independent contractor, but the worker who cannot is an employee. . . . For example, if the worker is subject to a real risk of economic loss due to significant investments or a bona fide liability for expenses, such as salary payments to unrelated employees, that factor indicates that the worker is an independent contractor. The risk that a worker will not receive payment for his or her services, however, is common to both independent contractors and employees and thus does not constitute a sufficient economic risk to support treatment as an independent contractor. (1987-1 C.B. 296)

Working for More Than One Firm. Independent contractor status is indicated when a worker performs "more than de minimis" services for numerous unrelated persons or firms at the same time. It is noted, however, that a worker may simultaneously be the employee of more than one person or firm "especially where such persons are part of the same service arrangement" (1987-1 C.B. 296, 299). Ruling 70-572 (1970-2 C.B. 221) is given as authority for this factor. The example given involves the determination that a freelance jockey, engaged for one race by a racehorse owner, was an independent contractor, not an employee of the horse owner. Revenue Ruling 70-572 references Revenue Ruling 70-573 (1970-2 C.B. 221), in which a determination was made that an individual performing the same activity (a jockey) was an employee. In the second instance, the jockey was subject to the control of the horse owner.

Services Available to the Relevant Market. Making services available, on a regular and consistent basis, to the general public is indicative of independent contractor status. For this factor, reliance is placed on the position taken in Revenue

Ruling 56-660 (1956-2 C.B. 693) relative to a writer engaged by an organization to write a book portraying its history. As noted in the ruling:

> [The writer] devotes his full time to services for the organization, although on one occasion he was granted leave without pay to perform a writing job for another firm. The writer does not hold himself out to the public as being available to do work of a similar or related nature, advertise in newspapers, etc., or maintain an office or shop. (1956-2 C.B. 693)

The writer was held to be an employee of the organization.

Employer Right to Discharge. An employer's right to discharge a worker indicates the existence of an employer-employee relationship. As stated in Revenue Ruling 87-41:

> An employer exercises control through the threat of dismissal, which causes the worker to obey the employer's instructions. An independent contractor, on the other hand, cannot be fired so long as the independent contractor produces a result that meets the contract specifications. (1987-1 C.B. 296)

Cited for consideration is Revenue Ruling 75-41 (1975-1 C.B. 323). The example provided relates to a professional service corporation that provided services (secretaries, nurses, dental hygienists, and other similarly trained personnel) to professionals ("subscribers"). While the personnel worked on subscribers' premises with subscribers' equipment, the corporation hired the personnel, paid them, provided whatever benefits they received, and retained the right to discharge them if services were not satisfactorily performed. Consequently, the personnel were deemed employees of the corporation.

Employee Right to Terminate. If a worker has the right to end a working relationship at will, without incurring liability, an employer-employee relationship is indicated. In Revenue Ruling 70-309 (1970-1 C.B. 199), oil well pumpers who

performed "personal services pursuant to a continuing relationship created under a written agreement that is terminable at any time" were deemed to be employees, not independent contractors.

Revenue Ruling 87-41 serves as an aid when determining a worker's classification under common law rules. The twenty factors listed in Revenue Ruling 87-41 serve as indicators of control, which must be assessed when making a determination of worker status. As noted in the ruling, "The degree of importance of each factor varies depending on the occupation and the factual context in which services are performed. The twenty factors are designed only as guides for determining whether an individual is an employee . . ." (1987-1 C.B. 296, 298). These factors, among others discussed below, will serve as potential variables for this research project.

In re Rasbury

The U.S. Bankruptcy Court, in the case of *In re Rasbury* (71A AFTR 2d 93-4539 (Bankr. N.D. Ala. 1991)), cites four factors in addition to the twenty identified in Revenue Ruling 87-41 that it considered when determining the IRS had incorrectly reclassified logging crew members, engaged by Billie Vester Rasbury and Bill's Forestry Service, Inc., as employees. Applying a twenty-four factor test, the court resolved the workers to be independent contractors. The additional four factors identified by the court are discussed below.

Industry Practice or Custom. The U.S. Bankruptcy Court noted that, "It was the widespread, almost universal, custom to classify such workers as independent

contractors in the West Alabama logging industry in the 1980s." Other courts have likewise acknowledged the importance of considering customs within an industry (*Ewing v. Vaughan*, 169 F.2d 837 (4th Cir. 1948); *Bonney Motor Express, Inc. v. U.S.*, 206 F.Supp. 22 (E.D. Va. 1962)). According to the Restatement of the Law of Agency (Restatement of Agency), "The custom of the community as to the control ordinarily exercised in a particular occupation is of importance" (1958, 489).

Intent of the Parties. In *Rasbury*, the loggers and Rasbury intended to create an independent contractor relationship as evidenced by written signed independent contractor agreements. Intent is listed as a relevant consideration in determining employment status under common law in the Restatement of Agency (1958, 486), Internal Revenue Service training material (IRS 1996b, 2-22), and by the courts (*Butts v. Commissioner*, T.C. Memo 1993-478 (1993); *Harris v. Commissioner*, T.C. Memo 1997-358 (1977)).

Signed Independent Contractor Agreements. The workers in *Rasbury* signed written contracts acknowledging they were to be considered independent contractors and that FICA, FUTA, and income taxes would not be withheld from their earnings. Further, Forms 1099 were appropriately filed for the three years at issue in the case. The Bankruptcy Court noted that, "While such documentary evidence is not conclusive, it is an important factor indicating intent of the parties and pointing toward an independent contractor status" (*In re Rasbury*, 71A AFTR 2d 93-4539 (Bankr. N.D. Ala. 1991)).

Employee-Type Benefits Provided. Certain work related benefits are typically provided only to employees including: insurance (worker's compensation, disability, health, and life), paid vacations, retirement plans, paid sick leave, and other fringe benefits. Independent contractors generally must provide for their own insurance, retirement, and other benefit-type needs. The judiciary noted that, except for workman's compensation insurance required by certain large clients as a condition for doing business, Mr. Rasbury provided no employee-type benefits to the loggers (*In re Rasbury*, 71A AFTR 2d 93-4539 (Bankr. N.D. Ala. 1991)). The Internal Revenue Service and courts admit that the provision of insurance coverage and other benefits is indicative of employee status (IRS 1996b, 2-23; *Weber v. Commissioner*, 103 T.C. 378 (1994); *Lewis v. Commissioner*, T.C. Memo 1993-635 (1993)).

Applying the twenty-four factors discussed above to determine, as a matter of fact, the common law classification of a worker as either an employee or independent contractor is a subjective process. That is, the U.S. Treasury Department has described the twenty plus factor test as confusing and one that "does not yield clear, consistent, or even satisfactory answers, and reasonable persons may differ as to the correct classification [of a worker]" (U.S. General Accounting Office 1995). In response to the expressed concerns of business owners regarding the worker classification issue, the IRS revised its worker classification training materials in 1996. Margaret Milner Richardson, then Commissioner of Internal Revenue, explained:

> With the exception of statutory employees, worker classification is based upon a common law standard for determining whether the worker is an independent contractor or employee. That standard essentially asks whether the business has the right to "direct and control" the worker. The courts have traditionally looked to a variety of evidentiary facts in applying this standard, and the Service has adopted those facts to assist in classifying workers. These training

> materials attempt to identify, simplify, and clarify the relevant facts that should be evaluated in order to accurately determine worker classification under the common law. (IRS 1996a)

An analysis of worker classification criteria as presented in the revised IRS training manual follows.

IRS Worker Classification Training Materials

The legal test for assessing the relationship between employer and employee is the presence or absence of control, or right to control the worker, both as to result and means of achieving that result. The twenty factors given in Revenue Ruling 87-41 serve as an analytical test to aid the decision maker in determining a worker's correct classification. The factors are not necessarily exclusive, as any information useful in assessing degree of control is important. Also, the factors are not static since changes in the business environment may affect the relevance of certain factors. The IRS Worker Classification Training Materials (hereafter Revised Training Materials) stem from the recognition that changes in business relationships and the work environment result in changes in the relevance of factors considered in issues of worker classification. The approach presented in the Revised Training Materials involves the grouping of Revenue Ruling 87-41 and *In re Rasbury* factors into one of three categories of evidence (behavioral control, financial control, and relationship of the parties) with some factors being of lesser importance than others (IRS 1996a, 1996b).

Behavioral control is evidenced by instructions to and training of a worker. As illustrated in Table 2.1, other factors that aid in assessing the level of behavioral control of an employer over a worker are: who hires, supervises and pays assistants;

whether the employer sets the sequence of work; if reports are required; and who furnishes the tools and equipment necessary to complete the work. Recognizing changes in the modern workforce, certain factors evidencing behavioral control are considered less important by the IRS including whether the worker works full or part-time, on or off of the employer's premises, for set hours, or for more than one business. It is also noted in the Revised Training Materials that business implemented rules (i.e., instructions) that parallel those mandated by government or industry should be given little weight when assessing behavioral control. When determining a worker's classification, the higher the level of behavioral control over a worker, the more likely an employer-employee relationship exists.

The test of financial control examines the economic relationship between the employer and worker. As indicated in Table 2.1, factors to consider when assessing the level of financial control include: the level of a worker's investment in a business; the worker's potential for profit or loss; whether the worker offers his services to the general public; whether the worker incurs unreimbursed business expenses; and how the worker is paid. A high level of financial control over a worker indicates the existence of an employer-employee relationship.

Evidence as to the relationship of the parties is given by the length of the working relationship, the parties' rights to terminate the relationship at will, and the intent of the parties. Written agreements, the filing of appropriate tax forms (Forms 1099 versus Form W-2), and the provision of employee-type benefits are indicators of intent. The IRS notes that a worker's performance of a service integral to the business may, but does not necessarily, reflect employee status.

TABLE 2.1

Evidence of Control – Factors by IRS Category

Factors	IRS Categories of Evidence		
Revenue Ruling 87-41	**Behavioral Control**	**Financial Control**	**Relationship of the Parties**
1. Instructions/Supervision	X		
2. Training	X		
3. Integration			X
4. Services Personally Rendered [a]	X		
5. Hiring, Supervising, and Paying Assistants [a]	X		
6. Continuing Relationship			X
7. Set Hours of Work [b]	X		
8. Full Time Required [b]	X		
9. Work Location [b]	X		
10. Order or Sequence of Tasks Set [a]	X		
11. Oral or Written Reports	X		
12. Method of Payment		X	
13. Unreimbursed Expenses		X	
14. Furnishing Tools and Materials [a]	X		
15. Significant Investment		X	
16. Opportunity for Profit or Loss		X	
17. Working for More Than One Firm [b]	X		
18. Services Available to Relevant Market		X	
19. Employer Right to Discharge			X
20. Employee Right to Terminate			X
In re Rasbury			
21. Industry Practice or Custom **			
22. Intent of the Parties			X
23. Signed, Indep. Contractor Agreement			X
24. Employee-Type Benefits Provided			X

[a] Listed as supporting the Instructions/Supervision factor

[b] Listed as a less important factor

**Not recognized as a factor by the IRS

The change in method for assessing employment relationships as evidenced by the Revised Training Materials is an attempt by the Service to provide a simpler

approach to worker classification and one that more clearly reflects conditions of the modern workplace. Additionally, legislative and administrative action has been taken in an effort to provide relief to taxpayers relative to issues of worker classification. The following section of this chapter discusses four of these efforts.

Relief Provisions

Revenue Act of 1978 - Section 530

Congressional response to the burdens placed upon businesses relative to the difficulties and potential expense of complying with ambiguous and subjective worker classification rules is the passage of a "safe harbor" provision via Section 530 of the *Revenue Act of 1978* (Section 530) (92 Stat. 2763, 2885). Section 530 provides a means whereby businesses may circumvent IRS reclassification of workers from independent contractor to employee status, and the related retroactive payroll tax liabilities, provided certain requirements are met. To qualify for relief under Section 530, the employer must satisfy the requirements of three tests: (1) a reasonable basis test, (2) substantive consistency test, and (3) reporting consistency test.

The employer of independent contractors must establish he has a reasonable basis for the classification of the workers. Reliance on any one of the following "safe havens" is sufficient to establish reasonable basis:

(1) Previous Decision - An employer may rely on judicial precedent (assuming similar facts and circumstances), a published ruling, or technical advice memorandum, letter ruling, or determination letter issued to the employer.

(2) Past IRS Audit – An employer may rely on a past IRS audit in which the IRS made no challenge regarding the classification of workers in substantially similar positions.[4]

(3) Industry Practice – An employer may rely on an industry practice if that practice is long standing, recognized, and practiced by a significant segment of the industry.[5]

An employer unable to prove reliance on any of the safe haven provisions may still demonstrate some other reasonable basis for classification of the worker. While not specifically defined in the statute, the intent of Congress is that the term "other reasonable basis" be liberally construed in favor of the taxpayer (U.S. Congress, House 1978). Reliance on professional advice, such as that rendered by an attorney or CPA to a client, may qualify as a reasonable basis for determining a worker's status (*Smoky Mountain Secrets Inc. v. U.S.*, 76 AFTR 2d 95-6974 (E.D. Tenn. 1995)).

In addition to establishing a reasonable basis for treating a worker as an independent contractor, the substantive consistency test requires the employer to demonstrate that the worker and any other workers in a similar position have consistently been treated as independent contractors. An employer will fail to meet the substantive consistency test if, given a "substantially similar position," some workers are classified as employees and others as independent contractors (*Halfhill v. U.S.*, 77 AFTR 2d 96-1553 (W.D. Pa. 1996); *La Nails Inc. v. U.S.*, 81 AFTR 2d 98-

[4] When asserting reliance on a past IRS Audit, for audits beginning after Dec. 31, 1996, the safe haven applies only if the audit included an examination, for employment tax purposes, of the worker at issue or other workers holding substantially similar positions. For audits beginning prior to Jan. 1, 1997, the safe haven applies even if the audit was not for employment tax purposes.

[5] Section 530 provides for ceilings on the employer's burden to prove the industry practice to be long standing (no more than 10 years) and practiced by a significant segment of the industry (no more than 25%).

2189 (D. Md. 1998)). Also, the worker must be consistently treated as an independent contractor over time.[6]

To meet the reporting consistency test, the employer must substantiate that all required federal tax returns, including information returns, have been consistently filed on the workers as independent contractors. Accordingly, relief under Section 530 is not available for any year in which a business does not timely file the required Forms 1099 or with respect to any worker for which the required Forms 1099 are not filed (IRS, Rev. Proc. 85-18 1985).

The determination of eligibility for relief pursuant to Section 530 should be made at the onset of an IRS worker classification audit. The relief granted under Section 530 is relief from potential liability relative to misclassification of a worker. Qualifying under the "safe harbor" statute does not result in a determination of correct classification for a worker. However, qualifying under the statute does allow an employer to prospectively continue the consistent treatment of the worker as an independent contractor regardless of the worker's correct classification under common law principles. A limited number of businesses will qualify for relief under Section 530 as all three of the tests described above must be met. For employers not qualifying for relief under Section 530, participation in the Classification Settlement Program is an option.

[6] If an employer reclassifies a misclassified worker from independent contractor to employee, he will not forfeit his right for Section 530 relief for years prior to the reclassification. The same is *not* true for a reclassification from employee to independent contractor.

Classification Settlement Program and Early Referral to Appeals

The Classification Settlement Program (CSP) is one of several IRS initiatives aimed at mitigating the damages associated with worker misclassification. CSP, implemented for a 2-year test period beginning March 5, 1996, was extended indefinitely in 1998 (IRS, News Release IR 96-7 1996; IRS, Notice 98-21 1998). The voluntary program is available to taxpayers who meet the consistency of reporting test but do not qualify for relief under Section 530, or to those who concur with the IRS that workers should be reclassified. Under CSP, three settlement offers are available: (1) If the taxpayer meets the three tests of Section 530, no tax will be assessed and the taxpayer may choose to continue treating the workers as independent contractors or prospectively treat them as employees; (2) If the taxpayer meets the consistency of reporting test and has a "colorable argument" that the substantive consistency and reasonable basis tests have been met, the settlement offer under CSP will be 25% of the assessed employment tax liability for the year and the workers will be prospectively reclassified as employees; and (3) If the taxpayer meets the consistency of reporting test but clearly does not meet the substantive consistency test or reasonable basis test, then the settlement offer under CSP will be 100% of the assessed employment tax liability for the year and the workers will be prospectively reclassified as employees (IRS 1999, Secs. 4.23.6.6, 4.23.6.13.1).

In situations where a taxpayer-employer disagrees with the Service on matters of availability of Section 530 relief or CSP offers, the taxpayer may seek resolution via early referral to IRS Appeals. Early referral of employment tax issues is designed to resolve issues "more expeditiously through simultaneous action by the [IRS]

District [Office] and [IRS] Appeals [Office]" (IRS, Announcement 96-13 1996). For employment tax issues that are not administratively resolved, judicial review is available.

Expanded Tax Court Jurisdiction

Issues of employment tax may be resolved in the U.S. Court of Federal Claims, Federal District Courts, Bankruptcy Courts, or the Tax Court. Taxpayers filing suit in the district courts or U.S. Court of Federal Claims are required to pay in advance any IRS assessed deficiencies including penalties and interest and subsequently sue for a refund. Relief was extended to taxpayers when, pursuant to the passage of the *Taxpayer Relief Act of 1997* (111 Stat. 788 §1454) and the *Community Renewal Tax Relief Act of 2000* (114 Stat. 2763), the Tax Court was officially granted jurisdiction over matters of employment tax both as to determination of classification and assessment amounts, respectively. A benefit of the expansion of the court's jurisdiction is that taxpayers choosing to litigate in Tax Court may do so without first paying Service assessed taxes, penalties, and interest. Only employers may bring employment tax issues before the Tax Court and cases involving disputed amounts of $50,000 or less may be brought before the Tax Court's small cases division.[7]

While relief may be available to certain taxpayers involved in worker classification disputes via Tax Court review, Section 530, CSP, and Early Referral to Appeals, many contend that the problem of worker classification needs to be resolved by addressing the source of the problem – ambiguous and subjective classification

[7] Decisions rendered in the small cases division of the Tax Court are not subject to appeal (I.R.C. § 7436(c)(2).

criteria. Current proposals offering, as a solution, more objective tests for determining worker status are discussed next.

Current Proposals

The common law control test, the standard by which employee versus independent contractor disputes must be resolved, is difficult to apply, subjective in nature, and imprecise. The Treasury Department states:

> Despite years of effort by many talented people, no clearly better tests have been developed. Until better tests are developed, or the remaining differences in treatment between employees and independent contractors are completely eliminated for Federal tax purposes, the best alternative is improved guidance with respect to the existing rules. (U.S. Treasury Department n.d.)

According to the Treasury Department, there are three possible solutions to the problem of worker classification for federal tax purposes: (1) develop a better test for distinguishing between employees and independent contractors, (2) eliminate any differences in the treatment between the two categories of workers thus eliminating the need to distinguish between employees and independent contractors, or (3) provide improved guidance so that those making the distinction can do so more effectively (U.S. Treasury Department n.d.).

The General Accounting Office (GAO) proposes a plan to clarify classification rules and improve tax compliance through expanded reporting requirements. Also, Senator Kit Bond, former Chairman of the Senate Committee on Small Business, has introduced legislation aimed at providing a more objective test of worker classification. Following is a discussion of the GAO and Bond proposals.

General Accounting Office

In general, it is the position of the GAO that the common law rules relative to worker classification are unclear and in need of clarification. The GAO accepts that the level of taxpayer compliance is improved through continued Service audit efforts but contends that stricter reporting requirements and increased penalties for noncompliance are needed. GAO offers as a solution it's *Simplification Proposal* (GAO Proposal), which addresses classification rules, IRS efforts, responsibilities of businesses, and non-tax issues.

It is the GAO's stance that "until the classification rules are clarified, we are not optimistic that the rather wide-spread confusion over who is an independent contractor and who is an employee can be avoided" (U.S. General Accounting Office 1995, 2). Accordingly, the GAO proposes the Internal Revenue Code be amended to exclude from the common law definition of employee, workers who: (1) maintain a separate set of accounting records for their business, (2) are at risk for profit or loss, (3) have a principal place of business not furnished by the employer, and (4) hold themselves out to be self-employed and/or make their services available to the public (U.S. General Accounting Office 1995, 4). For workers unable to meet all four criteria but who have a "valid basis" for independent contractor status, the common law rules would be applied. Workers unable to meet at least three of the four criteria would automatically, by default, be classified as employees.

The GAO proposal also recommends amending Section 530 to: (1) allow the IRS to issue guidance on worker classification issues[8], and (2) authorize the IRS to require employers qualifying for relief under Section 530 to prospectively reclassify misclassified independent contractors (U.S. General Accounting Office 1995, 3-4). Currently, if a business is granted Section 530 relief, it has the option of continuing to classify the workers at issue as independent contractors or prospectively reclassify them as employees. The current provision under Section 530 leads to classification inconsistencies.

Provisions of the proposal mandate income tax withholding from payments made to independent contractors and call for a substantial increase in the penalty amount for failing to file required information returns. The proposal also recommends lowering the $600 reporting threshold for payments made to independent contractors, requiring businesses to obtain and validate the taxpayer identification numbers of independent contractors, and requiring separate line item reporting on the tax return of the employer for total payments to independent contractors. The GAO acknowledges that any change in worker classification rules could result in a corresponding change in the number of workers classified as either employees or independent contractors for non tax purposes and that potential effects relative to labor laws should be considered.

[8] Intentions of Congress were two-fold relative to Section 530 of the Revenue Act of 1978: (1) to provide economic relief to businesses facing worker reclassification, and (2) to restrict the IRS from issuing further rulings or regulations relative to employment status under the common law.

Independent Contractor Determination Act of 2001

The *Independent Contractor Determination Act of 2001*[9] (U.S. Congress, Senate 2001a), introduced in the Senate by Congressman Kit Bond of Missouri, proposes to replace the subjective twenty plus factor common law test for determining worker classification with a more objective test.[10] Senator Bond describes the twenty-factor common law test of control as "a nightmare of subjectivity and unpredictability" and seriously questions whether the three-category approach, outlined by the IRS in its Revised Training Materials, serves to simplify the matter (U.S. Congress, Senate 1996b). The bill introduced by Mr. Bond provides for a "safe harbor" such that if certain requirements are met, a worker will be determined not to be an employee. Workers may meet the requirements of the safe harbor and qualify for independent contractor status by meeting the requirements of either a "general test" or an "incorporation test."

Under the general test (U.S. Congress 2001b at Description of Provisions), each of three requirements must be met:

> (1) There must be a written agreement between the parties stating the worker is an independent contractor and responsible for his or her own taxes including self-employment taxes.
>
> (2) The worker must demonstrate economic independence. Evidence of economic independence requires both: (a) the ability to realize a profit or loss, and (b) services limited in duration as to time or the completion of a specific

[9] House companion bill: Independent Contractor Determination Act of 2001, HR 1783.
[10] Similar bills have been introduced by Senator Bond in 1996 (S 1610), 1997 (S 473), and 1999 (S 344). To date the bills have not advanced beyond committee.

task. In addition, the worker must demonstrate one of the following: (c) a significant investment in assets, or (d) unreimbursed business expenses of at least 2 percent of income from entrepreneurial dealings.

(3) The worker must demonstrate workplace independence as evidenced by one of the following: (a) the worker has a principal place of business, or (b) the worker performs services at the facilities of more than one employer, or (c) the worker pays fair market rent for use of the employer's facilities, or (d) the worker primarily uses his or her own equipment.

Under the incorporation test (U.S. Congress 2001b at Description of Provisions), independent contractor status can be established if each of two conditions is met:

(1) Written Contract Requirement - There must exist a written agreement between the parties stating the worker is an independent contractor and responsible for his or her own taxes including self-employment taxes, and

(2) Business Structure and Benefits Requirement – The worker must: (a) conduct business as a corporation or limited liability company[11], and (b) not receive from the employer any of the benefits provided to its employees.

Under the proposed new rules, additional relief is provided for taxpayers in several areas. The bill provides that in cases of disputes with the IRS regarding the provisions of the new classification rules, the burden of proof will fall upon the Service, not the taxpayer, provided the taxpayer can demonstrate a reasonable basis

[11] To prevent abuse of the incorporation provisions, a ceiling is placed on the number of an employer's former employees that may qualify under this provision. The limit is the greater of ten workers or 3 percent of the number of employees in the preceding year. Limits do not apply to workers under the incorporation test who were not formerly employees nor do limits apply to the number of workers who can qualify under the general test.

for independent contractor treatment and has cooperated with IRS requests. Relief is also provided from Service initiated retroactive reclassification of workers to employee status. To qualify for relief from retroactive reclassification, the employer must offer proof that the parties operated under a written independent contractor agreement, reporting requirements were met, and there was a reasonable basis for independent contractor classification. Additional relief is provided via repeal of Section 530(d) of the *Revenue Act of 1978*. Section 530(d) precludes Section 530 relief to employers who supply third parties with highly skilled workers including engineers, designers, drafters, computer programmers, and systems analysts.[12]

The proposed new worker classification rules offered by Senator Bond provide a set of criteria for assessing who is not an employee. The safe harbor provisions described in the bill would not be available to taxpayers not meeting reporting requirements unless such failure to report was due to reasonable cause and not willful neglect. Workers not qualifying as independent contractors under the safe harbor provisions would continue to be classified according to the common law control test with resolution of disputes handled through administrative and judicial proceedings. The proposal introduced by Senator Bond does not restrict the application of the common law rules or Section 530 but offers, as an alternative, determination of independent contractor status under its safe harbor tests.

[12] Section 530(d), added as an amendment to the Revenue Act of 1978 by Section 1706 of the Tax Reform Act of 1986, has been a controversial issue.

Summary

The nationally historic period known as the Great Depression led to the passage of expansive social welfare legislation aimed at protecting the nation's employees. As a result, classification of workers as either employees or independent contractors became imperative. The Internal Revenue Code and Treasury Regulations offer little guidance on what constitutes an employee for federal employment tax purposes. The Supreme Court has ruled that when a statute does not specifically define the term "employee," the common law should be applied when making a determination of worker classification. Common law rules dictate that an employer-employee relationship exists when the employer has the right to control the worker not only as to end result but as to the means of accomplishing that result. Control, sufficient to establish an employer-employee relationship, is not necessarily easy to assess especially given the dynamics of the modern workforce. Revenue Ruling 87-41 provides some guidance by listing the factors the IRS considers relevant when making worker classification decisions. The courts have also given guidance. Despite recent efforts aimed at providing relief to taxpayers and recent proposals aimed at simplifying classification criteria, the employee versus independent contractor issue remains a highly litigated one. Insight can be gained by examining the factors considered by the judiciary to be relevant. The next chapter of this dissertation reviews prior research of judicial decision-making particularly as it relates to issues of worker classification.

CHAPTER 3

SELECTED LITERATURE REVIEW

The purpose of this chapter is to review prior studies of worker classification and judicial decision-making. The employee/independent contractor issue is a highly litigated one (see Marmoll (2001) pp. C-5 through C-11 for a list of court cases). As a consequence, much has been written about the topic. However, the majority of these examinations are descriptive and narrative in type as is prototypical of practitioner oriented and traditional legal research. The first section of this chapter contains a discussion of recent analytical and legal research.

The second section of the chapter is dedicated to reviews of the limited empirical investigations in the area. Initially, selected studies of judicial decision-making relative to tax matters in general are examined. Naturally, the understanding of this literature is critical to accomplishing the objectives of this research effort. Next, empirical studies of worker classification are discussed.

Analytical and Legal Research

Traditional legal research techniques combine expert analysis of administrative or judicial decisions with inductive reasoning in making an assessment relative to some area of law. A large body of legal research relative to worker classification exists. Much of this research is aimed at providing insight into how authorities

determine whether a worker is to be classified as an employee or independent contractor. A non-exhaustive review of selected analytical and legal research follows. The approach in these studies varies significantly from the methodology used in this dissertation. Nonetheless, a review of this literature is helpful in that it provides, at the least, initial evidence of which factors appear more important in reaching a determination of worker classification and how consistently these factors are applied by decision-makers.

Administrative Determinations

O'Neil and Nelsestuen. O'Neil and Nelsestuen (1993) analyze in detail eleven separate private letter rulings issued in 1991 to workers of a single computer software firm. While the fact patterns relative to the eleven workers were nearly identical, the Service classified nine workers as independent contractors, one as an employee under common law, and one as a statutory employee. Even though no attempt is made to quantitatively assess how the determinations were made, the authors do infer that factors cited more often in the rulings were probably considered more important by the decision-makers. Ten of the twenty factors presented in Revenue Ruling 87-41 (1987-1 C.B. 296) were noted in either or both of the facts or holdings in all eleven rulings. These factors included: Instructions/Supervision, Training, Services Personally Rendered, Full Time Required, Work Location, Method of Payment, Furnishing Tools and Materials, Working for More Than One Firm, Services Available to the Relevant Market, and Employer Right to Discharge. Integration was the only factor not mentioned in any of the rulings.

The purpose of the analysis was to identify patterns used by the Internal Revenue Service in making worker classification determinations. The authors conclude that the process is highly subjective and factors are inconsistently applied since "several factors appeared in the facts given by many or all of the workers, but resulted in different classifications" (O'Neil and Nelsestuen 1993, 963).

Frank. Frank (1989) examines IRS issued private letter rulings dealing with worker classification for employment tax purposes for a fifteen-month period (January 1, 1987 through March 31, 1998). Of the 346 rulings issued during this period, over 90 percent declared the worker in question to be an employee. Eight of the twenty-eight rulings indicating independent contractor status contained sufficient information for further analysis. Most of the twenty factors outlined in Revenue Ruling 87-41 (1987-1 C.B. 296) were mentioned in one or more of the letter rulings as either providing evidence for or against the resulting independent contractor determination. While the author makes no attempt to attach weights to the factors relied upon by the Service, he notes, "Although the 20 factors based on common law have not changed, the Service's reliance on only a few key factors dealing with control has changed" (Frank 1989, 22).

Judicial Determinations

Carlson. After reviewing numerous state and federal court determinations of worker classification, Carlson (1996) notes that certain types of laborers are misclassified more often than others and certain discriminating factors are more important than others. Groups of laborers frequently misclassified as independent

contractors include sales representatives, truck drivers, musicians and performers, and office workers. Relative to information considered by the judiciary when determining a worker's status, Carlson assesses that (1996, 673-679):

> (1) The most important indication of an employer/employee relationship is the employer's control over, or right to control, the details of the work as evidenced by supervision, instructions, training, and required reporting.
>
> (2) Other factors become important when the level of employer control over the details of the work does not clearly distinguish the worker as either an employee or an independent contractor.
>
> (3) Factors highly indicative of independent contractor status include the worker's right to hire assistants and the worker operating an independent business as evidenced by working for more than one firm and the opportunity for profit or loss.
>
> (4) Certain factors may or may not be important depending upon the type of labor provided. These factors include: industry custom, the worker's investment in tools and equipment, duration of the relationship, employer control over setting working hours, and the method of payment.
>
> (5) Integration and location of work are factors that are rarely decisive.
>
> (6) Factors of little or diminishing importance are the intent of the parties (written contract) and whether employee benefits are provided.

In a later study, Carlson (2001) compares the factors routinely cited by state and federal courts both before and after the landmark case of *Nationwide Mutual*

Insurance v. Darden (503 U.S. 318 (1992)). Consistent with the findings from his earlier study, employer control over the details of the work emerges as the most important factor stated by the courts. Similarly, factors noted as important include whether the worker hires assistants or works for more than one firm. It is interesting to note that the Service lists working for more than one firm as a factor of lesser importance (IRS 1996b, 2-30). Carlson makes several other observations (2001, 338-354):

> (1) Several factors are declining in importance as a result of changes in the modern workplace (e.g., method of payment, degree of worker skill, significant investment, and integration).
>
> (2) The presence of a written contract often raises a substance over form issue[13].
>
> (3) Permanency of the relationship is a frequently cited factor.
>
> (4) An employer's right to discharge a worker is viewed as more important than an employee's right to terminate the work relationship.

Wishner. Wishner (1995) examines the Second Circuit's approach in deciding for independent contractor status under copyright law *in Aymes v. Bonelli* (980 F.2d 857 (2d Cir. 1992)). In *Aymes*, five factors were identified as those that: (1) would be addressed in nearly all worker classification cases under the *Copyright Act* (17 U.S.C. § 101 (1976)), (2) were highly indicative of the true nature of a working

[13] Nunnallee (1992, 114) notes, "A Service Recipient cannot rely on a written contract with a worker to ensure IC status if the parties fail (intentionally or unintentionally) to follow its terms. . . . Employee status exists if the Service Recipient merely has the 'right to control' the worker, whether or not the right is actually exercised. . . . If the Service Recipient has no contractual right to control the worker but does so anyway, Employee status is found. If the Service Recipient has a contractual right to control the worker but never does so, Employee status is still found."

relationship, and (3) should be given more weight in resolving the issue. The five factors considered most important are: the hiring party's right to control the manner and means of the work; the skill required; the provision of employee benefits; the tax treatment of the hired party; and whether the hiring party has the right to assign additional projects to the worker. The court reasoned in *Aymes* that, of the five major factors, employee status was strongly indicated by one factor and slightly by another while independent contractor status was strongly indicated by the remaining three factors. Factors of lesser importance were not significant enough to outweigh the indications of independent contractor status. Wishner notes that the case evidences a structured approach to the weighing of factors for worker classification in copyright cases in particular.

Turcik. Turcik (2001) considers judicial application of common law criteria for determining worker classification under the *Copyright Act* (17 U.S.C. § 101 (1976)) and ERISA (29 U.S.C. § 1001 (1974)). As is the case for employment tax purposes, the term "employee" is not specifically defined in either statute. The Supreme Court has ruled, relative to both the Copyright Act (see *Community for Creative Non-Violence v. Reid*, 490 U.S. 730 (1989)) and ERISA (see *Nationwide Mutual Insurance Co. v. Darden*, 503 U.S.318 (1992)), that congressional intent is for common law agency doctrine to be applied in determining a worker's classification when the term "employee" is used but not otherwise defined within a statute.

Turcik surmises that, theoretically, in both copyright and ERISA cases, the courts should apply similar reasoning and arrive at comparable determinations of worker status given a set of facts. However, she notes inconsistent application of the

multi-factor test outlined in *Reid* and *Darden* by lower courts in both copyright and ERISA cases. Specifically, the court in *Aymes v. Bonelli* (980 F.2d 857 (2d Cir. 1992)), a copyright case, used a weighted factor approach as discussed above. The author's research reveals that while some courts apply a "weighted factor" approach in copyright cases, others do not. Further ERISA cases tend to follow an unweighted approach although one case is given as an exception.

Bruntz. From his analysis, Bruntz (1991) concludes that the discriminating importance of a factor is dependent, to some degree, upon the profession of the worker and/or industry custom. He states, "The weight courts give to various factors is dependent upon the relationship of the provider of the services to the recipient and the perception of the norms of this vocational or occupational field" (p. 365). Bruntz illustrates his point by reviewing court cases, under various statutes, involving workers from three diverse professions (agriculture, sales, and services).

Six criteria surface as salient in agricultural cases (pp. 369-370): employer control over the details of the work; the worker's opportunity for profit or loss; the level of worker investment; degree of skill required; permanency and duration of the work relationship; and degree of integration. For workers engaged in sales:

> The universal qualities which seem to consistently influence the outcome are: (1) the presence of a written, freely terminable agreement; (2) compensation solely on results; (3) an investment in facilities; and (4) the individual being exclusively responsible for taxes. These factors appear to override substantial control exercised by exclusive territories, requirements not to market competing products and potential losses resulting from losing the product line. (Bruntz 1991, 369)(footnotes omitted)

Workers in the service sector are more likely distinguished based upon whether the worker is engaged in an independent trade or business and, under certain statutes

(i.e., state worker's compensation laws), whether the work is dangerous in nature (pp. 373-374).

Marmoll. Marmoll (2001) observes that when considering evidence indicating a worker's status as either employee or independent contractor, the courts appear to consider variables in groupings she refers to as "indicator zones." Marmoll identifies six industry-related indicator zones (p. A-17): (1) details of work performance, (2) expenses of work performance, (3) compensation of work performance, (4) structure of work position, (5) duration of work position, and (6) location of work performance. The details, expenses, and compensation of work performance are noted as receiving more emphasis in court determinations than the structure, duration, or location factors.

Each of the twenty variables delineated in Revenue Ruling 87-41 (1987-1 C.B. 296), as well as other factors, are considered as supporting either employee or independent contractor status relative to one of the indicator zones. For example, as exhibited in Table 3.1, the judiciary can make an assessment as to Duration of Work Position by considering the right of the employer to discharge the worker, the worker's right to terminate the work relationship, and the permanency of the working relationship. Marmoll comments:

> More and more, cases are leaning toward reliance on groups of factors significant to an industry. This ends up as groupings that indicate a result, or indicator zones. . . . [The indicator zones] allow the fact finder to categorize the available industry specific facts without missing a critical area of needed analysis, but without having to deal with factors that are so unrelated to an industry that they eschew the results. (Marmoll 2001, A-19)

TABLE 3.1

Evidence of Control – Factors by Indicator Zone

Indicator Zone Factors	**Cross-reference**[a]
Details of Work Performance	
Instructions/Supervision	IRS #1
Training	IRS #2
Set Hours of Work	IRS #7
Full Time Required	IRS #8
Order or Sequence of Tasks Set	IRS #10
Oral or Written Reports	IRS #11
Worker Skill Level	RA
Labels	TM
Expenses of Work Performance	
Unreimbursed Expenses	IRS #13
Furnishing Tools and Materials	IRS #14
Significant Investment	IRS #15
Licenses and Taxes	TM
Compensation for Work Performance	
Method of Payment	IRS #12
Opportunity for Profit or Loss	IRS #16
Insurance	TM
Employee-Type Benefits Provided	TM/*Rasbury*
Duration of Work Position	
Employer Right to Discharge	IRS #19
Employee Right to Terminate	IRS #20
Continuing Relationship	IRS #6
Structure of Work Position	
Integration	IRS #3
Services Personally Rendered	IRS #4
Hiring, Superv. and Paying Assistants	IRS #5
Working for More Than One Firm	IRS #17
Services Available to Relevant Market	IRS #18
Worker in Separate Business	RA/TM

[a] Each factor listed is cross-referenced to an underlying source document as follows: Revenue Ruling 87-41 factors by number (IRS #1 through #20) (see also Table 2.1); factors stated in *In re Rasbury* (*Rasbury*); the Restatement (Second) of Agency (RA); and the IRS Revised Training Manual (TM).

TABLE 3.1 Continued

Intent of the Parties	RA/*Rasbury*
Government and Regulatory Rules	RA
Industry Practice or Custom	RA/*Rasbury*
State Law Characterization	TM
Incorporation	TM
Location of Work Performance	
Work Location	IRS #9

Source: Helen E. Marmoll, *Tax Management Portfolio*, Vol. 391, *Employment Status - Employee v. Independent Contractor* (Washington, D.C.: The Bureau of National Affairs, Inc., 2001), pp. A-19 – A-31.

Summary of Analytical and Legal Research

Legal research in worker classification indicates that not all factors of evidence equally impact administrative and judicial decision-making. Current research also reflects the continuing desire for insight into how courts apply factors in making determinations of a worker's status. A broader perspective and knowledge of unrevealed relationships can be obtained by applying statistical analysis to judicial determinations. In fact, one study (Burns and Groomer 1983) compares the classification results of a judicial decision-making model developed using stepwise discriminant analysis with a "postulated model" of expected variables gleaned from qualitative legal research. The result of the study "supports the argument that traditional tax planning based on qualitative determinations of variables should be supplemented by quantitative determinations" (Burns and Groomer 1983, 37).

Empirical Research

Numerous studies have focused on statistical analysis of court decisions relative to a variety of tax issues. These studies generally seek to identify and subsequently assess the relative importance of variables used by courts in resolving disputes. Certain studies have also tested for consistency in application of determinant variables among judicial forums.

Variable Analysis

Empirical testing aimed at identifying and measuring discriminating variables considered by the courts has been applied to a wide range of highly litigated tax issues including: the valuation of closely held corporations (Englebrecht 1976; Morris 1986); the valuation of large blocks of publicly traded stocks (Kramer 1982); reasonable compensation (Boyd 1977; Price 1981); accumulated earnings (Madeo 1979); ordinary income versus capital gains in real estate transactions (Taylor 1978); debt versus equity classification of corporate capital (Bond 1977; Whittington and Whittenburg 1980; Robertson 1989); employee versus independent contractor classification for workers (Stewart 1980); hobby versus business losses (Lett 1981; Burns and Groomer 1983; Robison 1983; Jones 1994); repair expenses versus capital improvements (Waters 1981); dividend equivalence (Englebrecht and Rolfe 1982); existence of a tax partnership (Tripp 1980); travel expenses (Pollard and Copeland 1987); classification of payments made to a former spouse (Kozub 1983); worthless securities (Kilpatrick 1984; Judd 1985); economic interest in natural resources (Pasewark 1986; Fenton 1986); taxability of scholarship and fellowship grants (Garrison 1986); principal

purpose of an acquisition (Olson 1987); and application of the step transaction doctrine (Smith 1987).

Madeo. In a study of accumulated earnings cases, Madeo (1979) analyzed fifty-nine Tax Court cases tried between 1954 and 1970 in order to identify variables used by the court in discriminating between taxpayer wins and losses. Employing stepwise discriminant analysis as the statistical tool, Madeo concludes that the variables are successful at distinguishing between winning and losing cases. The analytical model built using variables identified from the regulations correctly classified 78 percent of the cases while a model built using variables from the IRS Audit Guidelines correctly classified over 94 percent of the cases. Further, the research revealed "several variables and patterns not detected by more traditional analysis" (Madeo 1979, 551).

Whittington and Whittenburg. Whittington and Whittenburg (1980) utilized factor analysis and multiple discriminant analysis in order to: (1) identify factors used by the courts in the classification of debt versus equity financing in closely held corporations, and (2) estimate the relative importance of each factor in predicting judicial decisions. A review of cases and relevant literature revealed twelve dichotomous variables potentially useful by the judiciary in debt versus equity classifications. The test sample consisted of eighty cases tried from 1956 through 1977. Factor analysis of the twelve variables resulted in four orthogonal factors. Multiple discriminant analysis using the four factors as variables and performed on a random sample of fifty of the eighty cases resulted in a discriminant function able to

correctly classify 90 percent of the remaining thirty cases. The study also indicated that judicial decision-making relative to debt versus equity classification changed over time.

Englebrecht and Rolfe. The purpose of a study by Englebrecht and Rolfe (1982) was to assess the effect of a Supreme Court ruling on subsequent court decisions relative to stock redemptions. A population of fifty-four federal court cases was grouped based on whether they were tried before or after the landmark case. Multiple discriminant analysis was used to identify variables capable of discriminating between stock redemptions receiving dividend treatment versus redemptions receiving exchange treatment. Due to a small sample size, the jackknife method instead of a holdout sample was used to test for classification accuracy. Comparing discriminant functions for both time periods (before and after the court decision) as well as classification accuracy, the authors conclude the Supreme Court decision significantly affected judicial decision-making.

Robison. Robison (1983) used probit analysis to identify and estimate the relative importance of variables considered by the Tax Court in deciding for hobby or business classification of activities. He analyzed 219 Tax Court decisions resulting in 227 observations from 1955 through 1981. The forty independent variables relevant to the issue resulted in a five-scalar probit model capable of correctly classifying 90 percent of the cases. The decision-making model also was determined to be stable over time and stable across lines of business (farming and rental).

Judicial Forum

Much of the research in judicial decision-making relative to tax issues has focused on analyzing decisions of the Tax Court. Tax Court decisions are generally considered to be of high quality for several reasons including that: (1) the Tax Court hears only tax cases, (2) only expert judges render decisions (jury trials are not available), and (3) a high level of consistency is maintained since the Tax Court is bound to follow legal precedent set by other Tax Court decisions (unless a conflicting precedent is set by the Court of Appeals of the applicable circuit), the applicable Court of Appeals circuit, and the U.S. Supreme Court. Conversely, while district courts are required to follow precedent set by the applicable Court of Appeals and U.S. Supreme Court, consistency among districts is not compulsory. Further, a trial by jury may be available in a district court. Judges of Federal District Courts and Court of Federal Claims hear a wide variety of case types and are not necessarily tax experts. The question of decision-making consistency among judicial forums is therefore of interest to taxpayers, attorneys, the IRS, and researchers.

Studies examining decision-making differences among judicial forums have yielded mixed results. Differences between Tax Court decisions and those rendered in the district courts and Court of Claims were not evident in a study of dividend equivalence in stock redemptions (Englebrecht and Rolfe 1982). Similarly, Waters (1981) found a logistic regression model of variables considered by the Tax Court in classifying expenditures as either repairs or capital improvements was also able to correctly classify 83.3 percent of district court cases. However, decision models did vary between the Tax Court and district courts when considering worthless stock cases

(Judd 1985) and small differences were noted between Tax Court and Court of Claims decisions when considering the issue of economic interest (Fenton 1986).

In a study considering variables used by the courts to value large blocks of publicly traded stock for tax purposes, Kramer (1982) finds significant differences between a decision model built from Tax Court decisions and one built from combined Federal District Court and Court of Claims decisions. The Chow test of differences applied to the two models (F-test score of 3.774 significant at the .01 level) indicates the two groups of case decisions are from significantly different populations (p. 82). The researcher concludes that the "finding provides evidence to support a long-held theory of tax practitioners that the selection of the court which hears a tax case is a choice which can affect the outcome of the case" (Kramer 1982, 85).

Prior tax research using sophisticated statistical methodologies applied to judicial decisions of worker classification is limited to a single study by Dave Stewart (1980). Accordingly, his study is reviewed in depth with numerous references and comparisons made to it throughout the remainder of this dissertation.

Worker Classification

Empirical analyses of worker classification result from a single study performed by Dave Stewart (Stewart 1980; Stewart and Kramer 1980; Stewart 1982). The objectives of his research included: (1) identifying the variables used by courts in determining a worker's employment status, (2) constructing a statistical model of variables considered significant by the judiciary in resolving worker classification issues, and (3) assessing whether choice of legal forum is a factor necessary of consideration in employment tax cases.

Data for the study consisted of the published facts and opinions of all identified employee versus independent contractor cases tried in the Federal District Courts or Court of Claims, the courts of original jurisdiction, from 1940 to 1980. Tax Court decisions were not included in the study due to the limited number of decisions available at the time and the lack of the court's jurisdiction over employment tax matters. Of the 148 decisions included in the study, 128 were from the district courts with the remaining 20 tried in the Court of Claims.

Variable Identification. Through an examination of various authoritative sources including statutes, the IRS audit manual, landmark court cases, and relevant literature, factors or variables potentially pertinent in discriminating employees from independent contractors were identified. The following eight factors were found but excluded from the analysis either because they were infrequently mentioned in court cases (10 percent or less of the cases) or difficult to assess (Stewart 1980, 87): employee skill level; uniforms supplied; required oral or written reports; employer's right to discharge; employee's right to terminate; industry custom; intent of the parties; and employee-type benefits provided. After combining factors considered highly correlated (i.e., $p > 0.7$) and disregarding the eight factors considered not particularly relevant, the following eleven factors were retained for further analysis (Stewart 1980, 58; Stewart 1982, 7):

(1) Supervision (combining: Instructions, Training, and Sequencing of Tasks),

(2) Integration,

(3) Right to Delegate (combining: Hiring, Supervising, and Paying Assistants and Services Rendered Personally),

(4) Continuing Relationship,

(5) Set Hours of Work,

(6) Control Over the Place of Work,

(7) Independent Trade (combining: Full Time Required, Working for More Than One Firm, and Services Made Available to the General Public),

(8) Method of Payment,

(9) Payment of Business and/or Travel Expenses,

(10) Furnishing Tools and Equipment, and

(11) Realization of Profit or Loss (including Significant Investment).

Since not every factor applies in each individual court case, the eleven variables were treated as trichotomous, random variables. Each variable was assigned one of three values (i.e., 0 if the factor indicated independent contractor status, 1 if it was not mentioned or indeterminate in a case, and 2 if the factor indicated employee status). An alternative coding method where each variable is represented by two dummy variables, thereby doubling the number of parameters to be estimated was not employed after an initial analysis failed to reveal significant improvement using the latter coding scheme. With the eleven variables as independent variables and the court's determination of independent contractor or employee status as the dependent variable, Stewart compared discriminant analysis, OLS regression, and Logit analysis for modeling judicial decision-making in worker classification cases.

Statistical Models. The discriminant analysis, forward stepwise OLS regression, and stepwise Logit models correctly classified 96.6 percent, 95.3 percent,

and 97.3 percent of the court cases, respectively. The following five variables were common to all three models:

(1) Supervision,

(2) Realization of Profit or Loss,

(3) Independent trade,

(4) Continuing Relationship, and

(5) Integration.

A sixth factor, Right to Delegate, was present in both the discriminant and OLS regression models. The OLS regression model also added the seventh factor of Control Over the Place of Work. Based on these results, the researcher concludes that despite the theoretical superiority of Logit analysis in estimating dichotomous dependent variables, each of the three models tested were robust as to classification accuracy in worker classification cases.

Temporal Stability. Since the data consisted of court cases decided over a forty-year time period, temporal stability of the prediction models was examined. Data was divided into two groups. Cases decided prior to 1960 comprised the first group with cases decided after 1959 making up the second group. A discriminant model estimated using pre-1960 cases only was used to classify both groups of cases with an approximate classification accuracy rate of 95 percent. OLS regressions on both groups were compared using the Chow test. The resulting test statistic (.58798 < critical F-value of 1.75) was not significant at the .05 level indicating the two regressions were from the same population (1980, 142). Further analysis involved dividing the observations into four ten-year periods; using three periods to re-estimate

the model and a fourth period as a holdout sample (1982, 10). Stewart concludes the models to be stable over time.

Judicial Forum. Choice of legal forum was also considered in the study. As a comparison, a discriminant model estimated from only Federal District Court cases was used to classify both Federal District Court and Court of Claims cases. Classification accuracy of the model was approximately 94 percent for both legal forums. In addition, a separate OLS regression of only Federal District Court cases was compared to a regression of only Court of Claims decisions by applying the Chow test. With the test statistic of 1.144 being less than the critical F-value of 1.75 at the 5 percent significance level, indications are the two regressions came from the same population (1980, 153). Stewart concludes the Court of Claims and district courts are similar as to decision-making in worker classification cases.

Summary of Empirical Research

Prior empirical analyses of judicial determinations in tax matters provide evidence that: (1) not all factors are considered equally by the courts in arriving at a decision, (2) the way in which a court arrives at a decision, as captured in a decision-making model, is subject to change in response to significant events or over time, and (3) differences in the decision-making process may exist dependant upon the court in which a tax case is tried (Tax Court, Federal District Courts or Court of Claims). Prior empirical research of worker classification for tax purposes consists of a single study conducted over twenty-four years ago (Stewart 1980). Since that time, the employment landscape has changed dramatically; critical administrative guidance has

been promulgated and significant judicial guidance has been issued; and a large number of worker classification cases have been decided in the Tax Court (a forum not included in Stewart's study). As a result, further examination of the topic is warranted.

CHAPTER 4

METHODOLOGY

The objective of this study is to identify factors used by the judiciary in distinguishing between employees and independent contractors for federal tax purposes. Administrative rulings and judicial opinions identify numerous factors to be considered when making worker classification determinations. Nonetheless, little insight exists as to how the courts combine those factors into an overall judgment of employment status. The intent of this research inquiry is to build a parsimonious statistical model, using logistic regression, of significant factors in differentiating employees from independent contractors. This chapter describes in detail how the research is conducted. Included is a discussion of the research sample, potential variables, and variable coding scheme. Statistical methods for estimating and evaluating the model are also presented.

Research Questions

The following research questions were presented in Chapter 1 of this dissertation as worthy of investigation in order to gain insight into how a worker's employment status is determined by the courts as either employee or independent contractor:

1. Which of the factors or variables delineated in administrative and judicial rulings explain court determinations of employee classification in employee versus independent contractor disputes?
2. Can the demarcated factors from administrative and judicial rulings be used to predict employment status for tax purposes?
3. Do different courts of original jurisdiction (Federal District Courts, U.S. Court of Federal Claims, and U.S. Tax Court) consider similar factors when rendering decisions in cases of worker classification?
4. Have the factors considered by courts in worker classification cases changed over time?

Hypotheses

Corresponding to the research questions, the following hypotheses are presented for empirical investigation:

H_{o1}: Differentiation between employees and independent contractors for federal tax purposes is not possible based upon the factors delineated in administrative and judicial rulings.

H_{a1}: Differentiation between employees and independent contractors for federal tax purposes is possible based upon the factors delineated in administrative and judicial rulings.

H_{o2}: Differential factors cannot be used to predict a worker's classification for federal tax purposes.

H_{a2}: Differential factors can be used to predict a worker's classification for federal tax purposes.

H_{o3}: There are no significant differences between judicial forums with regard to factors considered when making worker classification determinations.

H_{a3}: There are significant differences between judicial forums with regard to factors considered when making worker classification determinations.

H_{o4}: The factors considered by the courts in making worker classification decisions have not changed significantly over time.

H_{a4}: The factors considered by the courts in making worker classification decisions have changed significantly over time.

Research Sample

Employee versus independent contractor cases have been tried in Tax Court (including the small tax case division for disputed amounts of $50,000 or less), Federal District Courts, U.S. Court of Federal Claims, U.S. Court of Appeals, and the U.S. Supreme Court. A worker's classification as either employee or independent contractor is a determination of fact. The facts of a case are decided in the court of original jurisdiction (Federal District Courts, U.S. Court of Federal Claims or U.S. Tax Court). Appellate review is generally limited to the application of law instead of the determination of facts. Further, an appellate court may reverse a lower court's ruling of a factual issue only if the determination is "clearly erroneous" (*Anderson v. City of Bessemer City, North Carolina*, 470 U.S. 564 (1985)). Therefore, in defining the research sample, cases initially considered for inclusion in this study consisted of all federal tax cases relative to worker classification tried in the courts of original jurisdiction.

Worker classification cases litigated from 1980 through 2003 were identified from various tax databases including Commerce Clearing House, Research Institute of America, and LEXIS. The sample represents the known population of cases tried during the stated time period. The year 1980 was selected as a starting point for

analysis since previous empirical research of worker classification (Stewart 1980) examined court determinations for the years 1940 through 1979. One hundred fifty-three cases were identified of which sixteen employment tax cases were eliminated due to the court's application of Section 530 of the *Revenue Act of 1978*. If certain requirements are met, Section 530 precludes the determination of a worker's factual status and allows employers to continue treating a worker as an independent contractor regardless of the worker's correct classification under common law principles[14]. Ten cases were removed from the data set because insufficient information was presented in the printed court records. Only four Court of Federal Claims decisions were identified for the 1980 through 2003 period. An objective in this study is to test for differences between judicial forums with regard to factors considered in worker classification cases. Due to the limited number of cases tried in the Court of Federal Claims, this forum and its four cases were excluded from the study leaving 123 Tax Court and Federal District Court cases in the data set. A master list of the cases analyzed in this study, including citations, is presented in Appendix A. Several of the 123 court cases included two or more judicial decisions pertaining to separate and distinct employment relationships resulting in a total of 137 observations for analysis. The numbers of cases and observations by court are summarized in Table 4.1.

Description of Variables

Each of the 123 court cases was examined and information was gathered and recorded relative to both dependent and independent variables. The dependent

[14] For a discussion of requirements and provisions of Section 530 see Chapter 2, pp. 61-63.

variable represents the court's determination of the worker's status as either an employee or independent contractor. The independent variables represent the factors considered by the courts in arriving at its decisions.

TABLE 4.1

Numbers of Cases and Observations by Court

Court	Cases	Observations
Tax Court	79	83
Federal District Courts	44	54
Total	123	137

Delineated in Revenue Ruling 87-41 (1987-1 C.B. 296) are twenty factors for consideration when making worker classification determinations. The 1987 ruling provided guidance for all subsequent determinations of worker classification. Although this study analyzes court cases decided prior to the issuance of the ruling, the factors listed therein are applicable because these factors were identified by the Service from a compendium of prior rulings and court cases dating back to 1947 (see Chapter 2, pp. 43-55). The *Rasbury* court (71A AFTR 2d 93-4539 (Bankr. N.D. Ala. 1991)) cited four factors for consideration in addition to the twenty identified in Revenue Ruling 87-41 (see Chapter 2, pp. 55-58). A list of the factors mentioned in Revenue Ruling 87-41 and the *Rasbury* case are depicted in Table 4.2. A discussion of the use of these variables in this study is presented in the following paragraphs.

TABLE 4.2

List of Potential Predictor Variables

Revenue Ruling 87-41
Instructions/Supervision
Training
Integration
Services Personally Rendered
Hiring, Supervising, and Paying Assistants
Continuing Relationship
Set Hours of Work
Full Time Required
Work Location
Order or Sequence of Tasks Set
Oral or Written Reports
Method of Payment
Unreimbursed Expenses
Furnishing Tools and Materials
Significant Investment
Opportunity for Profit or Loss
Working for More Than One Firm
Services Available to the Relevant Market
Employer Right to Discharge
Employee Right to Terminate
In re Rasbury
Industry Practice or Custom
Intent of the Parties
Signed Independent Contractor Agreements
Employee-Type Benefits Provided

Independent Variable Selection

According to Hair et al. (1998, 163), the most problematic issue in independent variable selection is specification error. Specification error results when irrelevant variables are included or relevant variables are omitted from a set of independent variables. Omitting a relevant variable can result in biased results and the variable's

effect cannot be assessed if it is not included in the study (Menard 2002, 68). Including irrelevant variables does not bias the results of the other independent variables but does have negative consequences:

> First, irrelevant variables usually increase a technique's ability to fit the sample data, but at the expense of overfitting the data and making them less generalizable to the population. Second, irrelevant variables do not typically bias the estimates of the relevant variables, but they can mask the true effects because of multicollinearity. Multicollinearity represents the degree to which any variable's effect can be predicted or accounted for by the other variables in the analysis. As multicollinearity rises, the ability to define any variable's effect is diminished. Thus, including variables that are conceptually not relevant can have several potentially harmful effects, even if the additional variables do not directly bias the model results. (Hair et al. 1998, 24)

Excess variables may also mask the effects of more relevant variables when a sequential model estimation form is used, such as the stepwise method, and model parsimony may be reduced (Hair et al. 1998, 163). To mitigate the undesirable effects associated with specification error, each of the twenty-four potential independent variables were scrutinized on a theoretical basis and considered for inclusion or exclusion from the study.

Consolidated Variables

Several of the twenty-four variables listed in Revenue Ruling 87-41 (1987-1 C.B. 296) and *In re Rasbury* (71A AFTR 2d 93-4539 (Bankr. N.D. Ala. 1991)) are indicators of the same underlying concept. Similar to the approach taken by Stewart (1980), variables were consolidated if the authoritative literature defined one or more of the variables in terms of the other. Further, variables were consolidated if they were consistently considered collectively in judicial determinations.

Opportunity for Profit or Loss. The variables Unreimbursed Expenses, Significant Investment, and Opportunity for Profit or Loss are interrelated to the extent that in effect they are a measure of the same construct. For example, in defining the Opportunity for Profit or Loss factor, it is stated in Revenue Ruling 87-41 (1987-1 C.B. 296) that " . . . if the worker is subject to a real risk of economic loss due to significant investments or a bonafide liability for expenses . . . that factor indicates that the worker is an independent contractor." The Internal Revenue Service further explains that:

> Some types of work simply do not require large expenditures. . .[and] although not every independent contractor need make a significant investment, almost every independent contractor will incur an array of business expenses. . . . If expenses are unreimbursed, then the opportunity for profit or loss exists. (IRS 1996b, 2-16 – 2-18)

As explained by the Service, a worker's opportunity for profit or loss is in part based upon whether the worker makes a significant investment in capital assets or incurs significant unreimbursed business expenses. Accordingly, the three factors were combined such that the Opportunity for Profit or Loss factor was considered present in a case if the court mentioned any one of the three individual factors.

Right of Discharge/Termination. An employer's right to discharge a worker at will and conversely the employee's right to terminate the working relationship at will is indicative of an employment relationship. The Service acknowledges that in the modern workplace "businesses rarely have complete flexibility in discharging an employee" and "the right to discharge/terminate is so

often unclear and depends primarily on contract and labor law" (IRS 1996b, 2-25 – 2-26).

Employer Right to Discharge and Employee Right to Terminate are listed as separate and distinct factors in Revenue Ruling 87-41 (1987-1 C.B. 296). However, the factors are a measure of the same concept. The employee's right to terminate the work relationship is the converse of the employer's right to end the same relationship. Marmoll (2001) notes, "[Court] cases discussing the right of discharge have either ignored the employee's converse right or have discussed the two rights together as one factor (p. A-27). The employer and employee rights are considered collectively in this analysis as a combined Right of Discharge/Termination.

Intent of the Parties. The type of working relationship intended between an employer and worker can be ascertained, to some degree, by considering underlying documentary evidence. The Service states:

> Courts often look at the intent of the parties. This is most often embodied in their contractual relationship. Thus, a written agreement describing the worker as an independent contractor is viewed as evidence of the parties' intent that a worker is an independent contractor. (IRS Training Course 1996b, 2-22)

The Bankruptcy Court in *Rasbury* noted, "While such documentary evidence [as a written contract or 1099s] is not conclusive, it is an important factor indicating intent of the parties . . ." (71A AFTR 2d 93-4539 (Bankr. N.D. Ala. 1991)). In the current study, the variable Signed Independent Contractor Agreements was considered jointly with and as providing evidence in support of the Intent of the Parties variable.

As indicated in Table 4.3, the remainder of the twenty-four variables listed in Revenue Ruling 87-41 (1987-1 C.B. 296) and *In re Rasbury* (71A AFTR 2d 93-4539

(Bankr. N.D. Ala. 1991)) were individually retained in the study resulting in twenty independent variables considered as potential indicators of employment status in federal tax cases.

TABLE 4.3

List of Variables

Variable Number	Variable Description
	Dependent
V0	Court Determination of Employee or Independent Contractor Status
	Independent
V1	Instructions/Supervision
V2	Training
V3	Integration
V4	Services Personally Rendered
V5	Hiring, Supervising, and Paying Assistants
V6	Continuing Relationship
V7	Set Hours of Work
V8	Full Time Required
V9	Work Location
V10	Order or Sequence of Tasks Set
V11	Oral or Written Reports
V12	Method of Payment
V13	Furnishing Tools and Materials
V14	Opportunity for Profit or Loss
V15	Working for More Than One Firm
V16	Services Available to the Relevant Market
V17	Right to Discharge/Terminate
V18	Industry Practice or Custom
V19	Intent of the Parties
V20	Employee-Type Benefits Provided

Variable Coding

The court's determination of a worker as either an employee or independent contractor is a binary decision. The dichotomous dependent variable (V0) was coded for each case as a judicial determination of employee status (represented by a "0") or a determination of independent contractor status (represented by a "1"). The general convention given a binary response variable is to assign the code of "1" to the dependent class of greatest interest. The Internal Revenue Service generally asserts employee status and thus, in this study of worker classification for federal tax purposes, independent contractor status is considered to be the class of greatest interest.

The twenty independent variables are qualitative in nature and are such that each variable either provides evidence of the existence of an employer/employee relationship or an employer/independent contractor relationship. However, each factor is not necessarily applicable in every court decision. Therefore, for any given court case, each indicator variable could either support employee classification, support independent contractor classification, or not be mentioned in the case. The assumption must be made that since judicial decisions are subject to review and reversal via the appeals process, judges will include, either in the facts, discussion, or opinion of the case, all information considered significant to the decision rendered. Logically, whenever a variable is not mentioned in a case, then that variable is not significant to the decision rendered or not applicable given the particular working relationship.

Alternative Coding Schemes

Two separate coding schemes were considered given that each of the twenty potential independent variables had one of three distinct outcomes (the factor supports employee classification, the factor supports independent contractor classification, or the factor is not relevant to the decision rendered). In principle, a qualitative variable with c classes should be represented by c-1 binary variables (Neter et al. 1996, 456). Therefore, each independent variable (with c = 3) should be represented by two dummy variables. For example, the Method of Payment variable (V12) could be assigned two dummy variables (V12A & V12B) coded as follows:

V12A = 1 if the worker was paid by the hour, week, or month
0 otherwise

V12B = 1 if the worker was paid by the job or on commission
0 otherwise

The use of two dummy variables maximizes the amount of information reflected such that:

	Variable Coding	
	V12A	V12B
If the worker was paid by the hour, week, or month	1	0
If the worker was paid by the job or on commission	0	1
If the Method of Payment variable is not mentioned	0	0

An effect, and a disadvantage in this case, of utilizing indicator variables is that the number of independent variables in the study is increased from twenty to forty. Forty potential variables are considered large in relation to the 137 data points available for analysis. In general, the ratio of observations to independent variables should be at least 5 to 1 with a ratio of 15 or 20 to 1 being preferred (Hair et al. 1998, 166). If a

stepwise procedure is used, a ratio of 50 to 1 has been recommended (Wilkinson 1975).

As an alternative, arbitrary "allocated codes" may be assigned (Neter et al. 1996, 480). In this case, each trichotomous, independent variable may be represented by a single factor with three values. For example, the Method of Payment variable (V12) could be coded "1" if a worker was paid by the hour, week, or month, "2" if a worker was paid by the job or on commission, and "3" if the factor was not mentioned in the case. Underlying this method of representing each factor with one variable taking on three values is the assumption that the distance between each of the three categories (employee status indicated/ "1", factor not relevant/ "2", independent contractor status indicated/ "3") is equal (Neter et al. 1996, 480). There is generally no reason to make this assumption and the one-variable/three value technique is not equivalent to the dummy variable technique unless the assumption is met (Pindyck and Rubinfeld 1981, 113). However, the forty independent variables required using the dummy variable technique is not considered feasible given the data set and the latter alternative is employed. Further, in a previous study of worker classification for federal tax purposes, Stewart (1980) evaluated the effects of different coding schemes (eleven variables with allocated codes versus twenty-two indicator variables). The researcher concluded that, given the number of variables (eleven) and the number of data points (148 judicial decisions), the advantages of using allocated codes (stability of estimates and ease of interpretation) outweighed the 1.3 percent increase in classification accuracy resulting from employing the dummy variable technique (pp. 130-133).

Coding of Independent Variables

For this study, each independent variable was coded "-1" if the variable was mentioned by the court and provided evidence of an employer/employee relationship. A variable mentioned by the court and indicative of an employer/independent contractor relationship was coded "+1". As noted by Neter et al. (1996, 482), the +1 / –1 coding of variables results in a response function such that:

$E\{Y\} = (B_0 + B_1)$ when X_1 is coded +1

$E\{Y\} = (B_0 - B_1)$ when X_1 is coded –1

The response function indicates that B_0 is an "average" intercept of the regression line from which the intercepts of the independent variable differ by B_1 in opposite directions (Neter et al. 1996, 482). If $B_1 = 0$, the regression lines are the same. The assignment of +1/-1 codes to the independent variables was structured so as to assure positive correlation between the independent variables (coded +1 when independent contractor status is indicated) and the dependent variable (coded 1 for a judicial determination of independent contractor status).

Applying this to the Method of Payment variable (V12), the variable is coded "-1" if the worker was paid in a regular and consistent manner (an indication of employee status). Variable V12 is coded "+1" if compensation was contingent upon completion of a job or on a commission basis (an indication of independent contractor status). Thus, payment by the hour, week, or month is expected to impact a judicial decision of worker status (as an employee or independent contractor) in an opposite direction from payment by the job. If a variable is not mentioned in a case (i.e. missing data), a code of "0" is assigned. This is consistent with the position that any

variable not mentioned by the court is presumably inapplicable or insignificant to the judiciary's decision. The "0" code is therefore the reference point from which the effect of the presence (judicial consideration) of any factor is measured against the outcome (judicial determination) in one of two opposite directions.

Each court case was read and data recorded by the researcher utilizing the coding scheme and variable descriptions as presented in Appendix B. Consistency in coding was promoted by careful attention to the variable descriptions. Definitional elements for the variables were derived from descriptions found in Revenue Ruling 87-41 (1987-1 C.B. 296) and a Bureau of National Affairs Tax Management Portfolio (Marmoll 2001). Pertinent information about each observation was initially recorded on a case analysis worksheet. To control for coder-bias, each case was read and analyzed by an independent coder with accounting related experience. Case analysis worksheets completed by the researcher and the independent coder were compared. In the event of a discrepancy between coder interpretations, the case was reread and reassessed with differences reconciled by the researcher.

Research Methods

The intent of this research effort is to build a parsimonious statistical model of factors found to be significant in differentiating employees from independent contractors. The linear multiple regression model takes the form:

$$Y = \beta_0 + \beta_1 X_1 + \ldots + \beta_p X_p + \varepsilon$$

where:

Y represents the dependent variable,

β_0 represents the intercept term,

β represents the coefficients of the independent variables,

X represents the independent variables, and

ε represents the error term.

This expression implies that it is possible for the expected value of Y, given the values of X, to take on any value as X ranges between negative and positive infinity.

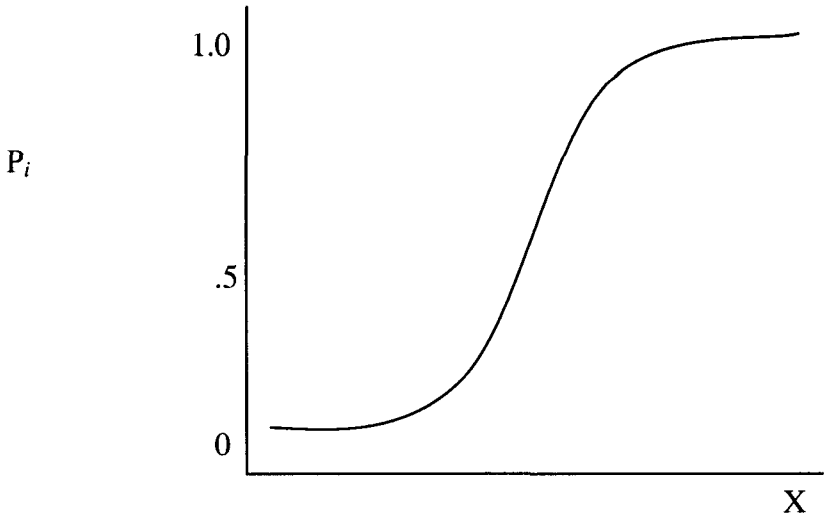
When a response variable is binary, as is the case in this study, assumptions underlying linear regression models are often violated in that: (1) error terms are not normally distributed, and (2) error terms do not have equal variances. Further, when a dependent variable is binary, the response function represents the probability of a particular outcome and should be restrained between zero and one. Linear response functions may fall outside the zero to one limit and thus fail to provide for sensible interpretations. A transformation of the standard regression model is required such that:

$$0 \leq E\{Y\} \leq 1$$

where:

$E\{Y\}$ represents the expected value of the dependent variable.

Theoretical and empirical considerations suggest that when the response variable is binary, the response function often will be curvilinear, in the shape of a tilted S, as opposed to linear (Neter et al. 1996, 570). This sigmoidal response function is nearly linear at the midpoint with asymptotes at zero and one such that the necessary constraints on the response function are achieved.



The nonlinear logistic regression model belongs to the family of models referred to as generalized linear models and is useful for predicting the probability of group membership given a dichotomous dependent variable. The model is based on a cumulative probability function and is written as:

$$P_i = \frac{1}{1+e^{-z}} \tag{4.1}$$

where:

P_i represents, in this study, the probability of a court determination of a worker's status as an independent contractor,

e represents the base of natural logarithms (approx. 2.718),

z represents $\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_p X_p$,

β_0 represents the intercept term,

B represents the coefficients of the independent variables, and

X represents the independent variables

The logistic equation can be linearized such that:

$$\text{Log}\ \frac{P_i}{1-P_i} = z \qquad \text{or} \tag{4.2}$$

$$\text{Log}\ \frac{P_i}{1-P_i} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots \beta_p X_p \tag{4.3}$$

where:

$\frac{P_i}{1-P_i}$ is the "odds ratio" and

$\text{Log}\ \frac{P_i}{1-P_i}$ is the "log odds ratio" or "logit"

Research Question 1

Logistic regression is used to determine which factors are significant in explaining court determinations of worker classification. Parameters of the logistic response function are estimated using the method of maximum likelihood. This method is appropriate when the response variable is binary (Neter et al. 1996, 573). This differs from multiple regression which utilizes the method of least squares. Parameter values for the logistic regression model are those that maximize the likelihood of the event occurring as opposed to minimizing squared deviations. The logistic regression model is estimated using version 12.0 of the Statistical Program for the Social Sciences (SPSS).

Interpreting Coefficients. Logistic regression coefficients correspond to the b coefficients in OLS regression. However, interpretation of the coefficients is not as straightforward (Aldrich and Nelson 1984, 42). In the logistic regression model, a coefficient represents the change in the logit given a change in one unit of the

independent variable X (Hosmer and Lemeshow 1989, 39). The logit can be converted to an odds ratio by raising the natural log e to the power b. Given a dichotomous independent variable, the odds ratio is a measure of how much more (or less) likely it is for the outcome to be present (Y = 1/ or in this case, for a judicial determination of independent contractor status) when X=1 versus when X=0. Because logistic regression coefficients become more difficult to interpret given trichotomous independent variables, classification accuracy is an important method for analyzing results in this study.

Stepwise Procedure. For this study, the stepwise procedure is used to estimate the logistic regression function. Concerning the selection of predictor variables for model building:

> Use of the all-possible regressions approach for logistic model building for exploratory observational studies often is not feasible, however, because of the extensive numerical search calculations required to find the maximum likelihood estimates for a logistic regression model. Consequently, stepwise selection procedures are frequently employed in logistic regression model building for exploratory observational studies. (Neter et al. 1996, 585)

The stepwise procedure offers a fast and effective means of screening a large number of variables while simultaneously fitting the logistic regression equation (Hosmer and Lemeshow 1989, 106). The procedure provides for a series of steps in which variables are considered for inclusion or removal from the model based on the importance of variables.

Importance is assessed in terms of the *p*–value of the likelihood ratio statistic (*G*), with the most important variable being the one with the smallest *p*-value. At any given step in the procedure, the "most important" variable is added to the model if its

p-value for G is less than some predetermined alpha level for entry (P_E). Simultaneously, at any given step in the procedure, the "least important" variable is considered for removal from the model if its p-value for G is larger than some predetermined alpha level for removal (P_R). The chosen value for P_R must be larger than the P_E value to prevent the program from entering and removing the same variable successively. Given a set of variables, the stepwise procedure provides for an iterative entry or removal of one explanatory variable at a time until a final model is estimated.

The model can be estimated using a forward or backward stepwise procedure. The forward stepwise procedure begins with a single explanatory variable with additional variables added or deleted until significant improvement ceases to be made. The backward procedure begins with a saturated model from which superfluous terms are eliminated. The backward stepwise procedure is useful when it is desirable to examine the model initially with all potential variables included. Further, as noted by Mantel (1970, 624):

> The particular advantageous properties of the stepdown regression procedure then is that it drops regressor variables, or sets of regressor variables, only when it can afford to drop them—where a set of regressor variables should be kept in its entirety it is kept, though the step-up procedure could have failed to pick up the set.

The backward stepwise procedure is the technique used in this study for analyzing variables considered by the judiciary when making worker classification determinations.

Assessing Goodness of Fit. Overall fit for the logistic regression model is assessed in a manner similar to that used in multiple regression analysis. As

previously discussed, logistic regression coefficients are estimated using the method of maximum likelihood as compared to the method of least squares applied in multiple regression. The overall measure of model fit for the logit model, comparable to the error sum of squares in multiple regression, is the likelihood value. The likelihood value represents "the probability of the observed results, given the parameter estimates" (SPSS Professional Statistics 1997, 47). In statistical packages, the likelihood value is generally expressed as -2 times the log of the likelihood (-2LL). A well-fitting model has a small -2LL value, with a perfect fit represented by a likelihood of one and -2LL of zero.

The -2 log-likelihood ratio (-2LL) is useful for comparing predictive fit between equations. The chi-square test provides a test of significance for a change in log-likelihood. Standard logistic regression output in SPSS includes the "model chi-square" and "step chi-square" tests. Model chi-square is the difference between -2LL for the base model (constant only) and the current model. It tests the null hypothesis that the coefficients in the current model, other than the constant, are zero and is comparable to multiple regressions' overall F test. The step chi-square is the change in -2LL for each successive model-building step. It is a test of the null hypothesis that the coefficients of the variables added or removed at the last step are zero and compares to the F-change test in stepwise multiple regression (SPSS Professional Statistics 1997, 48-49).

Several "R^2" measures have also been developed for assessment of overall model fit. The "Pseudo" R^2, Cox and Snell R^2, and Nagelkerke R^{-2} attempt to quantify the proportion of variation in an outcome variable explained by the logistic

regression model. The "Pseudo" R^2 measure is based on –2LL improvement and is calculated as (Hair et al., 1998, 320):

$$R^2_{logit} = \frac{-2LL_{null} - (-2LL_{model})}{-2LL_{null}} \quad (4.4)$$

where:

$-2LL_{null}$ is the –2 log-likelihood value for the base model, and

$-2LL_{model}$ is the –2 log-likelihood value for the current model

Cox and Snell's R^2 is formulated as (SPSS Professional Statistics 1997, 48):

$$R^2 = 1 - \left[\frac{L(0)}{L(B)}\right]^{2/N} \quad (4.5)$$

where:

L(0) is the likelihood for the base model (constant only),

L(B) is the likelihood for the current model, and

N is the sample size

The Cox and Snell R^2 is problematic in that a value of one cannot be achieved. The Naglekerke $R^{\sim 2}$ is a modification of the Cox and Snell R^2 such that a value of one is attainable. The measure is expressed as (SPSS Professional Statistics 1997, 48):

$$R^{\sim 2} = \frac{R^2}{R^2_{MAX}} \quad (4.6)$$

where:

R^2 = Cox and Snell R^2

$R^2_{MAX} = 1 - [L(0)]^{2/N}$

The "Pseudo" R^2, Cox and Snell R^2, and Naglekerke $R^{\sim 2}$ measures are considered in assessing goodness of fit for the logistic regression model in this research project.

Classification Matrix. In this study and in logistic regression analysis in general, a primary indicator of model fit is the classification matrix. The classification matrix provides a comparison of model predictions to observed outcomes. The "hit ratio" or percentage of correct classifications is analogous to the R^2 measure in multiple regression (Hair et al. 1998, 264). The classification matrix is constructed as shown in Table 4.4.

TABLE 4.4

Classification Matrix

	Predicted Group		
Observed Group	Employee	Independent Contractor	Percent Correct
Employee	H_1	I_1	P_1
Independent Contractor	I_2	H_2	P_2
		Overall Percentage	

Where:

H_1 and H_2 are the number of correct classifications (hits)
I_1 and I_2 are the number of incorrect classifications
P_1 is the percent of cases correctly predicted as employee determinations
P_2 is the percent of cases correctly predicted as independent contractor

Source: SPSS Professional Statistics 7.5 (SPSS, 1997, 45).

Observed group membership in the classification matrix depicts actual court determinations of employment status. Observations are predicted to result in a ruling of independent contractor status if the model predicted probability of the classification exceeds a predetermined percentage or "cut value" (i.e. .50). Diagonal elements represent the number of court outcomes correctly classified by the logistic regression function. Off-diagonal numbers reflect incorrect classifications. The percentage of correct classifications generated by the model is referred to as the "hit ratio."

While the classification matrix provides a useful measure of overall classification accuracy and model fit, it does not provide detailed information regarding individual cases. Therefore, misclassified cases are also examined on a case-by-case basis. According to Hair et al. (1998, 271), the purpose of identifying and analyzing individual misclassifications is to identify characteristics from these observations that could be incorporated into the model to improve predictive accuracy.

Research Question 2

One method of validating the logistic regression model is to incorporate a split-sample or cross-validation procedure. The split sample procedure involves randomly dividing the sample into two groups; an analysis sample used to formulate the logistic regression function and a holdout sample used to cross-validate predictive ability of the model. While no definite guidelines exist regarding division of the sample, researchers have employed 50-50, 60-40, or 75-25 splits (Hair et al. 1998, 258; Robison 1983, 10; Parker and Abramowicz 1989, 38). In dividing the sample into analysis and holdout groups, it is essential that each sub sample be of adequate size. As mentioned previously, the ratio of observations to independent variables should be

at least 5 to 1, with a ratio of 15 or 20 to 1 being preferable. Results become less stable as the sample size relative to the number of potential predictor variables declines (Hair et al. 1998, 258). The split-sample approach is most effective when the sample size is relatively large (Eisenbeis and Avery 1972, 23).

In the current study, there are 137 observations and twenty independent variables for a ratio of 6.85 to 1. The sample is not considered sufficiently large enough to split into analysis and holdout groups. According to Hair et al. (1998, 259):

> One compromise procedure the researcher can select if the sample size is too small to justify a division into analysis and holdout groups is to develop the function on the entire sample and then use the function to classify the same group used to develop the function.

This is the procedure utilized in the current study. The researcher should be aware that when the data used to develop the model are the same data as that used to assess the model's performance, the model may perform in an overly optimistic manner (Hosmer and Lemeshow 1989, 171). However, it should be noted that the 137 observations in this study represent the known population of worker classification cases tried for federal tax purposes in the Tax Court and Federal District Courts from 1980 through 2003.

Chance Criteria. Classification accuracy of the logistic regression model relative to chance provides an indication of the model's predictive ability. A model is not useful unless the percentage of cases correctly classified by the model exceeds the chance probability. For example, given two groups of equal size, the chance probability of correct classification would be 50 percent. If the group sizes are unequal, say 60/40, then a 60 percent overall accuracy rate could be achieved simply

by classifying all observations into the largest group represented. This is referred to as the maximum chance criterion. When the group sizes are unequal and the researcher wishes to correctly classify members in two or more groups, the proportional chance criterion should be used as the measure against which predictive accuracy of the model is compared (Hair et al. 1998, 269). The proportional chance criterion is computed as:

$$C_{PRO} = p^2 + (1-p)^2 \quad (4.7)$$

where:

p = the proportion of observations in group 1, and

1-p = the proportion of observations in group 2

In this study, of the 137 case decisions, seventy-nine rulings were entered for worker classification of employee status and fifty-eight for independent contractor status. Given the 57.7 percent and 42.3 percent groupings, the proportional chance criterion would be 51.19 percent. This criterion should be adjusted to account for the upward bias resulting from foregoing the split-sample approach (Hair et al. 1998, 269). Therefore, if the model developed in this study correctly classifies sufficiently more than 51.19 percent of the cases into each group; it may prove useful for future worker classification predictions.

Press's Q Statistic. Press's Q Statistic provides a statistical test for comparing the discriminatory power of a model relative to chance. The statistic is calculated based on the number of classifications correctly determined by the model, total sample size, and number of groups, as follows (Hair et al. 1998, 270):

$$\text{Press's Q} = \frac{[N-(nK)]^2}{N(K-1)} \qquad (4.8)$$

where:

N = The total sample size,

n = the number of observations correctly classified, and

K = the number of groups.

The critical value is a chi-square value for one degree of freedom at the desired confidence level. If the calculated value exceeds the critical value, then model predictions, as evidenced by the classification matrix, can be deemed statistically better than chance predictions. It should be noted that the test is sensitive to sample size. That is, given identical classification rates, large samples will have a higher Q statistic.

Research Question 3

Attention to choice of forum relative to worker classification litigation may be warranted if differences exist between courts as to the application of variables. To test for the effect of judicial forum on the outcome variable, an indicator variable (V21) is added to the model. The variable has two categories coded "0" if the case was tried in the Federal District Courts and "1" if the decision was rendered by the Tax Court. Statistical significance of the logistic regression coefficient for variable V21 is assessed. Significance of the variable would indicate forum specific differences exist relative to worker classification determinations for federal tax purposes.

To test for significant differences between judicial forums with respect to factors considered by the judiciary, a counterpart to the Chow test is employed (Greene 2003, 681). The log-likelihood for the pooled model of 137 observations is compared to the sum of log-likelihood values for a model of the eighty-three Tax Court only decisions and fifty-four Federal District Court only decisions. The chi-squared statistic is used to test for differences between the restricted and unrestricted models.

Research Question 4

Observations for this study of worker classification span a twenty-four year period of time. During this time period, new categories of working relationships have emerged, significant administrative guidance has been issued, and relevant court decisions have been rendered. It is possible that the variables considered by courts in making worker classification determinations have changed over time. The model of judicial decision-making developed in this study should be tested for temporal stability.

To test for the effect of temporal differences on the outcome variable, an indicator variable representing time period of litigation (V22) is added to the model. The variable has two categories coded "0" if the case was tried between 1980 and 1995 and "1" if the decision was rendered after 1995. The time break after year 1995 corresponds with a series of actions taken by the IRS (Revised Training Manual, Classification Settlement Program, and Early Referral to Appeals) aimed at easing the burden on businesses following the 1995 White House Conference on Small Business.

Statistical significance of the logistic regression coefficient for variable V22 is assessed.

Also of interest is whether the importance of factors considered by the judiciary in making worker classification determinations varied over the time period of the study. The log-likelihood for the pooled model of 137 observations (restricted model) is compared to the sum of log-likelihood values for models from each of the separate time periods (unrestricted model). The chi-squared statistic is employed to test for significant differences.

Summary

Disputes between the Internal Revenue Service and employers as to how working relationships should be classified have resulted in extensive litigation and legislative attention. Insight is needed into how the court, as final interpreter of the law, determines a worker's classification to be that of an employee versus that of an independent contractor. Four questions are presented in Chapter 1 as worthy of research. This chapter discusses the approach by which these questions are investigated. Specifically, the research sample is stipulated, variables identified, the coding scheme for the variables is presented, and appropriate statistical tools are discussed. Results of the analysis are presented in Chapter 5.

CHAPTER 5

ANALYSIS OF RESULTS

Introduction

Previous chapters contain: (1) a discussion of the worker classification issue and need for further research, (2) presentation of relative authoritative guidelines, (3) a review of prior research of judicial decision making relative to tax issues and worker classification in particular, and (4) development of the methodology used in this study. The purpose of this chapter is to present the results of the data analysis and tests of hypotheses. Summary statistics are presented first, followed by a discussion of results pertaining to each of the hypotheses presented in Chapter 4.

Summary of Input Data

A total of 123 federal tax cases with 137 decisions are used in this study. Of these, approximately 58 percent (79 decisions) result in a determination of employee status and 42 percent (58 decisions) yield determinations of independent contractor status. Decision trends relative to the number of cases tried and verdicts over the time period covered by the study are presented in Figure 1. As indicated, the number of worker classification cases litigated and employee determinations increased sharply during the 1990s. Recall that the IRS initiated its Employment Tax Examination Program in 1986 (see Chapter 1 p. 17). It is not surprising, given the trend depicted,

that the worker classification issue was listed as the number one problem plaguing small business at the 1995 White House Conference on Small Business (U.S. Small Business Administration 1996).

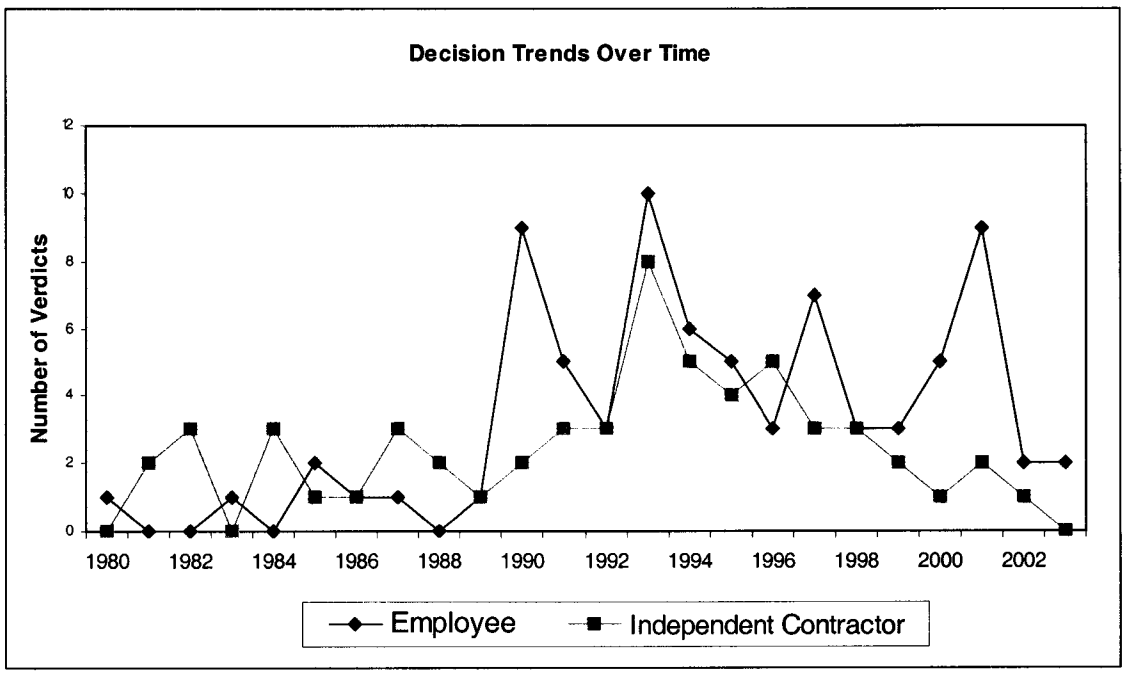


FIGURE 1. Decision Trends Over Time

Approximately 40 percent of the cases were tried in Federal District Courts with 60 percent being heard by the Tax Court. This is particularly interesting since the previous study of worker classification for tax purposes (Stewart 1980) did not examine Tax Court decisions due to the limited number of cases tried in that forum. Stewart's study, as discussed previously, examined decisions of the Federal District Courts and U.S. Court of Claims from 1940 through 1979. Obviously, the Tax Court has become an important, if not preferred, forum for trying worker classification cases for federal tax purposes.

Twenty predictor variables were identified as being potentially important in explaining judicial determinations in worker classification cases. As indicated in Table 5.1, ten of the twenty variables are mentioned in over half of the court decisions. Factors mentioned most frequently include Instructions/Supervision, Method of Payment, and Intent of the Parties. This is not surprising as the degree of employer supervision is generally considered the most important measure of employer control. Further, the Method of Payment and Intent of the Parties variables are relatively easy to assess. It is typically not difficult to determine whether a worker is being paid on a regular hourly, weekly, or monthly basis or conversely if compensation is based on commissions or completion of a specific job. Likewise, the intended type of working relationship can often be ascertained by examining underlying documentary evidence such as written contracts or federal tax forms including those required to be issued to employees (W-2s) or contract laborers (Forms 1099).

As depicted in Figure 2, the variables mentioned least often in the cases studied are Services Personally Rendered and Industry Practice or Custom. Each of these factors was mentioned in only fifteen of the 137 observations (less than 11 percent of the total court decisions). Of the twenty-four variables initially considered as potential variables in this study, Industry Practice or Custom is the only factor not recognized in the IRS Revised Training Manual. Despite the fact that the variable was rarely relied upon in judicial determinations of worker classification, the factor is particularly relevant to businesses seeking relief from worker classification consequences under Section 530 (see Chapter 2, pp. 61-63).

TABLE 5.1

Frequency of Consideration of Variables in Judicial Decisions
(in Descending Order)

Variable		Frequency				
		N	E	I	Total (E+I)	Percent (Total ÷ 137)
V1	Instructions/Supervision	20	59	58	117	85.4
V12	Method of Payment	24	57	56	113	82.5
V19	Intent of the Parties	24	43	70	113	82.5
V14	Opportunity for Profit or Loss	33	57	47	104	75.9
V13	Furnishing Tools & Materials	39	62	36	98	71.5
V7	Set Hours of Work	49	32	56	88	64.2
V15	Working for More Than One Firm	52	39	46	85	62.0
V9	Work Location	57	52	28	80	58.4
V6	Continuing Relationship	60	49	28	77	56.2
V17	Right to Discharge/Terminate	63	64	10	74	54.0
V3	Integration	72	62	3	65	47.4
V20	Employee-Type Benefits Provided	72	36	29	65	47.4
V5	Hiring, Superv., Paying Assistants	87	19	31	50	36.5
V2	Training	92	17	28	45	32.8
V8	Full Time Required	94	33	10	43	31.4
V11	Oral or Written Reports	96	25	16	41	29.9
V16	Services Available to Market	108	20	9	29	21.2
V10	Order or Sequence of Tasks Set	112	6	19	25	18.2
V4	Services Personally Rendered	122	10	5	15	10.9
V18	Industry Practice or Custom	122	3	12	15	10.9

N - Number of times variable was not mentioned in the court cases
E - Number of times variable was mentioned in favor of employee status
I - Number of times variable was mentioned in favor of independent contractor status

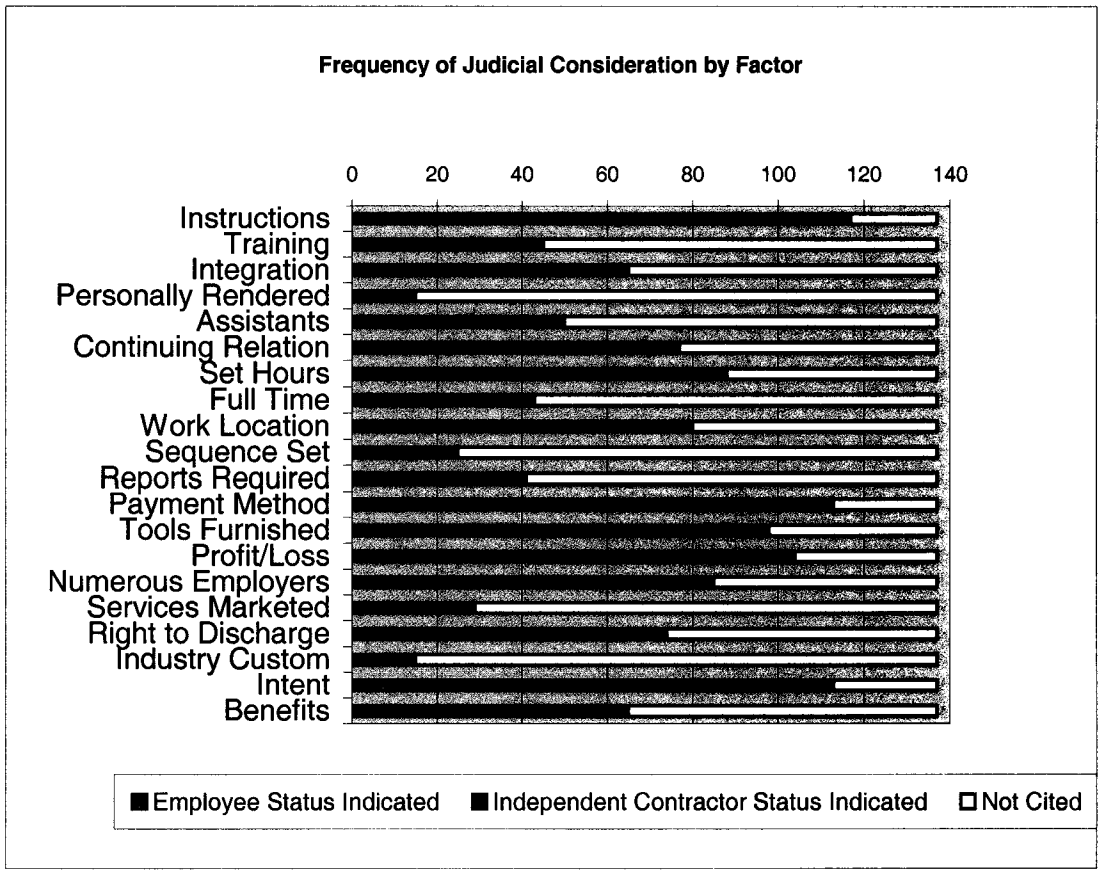


FIGURE 2. Frequency of Judicial Consideration by Factor

Two variables are obviously more likely to provide evidence of an employer-employee relationship as opposed to an employer-independent contractor relationship. The Integration factor was an indicator of employee status in 95 percent of the cases in which the factor is mentioned. Also, Right to Discharge/Terminate is mentioned 86 percent of the time in favor of employee status.

Multicollinearity

Multicollinearity refers to the correlation between two or more independent variables. Multicollinearity "should not be conceived as something that either 'exists' or 'does not' . . . . Rather, multicollinearity exists in *degrees*, and the degree

determines how important a problem is posed" (Berry and Feldman 1985, 40). While low levels of multicollinearity are fairly common and generally not problematic, high levels can be troublesome (Menard 2002, 76). When independent variables are highly correlated, it becomes difficult to separate the unique contribution of each independent variable (Berry and Feldman 1985, 40). According to Hair et al. (1998, 259):

> This consideration becomes especially critical when stepwise procedures are employed. The researcher . . . must be aware of the level of multicollinearity and its impact on determining which variables enter the stepwise solution.

Two commonly used measures for assessing multicollinearity are the tolerance statistic and the Variance Inflation Factor (VIF). The calculation of these statistics begins with regressing each independent variable on the remaining independent variables. The tolerance value is one minus the proportion of a variable's variance explained by the other independent variables in the model, or simply $1\text{-}R^2_X$ (Hair et al. 1998, 208). The Variance Inflation Factor is calculated as the reciprocal of the tolerance value. Thus, low tolerance and high VIF values signal high levels of multicollinearity. In general, tolerance levels less than .20 are considered "cause for concern" (Menard 2002, 76).

Multicollinearity is a data problem as opposed to one of model specification (Hair et al. 1998, 188). Therefore, the degree of multicollinearity was assessed prior to subjecting the data to logistic regression analysis. Collinearity statistics for the twenty variables considered as potential determinants of worker classification revealed no tolerance values below .20, with the smallest tolerance statistic being .485 for the Instructions/Supervision variable (V1).

Estimation of the Logit Model and Assessing Overall Fit

Logistic regression, much like multiple regression, begins with the estimation of a base model for comparison purposes. Particularly, the standard of comparison is the log-likelihood value of the constant only model. Results for the constant only model (hereafter the Base Model) are presented in Table 5.2.

TABLE 5.2

Logistic Regression Base Model

OVERALL MODEL FIT
-2 log likelihood (-2LL) : 186.691

VARIABLES NOT IN THE EQUATION

		Score Statistic	Significance
V1	Instructions/Supervision	85.525	.000
V2	Training	8.105	.004
V3	Integration	8.340	.004
V4	Services Personally Rendered	.345	.557
V5	Hiring, Supervising and Paying Assistants	29.955	.000
V6	Continuing Relationship	3.457	.063
V7	Set Hours of Work	23.316	.000
V8	Full Time Required	4.751	.029
V9	Work Location	24.199	.000
V10	Order or Sequence of Tasks Set	5.207	.022
V11	Oral or Written Reports	11.846	.001
V12	Method of Payment	21.625	.000
V13	Furnishing Tools and Materials	17.619	.000
V14	Opportunity for Profit or Loss	23.294	.000
V15	Working for More Than One Firm	3.952	.047
V16	Services Available to the Relevant Market	8.541	.003
V17	Right to Discharge/Terminate	2.670	.102
V18	Industry Practice or Custom	7.657	.006
V19	Intent of the Parties	6.010	.014
V20	Employee-Type Benefits Provided	6.291	.012

P_E=.05, P_R=.10
Cut Value = .50

The initial log-likelihood value is 186.691. The score statistic, a measure of association, is presented for the twenty variables considered for entry into the model.

Backward Stepwise Method

The backward stepwise method of computing the logistic regression function starts with a model including all predictor variables. At each subsequent step in the model building process, variables are considered for removal from or entry into the model. With SPSS, the score statistic is used for determining if a variable should be entered into the model. One of several criteria can be used to evaluate variables for removal from the model: the Wald statistic; likelihood ratio statistic; or conditional probability. The likelihood ratio criterion is employed in this study.

Step 1/ Saturated Model. Results of the initial logit model (hereafter the Step 1 or Saturated Model), including all twenty variables, are presented in Table 5.3. The log-likelihood value (-2LL) for the model is 28.419. This is a decrease in –2LL of 158.272 from the Base Model. A good fit is reflected by a small log-likelihood value. The log-likelihood value at subsequent steps in the model building process is compared to that of the Base Model and Step 1 Model. The R^2 type measures for the Saturated Model are high, indicating that the model including all twenty variables fits the data well. Further, the improvement in –2LL (model chi-square) relative to the constant only model (Base Model) is significant.

The *R* statistic is a measure of partial correlation and is used to assess the contribution of individual variables in the logistic regression function. A small R statistic indicates that a variable has a small partial contribution in the model. The statistic is calculated as follows (SPSS 1997, 42):

$$R = \sqrt{\left(\frac{\text{Wald statistic} - 2K}{-2LL_{(0)}}\right)} \qquad (5.1)$$

where:

K is the degrees of freedom for the variable, and

$-2LL_{(0)}$ is –2 times the likelihood value of the base model (constant only).

TABLE 5.3

Logistic Regression Step 1/ Saturated Model

OVERALL MODEL FIT

Goodness of Fit Measures	Value
-2 log likelihood (-2LL):	28.419
"Pseudo" R^2	.848
Cox and Snell R^2	.685
Nagelkerke R^{-2}	.921

Change in –2LL	Chi-square	df	Significance
Model	158.272	20	.000

VARIABLES IN THE EQUATION

Variable	B	S.E.	Wald	df	Sig.[a]	R[b]
Constant	-.341	1.013	.113	1	.736	.0000
V1	6.900	2.876	5.754	1	.016	.1418
V2	3.375	2.862	1.390	1	.238	.0000
V3	5.404	3.204	2.845	1	.092	.0673
V4	1.863	2.334	.637	1	.425	.0000
V5	7.719	4.157	3.447	1	.063	.0880
V6	4.072	1.908	4.558	1	.033	.1171
V7	-1.571	2.051	.587	1	.444	.0000
V8	-.713	1.860	.147	1	.702	.0000
V9	-.043	1.191	.001	1	.971	.0000

TABLE 5.3 Continued

V10	1.482	3.375	.193	1	.661	.0000
V11	-1.831	2.966	.381	1	.537	.0000
V12	1.857	1.130	2.700	1	.100	.0612
V13	-.054	1.045	.003	1	.959	.0000
V14	1.703	1.245	1.872	1	.171	.0000
V15	.112	1.240	.008	1	.928	.0000
V16	-3.619	2.579	1.969	1	.161	.0000
V17	5.262	2.769	3.611	1	.057	.0929
V18	3.088	3.396	.827	1	.363	.0000
V19	2.486	1.628	2.333	1	.127	.0422
V20	.081	1.433	.003	1	.955	.0000

[a] Significance level for the Wald statistic
[b] R statistic of partial correlation
P_E=.05, P_R=.10
Cut Value = .50

The Wald statistic is the squared ratio of a variable's coefficient to its standard error and has a chi-square distribution. Based on the R statistics at Step 1, variables V1, V5, V6, and V17 appear to make a large partial contribution to the model. Moderate contributions are indicated for variables V3, V12, and V19. The remaining variables show no measurable evidence of partial contribution.

Final Model. As previously discussed, subsequent steps in the model building process involve consideration of the variables for removal from the model (based on the likelihood ratio statistic) or reentry into the model (based on the score statistic). The likelihood ratio test "involves estimating the model with each variable eliminated in turn and looking at the change in the log-likelihood when each variable is deleted" (SPSS 1997, 53). Likelihood ratio statistics for each variable at each stage of the model building process are presented in Appendix C. As shown in Table 5.4, twelve variables were removed from the model. None of the variables, once removed, were reentered into the model.

TABLE 5.4

Variables Removed from the Model

Model Building Step		Variable Removed
2	V9	Work Location
3	V20	Employee-Type Benefits Provided
4	V13	Furnishing Tools and Materials
5	V15	Working for More Than One Firm
6	V8	Full Time Required
7	V10	Order or Sequence of Tasks Set
8	V11	Oral or Written Reports
9	V4	Services Personally Rendered
10	V7	Set Hours of Work
11	V18	Industry Practice or Custom
12	V2	Training
13	V16	Services Available to the Relevant Market

The eight variables retained in the final logistic regression model (hereafter the Final Model), as shown in Table 5.5, are: (V1) Instructions/Supervision; (V3) Integration; (V5) Hiring, Supervising, and Paying Assistants; (V6) Continuing Relationship; (V12) Method of Payment; (V14) Opportunity for Profit or Loss; (V17) Right to Discharge/Terminate; and (V19) Intent of the Parties.

A statistical test of significance for the Final Model is the model chi-square test. Model chi-square is an assessment of the change in –2LL from the Base Model (constant only) to the Final Model. The model chi-square tests the null hypothesis that all coefficients in the current model, other than the constant, are zero. The test is comparable to the overall *F* test in multiple regression (SPSS 1997, 48). Referring to Table 5.5, -2LL of 34.998 for the eight variable Final Model represents a reduction of

TABLE 5.5

Logistic Regression Final Model

OVERALL MODEL FIT

Goodness of Fit Measures	Value
-2 log likelihood (-2LL):	34.998
"Pseudo" R^2	.813
Cox and Snell R^2	.670
Nagelkerke $R^{\sim 2}$	.900

Change in -2LL	Chi-square	df	Significance
Model	151.693	8	.000

	Chi-square	df	Significance
Hosmer and Lemeshow	5.839	8	.665

VARIABLES IN THE EQUATION

Variable	B	S.E.	Wald	df	Sig.[a]	R[b]
Constant	-.294	.638	.211	1	.646	.0000
V1	3.961	.984	16.191	1	.000	.2757
V3	2.106	1.383	2.320	1	.128	.0414
V5	2.882	1.234	5.453	1	.020	.1360
V6	2.472	.940	6.917	1	.009	.1623
V12	1.421	.628	5.117	1	.024	.1292
V14	1.283	.665	3.721	1	.054	.0960
V17	2.381	1.074	4.661	1	.031	.1194
V19	1.601	.633	6.402	1	.011	.1536

VARIABLES NOT IN THE EQUATION

	Score Statistic	Significance
V2	1.080	.299
V4	.563	.453
V7	.476	.490
V8	.322	.571
V9	.208	.648
V10	.006	.939
V11	.029	.864
V13	.323	.570
V15	.085	.770
V16	1.567	.211
V18	.796	.372
V20	.659	.417

[a] Significance level for the Wald statistic — P_E=.05, P_R=.10

[b] R statistic of partial correlation — Cut Value = .50

151.693 from the Base Model. This reduction is statistically significant at the .000 level. The model chi-square test indicates the eight variable logistic regression model is significant.

Assessing Overall Model Fit

Several measures are available for assessing overall fit of the model and include the -2LL value, R^2 analogues, and the Hosmer and Lemeshow goodness-of-fit statistic. Recall that the likelihood value represents the probability of observed results given the parameter estimates and is a small number less than one. A well fitting model is one that results in a high likelihood of the observed results and a small value for –2 times the log of the likelihood value (-2LL). A comparison of –2LL values for each of the logistic regression models (Base, Saturated, and Final) is presented in Table 5.6.

TABLE 5.6

Model Comparison of -2LL Values

	Model -2LL Value	Change in –2LL (from Base Model)	Significance Level
Base Model	186.691		
Saturated Model (20 Variables)	28.419	158.272	.000
Final Model (8 Variables)	34.998	151.693	.000

The –2LL value for the model with no explanatory variables (the Base Model) is 186.691. The –2LL value for the Final Model is reduced from the Base Model value by 151.693 to 34.998. This reduction (improvement) is significant at the .000 level. Further, the -2LL value for the more parsimonious eight variable model is comparable to that of the twenty variable Saturated Model.

In logistic regression analysis, R^2 analogues are "statistics that attempt to quantify the proportion of explained 'variance' in the logistic regression model. They are similar in intent to the R^2 in a linear regression model . . . " (SPSS 1997, 47). Three measures are examined in this study: a "Pseudo" R^2, the Cox and Snell R^2, and the Nagelkerke $R^{\sim 2}$. A comparison of the three statistics relative to the Saturated and Final Model is presented in Table 5.7. R^2 values for the eight variable model resulting from the backward stepwise procedure are comparable to the values of the saturated twenty variable model. R^2 statistics for the final model range from .670 to .900. Compared to traditional R^2 measures in multiple regression, the statistics indicate a well fitting model.

TABLE 5.7

Model Comparison of R^2 Measures

	Saturated Model (20 Variables)	Final Model (8 Variables)
"Pseudo" R^2	.848	.813
Cox and Snell R^2	.685	.670
Nagelkerke R^2	.921	.900

Another measure of model fit considered is the Hosmer and Lemeshow goodness-of-fit test (Hosmer and Lemeshow 1989). The test involves dividing the cases into ten approximately equal groups based on the estimated probability of the event (an independent contractor determination) occurring. Actual and expected classifications are compared at each of the deciles of risk. The chi-square test is used to assess the difference between observed and expected classifications (SPSS 1997, 63). A small difference between observed and predicted values, and thus a non-significant chi-square, is indicative of good fit. As indicated in Table 5.5, the Hosmer and Lemeshow chi-square statistic for the Final Model is not significant (Sig. = .665). Indications are that there is no difference between actual and predicted values for the dependent variable and that the model fits the data reasonably well.

Classification Matrices

In logistic regression analysis, a primary indicator of model fit is the ability of the model to correctly classify the outcome variable. The classification matrix provides a graphical comparison of model predictions and observed outcomes. The "hit ratio" or percentage of correct classifications provides a measure of model fit and significance of the overall model as well as the independent variables included in the model (Hair et al. 1998, 320).

Table 5.8 displays the classification matrix for the final logistic regression model. The model was able to correctly classify 77 of the 79 rulings of employee status and 56 out of 58 independent contractor determinations. The classification matrix reveals a very high overall hit ratio of 97.1 percent. Furthermore, the model does equally well at predicting either employee or independent contractor

determinations. For purposes of comparison, the classification matrix for the Saturated Model is displayed in Table 5.9. The reduced variable Final Model is able to correctly classify one more case than the Saturated Model. Based on classification accuracy, the Final Model demonstrates excellent model fit and significance of both the overall model and the independent variables.

TABLE 5.8

Classification Matrix - Final Model

	Predicted Group		
Observed Group	Employee	Independent Contractor	Percent Correct
Employee	77	2	97.5
Independent Contractor	2	56	96.6
		Overall Percentage	97.1

TABLE 5.9

Classification Matrix - Saturated Model

	Predicted Group		
Observed Group	Employee	Independent Contractor	Percent Correct
Employee	76	3	96.2
Independent Contractor	2	56	96.6
		Overall Percentage	96.4

Casewise Diagnostics

The analysis of individual misclassifications can provide insight and useful information. Cases misclassified by the model are presented in Table 5.10. In this study, the model failed to correctly predict worker classification in only four cases. The misclassified cases include two from each forum included in the study (Tax Court and Federal District Courts).

TABLE 5.10

Misclassified Cases

No.	Citation	Observed Worker Status[a]	Predicted Group[a]	Predicted Probability
1	TC Memo 1993-161 (1993)	I	E	.459
2	117 TC 22 (2001)	E	I	.981
3	66 AFTR 2d 90-5782 (Bankr. D Alaska 1990)	E	I	.561
4	88 AFTR 2d 2001-7203 (E.D. Pa. 2001)	I	E	.011

[a] E = Employee; I= Independent Contractor

For the first and third misclassified cases the model generated a predicted probability of independent contractor status very near the cut value of .50. An examination of these cases reveals that each had an equal number of variables in

support of either worker status. In both cases, the court determination was the same as that indicated by the Instructions/Supervision variable.

In the second case, the court ruled that outside sales workers were employees although numerous factors supported independent contractor status. The workers were not supervised as to the details of the work, had some degree of opportunity for profit or loss, were paid on a commission basis, and had executed independent contractor agreements. It appears the court's decision is influenced by the fact that several of the company's outside sales workers had previously been treated as employees, receiving the appropriate Form W-2. However, in order to limit its legal liability the company had mandated that the status of all outside sales workers be changed to that of independent contractor. The court noted that, in substance, the working relationships remained unchanged.

The fourth case resulted in a determination of independent contractor status despite the fact that the worker was supervised at the same level as regular employees, given the same type of instructions as employees, retained for an indefinite period of time, and paid at an hourly rate. The court heavily weighed the Intent of the Parties variable noting that the worker received a Form 1099 and indicated on his Federal Form 1040 both business income and self-employment taxes. The court emphasized the importance it placed on the written independent contractor agreement stating, "It is strong evidence that in weighing all the other factors, tips the scales decidedly in favor of the conclusion that [the worker] was an independent contractor, as the court so finds" (*Mulzet v. R.L. Reppert, Inc.*, 88AFTR 2d 2001-7203 (E.D. Pa 2001)).

Interpretation of Model Coefficients

Recall that the logistic regression function in this study is estimated using trichotomous independent variables. Predictor variables identified as significant in the Final Model are recoded using dummy variables so that the coefficients may be interpreted in a meaningful manner. Specifically, each of the independent variables (X_i) is assigned two dummy variables (A and B) coded as follows:

VX_i A = 1 if the factor supports employee classification
0 otherwise

VX_i B = 1 if the factor supports independent contractor classification
0 otherwise

Therefore, a factor not mentioned in a judicial decision is assigned a code of "0" to both variables A and B and serves as the reference class. Results of the Final Model, recoded using the dummy variable technique, are presented in Table 5.11.

Logistic regression coefficients correspond to the b coefficients in OLS regression although interpretation of the coefficients is not as straightforward (Aldrich and Nelson 1984, 42). In multiple linear regression, coefficients indicate the amount of change in the dependent variable resulting from a one unit change in the independent variable. As noted by Hair et al. (1998, 278), in logistic regression:

> The estimated coefficients (B_0, B_1, B_2, . . . , B_n) are actually measures of the changes in the ratio of the probabilities, termed the odds ratio. Moreover, they are expressed in logarithms, so they need to be transformed back (the antilog of the value has to be taken) so that their relative effect on the probabilities is assessed more easily.

TABLE 5.11

Parameter Estimates for the Recoded Final Model

Variable		B	S.E.	Wald	df	Sig.[a]	Exp(B)
	Constant	-3.510	2.512	1.952	1	.162	.030
V1	*Instructions*			11.525	2	.003	
V1(A)		-2.740	1.864	2.160	1	.142	.065
V1(B)		6.532	2.722	5.758	1	.016	687.014
V3	*Integration*			1.179	2	.555	
V3(A)		-2.491	2.295	1.178	1	.278	.083
V3(B)		4.728	188.392	.001	1	.980	113.076
V5	*Assistants*			5.050	2	.080	
V5(A)		.650	3.027	.046	1	.830	1.916
V5(B)		5.087	2.279	4.981	1	.026	161.909
V6	*Contin. Rel.*			5.404	2	.067	
V6(A)		-1.969	2.552	.595	1	.440	.140
V6(B)		4.520	2.193	4.248	1	.039	91.849
V12	*Payment*			5.384	2	.068	
V12(A)		-2.669	2.241	1.418	1	.234	.069
V12(B)		2.647	1.739	2.315	1	.128	14.108
V14	*Profit/Loss*			3.624	2	.163	
V14(A)		.376	2.077	.033	1	.856	1.456
V14(B)		3.669	2.062	3.166	1	.075	39.214
V17	*Disch./Term.*			5.418	2	.067	
V17(A)		-7.319	3.258	5.048	1	.025	.001
V17(B)		2.510	3.197	.617	1	.432	12.310
V19	*Intent*			5.873	2	.053	
V19(A)		-1.360	2.044	.443	1	.506	.257
V19(B)		3.233	2.558	1.598	1	.206	25.357

[a] Significance level for the Wald statistic

Recall that the logistic regression model predicts the probability of occurrence of an event and can be written in terms of the log of the odds of its occurrence or "logit":

$$\text{Log} \quad \frac{\text{Probability (event)}}{\text{Probability (no event)}} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots \beta_p X_p$$

It is more intuitive to think in terms of "odds" rather than "log odds." The odds of occurrence are defined as the ratio of the probability that the event will occur to the probability that it will not. For example, the odds of drawing a diamond from a deck of cards are 0.25 / 0.75 = 1/3 or .33 (SPSS Professional Statistics 1997, 42). The logistic regression equation can be rewritten in terms of odds such that:

$$\frac{\text{Probability (event)}}{\text{Probability (no event)}} = e^{\beta 0 + \beta 1 X1 + \beta 2 X2 + \ldots \beta p Xp}$$

Effect on Odds. Referring to Table 5.11, note that the logistic regression coefficients (B_i) represent the change in the "log odds" associated with a one-unit change in the independent variable. The antilog of B_i ($\text{Exp}(B_i)$) is calculated as *e* (the base of natural logarithms – approx. 2.718) raised to the power B_i. $\text{Exp}(B_i)$ is the factor by which the "odds" change when the independent variable changes by one unit (SPSS Professional Statistics 1997, 43). For example, the coefficient (B) for variable 19B is 3.233. Then *e* raised to the power B_{19B} is 25.357 as indicated by $\text{Exp}(B_{19B})$. This implies that the odds of a judicial determination of independent contractor status are increased by a factor of 25.357 as the Intent of the Parties variable goes from being not relevant (coded 0) to being present and providing evidence of an employer/independent contractor working relationship (coded 1), given the other

variables in the model. Likewise, the value corresponding to $Exp(B_{19A})$ indicates that the odds of a judicial determination of independent contractor status are decreased by a factor of .257 as the Intent of the Parties variable goes from not being present in a particular case (coded 0) to being present and providing evidence of an employer/employee working relationship.

Note that logistic regression coefficients can be positive or negative. If B_i is positive, $Exp(B_i)$ is a factor greater than one indicating that as the variable increases from 0 to 1 (the factor is not present/relevant in a case to the factor is present/relevant), the likelihood of the event occurring (a judicial determination of independent contractor status) increases. Likewise, if B_i is negative, $Exp(B_i)$ is a value less than one indicating that as the variable increases from 0 to 1, the likelihood of a judicial determination of independent contractor status decreases (i.e. the likelihood of a ruling of employee status increases). When B_i is zero, $Exp(B_i)$ will be one, leaving the odds unaffected. A priori, if a factor supports employee classification (VX_iA), a negative coefficient value is expected. Conversely, a positive coefficient value is expected if a factor supports independent contractor status (VX_iB).

The coefficients for variables 5A and 14A do not conform to a priori expectations. That is, if a worker is not free to employ assistants when needed (V5A) or has no opportunity for independent profit or loss (V14A), then it is expected that the odds of obtaining a judicial ruling of independent contractor status should decrease (as evidenced by a negative coefficient value). With positive coefficient values, indications are that although these factors may be present in an observation as providing evidence of an employer/employee work relationship, they do not decrease

the odds of a judicial ruling of independent contractor status given the other variables in the model.

Importance of Variables. The coefficients in this study imply that certain variables have a greater impact on the odds of an independent contractor status ruling. Rankings of the factors based on magnitude of the effect on log odds (B) and odds (Exp(B)) are presented in Tables 5.12 and 5.13. It is obvious that the Instructions/Supervision factor (V1A & V1B) is an important determinant of worker status. Not surprisingly, it was the most often cited factor in judicial decisions (refer to Table 5.1). It is also one of the more subjectively determined factors, which adds to the complexity of the worker classification issue. Aside from the Instructions/Supervision factor, the freedom of the worker to hire, supervise, and pay assistants (V5B), if assistants are needed, has the greatest positive impact on the odds of obtaining independent contractor classification. Conversely, the right of the parties to terminate the working relationship at will (V17A) appears to have the most influence in obtaining employee classification.

As indicated in Table 5.12, other factors with a greater effect on the odds of obtaining independent contractor status include: (V6B) a working relationship limited in duration, and (V14B) the ability of the worker to independently realize a profit or loss. Although the Integration factor (V3B) ranks as the third most important factor in terms of coefficient magnitude, this factor is mentioned in support of employee classification in 95 percent of the court cases studied (refer to Table 5.1). In fact, the factor is stated in support of independent contractor status in only three observations.

Due to this limitation and the large standard error for the coefficient (see Table 5.11), results relative to variable V3B should be interpreted with caution.

TABLE 5.12

Effect on Odds of Independent Contractor Ruling - Variables Supporting Independent Contractor Status (In Descending Order)

	Variable	Model Coefficients (B)	Factor of Effect on Odds Exp (B)
V1(B)	Instructions/Supervision	6.532**	687.014
V5(B)	Hiring, Supervising, Paying Assistants	5.087**	161.909
V3(B)	Integration	4.728	113.076
V6(B)	Continuing Relationship	4.520**	91.849
V14(B)	Opportunity for Profit or Loss	3.669*	39.214
V19(B)	Intent of the Parties	3.233	25.357
V12(B)	Method of Payment	2.647	14.108
V17(B)	Right to Discharge/Terminate	2.510	12.310

* Significant at the .10 level (Wald Statistic)
** Significant at the .05 level (Wald Statistic)

Factors that appear particularly relevant to a determination of employee status, as presented in Table 5.13, include: (V17A) the right of the parties to terminate the working relationship at will, (V1A) the right of the employer to control how, when, and where work is performed; (V12A) worker compensation on a regular and consistent basis, (V3A) the worker performing services integral to the business, and (V6A) the fact that the working relationship is continuous in nature. Intent of the Parties appears to be of moderate weight in supporting either worker classification.

TABLE 5.13

Effect on Odds of Independent Contractor Ruling -
Variables Supporting Employee Status
(In Descending Order)

	Variable	Model Coefficients (B)	Factor of Effect on Odds Exp (B)
V17(A)	Right to Discharge/Terminate	-7.319**	.001
V1(A)	Instructions/Supervision	-2.740	.065
V12(A)	Method of Payment	-2.669	.069
V3(A)	Integration	-2.491	.083
V6(A)	Continuing Relationship	-1.969	.140
V19(A)	Intent of the Parties	-1.360	.257
V5(A)	Hiring, Supervising, Paying Assistants	.650	1.916
V14(A)	Opportunity for Profit or Loss	.376	1.456

** Significant at the .05 level (Wald Statistic)

Conclusion-Research Question 1

The first null hypothesis presented for investigation in this study is:

H_{o1}: Differentiation between employees and independent contractors for federal tax purposes is not possible based upon the factors delineated in administrative and judicial rulings.

The null hypothesis should be rejected if the logistic regression model, built from factors delineated in Revenue Ruling 87-41 (1987-1 C.B. 296) and *In re Rasbury* (71A AFTR 2d 93-4539 (Bankr. N.D. Ala. 1991)), is effective at distinguishing between employee and independent contractor classifications in federal tax cases. Results indicate that the Final Model is able to correctly classify decisions of the Federal District Courts and Tax Court in over 97 percent of the cases. The null hypothesis is

therefore rejected. Further, variables in the model are recoded such that information is provided as to the relative importance of variables.

Tests of Predictive Ability

Classification accuracy of the logistic regression model provides an indication of the model's predictive ability. However, a level of classification "accuracy" can be achieved simply by classifying all cases into the largest group represented. Comparing classification accuracy of the model relative to chance assesses predictive ability.

Proportional Chance Criterion

The "hit ratio" obtainable by simply classifying all cases to the largest group represented is referred to as the maximum chance criterion (Hair et al. 1998, 268). For example, in this study of worker classification, 57.7 percent of the court decisions resulted in a determination of employee status for the workers. A classification of independent contractor status was rendered in the remaining 42.3 percent of the decisions. As displayed in Table 5.14, an overall classification accuracy rate of 57.7 percent can be achieved simply by predicting all cases to result in a ruling of employee status. Notice, however, that individual group hit ratios are 100 percent relative to employee classification and 0 percent relative to independent contractor classifications.

TABLE 5.14

Classification Matrix – Based on Chance

	Predicted Group		
Observed Group	Employee	Independent Contractor	Percent Correct
Employee	79	0	100.0
Independent Contractor	58	0	0
Total	137	0	
		Overall Percentage	57.7

When the goal of the researcher is to maximize the percentage of correct classifications for each predicted group, as is the case in this study, then the proportional chance criterion should be used as the standard by which classification accuracy is compared (Hair et al. 1998, 269). Recall that the formula for calculating the proportional chance criterion is:

$$C_{PRO} = p^2 + (1-p)^2$$

where:

p = the proportion of observations in group 1, and

1-p = the proportion of observations in group 2

Given that the proportions of observations in groups 1 and 2 are 57.7 percent and 42.3 percent, respectively, the proportional chance criterion is 51.19 percent. According to Hair et al. (1998, 269), a model is useful for predictive purposes if the level of

classification accuracy achieved by the model exceeds the chance criterion by at least one-fourth. Accordingly, classification accuracy for the logistic regression model should exceed 63.99 percent (51.19 x 1.25), adjusted upward to account for any bias associated with foregoing utilizing a hold out sample. With a hit ratio of 97.1 percent, classification accuracy of the Final Model sufficiently exceeds the proportional chance criterion, indicating the model is very useful for prediction purposes.

Press's Q Statistic

Press's Q statistic provides a statistical test for comparing the discriminatory power of the model relative to chance. The statistic is calculated as follows (Hair et al. 1998, 270):

$$\text{Press's Q} = \frac{[N-(nK)]^2}{N(K-1)} \tag{5.2}$$

The Q statistic is 121.47 based on a total sample of N = 137, n = 133 correctly classified observations, and K = 2 as the number of groups. At a significance level of .01, the critical value, a chi-square value for one degree of freedom, is 6.63. Since the calculated value exceeds the critical value, model predictions, as evidenced by the classification matrix, can be deemed statistically better than chance predictions. It should be noted that the test is sensitive to sample size such that large samples will have a higher Q statistic. Accordingly, conclusions concerning predictive ability of the model should not be based solely on this statistic.

Conclusion-Research Question 2

The second null hypothesis presented for investigation in this study is:

H_{o2}: Differential factors cannot be used to predict a worker's classification for federal tax purposes.

The null hypothesis should be rejected if the logistic regression model is able to correctly classify a percentage, significantly better than chance, of Federal District Court and Tax Court decisions. Classification results for the model were presented in Table 5.8. Based on the hit ratio of 97.1 percent, the null hypothesis is rejected. Further, the Proportional Chance Criterion and Press's Q statistic indicate the model is effective in predicting worker classification for federal tax purposes.

Test for Consistency Relative to Judicial Forum

The taxpayer enjoys the choice of forum in litigating federal tax cases. Several prior studies suggest that selection of court may affect the outcome of a case pertaining to certain tax issues (Kramer 1982; Judd 1985; Fenton 1986). If differences exist between the district courts and the Tax Court relative to worker classification determinations, then that information would prove useful to taxpayers and their attorneys. To test for the effect of judicial forum, an indicator variable (V21/Forum) is added to the Final Model and statistical significance of the variable is assessed. The variable has two categories coded "0" if the case was tried in the Federal District Courts and "1" if the decision was rendered by the Tax Court. Results indicate that Forum is not significant (Wald statistic =. 375, Sig. = .540) in the determination of worker status for federal tax purposes.

Also of interest is whether significant differences exist between judicial forums with respect to factors considered by the judiciary. To test for significant differences, a counterpart to the Chow test is employed (Greene 2003, 681). The test involves using the chi-squared statistic to compare the log-likelihood values for the pooled model of all observations to the sum of log-likelihood values for a model of Tax Court

only decisions and Federal District Court only decisions. That is, the test requires splitting the data set into two subgroups based on the judicial forum in which cases were litigated. When splitting the data set, numerical problems emerge. Specifically, the problem of quasicomplete separation is encountered. Complete and quasicomplete separation results from being "too successful in predicting the dependent variable with a set of predictors" such that the logistic regression model cannot be calculated (Menard 2002, 79). Hosmer and Lemeshow state:

> As noted . . . the easiest way to address complete separation . . . is to use some careful univariate analysis. The occurrence of complete separation is not likely to be of great biological importance as it is usually a numerical coincidence rather than describing some important biological phenomenon. It is a problem we will have to work around. (1989, 131)

The Crosstabs procedure indicates that the Instructions/Supervision variable (V1) is highly correlated with the response variable (Phi = .804).

From a theoretical perspective, the strong association between the Instructions/Supervision variable and the dependent variable may be explained by the dual treatment of the "right to control" as both an overall test and a factor providing evidence in support of the overall test. For example, in Revenue Ruling 87-41, the Instructions/Supervision factor is listed as a key factor useful for assessing the level of employer control over a worker (the overall test for worker classification). However, the Instructions/Supervision factor is subsequently referred to in the ruling as the "control factor" (1987-1 C.B. 296). According to Marmoll (2001, A-20):

> The decisional authorities have equivocated, some accepting the right to control as the definition of a common law employee and looking to the factors to determine whether that right to control exists, with others viewing the right to control as simply one, albeit an important factor in a list of many to take into consideration. Still other courts have failed to make a firm choice between the

> two approaches, both listing the right to control as a factor to consider, and talking in terms of the right to control test. . . . The right to control as it is used in the test itself is the overall right to control the worker in the details of performance, whereas the factor sometimes referred to as the right to control refers to the day-to-day instructional matters that may occur between employer and employee.

Due to the high level of theoretical and statistical association between the dependent variable and the Instructions/Supervision variable, V1 is removed as a predictor variable when testing for differences between judicial forums with respect to factors considered by the judiciary.

The hypothesis that the variables in the Final Model, less the Instructions/Supervision variable (V1), are the same whether Forum (V21) equals 0 or 1 is tested. The log-likelihood for the pooled (restricted) model of 137 observations (which has a constant term, V3, V5, V6, V12, V14, V17, and V19) is –45.832. The log-likelihoods for the model based on eighty-three observations when Forum = 1 (Tax Court decisions) and fifty-four observations when Forum = 0 (Federal District Court decisions) are –28.628 and –12.041, respectively. The sum of –40.669 represents the log-likelihood for the unrestricted model. The chi-squared statistic for testing the eight restrictions of the pooled model is twice the difference, LR = 2 [- 40.669 – (- 45.832)] = 10.326. The 90 percent critical value from the chi-squared distribution with 8 degrees of freedom is 13.36. Therefore, the hypothesis that the constant term and the coefficients on V3, V5, V6, V12, V14, V17, and V19 are the same cannot be rejected.

Conclusion-Research Question 3

Stated in null form, the hypothesis relative to venue presented for investigation in this study is:

> H_{o3}: There are no significant differences between judicial forums with regard to factors considered when making worker classification determinations.

The null hypothesis cannot be rejected based on results obtained. These results do not necessarily conflict with the findings of the aforementioned research as studies examining decision-making differences among judicial forums have yielded mixed results (see also Englebrecht and Rolfe 1982; Stewart 1980). In this case, no evidence was found to suggest differences between the Federal District Courts and the Tax Court relative to worker classification for federal tax purposes.

Test of Temporal Stability

Observations for this study of worker classification span a twenty-four year period of time. It is possible that the variables considered by courts in making worker classification determinations have changed over time. To test for the effect of temporal differences, an indicator variable representing time period of litigation (V22/Time) is added to the Final Model and statistical significance of the variable is assessed. The variable has two categories coded "0" if the case was tried between 1980 and 1995 and "1" if the decision was rendered after 1995. The time break after year 1995 corresponds with a series of actions taken by the IRS (Revised Training Manual, Classification Settlement Program, and Early Referral to Appeals) aimed at easing the burden on businesses following the 1995 White House Conference on

Small Business. Results indicate that Time is not significant (Wald statistic = .257, Sig. = .612) in the determination of worker status for federal tax purposes.

Also of interest is whether the importance of factors considered by the judiciary in making worker classification determinations varied over the time period of the study. To test for significant differences, a counterpart to the Chow test is once again employed (Greene 2003, 681). The test involves using the chi-squared statistic to compare the log-likelihood values for the pooled model of all observations to the sum of log-likelihood values for a model of decisions litigated in the earlier time period (1980-1995) and later time period (1996-2003). The test requires splitting the data set into two subgroups based on the time period in which the cases were litigated. Splitting the data set results in numerical problems as described in the previous section. Consequently, V1 is removed as a predictor variable when testing for differences with respect to factors considered by the judiciary.

The hypothesis that the variables in the Final Model, less the Instructions/Supervision variable (V1), are the same whether Time (V22) equals 0 or 1 is tested. The log-likelihood for the pooled (restricted) model of 137 observations (which has a constant term, V3, V5, V6, V12, V14, V17, and V19) is –45.832. The log-likelihoods for the model based on fifty-one observations when Time = 1 (1996-2003) and eighty-six observations when Time = 0 (1980-1995) are –17.4235 and -26.3275, respectively. The sum of –43.751 represents the log-likelihood for the unrestricted model. The chi-squared statistic for testing the eight restrictions of the pooled model is twice the difference, LR = 2[-43.751 – (- 45.832)] = 4.162. The 90 percent critical value from the chi-squared distribution with 8 degrees of freedom is

13.36. Therefore, the hypothesis that the constant term and the coefficients on V3, V5, V6, V12, V14, V17, and V19 are the same cannot be rejected.

Conclusion-Research Question 4

The final null hypothesis presented for investigation in this study is:

H_{o4}: The factors considered by the courts in making worker classification decisions have not changed significantly over time.

Based on the results discussed above, the null hypothesis that the factors considered by the courts in making worker classification decisions have not changed significantly over time cannot be rejected. Indications are that the model is able to predict employee or independent contractor classification irrespective of time period and that the courts have consistently applied variables over time in making worker classification determinations.

Comparison with Prior Study

Prior to the current study, the single empirical work on worker classification for federal tax purposes was by Stewart (1980). A summarization of the variables found to be important in worker classification cases in this study as compared to those found by Stewart (1980) is provided in Table 5.15. As discussed in Chapter 3, Stewart analyzed 148 worker classification decisions tried in the Federal District Courts and Court of Claims from 1940 through 1979. Tax Court decisions were not included in the study due to the limited number of decisions available at the time and the lack of the court's jurisdiction over employment tax matters. Models were built using Logit, OLS regression, and multiple discriminant analysis (MDA).

This study employs logistic regression and examines 137 employee versus independent contractor decisions tried in the Federal District Courts and Tax Court from 1980 through 2003. Only four Court of Claims decisions were found during this time period resulting in the elimination of this forum from the study. Further, approximately 60 percent of the cases were tried in the Tax Court indicating the importance of this forum for litigation of worker classification cases. Both studies used a trichotomous coding scheme for the independent variables and a stepwise approach for variable selection.

TABLE 5.15

Comparison of Significant Variables in Worker Classification Models - Stewart vs. Webb

Variables	Stewart (1980) Logit, OLS & MDA Models	Webb (2004) Logistic Regression
Instructions/Supervision	X	X
Integration	X	X
Continuing Relationship	X	X
Opportunity for Profit or Loss	X	X
Independent Trade[a]	X	
Hiring, Supervising, and Paying Assistants	OLS & MDA	X
Work Location	OLS	
Right to Discharge/Terminate		X
Intent of the Parties		X
Method of Payment		X

[a] Independent Trade factor combines: Working for More Than One Firm, Services Available to the Relevant Market, and Full Time Required

Four variables emerged as significant in the Logit models for both studies: (1) Instructions/Supervision, (2) Integration, (3) Continuing Relationship, and

(4) Opportunity for Profit or Loss. A fifth variable, Hiring, Supervising, and Paying Assistants was found to be significant in the current study and by Stewart when applying OLS regression and multiple discriminant analysis. None of the components of Stewart's Independent Trade variable or Work Location were found to be important in this study. This is reflective of changes in the modern workforce. As outsourcing, freelancing, and contingent work relationships become more prevalent, the location of work performance and the number of firms worked for becomes less important determinants of worker status.

It is interesting to note that two variables, Right to Discharge/Terminate and Intent of the Parties were not included as potential variables in Stewart's analysis as they were considered not particularly relevant due to infrequent consideration in judicial decisions (10 percent or fewer of the cases analyzed). In contrast, for the 1980 through 2003 period, the rights of discharge and termination were mentioned in over 50 percent of cases and Intent of the Parties was considered over 80 percent of the time (refer to Table 5.1). Also, Method of Payment, while not significant in Stewart's analysis, was found to be an important determinant of worker status for the more recent time period. A possible explanation for the increased importance of the Method of Payment and Intent of the Parties variables is that, given the ambiguity and uncertainty in defining a worker's status, the judiciary is placing increased emphasis on more objectively determined factors.

Summary

The purpose of this chapter is to present the results of the data analysis and tests of hypotheses. Empirical findings in this study show that it is possible to differentiate between employees and independent contractors based on factors delineated in administrative and judicial rulings. Further, the logistic regression model developed in the study appears useful for predictive purposes. Factors identified by the model as being most effective at discriminating between and predicting worker classifications are: (1) the right of the employer to supervise/instruct the worker as to when, where, and how work is conducted, (2) whether the work performed is an integral part of the employer's business, (3) if the worker has the right to hire, supervise, and pay assistants if they are needed, (4) whether the working relationship is continual in nature, (5) how payments are made to the worker, (6) the opportunity for the worker to realize profit or incur a loss due to investments or liability for expenses, (7) the right of the parties to terminate the working relationship at will, and (8) the intent of the parties as to classification of the working relationship. Given that the study spans several decades and involves decisions from several judicial forums, the model was tested for temporal stability and stability between courts. The model appears to be stable over time and between venues. The following chapter includes a summary and discussion of the results of this research effort. Implications and limitations of the study are disclosed and recommendations for further research are presented.

CHAPTER 6

SUMMARY AND CONCLUSIONS

The purposes of this chapter are to summarize the findings of this research inquiry of worker classification. The primary research objective is to identify factors used by the judiciary in distinguishing between employees and independent contractors for federal tax purposes. Each step toward meeting this objective is outlined in the chapter summaries that follow. Next, conclusions relative to the tests of hypotheses are discussed. Implications and limitations of the study are disclosed and recommendations for further research are presented.

Summary of Previous Chapters

As discussed in Chapter 1, changes in the employment environment have led employers to an extended reliance on non-traditional employment relationships to fill certain human resource needs. The correct classification of non-traditional workers as either "employees" or "independent contractors" is important because the employer's legal responsibilities vary depending upon the nature of the working relationship. Further, the consequences of misclassification can be severe. For federal tax purposes, the term "employee" is not clearly defined in the Internal Revenue Code or Treasury Regulations. Ambiguous legislative and administrative guidelines have resulted in

frequent disagreements between employer taxpayers and the Internal Revenue Service with the end result being a considerable amount of litigation.

Presented in Chapter 2 is a summary of the historical events and legislative acts preceding codification of present employment tax law. Current legislative, administrative, and judicial authority on the subject is also outlined. The nationally historic period known as the Great Depression led to the passage of expansive social welfare legislation aimed at protecting the nation's employees. As a result, categorization of workers as either employees or independent contractors became imperative. The Internal Revenue Code and Treasury Regulations offer little guidance on what constitutes an employee for federal employment tax purposes. The Supreme Court has ruled that when a statute does not specifically define the term "employee," the common law should be applied when making a determination of worker classification. Common law rules dictate that an employer-employee relationship exists when the employer has the right to control the worker not only as to end result but also as to the means of accomplishing that result. Revenue Ruling 87-41 lists twenty factors the IRS deems relevant when assessing the degree of employer control. The court in *In re Rasbury* cites four additional factors for consideration.

Chapter 3 includes a review of prior studies of worker classification and judicial decision-making. The majority of research on worker classification is analytical and legal research. While the approach in these studies varies significantly from the methodology used in this dissertation, a survey of the literature is helpful in that it provides initial evidence of which factors appear more important in reaching a determination of worker status. Empirical investigations of judicial decision-making

relative to tax matters are also examined. Prior empirical analyses of judicial determinations in tax matters provide evidence that: (1) not all factors are considered equally by the courts in arriving at a decision, (2) the way in which a court arrives at a decision, as captured in a decision-making model, is subject to change in response to significant events or over time, and (3) differences in the decision-making process may exist dependant upon the venue in which a tax case is tried. Prior empirical research of worker classification for tax purposes consists of a single study conducted by Stewart (1980). Stewart examined 148 Federal District Court and Court of Claims decisions from 1940 through 1979. Since that time, the employment landscape has changed dramatically; critical administrative guidance has been promulgated and significant judicial guidance has been issued; and a large number of employee versus independent contractor cases have been decided in the Tax Court (a forum not included in Stewart's study). As a result, further consideration of the topic is warranted.

The methodology used in this study is developed and outlined in Chapter 4. This study is the first empirical analysis of worker classification for federal tax purposes since Stewart's study in 1980 and is the first to consider decisions rendered in the U.S. Tax Court. The research sample for the study consists of 137 judicial decisions rendered from 1980 through 2003. After consolidating several of the variables identified in Revenue Ruling 87-41 and *In re Rasbury*, twenty variables are considered as potential indicators of employment status. Predictor variables are coded as trichotomous qualitative variables and logistic regression is presented as the appropriate statistical tool.

Chapter 5 presents the analysis of research results. Summary statistics indicate that 58 percent of the court decisions resulted in determinations of employee status and 60 percent of the cases were tried in the U.S. Tax Court. Factors most frequently cited by the courts as determinants of worker status include: Instructions/Supervision, Method of Payment, and Intent of the Parties. The following section presents conclusions for each of the study's four research questions.

Summary of Conclusions

The following four research questions are presented in this study for investigation:

(1) Which of the factors or variables delineated in administrative and judicial rulings explain court determinations of worker classification in employee versus independent contractor disputes?

(2) Can the demarcated factors from administrative and judicial rulings be used to predict employment status for tax purposes?

(3) Do different courts of original jurisdiction consider similar factors when rendering decisions in cases of worker classification?

(4) Have the factors considered by courts in worker classification cases changed over time?

Applying a backward stepwise logistic regression procedure, eight variables emerged as effective determinants of worker classification. Specifically, the variables identified by the model are:

(1) Instructions/Supervision,

(2) Integration,

(3) Hiring, Supervising, and Paying Assistants,

(4) Continuing Relationship,

(5) Method of Payment,

(6) Opportunity for Profit or Loss,

(7) Right to Discharge/Terminate, and

(8) Intent of the Parties.

Analogue R^2 statistics (ranging from .670 to .900) indicate the eight variable model fits the data very well. Further, analysis of variable coefficients reveals that certain variables have a greater impact on the odds of obtaining an independent contractor status ruling. The Instructions/Supervision factor has the most impact on the odds of obtaining either an employee or independent contractor determination. It was also the most often cited factor in judicial decisions. Aside from the Instructions/Supervision factor, the freedom of the worker to hire, supervise, and pay assistants if they are needed, has the greatest positive impact on the odds of obtaining independent contractor classification. Conversely, the right of the parties to terminate the working relationship at will appears to have the most influence in obtaining employee classification.

A classification accuracy rate of 97.1 percent provides evidence that the eight variables, as captured in the decision-making model, are useful for predicting employment status. Further, the Proportional Chance Criterion and Press's Q statistic indicate predictive ability of the model sufficiently exceeds that which could be achieved merely by chance.

Prior studies report mixed results regarding the effect of venue on judicial decisions. Since this study includes decisions rendered in Federal District Courts and the U.S. Tax Court, tests were conducted to check for forum specific differences. First, a dummy variable added to the model indicates forum is not significant (Wald = .375, Sig. = .540). This finding is corroborated by the results of a counterpart to the Chow test. The test involves splitting the data set into two subgroups based on the judicial forum in which cases were litigated. The test statistic is used to compare the log-likelihood values for the pooled model of all observations to the sum of log-likelihood values for the Tax Court only and Federal District Court only models. No evidence is found to suggest differences between the Federal District Courts and the Tax Court relative to worker classification for federal tax purposes.

Since the data for the study spans a twenty-four year period of time, the model is tested for temporal stability. An indicator variable representing time period of litigation is added to the logistic regression model. Findings indicate that the variable Time is not significant (Wald statistic = .257, Sig. = .612) in the determination of worker status for federal tax purposes. Also, results of a counterpart to the Chow test support the conclusion that the model is able to predict employee or independent contractor classification irrespective of time period and that factors considered by the courts in making worker classification decisions have not changed significantly over the time span of the study.

Results of this study, as compared to the previous empirical research on worker categorization (Stewart 1980), reveal several interesting trends. The variables Work Location and Independent Trade (combining: Working for More Than One Firm,

Services Available to the Relevant Market, and Full Time Required) have become less important determinants of worker status. That is, while these variables emerged as significant determinants of worker status in the study by Stewart (1980), they were not found to be among the most effective predictors of classification in this study. This difference is likely a reflection of changes in the modern workforce. As outsourcing, freelancing, and contingent work relationships become more prevalent, the location of work performance and the number of firms worked for become less distinctive characteristics of worker status. Certain factors such as Method of Payment and Intent of the Parties (as evidenced by written contracts, W-2s, or 1099s) have emerged as more important determinants of status. A possible explanation is that, given ambiguous legislative and administrative guidelines and the large number of subjective variables, the judiciary is placing increased emphasis on the more objectively determined factors. Also, the U.S. Tax Court has become an important, if not preferred, forum for litigating employee versus independent contractor cases.

Implications

According to a report by the U.S. Department of Labor (2001a), approximately one out of ten workers, or about thirteen million people, work under alternative employment arrangements. The consequences of misclassifying such workers can be severe involving retroactive employer liability for employment taxes, fines and penalties, under-funded pension and fringe benefits plans, and lawsuits arising from violations of labor and nondiscrimination laws. The findings of this study have practical implications for those subject to ambiguous worker classification laws as well as for the writers, enforcers, and interpreters of those laws.

Employer taxpayers relying on nontraditional work arrangements can apply the model developed in this study to current work relationships to assess the probability of independent contractor status. This should be especially helpful for small business owners. Recall that the U.S. Small Business Administration has listed the employee versus independent contractor problem as the number one issue plaguing small business (U.S. Small Business Administration 1996).

Employers and their advisors can use the model when structuring employment arrangements so that desired objectives are met. That is, if independent contractor status is preferred, the employer can fashion the work arrangement, in light of the results of the model, so that key variables are supported. For example, the employer might pay the worker on a per job basis (Method of Payment) and obtain a written independent contractors agreement (Intent of the Parties). The parties could also document or otherwise specify the rights of the parties to terminate the relationship at will (Right to Discharge/Termination), the intended duration of the working relationship (Continuing Relationship), and the right or lack thereof for the worker to delegate work (Hiring, Supervising, and Paying Assistants). It should be noted that the specified form of the employment arrangement must be supported in substance. Practical application of the model when structuring employment arrangements should be useful by minimizing the probability of worker reclassification and the resultant consequences.

In the event of disputes pursuant to an Internal Revenue Service audit, results of this study should be useful to the IRS, taxpayer employers, tax practitioners, and attorneys when deciding whether to litigate. The model can be used to assess the

probability of a judicial determination of independent contractor status. Work arrangements found to have a moderate to low probability for a favorable judicial ruling might be resolved out of court at a cost savings to the parties involved.

One of the possible solutions to the worker classification problem is the development of clearer criteria for distinguishing between employment categories. The General Accounting Office proposes a plan to clarify classification rules and improve tax compliance through expanded reporting requirements. Also, Senator Kit Bond has introduced legislation aimed at providing a more objective test of worker classification. The GAO and Bond plans include some factors found in this study to be significant (i.e. Intent of the Parties, Opportunity for Profit or Loss, Continuing Relationship).[15] However, each proposal also includes stipulations that represent factors not included in the logistic regression model (i.e. Services Available to the Relevant Market, Working for More Than One Firm, Furnishing Tools and Materials). This study should provide lawmakers with insight into how the courts, as final interpreters of the law, resolve employee versus independent contractor conflicts. If court cases are being decided in a manner consistent with legislative intent, then ambiguity can be reduced and consistency between judges encouraged by incorporating the findings of this study into future legislation.

[15] For a discussion of the GAO plan and the Bond bill, see Chapter 2, pages 67-71.

Limitations

This research study is based on data from 137 court decisions from the Federal District Courts and the U.S. Tax Court between 1980 and 2003. A logistic regression function was developed to classify these observations based on eight variables identified as significant. The potential effect on the model of decisions not included in the sample is unknown. Specifically, three categories of decisions are not reflected in the model: (1) cases involving IRS audits that were settled before litigation, (2) cases tried before a jury for which the printed record includes only instructions to the jury and final opinion (i.e. details as to the factors considered in reaching a decision are not disclosed), and (3) cases qualifying under Section 530 of the *Revenue Act of 1978*.[16] Recall that Congress enacted Section 530 as a "safe harbor" statute aimed at providing relief from the potentially crippling employment tax liabilities to employers resulting from IRS initiated retroactive reclassification of independent contractors. Qualifying under the "safe harbor" statute does not result in a determination of correct status for a worker. Qualifying under the statute does allow an employer to prospectively continue the consistent treatment of the worker as an independent contractor regardless of the worker's correct classification under common law principles.

This study is also limited to the extent that evidence considered by the courts is not fully disclosed in the printed court records. However, the assumption must be made that since judicial decisions are subject to review and reversal via the appeals process, judges will include, either in the facts, discussion, or opinion of the case, all information considered significant to the decision rendered.

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[16] For a detailed discussion of the provisions and requirements of Section 530, see Chapter 2, pages 61-63.

Application of the logistic regression model may be limited due to the subjective nature of several of the determinant variables. For example, results indicate the Instructions/Supervision variable to be of primary significance in determining a worker's status as either employee or independent contractor. The variable supports classification of a worker as an employee if the employer retains the right to require the worker to comply with instructions as to when, where, and how work is to be performed. Assessment as to level of employer supervision over details of the work requires individual judgment and may be biased in favor of desired objectives. This is not the case with more objectively determined variables in the model. For instance, it is generally easy to consistently determine the classification supported by the Method of Payment variable. A worker is either paid in a consistent periodic manner (i.e. by the hour, week, or month), supporting employee classification, or by the job or on commission, supporting independent contractor classification. Inconsistent conclusions could be reached to the extent the model requires a subjective assessment by the user regarding a variable.

Both tax laws and the employment landscape are in a constant state of evolution. The IRS emphasizes in its Revised Training Materials that "relevant facts may change over time because business relationships and the work environment change over time" (IRS 1996a). Further, there have been numerous legislative attempts at revising and clarifying worker classification rules (U.S. Congress, Senate 1996a, 1997, 1999, 2001a). Due to the dynamic nature of tax laws and the employment environment, the model should be reassessed over time.

Suggestions for Future Research

The limitations noted above suggest possible extensions for the current study. For example, the Instructions/Supervision variable was found to be of primary importance in this study. This conclusion is supported by prior analytical and empirical research. However, assessment of this variable requires a subjective determination as to the extent of employer supervision over the details of when, where, and how work is performed. The Internal Revenue Service suggests in its Revised Training Material (IRS 1996b) that several of the twenty factors listed in Revenue Ruling 87-41 support the Instructions/Supervision factor (see Table 2.1). Further work might be done to determine if a statistical relationship exists between certain other determinant variables and the Instructions/Supervision variable.

Numerous questions as to the correct classification of a worker are never resolved due to application of the relief provisions of Section 530. An employer may qualify for relief from employment tax liability under Section 530 if the requirements of three tests are met. As noted by Marmoll (2001, A-2):

> Interpretation of these three requirements has become complex as litigation has developed this new area of employment tax law. A plethora of rulings and litigated cases now provide a road map, so to speak, for the employer's use of the § 530 "safe harbor" from employment tax liability.

A more complete understanding of the employee versus independent contractor issue could be gained by further analysis of the rulings and court cases involving the application of Section 530.

Another intriguing line of research would be to be to explore the suggestion of relying on groups of factors in determining worker status. The Internal Revenue Service (1996b) suggests that factors of evidence can be grouped into one of three

primary categories (Behavioral Control, Financial Control, or Relationship of the Parties). Marmoll (2001) suggests viewing evidentiary factors in terms of six "indicator zones" (Details, Expenses, Compensation, Duration, Structure, and Location).[17]

Finally, the methodology used in this study could be extended to other areas of law in which worker status is an issue. This study is limited to an examination of federal tax cases. Worker classification according to common law standards is an issue underlying a variety of workplace and nondiscrimination laws including the *Employee Retirement Income Security Act* (ERISA), the *National Labor Relations Act* (NLRA), and the *Copyright Act.*

Summary

This study provides evidence that certain variables delineated in Revenue Ruling 87-41 and *In re Rasbury* are effective at differentiating between court determinations of worker status as either employee or independent contractor. Particularly, eight variables emerge as relevant in federal tax cases and are effective predictors across two judicial venues and the time period included in the study.

The study is limited in that it is restricted to cases tried in court and not all worker classification disputes are litigated. Further, several of the variables included in the model are subjectively determined. Nevertheless, findings of the study should be of value to those affected by ambiguous worker classification laws including: taxpayers and their advisors, who are subject to the law; Congress, as the writer of the

[17] For additional information see Chapter 2 pages 58-61, Table 2.1, Chapter 3 pages 80-82, and Table 3.1.

law; the Internal Revenue Service, with authority to enforce the law; and judges, who have the job of ultimately interpreting the law.

APPENDIX A

MASTER CASE LIST

APPENDIX A

MASTER CASE LIST

TAX COURT CASES (79 Cases / 83 Decisions)

Adams, Joe J. v. Commissioner, TC Memo 1982-223 (1982)

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In re Black, 71A AFTR 2d 93-4510 (Bankr. E.D. Ark. 1991)

In re Colbert, 80 AFTR 2d 97-6742 (Bankr. W.D. Mo. 1997)

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In re Imholte, 66 AFTR 2d 90-5782 (Bankr. D. Alaska 1990)

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Winter v. United States, 86 AFTR 2d 2000-6846 (S.D. Tex. 2000)

APPENDIX B

VARIABLE DESCRIPTIONS AND CODING SCHEME

APPENDIX B

VARIABLE DESCRIPTIONS AND CODING SCHEME

Variable Number	**Variable** / Description	Code
	Dependent	
V0	The court determined the worker to be an employee	0
	The court determined the worker to be an independent contractor	1
	Independent	
V1	**Instructions/Supervision**	
	The employer retained the right to require the worker to comply with instructions as to when, where, and how work was to be performed	-1
	No evidence was presented regarding the degree of employer control over the details of the worker's performance	0
	The employer did not retain the right to control the details of the worker's performance	+1
V2	**Training**	
	The employer provided periodic or on-going training for the worker relative to procedures to be followed or methods to be used in performing work	-1
	Training was routine or would be provided to either employees or independent contractors (such as product or general orientation information) or no evidence was presented about employer provided training	0

	The worker did not receive training as to the methods or manner of work performance	+1
V3	**Integration**	
	The success or continuation of the business significantly depended upon the performance of services offered by the worker	-1
	No evidence was presented as to the degree of integration between the services offered by the worker and the success of the employer	0
	Services offered by the worker were not necessarily an integral part of the employer's business	+1
V4	**Services Personally Rendered**	
	The employer required that the worker personally perform services	-1
	No evidence was presented concerning whether or not the worker was required to personally render services	0
	The worker was not required to personally render services and retained the right to delegate	+1
V5	**Hiring, Supervising, and Paying Assistants**	
	If assistants were required, the employer hired, supervised, and paid the assistants	-1
	No information was given about the use of assistants	0
	The worker employed his own assistants if needed	+1
V6	**Continuing Relationship**	
	The worker was retained by the employer for an indefinite period of time	-1
	The expected duration of the working relationship was not mentioned	0

	The working relationship was expected to continue for the duration of a specific project or for a specified period of time	+1
V7	**Set Hours of Work**	
	The employer established set hours of work for the worker	-1
	No information was given concerning working hours	0
	The worker was in control of his own work hours	+1
V8	**Full Time Required**	
	The worker was required to work full time for the employer	-1
	No information was given concerning whether the worker was employed full time by the employer	0
	The worker was not restricted to working solely for the employer and was free to work for whomever he chose	+1
V9	**Work Location**	
	The employer retained control over where the work was performed	-1
	No evidence was presented regarding location of the work	0
	The employer did not retain control over where the work was to be performed	+1
V10	**Order or Sequence of Tasks Set**	
	The employer had the right to stipulate the order or sequence in which work was to be performed	-1
	No mention was made regarding the order or sequencing of work	0
	The worker was free to follow his own patterns of work	+1

V11	**Oral or Written Reports**	
	The employer required oral or written reporting from the worker as to details of how the work was performed	-1
	No information is given regarding reporting requirements	0
	Required reporting from the worker was nonexistent or limited to reporting the end result of work rather than how the work was performed	+1
V12	**Method of Payment**	
	The worker was paid by the hour, week, or month	-1
	No information was given concerning the method by which the worker was compensated	0
	The worker was paid by the job or on commission	+1
V13	**Furnishing Tools and Materials**	
	The employer furnished significant tools, materials, and other equipment necessary for the completion of work	-1
	The furnishing of tools and materials was not mentioned	0
	The worker invested in his own tools, materials, and other equipment	+1
V14	**Opportunity for Profit or Loss**	
	The worker had no opportunity to realize a profit or suffer a loss, beyond that ordinarily realized by an employee, as a result of the worker's services	-1
	No mention was made of the worker's opportunity for profit or loss	0
	The worker had an opportunity to realize profit or was subject to a real risk of economic loss due to (1) significant investment in facilities (including fair market value payment for use of employer's facilities) or (2) liability for unreimbursed business expenses	+1

V15	**Working for More Than One Firm**	
	The worker performed services only for the employer	-1
	No information is given regarding whether the worker performed services for more than one firm at a time	0
	The worker performed services for a multiple of unrelated persons or firms at the same time	+1
V16	**Services Available to the Relevant Market**	
	The worker did not hold himself out to the general public as being available for the performance of services	-1
	No evidence was presented about the worker offering or not offering his services to the market in general	0
	The worker made his services available to the general public on a regular and consistent basis	+1
V17	**Right to Discharge/Terminate**	
	The employer had the right to discharge the worker and/or the worker had the right to terminate the working relationship at will	-1
	No information is given regarding the employer's right to discharge the worker or the employee's converse right to terminate the work relationship	0
	The working relationship could only be terminated by the employer if the worker failed to provide results according to contract specifications and/or the working relationship could not be terminated by the worker without liability	+1
V18	**Industry Practice or Custom**	
	Industry practice or custom is to classify workers in substantially similar positions as employees	-1
	No mention is made of typical worker classification practices in the employer's industry	0
	Industry practice or custom is to classify workers in substantially similar positions as independent contractors	+1

V19	**Intent of the Parties**	
	Information (e.g., labels, form W-2 filed, signed written agreement) indicates the parties intended the relationship to be one of employer-employee	-1
	No information is revealed regarding the intent of the parties	0
	Information (e.g., labels, forms 1099 filed, signed written agreement) indicates the parties intended the relationship to be one of employer-independent contractor	+1
V20	**Employee-Type Benefits Provided**	
	The employer provided the worker with employee type benefits including insurance (worker's compensation, disability, health, life), paid vacations, retirement, paid sick leave, or other fringe benefits	-1
	No information was revealed regarding worker benefits	0
	Employee-type benefits were not provided for the worker	+1

APPENDIX C

MODEL STATISTICS FOR TERMS REMOVED

STEPWISE METHOD

APPENDIX C

MODEL STATISTICS FOR TERMS REMOVED STEPWISE METHOD

		Variable	Model Log Likelihood	Change in -2 Log Likelihood	df	Significance of the Change
Step 1		V1	-37.475	46.532	1	.000
		V2	-15.095	1.772	1	.183
		V3	-16.544	4.669	1	.031
		V4	-14.553	.687	1	.407
		V5	-18.756	9.092	1	.003
		V6	-19.448	10.476	1	.001
		V7	-14.533	.648	1	.421
		V8	-14.282	.144	1	.704
	**	V9	-14.210	.001	1	.971
		V10	-14.312	.206	1	.650
		V11	-14.417	.415	1	.520
		V12	-16.005	3.591	1	.058
		V13	-14.211	.003	1	.959
		V14	-15.616	2.813	1	.094
		V15	-14.214	.008	1	.928
		V16	-15.321	2.223	1	.136
		V17	-19.198	9.977	1	.002
		V18	-14.717	1.016	1	.314
		V19	-16.358	4.296	1	.038
		V20	-14.211	.003	1	.955
Step 2		V1	-38.683	48.946	1	.000
		V2	-15.109	1.797	1	.180
		V3	-16.742	5.063	1	.024
		V4	-14.582	.744	1	.388
		V5	-18.764	9.108	1	.003
		V6	-19.521	10.621	1	.001
		V7	-14.574	.727	1	.394
		V8	-14.285	.149	1	.700
		V10	-14.345	.269	1	.604
		V11	-14.499	.578	1	.447
		V12	-16.026	3.632	1	.057
		V13	-14.213	.005	1	.941
		V14	-15.785	3.150	1	.076
		V15	-14.214	.007	1	.932
		V16	-15.390	2.359	1	.125

		V17	-19.299	10.178	1	.001
		V18	-14.850	1.279	1	.258
		V19	-16.392	4.363	1	.037
	**	V20	-14.212	.004	1	.951
Step 3		V1	-38.904	49.384	1	.000
		V2	-15.565	2.706	1	.100
		V3	-17.006	5.587	1	.018
		V4	-14.583	.741	1	.389
		V5	-19.157	9.891	1	.002
		V6	-19.560	10.697	1	.001
		V7	-14.712	1.000	1	.317
		V8	-14.285	.145	1	.703
		V10	-14.350	.276	1	.600
		V11	-14.524	.623	1	.430
		V12	-16.307	4.190	1	.041
	**	V13	-14.215	.005	1	.942
		V14	-15.889	3.354	1	.067
		V15	-14.215	.007	1	.934
		V16	-15.481	2.537	1	.111
		V17	-19.575	10.726	1	.001
		V18	-14.850	1.275	1	.259
		V19	-17.791	7.157	1	.007
Step 4		V1	-40.057	51.684	1	.000
		V2	-15.617	2.804	1	.094
		V3	-17.015	5.600	1	.018
		V4	-14.586	.743	1	.389
		V5	-19.873	11.317	1	.001
		V6	-19.636	10.842	1	.001
		V7	-14.728	1.027	1	.311
		V8	-14.306	.183	1	.669
		V10	-14.407	.385	1	.535
		V11	-14.530	.631	1	.427
		V12	-16.324	4.218	1	.040
		V14	-15.983	3.537	1	.060
	**	V15	-14.220	.010	1	.919
		V16	-15.482	2.534	1	.111
		V17	-19.706	10.983	1	.001
		V18	-14.893	1.357	1	.244
		V19	-17.800	7.170	1	.007
Step 5		V1	-40.078	51.715	1	.000
		V2	-15.683	2.926	1	.087
		V3	-17.107	5.775	1	.016
		V4	-14.626	.812	1	.367

		V5	-19.874	11.309	1	.001
		V6	-19.697	10.955	1	.001
		V7	-14.745	1.050	1	.306
	**	V8	-14.326	.212	1	.645
		V10	-14.410	.379	1	.538
		V11	-14.534	.629	1	.428
		V12	-16.366	4.292	1	.038
		V14	-16.151	3.863	1	.049
		V16	-15.531	2.623	1	.105
		V17	-19.843	11.247	1	.001
		V18	-14.979	1.518	1	.218
		V19	-17.951	7.461	1	.006
Step 6		V1	-40.367	52.083	1	.000
		V2	-15.686	2.721	1	.099
		V3	-17.111	5.570	1	.018
		V4	-14.650	.649	1	.420
		V5	-19.960	11.269	1	.001
		V6	-20.251	11.851	1	.001
		V7	-14.818	.985	1	.321
	**	V10	-14.535	.418	1	.518
		V11	-14.662	.673	1	.412
		V12	-16.647	4.642	1	.031
		V14	-16.179	3.707	1	.054
		V16	-15.540	2.428	1	.119
		V17	-20.389	12.126	1	.000
		V18	-15.100	1.548	1	.213
		V19	-18.197	7.742	1	.005
Step 7		V1	-40.769	52.470	1	.000
		V2	-15.819	2.569	1	.109
		V3	-17.126	5.182	1	.023
		V4	-14.973	.877	1	.349
		V5	-19.999	10.929	1	.001
		V6	-21.176	13.283	1	.000
		V7	-15.105	1.140	1	.286
	**	V11	-14.705	.340	1	.560
		V12	-16.797	4.526	1	.033
		V14	-16.314	3.558	1	.059
		V16	-15.559	2.049	1	.152
		V17	-20.422	11.775	1	.001
		V18	-15.344	1.619	1	.203
		V19	-18.727	8.385	1	.004
Step 8		V1	-41.365	53.321	1	.000
		V2	-15.883	2.357	1	.125

		V3	-17.133	4.856	1	.028
	**	V4	-15.011	.613	1	.434
		V5	-20.383	11.356	1	.001
		V6	-22.020	14.630	1	.000
		V7	-15.109	.810	1	.368
		V12	-16.842	4.275	1	.039
		V14	-16.318	3.228	1	.072
		V16	-16.017	2.624	1	.105
		V17	-20.474	11.538	1	.001
		V18	-15.542	1.676	1	.196
		V19	-18.750	8.091	1	.004
Step 9		V1	-41.909	53.796	1	.000
		V2	-15.893	1.763	1	.184
		V3	-17.135	4.248	1	.039
		V5	-20.392	10.761	1	.001
		V6	-22.285	14.548	1	.000
	**	V7	-15.227	.433	1	.511
		V12	-18.463	6.905	1	.009
		V14	-16.878	3.733	1	.053
		V16	-16.516	3.010	1	.083
		V17	-20.474	10.925	1	.001
		V18	-15.813	1.603	1	.205
		V19	-18.753	7.484	1	.006
Step 10		V1	-42.120	53.785	1	.000
		V2	-15.931	1.407	1	.235
		V3	-17.217	3.980	1	.046
		V5	-20.887	11.319	1	.001
		V6	-22.307	14.159	1	.000
		V12	-18.593	6.732	1	.009
		V14	-16.968	3.481	1	.062
		V16	-16.574	2.692	1	.101
		V17	-20.474	10.493	1	.001
	**	V18	-15.819	1.183	1	.277
		V19	-19.236	8.017	1	.005
Step 11		V1	-44.955	58.272	1	.000
	**	V2	-16.760	1.882	1	.170
		V3	-18.202	4.766	1	.029
		V5	-20.898	10.158	1	.001
		V6	-22.430	13.222	1	.000
		V12	-19.124	6.609	1	.010
		V14	-17.598	3.559	1	.059
		V16	-16.958	2.277	1	.131
		V17	-20.502	9.367	1	.002

		V19	-20.858	10.079	1	.001
Step 12		V1	-45.778	58.037	1	.000
		V3	-18.456	3.392	1	.066
		V5	-21.116	8.713	1	.003
		V6	-23.073	12.627	1	.000
		V12	-19.783	6.047	1	.014
		V14	-18.971	4.423	1	.035
	**	V16	-17.499	1.478	1	.224
		V17	-20.531	7.543	1	.006
		V19	-21.700	9.880	1	.002
Step 13		V1	-45.832	56.665	1	.000
		V3	-18.864	2.729	1	.099
		V5	-21.242	7.487	1	.006
		V6	-23.175	11.353	1	.001
		V12	-20.627	6.256	1	.012
		V14	-19.785	4.571	1	.033
		V17	-21.186	7.374	1	.007
		V19	-21.863	8.727	1	.003

** Variable resulting in the least significant change/improvement in –2LL and therefore removed from the model in the subsequent model-building step.

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