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# NON-PROFIT BUSINESS ACTIVITY AND THE UNRELATED BUSINESS INCOME TAX

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## EXECUTIVE SUMMARY

American non-profit organizations are generally exempt from federal income tax, with the exception that profits earned from activities that are "unrelated" to exempt purposes are subject to the Unrelated Business Income Tax (UBIT). The UBIT is intended to prevent "unfair" competition between tax-exempt non-profits and taxable for-profit firms, and also to prevent erosion of the federal tax base through tax-motivated transactions between taxable and tax-exempt entities. The evidence indicates that American non-profit organizations engage in very little unrelated business activity, paying aggregate UBIT of less than $200 million annually. Large non-profit organizations, and those with pressing financial needs due to high program-related expenses and low receipts of contributions and government grants, are the most likely to have unrelated business income. The same organizational characteristics are not associated with earning income from inventory sales that are "related" to exempt purposes. This evidence suggests that non-profits incur impor-

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tant organizational costs in undertaking unrelated business activity, since unrelated business income is concentrated among organizations facing the strongest financial pressures. This, in turn, carries implications for the efficiency of the UBIT as a source of tax revenue and for the need to tax the business income of non-profit organizations in order to prevent "unfair" competition.

## 1. INTRODUCTION

Charitable non-profit organizations in the U.S. that are eligible for tax exemptions under Internal Revenue Code section 501(c)(3) include religious, educational, charitable, scientific, and literary organizations. These charitable non-profits spent $548 billion on their activities in 1994 (the most recent year for which comprehensive data are available), which represents roughly 8 percent of gross domestic product. This is a sizable figure, particularly since it omits most religious organizations (which do not report their finances to the government) and since spending includes only the compensated portion of non-profit labor, much of which is provided to non-profits at zero or below-market wages.

Non-profit organizations commonly express concern over the difficulties they confront in financing their many activities. Funding for charitable non-profit organizations comes largely from program service revenues, which generated $422 billion in 1994, or 72 percent of their total receipts of $587 billion. Other sources of funds include contributions ($58 billion), government grants ($52 billion), and various types of income from investments.[1]

Non-profit organizations are generally exempt from federal and state income taxes, which distinguishes them from most other private entities—such as corporations, which are currently subject to a federal income tax of 35 percent. The tax exemption for non-profits has several important aspects. One is that income earned by non-profits is largely exempt from tax. A second is that individuals and corporations making qualifying donations to 501(c)(3) organizations are entitled to claim tax deductions for their contributions.

Non-profit organizations in the U.S. are not eligible for blanket tax exemptions; instead, organizations must apply for and receive tax-exempt status from the U.S. government, and tax exemptions, if granted, are limited. American laws constrain the operating activities and financial behavior of organizations that wish to retain tax-exempt status, and impose taxes on certain activities of non-profit organizations

[1] Hilgert (1998) reports aggregate financial information for 501(c)(3) organizations in 1994.

that are otherwise tax-exempt. This paper evaluates one such tax: the Unrelated Business Income Tax (UBIT).

The United States introduced in 1950 a new tax on the "unrelated business income" of certain non-profit organizations. Congress enacted the UBIT out of concern over the possibility of "unfair competition" between taxable business entities and non-profit organizations engaging in the same, or similar, activities. The UBIT has been controversial since its enactment, coming under fire from some critics who claim that it imposes unnecessary burdens on non-profit organizations and others who argue that its scope is insufficiently broad. The purpose of this paper is to review some of the issues raised by the UBIT and to evaluate its effect on charitable non-profit organizations in the U.S.

Certain aspects of the UBIT are clear from the outset. The UBIT raises very little direct revenue for the federal government, the most recent available annual figure (for 1994) being $195 million. The primary function of the UBIT is to discourage (though not eliminate) unrelated business activity on the part of charitable non-profits. In doing so, the UBIT reduces the likelihood that non-profit organizations will compete with taxpaying firms in similar lines of business. The UBIT thereby also maintains that portion of the corporate tax base that would otherwise become the province of tax-exempt entities. Some organizations with opportunities to earn unrelated business income that would be subject to the UBIT opt instead to seek alternative methods of financing their activities and, in some cases, to scale back their program-related expenditures.

The empirical work in this paper analyzes the characteristics of organizations with and without unrelated business income in order to identify characteristics of non-profit organizations that are correlated with unrelated business activity. The results suggest that large organizations are the most likely to have unrelated business income, and that, controlling for asset size, unrelated business activity is concentrated among organizations with high program-related expenses and those receiving few contributions and government grants. This pattern suggests that unrelated business activity is undertaken largely by organizations with both business opportunities and pressing financial needs. Put differently, American non-profit organizations appear to prefer not to undertake unrelated business activity unless driven to do so by financial necessity.

The difficulty with such an interpretation of the evidence is that the correlations evident in the data need not be causal. An organization with the ability to generate unrelated business income may, all other things equal, be less inclined than other organizations to seek outside funding in the form of contributions or government grants, and may be more willing than others to spend money on active programs. Furthermore, unrelated business activity may discourage private contributors and government granting agencies from providing funds. Since fundraising, program spending, and other operational aspects of non-profit organizations represent endogenous choices, the direction of causality is not entirely clear.

In order to address the issue of causality, the empirical work in this paper compares organizational characteristics associated with earning unrelated business income with characteristics associated with earning profits from sales of inventory items. The patterns differ greatly: while large organizations are the most likely to generate both types of revenue, organizations receiving higher levels of contributions and government grants, and organizations with lower levels of program spending, are considerably more likely to generate income from sales of inventory items. It appears that it is not commercialism per se that exhibits a positive correlation with program spending and a negative correlation with the receipt of contributions and grants, but a particular form of commercialism that is unrelated to exempt purposes. Such a pattern is consistent with a general reluctance on the part of non-profit organizations to engage in unrelated business activities.

This evidence implies that fear of "unfair" competition in the marketplace from non-profit organizations, even in the absence of the UBIT, is generally misplaced. Of course, with so many available definitions of "fairness," this issue is difficult entirely to resolve. Analysis of their incentives indicates that non-profit organizations have no reason to operate unrelated businesses used for investment purposes any differently than would taxable for-profit competitors in the same lines of business. The tax exemption augments a non-profit's available resources for business investment; but so, too, do earnings in the other business lines of a large (for-profit) conglomerate, yet the "fairness" issue is seldom raised in the second case. And the evidence suggests that non-profit organizations are generally less eager than their for-profit counterparts to undertake business ventures unrelated to their charitable purposes, typically doing so only when pushed by financial necessity.

From a tax policy standpoint, it has been noted that the UBIT removes the tax incentive non-profit organizations would otherwise have to own and operate corporate entities instead of merely owning their shares. In the absence of a UBIT, the corporate tax can be avoided by undertaking business activity entirely within a non-profit organization. The UBIT introduces at least as many distortions as it removes, however, since non-profit organizations do not pay taxes on most of their capital income. Introduction of the UBIT widens the tax wedge between earning capital income in the form of interest and earning income from unrelated business activities. In addition, the UBIT is the source of extensive compliance and enforcement difficulties that stem from the vagueness of operational distinctions between business income that is "related" and "unrelated" to charitable purposes, and from the difficulty of allocating joint costs between charitable and business operations.

Section 2 reviews the tax treatment of income earned by non-profit organizations. Section 3 evaluates the incentives created by the UBIT and their implications for the efficiency of resource allocation. Section 4 considers aggregate patterns of unrelated business activity by non-profit organizations. Section 5 analyzes the commercial behavior of individual non-profit organizations, devoting special attention to the differing characteristics of organizations with unrelated business income and those with income from selling inventory items that are related to their charitable purposes. Section 6 is the conclusion.

## 2. THE (LIMITED) TAX EXEMPTION FOR NON-PROFIT ORGANIZATIONS

Organizations dedicated to various objectives deemed by Congress to be sufficiently worthy are granted exemptions from federal and state income taxes. There are two important aspects of this exemption: the first is that organizations must receive their exemptions from the U.S. Treasury; for this they must apply, and many applications are denied. The second is that the exemption is partial: not all activities of non-profit organizations are exempt from federal income tax. Once a 501(c)(3) organization has a tax exemption, qualifying contributions are deductible against the taxable incomes of contributors, so tax exemptions are valuable quite beyond the ability they confer to avoid tax on business income.

The U.S. corporate income tax was introduced in 1913, at which time non-profit organizations were granted exemptions from the tax.[2] In the late 1940s, public outcry over various business acquisitions by some highly visible non-profit organizations motivated Congress to reevaluate the tax exemption for non-profits. In 1950, Congress introduced the UBIT, to which non-profit organizations are subject. The UBIT is very similar in structure and rate to the corporate income tax, with the difference that it applies only to certain sources of income.

The UBIT is a tax on income earned in a manner that is "unrelated" to a non-profit organization's charitable purpose. Thus, art museums are not required to pay UBIT on profits earned from sales of art reproduc-

[2] See Bittker and Rahdert (1976) for a survey of the history of the exemption of non-profit organizations from federal income taxation. Simon (1987) reviews the taxation of non-profit organizations more generally.

tions in museum shops. But art museums are required to pay UBIT on profits earned from sales in their shops of "unrelated" items, such as magazines or pain relievers. Ticket sales for its college football games are not taxable to a university, but income generated by renting its sports facility to a professional team is subject to the UBIT. Advertising revenue is generally taxable under the UBIT. Most types of capital income are explicitly exempted from the UBIT, so that, for example, educational institutions are not subject to UBIT on interest, dividends, and capital gains earned by their endowment funds. An important exception is that debt-financed investments are subject to the UBIT.

The fact that a non-profit organization uses the income that it earns to further its exempt purpose does not imply that any income-earning activities are therefore "related" to the purpose and consequently exempt from the UBIT. Income is subject to the UBIT based on the way in which it is earned, not the way in which it is used. The UBIT provisions are intended to prevent "unfair" competition between non-profit organizations and taxable competitors and to protect the integrity of the tax base from erosion due to tax-motivated transactions between taxed and untaxed entities. There are, however, many practical difficulties that arise in distinguishing "related" from "unrelated" income,[3] as well as in identifying debt-financed investments that are designed to exploit a non-profit organization's tax-exempt status for investment purposes. The government can remove the tax-exempt status of organizations earning excessive unrelated business income, and this possibility, together with various differences between the UBIT and the regular corporate tax, has motivated some non-profits to locate income-generating activities in wholly-owned taxable subsidiaries that are subject to corporate taxation.

## 3. EFFICIENCY CONSEQUENCES OF THE UBIT

The UBIT applies to a subset of the commercial activities of non-profit organizations. The controversy over this tax focuses on two issues. The first concerns whether, in the absence of the UBIT, tax-exempt non-profit organizations would have "unfair" commercial advantages over for-profit, taxpaying firms engaged in the same or similar lines of business. The second is whether the UBIT in its current form improves the efficiency of resource allocation over a situation (such as that prior to 1950) in which the unrelated business incomes of non-profit organizations are entirely exempt from federal tax.

[3] See, for example, U.S. General Accounting Office (1987, pp. 24–25), describing the difficulties facing the IRS in determining the "relatedness" of various income-producing activities and costs appropriately deducted against "unrelated" business income.

The fairness issue is extremely difficult to evaluate, due in large part to the absence of a consensus on what constitutes "unfair" commercial advantages. Rose-Ackerman (1982) argues that competition between taxable for-profit firms and tax-exempt non-profits cannot, in equilibrium, be unfair to taxable competing firms, since all market participants must earn their required rates of return. While not conceding that the corporate tax discourages investment by taxable firms, Rose-Ackerman argues that, even if it does, the effect of exempting some but not all competitors from taxation is to increase the number of tax-exempt entities in the market without reducing the returns to taxable firms. This situation, she argues, is not unfair to taxable firms that choose to compete with tax-exempt entities, since such taxable firms must earn their required rates of return in expectation or else they would not compete in those markets.

This interpretation of fairness is not popular in certain industry circles and in some of the media coverage of this issue.[4] There, the fairness issue is commonly coupled with the idea that tax-exempt competitors will be able to invest more, or to charge lower prices, or to provide better services at the same prices, than their taxable counterparts. Their ability to do so, so the argument goes, stems from the resources and the incentives generated by the tax exemption.

It is difficult to distinguish fairness concerns from efficiency issues in many of these controversies. Hansmann (1989) argues that fairness issues are secondary to issues of efficiency. The two are certainly related, in that the effects of the UBIT on both fairness and efficiency turn on its effects on the behavior of non-profit organizations in commercial markets with taxable competitors.

Efficiency has the virtue of being (in principle) well defined, but its application to the analysis of the UBIT is greatly complicated by the *n*th-best nature of economies with multiple tax distortions. It is, however, straightforward to identify two issues related to the analysis of efficiency. The first is the effect of the tax exemption, and the UBIT, on the selection of commercial activities undertaken by non-profit organizations. The second is the effect of the UBIT on managerial decisions in those unrelated business operations that non-profits undertake.

For purposes of analysis, it is useful to consider the (counterfactual) case of a seamlessly enforced and operated UBIT that taxes only the unrelated portion (somehow defined) of a non-profit organization's business income and does so without imposing any undue administrative or compliance costs. Non-profit organizations have the opportunity to undertake any of a number of unrelated business operations. Suppose that

[4] See, for example, Pound, Cohen, and Loeb (1995).

non-profit organizations do not have any special cost advantages over their taxable rivals, nor are they disadvantaged; they are on an equal footing except for any advantage conferred by their exemption from corporate income taxes.[5]

Rose-Ackerman (1982) makes the point that, if the alternative to investing in an unrelated business is instead to hold interest-bearing securities, then taxable and tax-exempt organizations will effectively face the same cost of capital when they invest in unrelated businesses, even in the absence of a UBIT. The opportunity cost of funds invested in business capital is the interest that could otherwise have been earned had the same money been used to buy bonds. For the purposes of this calculation it does not matter that tax-exempt organizations keep all of their returns while taxable ones keep only a fraction, since each will invest in unrelated businesses only up to the point that they would not do better by purchasing bonds instead.

Hansmann (1989) notes that, in Rose-Ackerman's analysis, it is critical that the alternative to unrelated business investment is investment in interest-bearing securities (or other assets the returns to which are fully taxed when held by taxable investors). Hansmann compares the incentives to invest in unrelated businesses with those to hold corporate stock, and notes that the tax preference for unrealized capital gains on corporate stock implies that taxable investors will concentrate their investments in stock, while, in the absence of a UBIT, tax-exempt entities will concentrate their investments in business assets. Viewed differently, tax-exempt entities can avoid the corporate tax altogether by owning their business investments directly instead of holding 100 percent of the stock of taxpaying corporations. Taxable investors can also avoid the corporate tax by financing their investments entirely with debt,[6] but Hansmann correctly observes that equity is also an important source of finance and it is therefore inappropriate to treat taxable investors as though they were untaxed on their corporate investments. Hansmann therefore concludes that the tax incentive for non-profit organizations to invest in unrelated businesses creates an inefficiency that the UBIT serves to rectify.

Sansing (1998) calls attention to the importance of cost allocation to this analysis. If, in practice, non-profit organizations are free to allocate as many of their general overhead costs as they wish against unrelated

[5] The following analysis concerns only the effect of a non-profit organization's exemption from the corporate income tax. The exemption from property, sales, and other taxes creates incentives to locate highly taxed activity in the non-profit sector, as many observers have noted.

[6] As Stiglitz (1973) and others have noted.

business income in calculating UBIT liabilities, then they will not face any tax obligations under the UBIT and the tax therefore fails to prevent the inefficiency noted by Hansmann. Sansing notes, however, that if instead a non-profit faces important non-deductible costs of unrelated business activity—such as the cost to an organization's reputation, or its sense of mission, from excessive commercialization—then the UBIT may reduce efficiency by discouraging unrelated business activity that the organization would otherwise undertake. The inefficiency arises because the UBIT taxes the returns to unrelated business activity without allowing deductions for important non-pecuniary costs. Non-profit organizations may well differ from ordinary businesses in their sensitivity to such costs.

Cordes and Weisbrod (1998) offer some evidence on this point from their examination of the information returns of a large sample of non-profit organizations in 1992. They report that the ratio of public to private contributions received by a non-profit organization is correlated with whether the organization has unrelated business income, interpreting this result to mean that public and private donors to non-profit organizations are sensitive (indeed, differentially so) to the commercialization of their activities. Cordes and Weisbrod report a similar correlation between contribution sources and the fraction of total revenue accounted for by (tax-exempt) program service revenues, suggesting that it is not the "unrelatedness" of business income, but instead the commercialization of non-profit activity, to which donors are sensitive. Cordes and Weisbrod also offer suggestive evidence that non-profit organizations allocate internal costs in a manner that reduces their UBIT liabilities.

As most observers appear to agree, the effect of the UBIT on the efficiency of resource allocation is not so much a question of how non-profit firms might manage any business operations that they run as one of the extent to which non-profits choose to undertake unrelated business activity. Both Rose-Ackerman and Hansmann observe that non-profits and for-profit firms face similar incentives to manage their business operations to maximize profits. Hansmann's main argument implies that a non-profit organization might run an unrelated business somewhat differently than would a for-profit firm, since the non-profit has a lower cost of capital. But this implication is misleading, since the opportunity cost a non-profit organization incurs by investing in a given unrelated business operation includes the cost of not investing in another. Consequently, if the non-profit sector is small compared to the rest of the economy and therefore has access to an effectively limitless supply of potential unrelated business investment opportunities, the implicit cost of capital for any one business operation is the potential return elsewhere available, which must equal the pre-tax cost of funds for taxable investors. Non-profit organizations therefore do not have tax incentives to manage their unrelated business operations any differently than do for-profit firms in the same lines of business.

There is an incentive for tax-exempt organizations to concentrate their investments in heavily-taxed assets, since equilibrium in a market dominated by taxable investors implies that such investments have the highest pre-tax returns. (This argument does not, of course, imply that investors will specialize completely, since such a strategy would generally conflict with diversification needs.) The UBIT therefore reduces the preference that non-profits would otherwise have for business investments over ownership of corporate stock. But it does not follow that the UBIT enhances efficiency, quite apart from the scenario identified by Sansing. Corporate stock is not the only asset in which non-profits invest; indeed, asset market equilibrium implies that corporate stock, which offers tax advantages to taxable investors, should carry a low pre-tax rate of return, and therefore will represent a relatively small fraction of the investment portfolio of tax-exempt entities.[7] Nonprofit organizations have incentives to concentrate their investments in bonds and other assets the returns of which are highly taxed—and that the market prices accordingly. Subjecting the unrelated business income of non-profit organizations to the UBIT then serves to discourage unrelated business activity to an inefficient degree. In the absence of the UBIT, non-profit organizations face the same incentives that taxable investors face in allocating funds between investments in bonds and investments in unrelated businesses. Introduction of the UBIT changes these incentives. Since nonprofit organizations invest in many asset types, with differing tax characteristics, a simple comparison of incentives to invest in corporate stock and incentives to invest in unrelated business assets is insufficient to evaluate the efficiency effects of the UBIT.

## 4. AGGREGATE PATTERNS OF UNRELATED BUSINESS INCOME AND UBIT

This section considers the available aggregate evidence of the characteristics of unrelated business income earned by non-profit organizations in recent years. This evidence is drawn from information provided to the Internal Revenue Service (IRS) on tax forms filed by non-profits. Non-

[7] Hilgert (1998, p. 102) reports that, as of year-end 1994, 501(c)(3) organizations had $349 billion of (book) investments in securities (including stocks and corporate bonds), or 35 percent of their total (book) assets of $992 billion. These book figures are likely to overstate the fraction of tradable securities in portfolios, but not all of the $992 billion of assets are used for investment purposes.

profit organizations with gross unrelated business income of $1,000 or more are required to file with the IRS Form 990-T, which is used to determine the size of any tax obligation the organization incurs on its unrelated business income. Form 990-T requires non-profit organizations to report detailed information concerning their unrelated business activities. Since individual Form 990-T filings are confidential, it is not possible for researchers to analyze them directly; consequently, the only available Form 990-T information consists of national aggregates reported by the IRS on the basis of selected samples of Form 990-T filings.

Table 1 summarizes recent experience with the UBIT in the United States. In 1994, 35,657 organizations filed Form 990-T. These organizations had total gross unrelated business income of $5.4 billion, against which they claimed aggregate deductions of $6.5 billion, for a net unrelated business loss of $1.1 billion. Organizations exhibit considerable heterogeneity: the net incomes of the 18,588 organizations for which unrelated business income is positive sum to $643 million (which therefore represents taxable profits), while the 17,070 organizations without positive unrelated business income had losses that sum to $1.77 billion. Non-profit organizations paid total UBIT of $195 million in 1994.

While of unimpressive magnitude compared to other components of federal tax receipts, the $195-million tax payment in 1994 reflects rapid recent growth in UBIT collections. Table 1 indicates that non-profit orga-

**TABLE 1**
*Unrelated Business Income and UBIT, 1990–1994*

| Year | No. of returns | Gross unrel. bus. income ($ mil.) | Total deductions ($ mil.) | Net income less deficit ($ mil.) | Net income: taxable profit ($ mil.) | Deficit ($ mil.) | Total UBIT ($ mil.) |
|---|---|---|---|---|---|---|---|
| 1990 | 31,091 | 3,511.5 | 4,131.1 | −631.6 | 388.9 | −1,020.5 | 99.1 |
| 1991 | 32,690 | 3,384.7 | 4,047.2 | −662.5 | 431.1 | −1,093.6 | 116.9 |
| 1992 | 31,122 | 4,069.1 | 5,182.6 | −1,113.4 | 485.9 | −1,599.3 | 132.4 |
| 1993 | 32,638 | 4,069.1 | 5,741.4 | −1,047.2 | 603.6 | −1,650.8 | 181.4 |
| 1994 | 35,657 | 5,379.8 | 6,506.8 | −1,127.0 | 643.0 | −1,770.0 | 195.2 |

*Note:* The table entries are population estimates for all U.S. exempt organizations drawn from Form 990-T filings between 1990 and 1994. "Net income less deficit" is the difference between gross unrelated business income and deductions claimed against unrelated business income. "Net income: taxable profit" is the difference between gross unrelated business income and deductions, for all exempt organizations for which this difference is positive. "Deficit" is the difference between gross unrelated business income and deductions for all exempt organizations for which this difference is negative. Dollar figures are millions of current dollars.

*Source:* Riley (1995, 1997, 1998).

## TABLE 2

### *Unrelated Business Income and UBIT by Type of Tax-Exempt Organization, 1994*

| Internal Revenue Code section[a] | Number of returns | Gross unrelated business income ($ thousands) | Total deductions ($ thousands) | Net income (less deficit) ($ thousands) | Deficit ($ thousands) | Total income tax: Number of returns | Total income tax: Amount ($ thousands) |
|---|---|---|---|---|---|---|---|
| Total | 35,657 | 5,379,838 | 6,506,838 | −1,127,001 | −1,769,954 | 18,594 | 195,191 |
| 401(a) | 988 | 124,603 | 35,734 | 88,869 | −12,886 | 875 | 34,325 |
| 408(e) | 5,330 | 30,518 | 20,334 | 10,184 | −4,466 | 5,043 | 4,025 |
| 501(c)(2) | 182 | 44,957 | 103,917 | −58,960 | −61,167 | 97 | 611 |
| 501(c)(3) | 9,277 | 3,119,920 | 4,075,056 | −955,136 | −1,174,048 | 2,967 | 64,695 |
| 501(c)(4) | 1,498 | 249,859 | 290,072 | −40,213 | −55,065 | 579 | 3,888 |
| 501(c)(5) | 2,625 | 193,605 | 263,804 | −70,200 | −92,271 | 1,120 | 5,465 |
| 501(c)(6) | 5,962 | 704,015 | 867,016 | −163,002 | −217,972 | 2,023 | 18,207 |
| 501(c)(7) | 6,447 | 355,059 | 364,027 | −8,968 | −70,552 | 4,530 | 12,927 |
| 501(c)(8) | 929 | 53,789 | 72,481 | −18,691 | −24,666 | 392 | 814 |
| 501(c)(9) | 653 | 271,125 | 157,928 | 113,197 | −9,550 | 362 | 43,403 |
| 501(c)(10) | 251 | 10,620 | 11,986 | −1,366 | −2,581 | 108 | 219 |
| 501(c)(12) | 118 | 13,551 | 14,192 | −641 | −4,431 | 63 | 899 |
| 501(c)(13) | 32 | 2,011 | 2,025 | −14 | 31 | 4 | 3 |
| 501(c)(14) | 73 | 8,089 | 11,075 | −2,986 | −3,456 | 61 | 70 |
| 501(c)(19) | 1,281 | 110,992 | 137,366 | −26,374 | −32,239 | 357 | 1,051 |

*Note:* "Number of returns" is the number of organizations filing Form 990-T, the Exempt Organization Business Income Tax return. "Gross unrelated business income" is income before deductions, and "Total deductions" are deductions claimed against unrelated business income; "Net income" is the difference between gross income and total deductions. "Deficit" is the total net income of only those organizations with negative net income. Entries in the last two columns—number of tax returns and amount of total income tax—describe those organizations filing Form 990-T and paying positive UBIT in 1994. Dollar amounts are thousands of current dollars.

*Source:* Riley (1998).

[a] IRS code section numbers correspond to the following types of organizations: 401(a): qualified pension, profit-sharing, or stock bonus plans; 408(e): individual retirement arrangements; 501(c)(2): title-holding corporations for exempt organizations; 501(c)(3): religious, educational, charitable, scientific, or literary organizations, organizations preventing cruelty to children, or fostering national or international amateur sports competition; 501(c)(4): civic leagues, social welfare organizations, and local associations of employees; 501(c)(5): labor, agricultural, and horticultural organizations; 501(c)(6): business leagues, chambers of commerce, real estate boards, and like organizations; 501(c)(7): social and recreational clubs; 501(c)(8): fraternal beneficiary societies and associations; 501(c)(9): voluntary employees' beneficiary associations; 501(c)(10): domestic fraternal societies and associations; 501(c)(12): benevolent life insurance associations, mutual ditch or irrigation companies, mutual or cooperative telephone companies, and like organizations; 501(c)(13): cemetery companies; 501(c)(14): state-chartered credit unions and mutual reserve funds; 501(c)(19): posts or organizations of past or present members of the armed forces.

nizations had UBIT obligations of only $99.1 million in 1990, and that annual UBIT collections rose steadily between 1990 and 1994.

Entries in Table 1 describe the unrelated business income and UBIT of the entire non-profit sector. Table 2 provides the same information for 1994, distinguishing organizations by the Internal Revenue Code sections under which they are tax-exempt. As Table 2 indicates, 501(c)(3) organizations report more than half of aggregate gross unrelated business income in 1994 ($3.1 billion out of a total of $5.4 billion), and paid one-third of the total UBIT in that year. Other organizational types with gross unrelated business income exceeding $200 million include 501(c)(4) organizations (civic leagues, social welfare organizations, and local associations of employees), 501(c)(6) organizations (business leagues, chambers of commerce, real estate boards, and like organizations), 501(c)(7) organizations (social and recreational clubs), and 501(c)(9) organizations (voluntary employees' beneficiary associations).

The size and diversity of the 501(c)(3) population suggests that many different types of organizations within this category may earn unrelated business income. Table 3 presents a breakdown of unrelated business income and other financial information for differing types of 501(c)(3) organizations in 1993 (comparable figures being unavailable for 1994). The information presented in Table 3 was compiled by the IRS based on a matched sample of Form 990 and Form 990-T filings for 1993 (and reported in Riley, 1997). Form 990 is the information return that all non-profits (other than religious organizations) are required to file annually with the IRS; they are public documents, and therefore are in principle available for researchers to use. The IRS selects for coding a sample of Form 990 filings stratified on asset size, with large organizations the most likely to be included in the sample.

The entries in Table 3 are based on information from organizations in the Form 990 sample that also file Form 990-T in 1993. Sampling weights used in the construction of the Form 990 sample are then inverted to generate the population estimates reported in Table 3. Since the sampling weights used to generate the numbers reported in Table 3 are not conditioned on earning unrelated business income (and therefore filing Form 990-T), inverting these weights does not, in general, produce accurate population estimates. For example, the estimated (based on sampling weights) 6,312 501(c)(3) organizations filing Form 990-T does not accord with the separately available (and more reliable) 1993 figure of 9,246. But patterns evident in Table 3 are likely to be reproduced in the population, since there is no particular reason that any biases introduced by inverting the sampling weights will differ systematically between types of 501(c)(3) organizations.

**TABLE 3**

***Income, Expenses, and Unrelated Business Income of 501(c)(3) Organizations, Matched Sample, 1993***

| Type of 501(c)(3) organization | Number of returns | Adjusted total income ($ millions) | Adjusted total expenses ($ millions) | Adjusted unrelated business income ($ millions) | Adjusted unrelated business expenses ($ millions) |
|---|---|---|---|---|---|
| Total | 6,312 | $ 222,654 | $ 233,513 | $ 2,435 | $ 2,447 |
| Educational institution or school | 533 | 39,577 | 41,173 | 228 | 220 |
| Hospital | 1,159 | 140,022 | 135,379 | 848 | 924 |
| Hospital research organization | 5 | 1,447 | 1,179 | 5 | 5 |
| Organization supporting a public college | 173 | 616 | 736 | 30 | 30 |
| Organization supporting other charitable organizations | 301 | 14,222 | 13,801 | 438 | 373 |
| Publicly-supported organization[a] | 4,132 | 259,000 | 30,389 | 883 | 892 |
| Other | 9 | 871 | 857 | 4 | 3 |

*Note:* The table presents information from a matched (stratified) sample of Form 990 and Form 990-T filings by 501(c)(3) organizations for 1993. Data from only those organizations that are included in the stratified sample, and that file both Form 990 and Form 990-T, are the basis of the figures; sampling weights are used to construct population estimates. Income and expense items reported are adjusted by the IRS to make financial reporting entries (from Form 990) comparable with tax entries (reported on Form 990-T). Dollar amounts are millions of current dollars. Organizations are classified by type of activity.

*Source:* Riley (1997).

[a] A "publicly-supported organization" must receive at least one-third of its total support from governmental units, from contributions made directly or indirectly by the general public, or from a combination of these sources; less than one-third of its funds may come from internal sources. "Publicly-supported organizations" are organized and operated in a manner to attract new and additional public or governmental support on a continuous basis.

The IRS adjusts income and expense items reported in Table 3 in order to make financial reporting entries (from Form 990) comparable with tax entries (reported on Form 990-T). Organizations are classified by type of activity, all but one of which is self-explanatory. A "publicly supported organization" must receive at least one-third of its total support from governmental units, from contributions made directly or indirectly by the general public, or from a combination of these sources; less than one-third of its funds may come from internal sources. Furthermore, "publicly supported organizations" are organized and operated in a manner

**TABLE 4**
***Source of Gross Unrelated Business Income, 1994***

| Income item | Amount ($ thousands) | Number of organizations reporting |
|---|---|---|
| Total | $ 5,379,838 | 35,657 |
| Gross profit (less loss) from sales and services | 2,700,302 | 14,147 |
| Capital-gain net income | 144,612 | 513 |
| Net capital loss (trusts only) | −242 | 78 |
| Net gain (less loss), sales of non-capital assets | 3,644 | 309 |
| Income (less loss) from partnerships | 134,379 | 6,295 |
| Rental income | 120,912 | 3,722 |
| Unrelated debt-financed income | 347,868 | 2,358 |
| Investment income (less loss) | 274,450 | 5,556 |
| Income from controlled organizations | 45,506 | 1,376 |
| Exploited exempt-activity income, except advertising | 89,535 | 801 |
| Advertising income | 942,711 | 7,582 |
| Other income (less loss) | 576,161 | 6,333 |

*Note:* The table distinguishes sources of unrelated business income reported by all non-profit organizations filing Form 990-T in 1994. Income items reported are gross of various deductions claimed on Form 990-T. Dollar amounts are thousands of current dollars.

*Source:* Riley (1998).

to attract new and additional public or governmental support on a continuing basis.

The evidence reported in Table 3 indicates that the gross unrelated business income of 501(c)(3) organizations is a mere 1.1 percent of their total income, and that their unrelated business expenses are 1.1 percent of their total expenses. Net unrelated business income (gross income minus expenses) is therefore of trivial magnitude relative to other revenue sources. Hospitals account for roughly one-third of the unrelated business income of 501(c)(3) organizations, a sizable fraction but significantly less than their share of the 501(c)(3) sector's finances. Publicly-supported organizations, educational institutions, and organizations that support other charitable organizations also earn significant amounts of unrelated business income.[8]

Unrelated business income earned by non-profit organizations in 1994 takes many forms, of which major categories are detailed in Table 4. Of

[8] It is worth bearing in mind that the burden of the UBIT may be felt most keenly by organizations for whom the tax is so burdensome that they elect not to earn any unrelated business income and therefore do not appear in the figures reported in Table 3. Of course, it would be extremely difficult to estimate the distribution of such burdens across 501(c)(3) types.

the total unrelated business income of $5.4 billion, half ($2.7 billion) consists of gross profit (less loss) from sales and services. Sales and services income is significant not only in terms of its aggregate level, but also in terms of the number of non-profit organizations—14,147 out of a total of 35,657 Form 990-T filers—reporting such income. Other important sources of unrelated business income include advertising income ($943 million), other income ($576 million), and various sources of investment income.

The available aggregate information indicates that the non-profit sector's many sources of unrelated business income generate very little tax liability from the UBIT. Partly this reflects the fact that many organizations claim deductions against gross unrelated business income that are large enough to produce tax losses, but largely it reflects the absence of much unrelated business activity. While the reported figures do not include the operations of taxable subsidiaries, there is no evidence that this omission has a large effect on the aggregate numbers.[9] The next section analyzes the characteristics of 501(c)(3) organizations with business operations that are unrelated to their exempt purposes.

## 5. WHO HAS UNRELATED BUSINESS INCOME?

The behavior of non-profit organizations that are subject to the UBIT reveals important information concerning their ability and willingness to earn unrelated business income in spite of the associated tax liability. This section analyzes information drawn from Form 990 filings of non-profit organizations in 1989. These information returns do not contain any detail on a non-profit organization's unrelated business income, nor do they indicate whether or not a non-profit organization had positive UBIT liability in 1989. They do, however, have entries indicating whether the filing organization was also obliged to file Form 990-T for 1989, which is almost a perfect indicator of having gross unrelated business income in excess of $1,000. Consequently, it is possible to use publicly-available data reported on Form 990 to analyze the determinants of whether an organization has $1,000 or more of gross unrelated business income.

[9] Prior to 1997, any interest, rents, royalties, and annuities received from taxable subsidiaries owned at least 80 percent by parent non-profit organizations were treated as unrelated business income and therefore taxable under the UBIT. The Taxpayer Relief Act of 1997 reduced the ownership share necessary for application of the UBIT to 50 percent and introduced other changes intended to prevent tax avoidance through the use of subsidiaries of non-profit organizations. The U.S. Congress, Joint Committee on Taxation (1997, pp. 239–240) estimates the revenue impact of these changes to be less than $5 million per year, reflecting, in part, the modest volume of non-profit business activity conducted through taxable subsidiaries.

### 5.1 *Unrelated Business Income of 501(c)(3)s*

Table 5 presents the results of logit regressions in which the dependent variable equals one if an organization has gross unrelated business income greater than $1,000 in 1989, and equals zero otherwise. Independent variables include: book values of total assets at year-end 1989, administrative expenses in 1989, program service expenses in 1989, total

**TABLE 5**
***Unrelated Business Income of 501(c)(3)s, 1989***

| | Coefficient | | | | |
|---|---|---|---|---|---|
| Term | Regression 1 | 2 | 3 | 4 | 5 |
| Constant | −11.7327<br>(0.3681) | −11.2206<br>(0.3868) | −11.3168<br>(0.5942) | −9.9958<br>(12.9293) | −26.8112<br>(22.3267) |
| ln Assets | 0.2645<br>(0.0351) | 0.2507<br>(0.0374) | 0.4215<br>(0.0635) | 0.2181<br>(2.3910) | 3.3733<br>(4.0332) |
| (ln Assets)$^2$ | | | | −0.0087<br>(0.1465) | −0.1842<br>(0.2414) |
| (ln Assets)$^3$ | | | | 0.0004<br>(0.0030) | 0.0038<br>(0.0048) |
| ln Total Expense | 0.4135<br>(0.0294) | | | | |
| ln Service Expense | | 0.2298<br>(0.0350) | 0.1994<br>(0.0573) | 0.2255<br>(0.0352) | 0.1977<br>(0.0576) |
| ln Admin. Expense | | 0.1860<br>(0.0285) | 0.0799<br>(0.0468) | 0.1875<br>(0.0286) | 0.0826<br>(0.0469) |
| ln Total Receipts | −0.0456<br>(0.0124) | −0.0364<br>(0.0133) | | −0.0384<br>(0.0134) | |
| ln Contributions | | | 0.0071<br>(0.0270) | | 0.0057<br>(0.0270) |
| ln Grants | | | −0.1002<br>(0.0253) | | −0.1036<br>(0.0256) |
| ln Likelihood | −3761.5 | −3378.9 | −1430.3 | −3378.2 | −1429.8 |
| No. of observations | 8,594 | 7,483 | 2,891 | 7,483 | 2,891 |

*Note:* The columns report coefficients from logit regressions in which the dependent variable equals one if a 501(c)(3) organization has unrelated business income greater than $1,000 in 1989, and equals zero otherwise. "Assets" equals the gross book value of year-end 1989 assets; "Total Expense" equals the sum of administrative and service expenses; "Total Receipts" equals the sum of contributions and grants. Regression samples exclude organizations with asset sizes below the fifth percentile of the sample, and those observations in which any independent variable (prior to taking logs) is less than $100. All variables are measured in 1989 dollars. Standard errors are in parentheses.

**TABLE 6**
*Means and Standard Deviations of Regression Variables*

| Sample | Variable | Mean | Standard deviation | Number of observations |
|---|---|---|---|---|
| 1989 large sample (Tables 5 and 7) | Unrelated business income dummy | 0.2219 | 0.4155 | 8594 |
| | Inventory sales dummy | 0.1430 | 0.3501 | 8594 |
| | ln Assets | 16.2594 | 1.9587 | 8594 |
| | ln Total Expense | 15.4143 | 2.1719 | 8594 |
| | ln Total Receipts | 13.1712 | 2.3468 | 8594 |
| | ln Service Expense | 15.7577 | 1.9665 | 2891 |
| | ln Admin. Expense | 14.0580 | 1.9075 | 2891 |
| | ln Contributions | 13.5332 | 2.1840 | 2891 |
| | ln Grants | 13.1041 | 2.1202 | 2891 |
| 1989 sample of organizations with either unrelated business income or profits from inventory sales but not both (Table 9) | Unrelated business income vs. inventory sales dummy | 0.6426 | 0.4793 | 2378 |
| | ln Assets | 16.9486 | 1.8118 | 2378 |
| | ln Total Expense | 16.2802 | 1.9973 | 2378 |
| | ln Total Receipts | 13.4482 | 2.2969 | 2378 |
| | ln Service Expense | 16.2892 | 1.8785 | 982 |
| | ln Admin. Expense | 14.5835 | 1.7367 | 982 |
| | ln Contributions | 13.9045 | 2.0219 | 982 |
| | ln Grants | 13.2473 | 2.1156 | 982 |
| 1989 hospital sample (Table 10) | Unrelated business income dummy | 0.4050 | 0.4910 | 2173 |
| | ln Assets | 17.4781 | 1.2322 | 2173 |
| | ln Total Expense | 17.3298 | 1.3622 | 2173 |
| | ln Total Receipts | 12.1323 | 2.1534 | 2173 |
| | ln Service Expense | 17.6180 | 1.3023 | 512 |
| | ln Admin. Expense | 15.8915 | 1.4027 | 512 |
| | ln Contributions | 12.5488 | 2.0807 | 512 |
| | ln Grants | 12.5283 | 2.0173 | 512 |

expenses (defined as the sum of administrative and program service expenses), contributions received in 1989, government grants received in 1989, and total receipts (defined as the sum of contributions and government grants). Variable means and standard deviations are reported in Table 6. Independent variables are entered in log form; in some specifications, second and third powers of log assets are included as independent variables.[10]

Larger organizations are the most likely to report unrelated business income. The 0.2645 coefficient on ln Assets in column 1 of Table 5 is large and differs significantly from zero. Evaluating the logit function at the sample mean of the independent variables, this coefficient implies that, as an organization's asset size doubles (and nothing else changes), it has 3.7 percent greater likelihood of reporting unrelated business income. Since the sample mean likelihood of reporting unrelated business income is 22 percent, a difference of 3.7 percent is sizable.

The positive correlation between unrelated business income and asset size is not surprising. Quite apart from the factors that are idiosyncratic to unrelated business income, the larger an organization is, the more likely it is to have *any* given source of income. Size may also be correlated with other, unmeasured characteristics that encourage organizations to earn unrelated business income, but these are inevitably very difficult to distinguish from the pure effect of organizational size.[11]

Conditioning on asset size, organizations with greater expenses, particularly service-related expenses, are more likely to have unrelated business income. The 0.4135 estimated coefficient on ln Total Expense in column 1 of Table 5 differs significantly from zero and implies that there is a positive correlation between total expenses and earning unrelated business income. Again evaluating the logit function at sample means, doubling an organization's service and administrative expenses (and holding other characteristics constant) is associated with 5.9 percent greater likelihood of reporting gross unrelated business income. The regression reported in column 2 separates service expenses and administrative expenses; both are positively correlated with earning unrelated business income.

Organizations receiving high levels of contributions and government grants are less likely than are other organizations to report unrelated business income, conditional on asset size and other observable characteristics. While the estimated −0.0456 coefficient on ln Total Receipts in column 1 of Table 5 differs statistically from zero, it implies a smaller

[10] In order to prevent observations of very small non-profits from exerting undue influence on the regression results, regression samples exclude the smallest (measured by year-end assets) 5 percent of the sample. Individual regressions exclude observations in which data are missing or independent variables (prior to logging) have values less than $100.

[11] Another, possibly important consideration is that large organizations may have the greatest ability to generate sizable deductions against gross unrelated business income through the allocation of joint costs. Adept cost allocation reduces the effective tax rate due to the UBIT, as Sansing (1998) notes.

absolute effect on unrelated business income than do the estimated coefficients on total assets and total expenses—reflecting, in part, the smaller magnitude of receipts from contributions and government grants. Evaluating the logit function at sample means, 100 percent higher total receipts are associated with 0.6 percent lower likelihood of reporting unrelated business income. The specifications reported in columns 3 and 5 provide estimates of separate effects of contributions and government grants, doing so from a sample consisting of organizations that report both contributions and government grants in excess of $100. In this sample of 2,891 organizations, contributions have an insignificant effect on unrelated business income, while government grants have a significant negative effect.

One of the difficulties of interpreting the evidence reported in the first three columns of Table 5 comes from the fact that several of the independent variables represent differing measures of an organization's size. To be sure, the inclusion of log assets as a regressor means that the effects of other variables are measured in a way that is conditioned on the size of an organization's assets, but there remains the possibility that estimated coefficients on variables other than assets reflect nonlinearities in the effect of organizational size on unrelated business income. The regressions reported in columns 4 and 5 of Table 5 include as regressors three powers of log assets in order to absorb the effects of simple nonlinearities. The results are quite consistent with those reported in columns 1 through 3.

The regressions reported in Table 5 indicate that large organizations with many expenses and few receipts of contributions and government grants are the more likely to report earning unrelated business income in 1989. This pattern is consistent with a preference on the part of 501(c)(3) organizations not to divert their energies into earning unrelated business income, but a willingness to do so when feeling financial pressure from ongoing operations. A second interpretation of the evidence is that organizations earning unrelated business income spend more and attract fewer contributions and government grants than do other organizations. And a third possibility is simply that organizations differ in their opportunities to earn business income; that such opportunities appear most often among organizations with many expenses and few receipts of contributions and government grants. In order to distinguish between these interpretations of the regressions reported in Table 5, it is useful to juxtapose this evidence with similar regressions in which the dependent variable indicates whether an organization has business income coming from sources that are "related" to exempt purposes.

## 5.2 *Inventory Sales by 501(c)(3)s*

Non-profit organizations often supplement their revenues with membership dues, rental income, income from special events and activities, and profits from sales of inventory items. Of these, sales of inventory items are the most likely to require organizations to have financial and commercial infrastructure and to reflect business opportunities available to non-profit organizations. Sales of inventory items need not constitute unrelated business income; in the sample of organizations analyzed in Table 5, only 31 percent of those reporting gross profits of $1,000 or more from sales of inventory items also report gross unrelated business income of $1,000 or more (from all sources). For the economy as a whole in 1994, 501(c)(3) organizations report inventory sales of $7.2 billion, on which they earned $3.2 billion of gross profit.[12] Sales of inventory items typically do not constitute unrelated business income, and inventory sales exceed total unrelated business income in the 501(c)(3) sector.

Table 7 reports the results of regressions in which the dependent variable is a dummy variable that takes the value one if a 501(c)(3) organization has at least $1,000 of gross profits from sales of inventory items in 1989, and zero otherwise. Estimated coefficients in these logit regressions differ in sign and magnitude from the coefficients (reported in Table 5) estimated for unrelated business income. Greater asset size is associated with higher likelihood of reporting profits from inventory sales, but the effect of asset size is insignificant in all but the regression reported in column 3. More striking is the sign pattern of estimated coefficients on expense and receipt items. Organizations with greater expenses, particularly program service expenses, are less likely than others to report earning profits from inventory sales, while organizations with greater receipts of contributions and government grants, particularly contributions, are more likely than others to report earning profits from inventory sales.

These patterns differ sharply from those reported in Table 5. They suggest that the organizational characteristics associated with earning unrelated business income reflect something other than simple business opportunities, or at least those that are expressed by selling inventory items. Suppose that the unobserved characteristics of an organization that are correlated with earning unrelated business income are also correlated with asset size and total expenses, and are negatively correlated with receipts of contributions and government grants. If so, then the

[12] See Hilgert (1998, p. 104).

**TABLE 7**
***Profits from Inventory Sales by 501(c)(3)s, 1989***

| Term | Coefficient | | | | |
|---|---|---|---|---|---|
| | Regression 1 | 2 | 3 | 4 | 5 |
| Constant | −3.1980 (0.2773) | −3.0710 (0.2992) | −3.3026 (0.4578) | −7.2036 (8.1381) | −13.2321 (13.9001) |
| ln Assets | 0.0203 (0.0281) | 0.0535 (0.0312) | 0.4060 (0.0563) | 0.9967 (1.5467) | 2.1491 (2.5818) |
| (ln Assets)$^2$ | | | | −0.0680 (0.0970) | −0.1009 (0.1583) |
| (ln Assets)$^3$ | | | | 0.0016 (0.0020) | 0.0019 (0.0032) |
| ln Total Expense | −0.0369 (0.0247) | | | | |
| ln Service Expense | | −0.2509 (0.0306) | −0.4307 (0.0535) | −0.2557 (0.0308) | −0.4240 (0.0540) |
| ln Admin. Expense | | 0.1790 (0.0293) | 0.0430 (0.0471) | 0.1801 (0.0293) | 0.0431 (0.0474) |
| ln Total Receipts | 0.1229 (0.0156) | 0.1386 (0.0171) | | 0.1360 (0.0171) | |
| ln Contributions | | | 0.1474 (0.0304) | | 0.1468 (0.0304) |
| ln Grants | | | −0.0504 (0.0265) | | −0.0497 (0.0269) |
| ln Likelihood | −3488.6 | −3136.4 | −1418.8 | −3135.2 | −1418.3 |
| No. of observations | 8,594 | 7,483 | 2,891 | 7,483 | 2,891 |

*Note:* The columns report coefficients from logit regressions in which the dependent variable equals one if a 501(c)(3) organization has gross profits greater than $1,000 from sales of inventory items in 1989, and equals zero otherwise. "Assets" equals the gross book value of year-end 1989 assets; "Total Expense" equals the sum of administrative and service expenses; "Total Receipts" equals the sum of contributions and grants. Regression samples exclude organizations with asset sizes below the fifth percentile of the sample, and those observations in which any independent variable (prior to taking logs) is less than $100. All variables are measured in 1989 dollars. Standard errors are in parentheses.

estimated coefficients reported in Table 5 reflect nothing of a causal nature, but instead spurious correlations. If the same unobserved characteristics are also correlated with earning profits from sales of inventory items, then the sign pattern reported in Table 5 should also appear in Table 7—but it does not.

The issue of unobserved organizational characteristics suggests a related but more powerful test of the effect of various independent vari-

**TABLE 8**
***501(c)(3) Organizations with Inventory Sales and Unrelated Business Income, 1989***

| | Unrelated business income dummy = 1 | Unrelated business income dummy = 0 |
|---|---|---|
| Inventory sales dummy = 1 | 379 | 850 |
| Inventory sales dummy = 0 | 1,528 | 5,837 |

*Note:* The table presents numbers of 501(c)(3) organizations in the Form 990 sample with profits from inventory sales and with unrelated business income in 1989. The unrelated business income dummy variable equals one if an organization reports gross unrelated business income of at least $1,000 in 1989, and equals zero otherwise. Similarly, the inventory sales dummy equals one if an organization reports gross profits of at least $1,000 from sales of inventory items in 1989, and equals zero otherwise. The total sample of 8,594 organizations includes only those organizations in the Form 990 sample reporting total expenses and total receipts of over $100 in 1989, and excludes organizations with asset sizes below the fifth percentile of the sample.

ables on whether an organization earns unrelated business income or profits from inventory sales. Table 8 classifies the large sample of 8,594 organizations by whether or not they have unrelated business income and whether or not they have gross profits from sales of inventory items. In this sample, 5,837 organizations report neither type of income, while 379 report both. Of particular interest are the 2,378 organizations reporting either unrelated business income, or gross sales profits, but not both. These 2,378 organizations share the characteristic of being able and willing to generate income with business activity, but they differ in the type of activity they undertake. It is possible to use this sample to estimate the determinants of reporting one type of income and not the other.

Table 9 reports the results of logit regressions in which the dependent variable equals one if an organization has unrelated business income but no sales profits, and equals zero if it has no unrelated business income but positive sales profits. The sample consists of the 2,378 observations with either unrelated business income or profits from sales in 1989.[13]

The results reported in Table 9 are quite consistent with those reported in Tables 5 and 7. Organizations with greater expenses, particularly service expenses, are more likely than others to report unrelated business income rather than profits from sales of "related" inventory. Contributions and government grants reduce the likelihood that an organization will report unrelated business income instead of profits from sales of "related" inventory.

[13] Chamberlain (1980) discusses the properties of the fixed-effects logit estimator in panel estimation, which is adapted to the current cross-sectional application.

**TABLE 9**
***Unrelated Business Income vs. Profits from Inventory Sales by 501(c)(3)s, 1989***

| | Coefficient | | | | |
|---|---|---|---|---|---|
| Term | Regression 1 | 2 | 3 | 4 | 5 |
| Constant | −8.7158 | −8.1152 | −9.0310 | −13.2365 | −14.0390 |
| | (0.5604) | (0.5855) | (0.9342) | (18.9341) | (33.8831) |
| ln Assets | 0.1527 | 0.0514 | −0.3504 | 0.9825 | 0.7440 |
| | (0.0649) | (0.0697) | (0.1153) | (3.5594) | (6.1949) |
| (ln Assets)$^2$ | | | | −0.0558 | −0.0756 |
| | | | | (0.2212) | (0.3743) |
| (ln Assets)$^3$ | | | | 0.0011 | 0.0017 |
| | | | | (0.0045) | (0.0075) |
| ln Total Expense | 0.6021 | | | | |
| | (0.0578) | | | | |
| ln Service Expense | | 0.6622 | 0.9291 | 0.6644 | 0.9244 |
| | | (0.0660) | (0.1083) | (0.0665) | (0.1090) |
| ln Admin. Expense | | 0.0204 | 0.1709 | 0.0198 | 0.1721 |
| | | (0.0519) | (0.0790) | (0.0520) | (0.0791) |
| ln Total Receipts | −0.2152 | −0.2167 | | −0.2172 | |
| | (0.0274) | (0.0296) | | (0.0298) | |
| ln Contributions | | | −0.0682 | | −0.0690 |
| | | | (0.0521) | | (0.0521) |
| ln Grants | | | −0.0835 | | −0.0866 |
| | | | (0.0476) | | (0.0480) |
| ln Likelihood | −1195.6 | −1090.3 | −520.3 | −1090.2 | −520.2 |
| No. of observations | 2,378 | 2,155 | 982 | 2,155 | 982 |

*Note:* The sample is limited to 501(c)(3) organizations with *either* unrelated business income *or* gross profits of at least $1,000 from inventory sales (but not both) in 1989. The columns report coefficients from logit regressions in which the dependent variable equals one if unrelated business income is at least $1,000 and gross profits from inventory sales are less than $1,000, and the dependent variable equals zero if gross profits from inventory sales are at least $1,000 and unrelated business income is less than $1,000. "Assets" equals the gross book value of year-end 1989 assets; "Total Expense" equals the sum of administrative and service expenses; "Total Receipts" equals the sum of contributions and grants. Regression samples exclude organizations with asset sizes below the fifth percentile of the sample, and those observations in which any independent variable (prior to taking logs) is less than $100. All variables are measured in 1989 dollars. Standard errors are in parentheses.

## 5.3 Hospitals

The 501(c)(3) category encompasses an extremely heterogeneous group of non-profit organizations, making it a challenge to generalize about their motives and also making it difficult to rule out the possibility that unobserved heterogeneity is responsible for the patterns that are evident in the regressions. While it is possible to classify non-profit organizations by their primary activities and analyze each organizational type separately, doing so greatly reduces the statistical power of the estimates—and does not solve all of the problems raised by organizational heterogeneity. Since the sample is stratified on asset size, hospitals are sufficiently well represented in the sample (2,173 of the 8,594 observations) to afford reliable estimation of coefficients exclusively from the hospital subsample. The advantage of estimating the regressions on only the hospital subsample is that the resulting coefficients are thereby less likely to reflect any spurious correlations induced by organizational heterogeneity.

Table 10 presents estimated coefficients from regressions that are identical to those reported in Table 5 but that are run only on observations of 501(c)(3) hospitals. The coefficient pattern is remarkably similar to that reported in Table 5. Asset size is positively correlated with reporting unrelated business income, as are total expenses, particularly service expenses. Receipt of contributions and government grants, particularly government grants, is negatively associated with reporting unrelated business income. Non-profit hospitals are the subject of extensive research that is largely devoted to identifying any differences between their behavior and the behavior of for-profit, taxable hospitals.[14] The evidence reported in Tables 5 and 10 suggests that the financial determinants of unrelated business activity by non-profit hospitals are similar to those that affect non-profit organizations outside the health area.

### 5.4 *Implications*

The estimation results are consistent with the interpretation that non-profit organizations prefer not to engage in unrelated business activities, but do so if they feel pressing needs for additional sources of finance. There are other possible interpretations of the evidence, but none that accord consistently with the patterns of behavior evident in the data.

Since the financial constraints facing non-profit organizations are, to one degree or another, under the control of those organizations, it is possible that organizations flush with cash from unrelated business activities spend their cash on program-related services and fail to pursue sources of contributions and government grants. There are two reasons why it is unlikely that the direction of causality works in this way. First, the aggregate figures make it clear that unrelated business income cannot have a major effect on organizational finances even under the best of

[14] See Sloan (1998) for a recent survey.

**TABLE 10**
***Unrelated Business Income of 501(c)(3) Hospitals, 1989***

| | Coefficient | | | | |
|---|---|---|---|---|---|
| Term | Regression 1 | 2 | 3 | 4 | 5 |
| Constant | −13.3222<br>(0.8760) | −12.9689<br>(0.9395) | −13.0232<br>(1.8527) | −67.7922<br>(79.3376) | 42.4897<br>(106.5201) |
| ln Assets | 0.2107<br>(0.1079) | 0.1468<br>(0.1172) | 0.6292<br>(0.2354) | 9.4843<br>(13.5441) | −9.6272<br>(18.0935) |
| (ln Assets)$^2$ | | | | −0.5290<br>(0.7709) | 0.6246<br>(1.0231) |
| (ln Assets)$^3$ | | | | 0.0099<br>(0.0146) | −0.0125<br>(0.0193) |
| ln Total Expense | 0.5910<br>(0.1052) | | | | |
| ln Service Expense | | 0.5561<br>(0.1066) | 0.4314<br>(0.2101) | 0.5615<br>(0.1073) | 0.4277<br>(0.2099) |
| ln Admin. Expense | | 0.0958<br>(0.0513) | −0.1486<br>(0.1033) | 0.0968<br>(0.0515) | −0.1559<br>(0.1038) |
| ln Total Receipts | −0.0903<br>(0.0248) | −0.0900<br>(0.0269) | | −0.0889<br>(0.0272) | |
| ln Contributions | | | −0.0994<br>(0.0558) | | −0.0960<br>(0.0562) |
| ln Grants | | | −0.1997<br>(0.0567) | | −0.1964<br>(0.0572) |
| ln Likelihood | −1310.6 | −1119.0 | −308.0 | −1118.7 | −307.6 |
| No. of observations | 2,173 | 1,845 | 512 | 1,845 | 512 |

*Note:* The sample is limited to non-profit hospitals. The columns report coefficients from logit regressions in which the dependent variable equals one if a 501(c)(3) hospital has unrelated business income of at least $1,000 in 1989, and equals zero otherwise. "Assets" equals the gross book value of year-end 1989 assets; "Total Expense" equals the sum of administrative and service expenses; "Total Receipts" equals the sum of contributions and grants. Regression samples exclude organizations with asset sizes below the fifth percentile of the sample, and those observations in which any independent variable (prior to taking logs) is less than $100. All variables are measured in 1989 dollars. Standard errors are in parentheses.

circumstances; gross unrelated business revenues are just too small for that. Unrelated business activities instead represent one component of what are likely to be more comprehensive efforts to strengthen the finances of organizations in financial need. Second, if income generated by unrelated business activity has a major impact on spending and on the pursuit of contributions and government grants, then it is difficult to understand why the same is not true of income generated by sales of inventory items.

Another possibility is that the estimated coefficients reflect nothing more than reporting behavior on the part of non-profit organizations. Since unrelated business income is self-reported, and since non-profit organizations are virtually never audited by the IRS, organizations have incentives to misreport any otherwise-taxable activities as being either unrelated to charitable purpose, and therefore exempt from tax, or else unprofitable due to large deductions from income. The difficulty with this interpretation is that reporting considerations should generally bias against finding the results presented in Tables 5–10, since organizations with pressing financial needs are the least likely to reveal to the IRS that they earn unrelated business income. To be sure, once gross unrelated business income is reported, threadbare organizations have strong incentives to overstate—or to interpret generously—any available deductions against that income. Indeed, it may be the coincidence of financial need and unrelated business income that is responsible for the (reported) unprofitability of aggregate unrelated business activity in the aggregate statistics.

The evidence suggests that the burden of the UBIT falls most heavily on organizations with the greatest financial need. There is more than one way to view such incidence. One view is that subjecting such organizations to the UBIT hinders their attempts to obtain needed funds to further their exempt purposes. Another view is that organizations with great financial needs are those that spend beyond their means or are unable to attract public contributions or government grants. Evaluations of the UBIT turn largely on the organizational attributes that are associated with earning unrelated business income, and about these we have only indirect evidence.

## 6. CONCLUSION

The Unrelated Business Income Tax raises very little direct revenue for the federal government, but serves the function of discouraging most non-profit organizations from undertaking unrelated business activity. The evidence from information returns filed with the IRS suggests that 501(c)(3) organizations are generally reluctant to engage in unrelated business activity, typically doing so when pressed by strong financial needs. This reluctance on the part of 501(c)(3) organizations reflects their own perceptions of the costlines of diverting organizational focus from charitable activities, as well as the cost of possibly alienating employees, contributors, and other supporters. The general unwillingness of non-profit organizations to undertake unrelated business activity is an important consideration in evaluating whether the UBIT is necessary in order to prevent "unfair" competition between non-profit and for-profit firms. In addition, the inability of non-profit organizations to deduct from taxable income the special organizational costs they incur in earning unrelated business income implies that the UBIT may reduce the efficiency of resource allocation.

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