OPTIMAL TAX STRATEGIES FOR SMALL BUSINESSES AND PROFESSIONAL PRACTICES

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ABSTRACT

Some of the principal causes of failure among the twenty million small businesses in the United States are poor financial management and overpayment of taxes. This particular paper describes how the small business owner and professional can minimize federal and state income taxes consistent with a company's cash flow budget. The authors characterize the tax planning problem as a 0-1 knapsack problem and employ PROC LP to optimize the overall tax burden. The model is developed using tax law from the Internal Revenue Code of 1986 and all modifications since then. These tax planning strategies have been discussed on the evening news on KMGH-TV, the CBS affiliate station in Denver, Colorado.

INTRODUCTION

Existing organizational forms found in the United States today are Sole Proprietorship (70.4%), Partnerships (10.1%) and Corporations (19.5%) [1]. More specifically, this paper describes a methodology for reducing income taxes that applies to Subchapter S Corporations, Limited Liability Companies, Partnerships and Sole Proprietorships. As such, the authors estimate that their approach applies to 90% of all existing small businesses and professional practices.

To demonstrate the technique, consider a family owned Sole Proprietorship that is on a cash basis method of accounting. We assume the owner's 1991 marginal tax brackets are: Federal (28%), State (5%) and FICA (15.3%). We further assume that his projected 1991 schedule C earnings are $53,000 before tax planning and that his projected cash flow budget for equipment acquisition, retirement programs, expanding the business, etc., is $26,250. Note further that the spouse has $35,000 of W-2 wages and the taxpayer plans on filing MFJ with itemized deductions. To keep the discussion simple, we will ignore any Alternative Minimum Tax considerations.

The now classic words of Judge Learned Hand in Commissioner vs. Newman (1947) reflect the true values that the small businessman should have in implementing an aggressive but legal tax planning program [2]:

> Over and over again courts have said that there is nothing sinister in so arranging one's affairs as to keep taxes as low as possible. Everybody does so, rich or poor; and all do right, for nobody owes any public duty to pay more than the law demands: taxes are enforced extractions, not voluntary contributions. To demand more in the name of morals is mere cant.

THE MODEL

For ease of exposition, assume that the authors meet with the client in September of 1991 to discuss his year end business needs and tax planning strategies. After a careful discussion of his personal and business goals, let us assume that we develop the following list of 20 tax strategies to be implemented by the client by December 31, 1991.

YEAR END TAX STRATEGIES

(1) Gifts and awards for employees
(2) Buy new vehicle for business
(3) Make 13 mortgage payments on house
(4) Fund a Keogh retirement plan
(5) Make cash contribution to the church
(6) Pay all state income taxes
(7) Host employee Christmas party
(8) Buy office equipment as needed
(9) Give Christmas gifts to all important clients
(10) Put teenage son on payroll
(11) Pay for tax return
(12) Replace carpet in the rental unit
(13) Pay January office rent
(14) Take capital loss on stock
(15) Buy theatre tickets to entertain clients
(16) Pay all misc business expenses
(17) Make business/personal trip
(18) Pay off outstanding medical bills
(19) Increase advertising budget
(20) Purchase SE health insurance

In reality, this roster of tax strategies can typically extend from 40 to 50 tax strategies depending upon the clients cash flow budget. In developing this list, we discuss with the client the various methods of depreciation, luxury car rules, business use of automobiles, amortization schedules, types of retirement programs, travel rules, capital loss restrictions, 80% rules on meals and entertainment, etc. The next step in model development is to examine the impact that these strategies have on the taxpayers' cash flow budget and tax position. The following table outlines the cost and benefit of each tax strategy and the particular tax schedule that it impacts:

IMPACT OF STRATEGIES

Strategy	Schedule	Cost	Benefit
1	C	$ 800	$ 361
2	C	3,200	1,634
3	A	1,200	356
4	1040	6,216	2,051
5	A	1,000	330
6	A	900	297
7	C	350	158
8	C	4,500	2,032
9	C	750	339
10	C	3,400	1,535
11	C	400	181
12	E	1,500	71
13	C	475	214
14	D	0	990
15	C	525	237
16	C	3,700	1,671
17	C	2,750	903
18	A	1,725	0
19	C	1,400	632
20	1040	3,000	248
(Totals)		$37,791	$14,240

For example, strategy #14 involves Schedule D, zero cash flow and results in $990 of tax benefit. Similarly, strategy #18 impacts the medical portion of Schedule A, results in a cost of $1,725 and has zero tax benefit. The rental property involved with strategy #12 uses MACRS depreciation and saves the taxpayer $71 on the Schedule E. In a similar fashion, strategy #1 costs $800 on the Schedule C but saves $361 in taxes. The bottom line is that if the taxpayer has $37,791 of cash flow budget, we could save him $14,240 of federal and state income taxes. The problem is that the taxpayer has only $26,250 of planning money available and therefore is forced to choose among the 2^{20} = 1,048,576 combinations available. The problem becomes even more acute if we're talking about 40 to 50 tax strategies to implement.

To shed more light on the problem, the authors employ the linear optimizing model described by Wagner [3]. In this capital budgeting problem, the objective function maximizes overall tax savings subject to a single cost constraint that is limited by the size of the overall cash flow budget. The 20 decision variables take on the values of 0 or 1 depending upon whether a particular strategy is implemented or not. Using PROC LP in the SAS/OR users guide yields an optimal solution as follows [4]:

OPTIMAL SOLUTION

- Maximum tax savings - $12,151
- Cash expenditures - $26,241

OPTIMAL TAX STRATEGIES

- Gifts and awards for employees
- Buy new vehicle for business
- Fund a Keogh retirement plan
- Make cash contribution to the church
- Host employee Christmas party
- Buy office equipment as needed
- Give Christmas gifts to all important clients
- Put teenage son on payroll
- Pay for tax return
- Take capital loss on stock
- Buy theatre tickets to entertain clients
- Pay all miscellaneous business expenses
- Increase advertising budget

The optimal budget allocation by schedule breaks down as follows:

Schedule A	3.81%
Schedule 1040	23.69%
Schedule C	72.50%

The reader will find it instructive to run a cash budget sensitivity analysis that plots tax savings vs. overall cash flow. Since the tax return is essentially a linear device for fixed marginal tax brackets, the client can easily plan where he wants to go with variations in overall cash flow budget. In closing, the authors would like to point out that this 0-1 knapsack problem can be solved by Dynamic Programming [3] or by the Slippery Algorithm [5]. To deal with absolute must strategies and budget cuts, the accountant can easily employ weights in the linear objective function.

In our experience, characteristics of fear, greed and status all motivate clients to apply this particular methodology to their overall tax situation. By comparison, the Operations Research portion of the problem is really much simpler than the tax code itself. As such, General Business Services has been able to achieve strategic advantage and applicational success in the marketplace. Conversely, our clients have been able to achieve the best disposition of their tax planning dollars as well.

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