HEINONLINE

EFFICIENT TAXATION OF MIXED PERSONAL AND BUSINESS EXPENSES

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INTRODUCTION

Many business expenditures also produce a personal benefit. Some of these, such as the cost of luxury office furniture or a corner office with an ocean view, are deductible by the employer and nontaxable to the employee.[1] Others, such as the costs of business clothing (other than uni-

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   1. In general, Internal Revenue Code § 162 allows an employer to deduct all ordinary and necessary expenses incurred in carrying on any trade or business during the taxable year. I.R.C. § 162 (1988 & Supp. V 1993). Since a paid employee's performance of services constitutes a trade or business, an employee also can deduct such non-reimbursed expenditures. Treas. Reg. § 1.162-17(a) (1993). Unlike employers, however, employees only can deduct such expenses to the extent that they exceed two percent of their adjusted gross income. I.R.C. § 67(a) (1988). Any benefits

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forms) or most commuting expenses, are not deductible at all.[2] Still others, such as the cost of business meals, are deductible in part.[3]

A mixed personal and business expenditure is efficient if its combined personal and business benefits exceed its costs.[4] The ideal tax regime would encourage mixed expenditures that are efficient and discourage those that are inefficient. Early commentators noted that this goal can be achieved by taxing individuals on the personal value that they receive from the mixed expenditure.[5] It often is difficult, however, to determine that value. For some individuals, for example, a business trip to New York is a welcome opportunity to check out the jazz clubs. For others, it is an unwelcome intrusion into their family life.

Taxing the personal value of mixed expenditures is not, however, the only method of encouraging efficient outlays. This Article discusses two other methods of taxation that promote efficient expenditures. The first

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that an employee may accrue as a result of these expenses generally are treated as non-taxable working condition fringe benefits. I.R.C. § 132(a)(3), (d) (1988 & Supp. V 1993).

The cost of business assets with a useful life greater than one year generally must be capitalized and deducted over the useful life of the asset rather than currently deducted. *Id.* § 167.

2. The cost of acquiring and maintaining a uniform is not deductible by an employee unless wearing the uniform is a condition of employment and the uniform cannot be adapted for general or continued use as regular clothing. Pevsner v. Commissioner, 628 F.2d 467, 469 (5th Cir. 1980). An employer, on the other hand, can deduct the cost of a uniform for an employee irrespective of whether it can be worn as regular clothing. I.R.C. § 162(a) (1988 & Supp. V 1993). However, if an employee is allowed to keep a uniform that is usable outside of work, the transfer is considered compensation and therefore is taxable to the employee. I.R.C. § 61(a) (1988).

Commuting costs incurred between a taxpayer's home and her principal place of business generally are non-deductible personal expenses. Treas. Regs. §§ 1.162-2(e), 1.212-1(f) (1993); Mitchell v. Commissioner, 42 T.C. 953, 970 (1964). Qualified parking, certain transit passes, and employer-provided transportation services are deductible by the employer and tax-free to the employee. I.R.C. § 132(f)(1) (Supp. V 1993).

3. The amount allowable as a deduction for meals or entertainment expenses that otherwise are deductible by the employer and tax-free to the employee cannot exceed 50% of the cost of such expenditures. I.R.C. § 274(n) (1988 & Supp. V 1993).

4. The terms "personal value" and "business value" are defined in Part I.A *infra.* "Efficiency" is defined in Part I.B *infra.*

5. The basic ideas underlying the current analysis of mixed expenditures are set forth in separate articles by Professor William Klein and Professor Daniel Halperin published in the late 1960s and early 1970s. These works discuss with clarity the central issues surrounding mixed expenditures and offer many important insights on the ideal taxation of such outlays. Daniel I. Halperin, *Business Deduction for Personal Living Expenses: A Uniform Approach to an Unsolved Problem,* 122 U. PA. L. REV. 859 (1974); William A. Klein, *The Deductibility of Transportation Expenses of a Combination Business and Pleasure Trip—A Conceptual Analysis,* 18 STAN. L. REV. 1099 (1966) [hereinafter Klein, *Transportation*]; William A. Klein, *Income Taxation and Commuting Expenses: Tax Policy and the Need for Nonsimplistic Analysis of "Simple" Problems,* 54 CORNELL L. REV. 871 (1969); William A. Klein, *Tax Deductions for Family Care Expenses,* 14 B.C. INDUS. & COM. L. REV. 917 (1973).

method taxes individuals on the amount that the cost of a mixed expenditure exceeds its business value. The second method divides a mixed expenditure into taxable and nontaxable parts according to the relative size of the personal and business value of the expenditure.

This Article compares these two methods of encouraging efficient mixed expenditures with the traditional solution of taxing the personal value of the expenditure. The conditions under which each method produces efficient results are explained and the informational requirements and distributional effects of each method are discussed.

I. THE PROBLEM OF MIXED PERSONAL AND BUSINESS EXPENDITURES

A. Personal and Business Values

Suppose a doctor attends a medical convention in Hawaii. The doctor spends each morning learning the latest treatment methods and spends each afternoon relaxing on the beach. Or suppose that a lawyer furnishes his office with a large mahogany desk and filing cabinet, plush leather chairs, and attractive art work. The new appointments may improve the lawyer's efficiency at work and impress clients, but they also make his work more enjoyable.

Each of the above outlays has both a personal value and a business value. The personal value is the dollar amount that the recipient of the personal benefit would be willing to pay to receive it. The business value is its expected financial value to the business making the expenditure, apart from any financial benefit arising from the personal value of the expenditure. The business value of an expenditure could represent either additional income or reduced costs of doing business. In either case, the business value increases the taxable profits of the business.

Suppose, for example, that an employer sponsors a three-day company retreat at a resort hotel. The retreat includes business presentations each day, but allows plenty of time for golf, tennis, banquets, and other personal activities as well.

If employee Alice is indifferent between (1) attending the retreat and (2) working her normal work day and receiving a cash bonus of $200, then the personal value of the retreat to Alice is $200.[6] The total personal value of the retreat is the sum of the personal values of all of the participants.

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6. Under current law, Alice would prefer the retreat because the personal benefit of the retreat would be received tax-free, but the $200 cash bonus would be taxed. In calculating the cash value of a personal benefit, it is assumed that the benefit and the cash are taxed equally.

A business gains financially from expenditures that produce a personal value to its employees. The reason is simple. Employees will work for less if their job is enjoyable. In this example, Alice is indifferent between receiving a $200 cash bonus and attending the retreat. Thus, the employer can pay Alice $200 less in salary if she is permitted to attend the retreat.[7]

An expenditure with both a personal and business value can be viewed as an expenditure with a purely business value combined with a cash payment equal to the personal value of the expenditure. Thus, a retreat at a luxury resort with free tennis and golf could be viewed as a meeting at an economy hotel with no recreational facilities, plus cash payments to the attendees equal to the amount they would be willing to pay for the luxury upgrade.[8]

B. Efficient Taxation of Mixed Expenditures

A mixed expenditure is efficient if, in a no-tax world, the cost of the expenditure is less than the sum of its business and personal values. More formally, an expenditure is efficient if $C < B + P$, where C is the pre-tax cost, B is the pre-tax business value, and P is the pre-tax personal value.[9] Since mixed expenditures, by definition, are outlays that produce a personal as well as a business value, it will be assumed that $P \geq 0$.[10] In a world with taxes, an individual will make a mixed expenditure if its after-tax cost is less than the sum of its after-tax business value and its after-tax personal value. Under an ideal tax structure, only expenditures that are efficient on a pre-tax basis will be made.

If mixed expenditures are treated as purely business outlays, inefficient results may occur. If an expenditure is treated as purely business, the cost of the expenditure is deductible and the business value of the expenditure,

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7.   In most cases there will be no immediate reduction of an employee's compensation to reflect the personal value of his working conditions. Nevertheless, the personal value of an employee's working conditions generally will be reflected in his compensation. Jobs that are viewed as pleasant are compensated less well than jobs that require equal skill but are less enjoyable.

8.   Some of the business benefits of an expenditure may be impossible to purchase without producing personal benefits. Meeting rooms with comfortable chairs, spacious tables, and good acoustics, for example, are likely to make a meeting both more productive and more pleasant for the participants.

9.   If $C = B + P$, an individual will be indifferent to making an expenditure. This Article assumes that no expenditure will be made in such case.

10.   The assumption that the personal value is not negative is consistent with the definition of mixed expenditures as business outlays that also have a personal consumption value. P is permitted to equal zero because doing so increases the generality of the results of the analysis.

in the form of increased profits, is taxed. In such a case, an expenditure will be made if

$$(1-r)C < (1-r)B + P$$

or, equivalently if

$$C < B + P/(1-r),$$

where r is the tax rate.[11] An inefficient expenditure will be made if

$$P < C - B < P/(1-r).$$

Suppose, for example, that in a no-tax world a doctor believes that attending a medical convention in Hawaii has a business value of $2,500 and a personal value of $2,000. If the cost of the attending the convention is $5,000, the doctor will not attend because the $5,000 cost exceeds the $4,500 benefit.

Suppose, however, that the doctor can deduct the cost of the convention, but is taxed only on its business value. If the doctor is in the 40% marginal tax bracket, the after-tax cost of attending the convention is $3,000,[12] the after-tax business value is $1,500,[13] and the (tax-free) personal value is $2,000 for a total after-tax benefit of $3,500.[14] Now the doctor will attend the convention because the after-tax cost of $3,000 is less than the after-tax benefit of $3,500. This is inefficient because the $5,000 pre-tax cost of attending the convention exceeds its $4,500 pre-tax value.

It is well-recognized that the failure to tax the personal consumption element of mixed expenditures may lead to inefficient expenditures.[15] The traditional solution is to tax the personal value of the expenditure to the person who receives that value.[16] The next Part of this Article discusses this traditional solution and then explores two different tax regimes that produce efficient expenditures.

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11. For simplicity, it will be assumed that the tax rate r is the same for both the individual or firm that is making the mixed expenditures and for the individual enjoying the personal value from the expenditure. The results of the analysis are essentially unchanged, however, if this assumption is weakened.

The after-tax cost of the expenditure is $(1-r)C$. The after-tax business value is $(1-r)B$. The untaxed personal value is P. The expenditure will be made if

$$(1-r)C < (1-r)B + P.$$

This simplifies to

$$C < B + P/(1-r).$$

12. .6 × $5,000 = $3,000.

13. .6 × $2,500 = $1,500.

14. $1,500 + $2,000 = $3,500.

15. A formal proof of the efficiency of taxing fringe benefits at the employee's marginal willingness to pay is presented in Avery Katz & Gregory Mankiw, *How Should Fringe Benefits Be Taxed?*, 38 NAT'L TAX J. 37, 39–40 (1985).

16. *See, e.g.*, Halperin, *supra* note 5, at 862–64.

II. THREE METHODS OF TAXING MIXED EXPENDITURES

A. The Personal Consumption Method

Under the personal consumption (PC) method of taxing mixed expenditures, the cost of a mixed expenditure is deductible and both its business value and its personal value are taxable.[17] Equivalently, if an expenditure is made by the same individual who will enjoy the consumption, then a business deduction is denied to the extent that the expenditure produces a personal value to the individual.[18]

Under the PC method, a mixed expenditure will be made if

$$(1-r)C < (1-r)B + (1-r)P.$$

This immediately simplifies to the efficiency condition of $C < B + P$. The PC method, therefore, encourages efficient mixed expenditures.

Consider again a doctor in the 40% marginal tax bracket who is deciding whether to attend a medical convention costing $5,000. The doctor believes that the convention has a business value of $2,500 and a personal value of $2,000.

The cost of the convention is deductible, so the after-tax cost of the convention is $3,000.[19] The after-tax business value of the convention is $1,500[20] and the after-tax personal value of the convention is $1,200,[21] so the total after-tax value is $2,700.[22] Since the after-tax cost of $3,000 is greater than the after-tax benefit of $2,700, the expenditure will not be made. This is efficient because the pre-tax cost of $5,000 exceeds the pre-tax benefits of $4,500.

The PC method of taxing mixed expenditures is attractive because it produces efficient expenditures. It is also easy to explain. Implementation of the PC method, however, may be difficult. The government has no direct way of knowing the personal value that an expenditure has to a particular individual. Moreover, if individuals are taxed on the personal

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17. In the employer-employee case, the total cost of the expenditure would be deductible as a business expense, the business value would be taxed as profits earned by the employer and the personal value would be taxed as salary to the employee.

18. Halperin's discussion, for example, assumes that the expenditure is being made by the same individual who will enjoy the benefit. Halperin, *supra* note 5. The analysis is the same under either assumption.

19. The after-tax cost is $(1-r)C$. .6 × $5,000 = $3,000.

20. The after-tax business value is $(1-r)B$. .6 × $2,500 = $1,500.

21. The after-tax personal value is $(1-r)P$. .6 × $2,000 = $1,200.

22. $1,500 + $1,200 = $2,700.

value of mixed expenditures, they will have a powerful incentive to claim that the expenditure provides them with no personal benefit.

The informational problem, however, is not always insuperable. For many mixed expenditures, reasonable estimates of the personal value may be possible. It would be useful, nonetheless, to discover efficient methods of taxing mixed expenditures that do not require knowing their personal value. Two such alternative methods are explored below.

B.   The Excess Cost Method

The excess cost (EC) method treats the excess of the cost of a mixed expenditure over its business value as taxable personal income. Thus, under the EC method the business value of an expenditure and the excess of its cost over its business value are taxable. As in the PC method, the total cost of the expenditure is deductible.

If an expenditure is made by the same individual who enjoys the personal benefit, an equivalent result can be reached by limiting the deduction for the expenditure to the lesser of its cost or its business value.

Under the EC method, an expenditure will be made if
$$(1-r)C < (1-r)B + P - rE,$$
where $E = C-B$ for $C > B$, and $E = 0$ for $C \leq B$.

The EC method always produces efficient expenditures. To see this, note that if $C > B$, an expenditure will be made if
$$(1-r)C < (1-r)B + P - r(C-B).$$
This simplies to the efficiency condition $C < B + P$.[23]

On the other hand, if $C < B$, an expenditure will be made if
$$(1-r)C < (1-r)B + P - r(0).$$
This simplifies to
$$C < B + P/(1-r).$$
Since the cost is less than the business value $(C < B)$ and the personal value is positive $(P \geq 0)$, an efficient expenditure will be made.

To illustrate, consider again a doctor in the 40% tax bracket who is deciding whether to attend a medical convention with a cost of $5,000, a business value of $2,500, and a personal value of $2,000. As in the PC method, the after-tax cost of the expenditure is $3,000 and the after-tax business value is $1,500.[24]

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23. $(1-r)C < (1-r)B + P - r(C-B)$. $C-rC < B-rB + P - rC + rB$. $C < B + P$.
24.   *See supra* notes 19–20.

The cost of the convention exceeds its business value by $2,500. The doctor is in the 40% bracket, so this excess cost is subject to a tax of $1,000.[25] The pre-tax personal value of the expenditure is $2,000, so the after-tax personal value is $1,000.[26]

The total after-tax value of the convention under the EC method, therefore, is $2,500.[27] This is $500 less than the after-tax cost of $3,000, so the expenditure will not be made. This is efficient because the pre-tax cost of $5,000 exceeds the pre-tax benefit of $4,500.

The EC method also produces efficient results if the total benefits exceed the cost of the expenditure. Suppose that the cost of attending the convention is only $4,000, $500 less than the pre-tax benefits. Now the after-tax cost of the expenditure is $2,400.[28] The after-tax business value again is $1,500.[29]

The cost of the convention exceeds its business value by $1,500. This excess cost is subject to a tax of $600.[30] The pre-tax personal value again is $2,000, so the after-tax personal value is $1,400.[31] Thus the total after-tax value is $2,900.[32] This is $500 greater than the $2,400 after-tax cost, so the expenditure will be made.

C. The Allocation of Cost Method

The allocation of cost (AC) method allocates the cost of a mixed expenditure into business and personal components in proportion to the relative size of the business and personal values produced by the expenditure.[33] If, for example, the business value of a mixed expenditure is twice as large as the personal value, then two-thirds of the cost of the expenditure is allocated to the business value and one-third of the cost is allocated to the personal value. The portion of the cost that is allocated to the personal

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25. The tax on the excess cost is $r(C - B)$, for $C > B$. $.4 \times (\$5,000 - \$2,500) = \$1,000$.
26. $\$2,000 - \$1,000 = \$1,000$.
27. $\$1,500 + \$1,000 = \$2,500$.
28. The after-tax cost is $(1-r)C$. $.6 \times \$4,000 = \$2,400$.
29. *See supra* note 20.
30. The tax on the personal value is $(r)P$. $.4 \times \$1500 = \$600$.
31. $\$2,000 - \$600 = \$1,400$.
32. $\$1,500 + \$1,400 = \$2,900$.
33. Halperin argues that the AC method is satisfactory only if the total of the business and personal values is greater than the cost of the expenditure. He reasons that if the total value is greater than the cost, then a portion of the personal value would go untaxed. Halperin, *supra* note 5, at 886. If the AC method is adopted, however, an expenditure will not be made if the business and personal values are less than the cost, so that the condition under which Halperin approves of the AC method will not occur.

value is taxable personal consumption. Under the AC method, the cost of an expenditure is deductible and the business value and that portion of the cost that is allocable to the personal value is taxed.

More formally, the portion of an expenditure's cost that is taxed as personal consumption is $P/(B+P)$ and the tax owed is $rCP/(B+P)$. Under the AC method an expenditure is made if

$$(1-r)C < (1-r)B + P - rCP/(B+P).$$

This simplifies to

$$C < [(B+P)^2 - Br(B-P)]/[B(1-r)+P].$$

The AC method always produces efficient expenditures. To see this, note that if $C = B + P$, then the left and right sides of the above inequality are equal.[34] This shows that if the pre-tax cost is equal to the pre-tax benefits, then the after-tax cost also is equal to the after-tax benefits. If the cost, C, is lower than the pre-tax benefits, then the expenditure is efficient; if the cost is higher, then the expenditure is inefficient. Efficient results are achieved under the AC method since the expenditure will be made if and only if $C < B + P$.

To illustrate, suppose an individual in the 40% bracket is considering a $1,000 expenditure that has a $900 business value and a $300 personal value. Twenty-five percent of the total value of the expenditure is due to its personal value,[35] so 25% of the $1,000 cost, or $250, is taxable as personal consumption. Thus, the $900 business value and the $250 personal portion of the cost are taxable. The $1,000 cost is deductible, so at a tax rate of 40%, the after-tax cost of the expenditure is $600,[36] the after-tax business value is $540,[37] and the after-tax personal value is $200.[38]

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34. If $C = B + P$, then

$$C < B + P/(1-r) - rCP/((B+P)(1-r))$$
$$=$$
$$C < B + P/(1-r) - rCP/(C(1-r))$$
$$=$$
$$C < B + P/(1-r) - rP/(1-r)$$
$$=$$
$$C < B + (P - rP)/(1-r)$$
$$=$$
$$C < B + P = C < C.$$

35. Total value is $B + P = \$900 + \$300 = \$1,200$. $\$300/\$1200 = .25$.

36. The after-tax cost is $(1-r)C$. $.6 \times \$1,000 = \$600$.

37. The after-tax business value is $(1-r)B$. $.6 \times \$900 = \$540$. After-tax personal value is $\$300 - (.4 \times \$250) = \$200$.

38. The after-tax personal value is

$$P - rPC/(B + P).$$

$\$300 - [.4(\$300)(\$1,000)]/(\$900+\$300) = \$300 - \$100 = \$200$.

Since the total after-tax value of $740[39] exceeds the $600 after-tax cost, the expenditure will be made. Making the expenditure is efficient because the pre-tax cost of $1,000 is less than the pre-tax value of $1,200. It is easy to show that the AC method also will discourage an expenditure if its pre-tax cost is greater than the sum of its pre-tax personal and business values.[40]

D. Differences Among the Three Methods

Although the PC, EC, and AC methods each produce efficient expenditures, they differ in two important respects.

First, the three methods have different informational requirements:

i.   The PC method requires knowing the personal value of an expenditure, but not the business value.

ii. The EC method requires knowing the business value of an expenditure, but not the personal value.

iii. The AC method requires knowing the ratio of the personal value to the business value of an expenditure, but does not require knowing the absolute size of either value.

Second, the three methods have different distributional effects. Each method permits the deduction of the cost of the expenditure and taxes the full business value, but the amount of taxable personal income differs:

i.   The PC method taxes the entire personal value or P.

ii. The EC method taxes the excess of the over the business value or $C - B$.

iii. The AC method taxes the portion of the cost allocated to personal consumption or $CP/(B+P)$.

The total tax on mixed expenditures is highest under the PC method, next highest under the AC method, and lowest under the EC method.

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39. $540 + $200 = $740.

40. Suppose, for example, that the pre-tax cost is $1,500, the pre-tax business value is $900, and the pre-tax personal value is $300. The personal portion of the cost is .25 × $1,500 or $375. The $1,500 cost is deductible while the $900 business value and the $375 personal portion of the cost are taxable. If the tax rate is 40%, the personal portion of the cost is subject to a tax of $150. The after-tax cost of the expenditure is $900, the after-tax business value is $540 and the after-tax personal value is $150. The total after-tax value of the expenditure is $690. This is less than the after-tax cost of $900, so the expenditure will not be made. This is efficient because the pre-tax cost of $1,500 is greater than the total pre-tax value of $1,200.

III. CATEGORIZING MIXED EXPENDITURES

A. Seven Types of Expenditures

The possible mixtures of business and personal motives for an expenditure can be divided into seven categories. Borrowing from the terminology of Professor Daniel Halperin, these categories will be called All Business, Enough Business, Neither Alone, Either Alone, Sufficient Pleasure, Solely Pleasure, and Insufficient Together.[41] These categories are defined as follows:

    i.   *All Business:* The business value of the expenditure is greater than its cost and the expenditure has no personal value.[42] $B > C.$ $P = 0.$

    ii.   *Enough Business:* The business value of the expenditure is greater than its cost and the expenditure has a personal value greater than zero, but less than the cost of the expenditure.[43] $B > C.$ $0 < P < C.$

    iii.   *Neither Alone:* The business value and the personal value of the expenditure each are less than its cost, but the sum of the business value and the personal value is greater than its cost.[44] $B < C.$ $P < C.$ $B + P > C.$

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41. The first six categories are those introduced in Halperin, *supra* note 5, at 867–69. I have added a seventh category, Insufficient Together, to include expenditures that were made, perhaps for tax reasons, even though the sum of the personal and business values is less than the cost. The definitions here generally are consistent with those of Halperin, but may not be identical.

42. Attending a medical convention is All Business if the doctor believes (1) that the skills she will obtain from attending the convention will justify its cost, even if she gets no pleasure from attending; and (2) that she will not enjoy the convention and would pay nothing to attend if there were no business reason to do so. If the cost of attending the convention is $5,000, a decision to attend is All Business if the business value of attending is $6,000 and the personal value is $0.

43. Attending a medical convention is Enough Business if the doctor believes (1) that the skills she will obtain from attending the convention will justify its cost, even if she gets no pleasure from attending the convention; and (2) that she will enjoy the convention, but that the cost of attending exceeds the amount she would be willing to pay if there were no business reason to attend. If the cost of attending the convention is $5,000, a decision to attend is Enough Business if the business value of attending is $6,000 and the personal value is $3,000.

44. Attending a medical convention is Neither Alone if the doctor believes (1) that the combined value of the skills she will develop and the value of the enjoyment she will obtain from attending will exceed the cost; but (2) the cost will not be justified by either the training alone or the enjoyment alone. If the cost of attending the convention is $5,000, a decision to attend is Neither Alone if the business value of attending is $3,000 and the personal value is $3,000.

iv. *Either Alone*: The business value and the personal value of the expenditure are each greater than their cost.[45] $B > C$. $P > C$.

v. *Sufficient Pleasure*: The personal value of the expenditure is greater than its cost and the expenditure has a business value greater than zero, but less than the cost of the expenditure.[46] $P > C$. $0 < B < C$.

vi. *Solely Pleasure*: The personal value of the expenditure is greater than its cost and the expenditure has no business value.[47] $P > C$. $B = 0$.

vii. *Insufficient Together*: The sum of the business value and the personal value is less than its cost.[48] $B + P < C$.

B. Taxing Different Categories of Expenditures

Table 1 summarizes the taxation of these seven categories of expenditures under the PC, EC, and AC methods.[49]

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45. Attending a medical convention is Either Alone if the doctor believes that the value of the skills she will develop and the value of the enjoyment she will obtain each will exceed the cost of attending. If the cost of attending the convention is $5,000, a decision to attend is Either Alone if the business value of attending is $6,000 and the personal value is $6,000.

46. Attending a medical convention is Sufficient Pleasure if the doctor believes (1) that the enjoyment she will obtain from attending the convention will justify its cost, even if she gets no business value from attending the convention; and (2) that she will obtain a business value from the convention, but that the cost of attending exceeds the amount she would be willing to pay if there were no personal reason to attend. If the cost of attending the convention is $5,000, a decision to attend is Sufficient Pleasure if the personal value of attending is $6,000 and the business value is $3,000.

47. Attending a medical convention is Solely Pleasure if the doctor believes (1) that the enjoyment she will obtain from attending the convention will justify its cost, even if she obtains no business value from attending; and (2) that she will obtain no business value from the convention and would pay nothing to attend if there were no personal reason to do so. If the cost of attending the convention is $5,000, a decision to attend is Solely Pleasure if the personal value of attending is $6,000 and the business value is $0.

48. Attending a medical convention is Insufficient Together if the doctor believes that the combined value of the skills she will develop and the value of the enjoyment she will obtain from attending will be less than the cost of attending. If the cost of attending the convention is $5,000, a decision to attend is Insufficient Together if the business value of attending is $2,000 and the personal value is $2,000.

49. For Neither Alone and Sufficient Pleasure the amount subject to taxation, $B + (C-B)$ simplifies to C. It is useful, however, to view the two components separately. First, each component may be taxed to a different person if the expenditure occurs in an employer-employee context. The employer will be taxed on B and the employee will be taxed on $C - B$. Second, the business value taxed to the employer is not separately calculated, but is simply reflected in the overall profits of the business. The excess value, $C - B$, on the other hand, is calculated by estimating the business value of the expenditure.

Table 1.

Category	Amount Taxed		
	PC Method	EC Method	AC Method
All Business	B	B	B
Enough Business	B + P	B	B + CP/(B+P)
Neither Alone	B + P	B +(C−B)	B + CP/(B+P)
Either Alone	B + P	B	B + CP/(B+P)
Sufficient Pleasure	B + P	B + (C−B)	B + CP/(B+P)
Solely Pleasure	P	C	C
Insufficient Together	—	—	—

The results are the same under each method for All Business and Insufficient Together. For All Business, the business value is taxed and there is no taxable personal value. For Insufficient Together, nothing is taxed because the expenditure will not be made.

For Solely Pleasure, the amount taxed is the same under the EC and AC methods, but is higher under the PC method if the consumption value of the mixed expenditure is greater than its cost.

For each of the mixed expenditures—Enough Business, Neither Alone, Either Alone, and Sufficient Pleasure—the amount taxed as personal value is highest under the PC method, next highest under the AC method, and lowest under the EC method. It is not obvious, however, that one method is fairer than another.

Consider, for example, the case of employer-provided office decoration. Suppose that the cost of the office decoration is $500, the business value is $600 and the personal value to the employee is $200. Under the PC method, the employee would be taxed on the $200 personal value she receives from the office decoration. Under the EC method the employee would pay nothing because the business value alone is greater than the cost of the decoration.

It might be argued that the PC method is fairest because it taxes the employee who receives the office decoration the same amount as an individual with an undecorated office who receives $200 in cash. On this view, "horizontal equity" is violated if an employee receiving cash is taxed

more heavily than an employee receiving office decorations with an equiva-
lent personal value.

This sort of argument, however, fails to take into account the capital-
ization of the benefit of the tax-free receipt of the office decoration into the
salary paid.[50] As noted earlier, employers who provide an attractive work-
ing environment will be able to attract employees at a lower salary than
employers who provide dismal working conditions.[51] The reduced wages
will reflect not only the value of the more pleasant working environment,
but also the fact that the benefit is received tax-free. After salary adjust-
ments are taken into consideration, an employee receiving a tax-free bene-
fit will be no better-off than one who receives taxable cash instead.[52]

IV. PRIMARY PURPOSE AND OTHER ALL-OR-NOTHING METHODS OF TAXING MIXED EXPENDITURES.

Under the primary purpose (PP) method of taxing mixed expenditures,
an expenditure is treated as purely business if its primary purpose is business
and purely personal if its primary purpose is personal.[53]

If an expenditure is primarily business, only the business value is taxed.
The after-tax value of an expenditure that is primarily business is

$$(1-r)B + P.$$

If an expenditure is primary personal, the personal value is taxed and is
assumed to equal the entire cost of the expenditure. The business value of
the expenditure, however, also is taxed as it is reflected in increased profits

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50.   The classic analysis of the capitalization of tax benefits is contained in Boris I. Bittker,
Equity, Efficiency, and Income Tax Theory: Do Misallocations Drive Out Inequities?, 16 SAN DIEGO
L. REV. 735 (1979).

51.   *See supra* note 7.

52.   An extended discussion of the problems with traditional notions of tax fairness is
beyond the scope of this paper. For my views on tax norms in general and the horizontal equity
norm in particular, see Thomas D. Griffith, *Should "Tax Norms" Be Abandoned? Rethinking Tax
Policy Analysis and the Taxation of Personal Injury Recoveries*, 1993 WIS. L. REV. 115; Thomas D.
Griffith, *Theories of Personal Deductions in the Income Tax*, 40 HASTINGS L.J. 343 (1989). For a
persuasive critique of measures of horizontal equity, see Louis Kaplow, *Horizontal Equity: Measures
in Search of a Principle*, 42 NAT'L TAX J. 139 (1989). For an excellent general critique of the use
of equality as an independent norm, see Peter Westen, *The Empty Idea of Equality*, 95 HARV. L.
REV. 537 (1982).

53.   Then-existing primary purposes tests for mixed expenditures are critiqued in Klein,
Transportation, supra note 5, at 1107–11.

for the business.[54] The after-tax value of an expenditure that is primarily personal thus is

$$(1-r)B + P - rC.$$

Under the PP method large differences in tax liability may be produced by small differences in value if the personal and business values are nearly equal. Moreover, the PP method may produce inefficient mixed expenditures.[55]

Suppose, for example, that a taxpayer in the 40% bracket is deciding whether to make an expenditure costing $1,000 that has a business value of $500 and a personal value of $400. Under the PP method, the expenditure is treated as entirely business, so that the personal value is not taxed. Thus, the after-tax cost of the expenditure is $600,[56] the after-tax business value is $300,[57] and the after-tax personal value is $400.[58] Since the after-tax cost of $600 is less than the after-tax benefit of $700,[59] the expenditure is made, even though the pre-tax cost of $1,000 is greater than the pre-tax benefit of $900.

Suppose, on the other hand, that the personal value of the expenditure is $600, $100 more than the business value of $500. Under the PP test, the expenditure now is treated as personal and the entire $1,000 cost is taxed as personal consumption, so, at a 40% rate, a personal tax of $400 is assessed. As before, the $500 business value is taxed as it is reflected in the profits of the business. The after-tax cost of the expenditure remains $600 and the after-tax business value remains $300. The after-tax personal

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54. If the expenditure takes place in the employer-employee context, it is deductible as a payment of salary, the salary is taxable income to the employee, and the business value is taxable to the employer as it is reflected in the firm's profits. If the expenditure is made by a self-employed individual, it is a nondeductible personal expense and the business value is taxable to the individual because it is reflected in increased profits. These treatments are equivalent.

55. Under the PP method:
(1) If $B > P$, an expenditure will be made if
$$(1-r)C < (1-r)B + P$$
or, equivalently, if
$$C < B + P/(1-r).$$
(2) If $B < P$, an expenditure will be made if
$$(1-r)C < (1-r)B + P - rC$$
or, equivalently, if
$$C < (1-r)B + P.$$

In each case, the decision-making rule is inconsistent with the efficiency condition that an expenditure should be made if $C < B + P$.

56. The after-tax cost is $(1-r)C$. $.6 \times \$1,000 = \$600$.

57. The after-tax business value is $(1-r)B$. $.6 \times \$500 = \$300$.

58. The personal value is not taxed, so the after-tax personal value is the same as the pre-tax personal value.

59. $\$300 + \$400 = \$700$.

value, however, is reduced to $200.[60] The after-tax cost of $600 is greater than the after-tax benefit of $500, so the expenditure is not made, even though on a pre-tax basis the benefit is $100 greater than the cost.

Under the PP test, a dramatic shift in tax liability occurs at the point where the personal value exceeds the business value. So long as the personal value is less than the business value, increases in the personal value have no effect on the tax owed. The moment the personal value exceeds the business value, however, the entire expenditure is treated as personal consumption.

Any such system of taxing mixed expenditures that leads to large changes in tax liability as a result of small changes in personal or business value is likely to be inefficient. It seems safe to discard all-or-nothing methods and, instead, rely on the PC, EC, and AC methods of taxing mixed expenditures.

V. APPLYING THE PC, AC, AND EC METHODS

The PC, AC, and EC methods each lead to efficient expenditures. They differ, however, both in the portion of the mixed expenditure that is taxed as personal consumption and in their informational requirements.

The fact that the three methods have different informational requirements makes it possible to match each method with mixed expenditures where the necessary information is likely to exist. If this is done wisely, applying different methods of taxation to different activities may be more efficient than relying on a single method.

A. Applying the PC Method

The PC method requires knowing the personal consumption value of the expenditure. It does not, however, require knowing the business value because that value is automatically reflected in the taxable profits of the business. Thus, the PC method is appropriate where the personal value of the mixed expenditure is easier to estimate than the business value.

The PC method seems appropriate for the taxation of business meals. It is very difficult for the government to determine the business value of a business meal expenditure. It is easy to see, however, that such a meal is likely to have a significant personal value, even if that personal value may not be equal to its full cost. Thus, it makes sense to tax a portion of the

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60. $600 − $400 = $200.

cost of business meals to represent their likely personal consumption value. This approach is followed in current Code provisions that limit the deduction for most business meals to 50% of their cost.[61]

B.   Applying the AC Method

The AC method requires knowing the relative size of the personal and business values of the expenditure, but does not require knowing the absolute amount of either value. The AC method is particularly appropriate for situations where an expenditure is used for business purposes at some times and for personal purposes at other times. In these cases, a pro rata allocation of the cost of the expenditure is reasonable. Expenditures where such an allocation may be appropriate include home computers used for business and personal purposes and private planes used for business and personal trips.

C.   Applying the EC method

The EC method requires knowing the business value of the expenditure, but it does not require knowing the personal value. Under the EC method, the business value is not needed to calculate the tax on the business value itself because that amount is automatically reflected in the taxable profits of the business. Rather, the business value of the expenditure is needed to determine the amount by which the cost of the expenditure exceeds its business value in order to determine the amount taxed as personal consumption.

For many mixed expenditures, it is difficult to determine the personal value, but it is clear that business reasons alone justify the outlay. Examples include tickets provided to a theater critic, standard quality office furniture, and economy-class business travel. For such expenditures, the EC method is appropriate since this method does not require knowing either the personal value or the precise amount of the business value. Current tax law generally follows this approach by excluding from taxation the personal value of such mixed expenses.[62]

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61.   I.R.C. § 274(n) (1988 & Supp. V 1993). This code section also limits the deduction for business entertainment to 50% of its cost. In most cases, the business value of attending a sporting event or Broadway show is zero. Thus, the EC method should be adopted and the cost of such entertainment expenses should be taxed in full.

62.   Such items generally are excluded as working condition fringe benefits under I.R.C. § 132(d) (1988).

D. Defining the Expenditure

In the analysis so far, it has been assumed that a mixed expenditure is efficient if its total benefits exceed its cost. This assumption is true, however, only if the "expenditure" is defined properly.

To understand the problem, suppose that an individual is considering whether to travel from New York to Los Angeles to negotiate a business deal and that the business value of making the trip is $5,000. The cost of the trip is $3,000 if the individual flies first-class and stays at luxury hotels, but only $1,000 if the individual flies coach and stays at budget hotels. If the entire trip is viewed as a single expenditure, then both luxury travel and budget travel seem efficient because the business benefit of $5,000 exceeds the cost of either trip.

A different result is reached if the trip is viewed as two separate expenditures: a budget trip costing $1,000 and a luxury upgrade costing an additional $2,000. The budget trip has a business value of $5,000 and no personal value. The luxury upgrade has no business value,[63] but has a personal value of $1,500. It is efficient to purchase the budget trip (cost $1,000, benefit $5,000), but not the luxury upgrade (cost $2,000, benefit $1,500) and in a no-tax world the individual will make the efficient decision.

A different result, however, may occur if taxes are introduced. If the cost of the luxury upgrade is deductible, but the personal consumption it produces is not taxed, then the upgrade will be purchased whenever the taxpayer is subject to a marginal tax rate greater than 25% since then the after-tax cost of the upgrade will be less than the personal value of $1,500.[64]

The PC, EC, and AC methods differ in their vulnerability to difficulties in defining the mixed expenditure. In this example, the PC method of taxation reaches an efficient result whether the trip to Los Angeles is viewed as one expenditure or two. Under the EC and AC methods, how-

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63. In fact, luxury travel may have a positive business value by permitting more effective work while on route or by keeping the business traveler well-rested. Much of the value of luxury business travel, however, clearly is personal.

64. The after-tax cost of the upgrade is $(1-r)C$. An individual will purchase the upgrade if $(1-r)C < P$. $(1-r)\$2,000 < \$1,500$. $r > .25$.

ever, an efficient result is reached only if the outlay is viewed as two sepa-
rate expenditures. Table 2 shows the calculations assuming a 40% tax rate.

Table 2.

Budget Trip Cost = $1,000. Business Benefit = $5,000. Personal Benefit = $0.						
Method	After-tax Cost	Total Benefit	Tax on Business Benefit	Tax on Personal Benefit	After-tax Gross Benefit	After-tax Net Benefit
PC/EC/AC	$600	$5,000	$2,000	$0	$3,000	$2,400

Luxury Trip Taxed as One Expenditure Cost = $3,000. Business Benefit = $5,000. Personal Benefit = $1,500						
Method	After-tax Cost	Total Benefit	Tax on Business Benefit	Tax on Personal Benefit	After-tax Gross Benefit	After-tax Net Benefit
PC	$1,800	$6,500	$2,000	$600	$3,900	$2,100
EC	$1,800	$6,500	$2,000	$0	$4,500	$2,700
AC	$1,800	$6,500	$2,000	$277	$4223	$2,423

Luxury Trip Taxed as Budget Trip plus Luxury Upgrade Cost = $3,000. Business Benefit = $5,000. Personal Benefit = $1,500						
Method	After-tax Cost	Total Benefit	Tax on Business Benefit	Tax on Personal Benefit	After-tax Gross Benefit	After-tax Net Benefit
PC	$1,800	$6,500	$2,000	$600	$3,900	$2,100
EC	$1,800	$6,500	$2,000	$800	$3,700	$1,900
AC	$1,800	$6,500	$2,000	$800	$3,700	$1,900

The net after-tax benefit of the budget trip under each method is
$2,400. If the upgrade is taxed as a separate expenditure, it will not be
made under any of the three methods. Under each method, the after-tax
benefit of the budget trip alone is greater than the after-tax benefit of the
budget trip plus the separate luxury upgrade.

If viewed as a single expenditure, under the PC method, the luxury trip also yields a smaller after-tax net benefit than the budget trip. Under the EC and AC methods, however, the luxury trip will yield higher after-tax net benefits than the budget trip if the trip is viewed as a single expenditure, leading to an inefficient expenditure.

The PC method is not sensitive to the specification of the expenditure because it always taxes in full the personal value of an expenditure. The EC method is highly sensitive to the specification of an expenditure because it taxes the personal value of an expenditure only to the extent that the cost of the expenditure exceeds the business benefit. Under the EC method, if the business benefit of an expenditure exceeds its cost, additional expenditures with purely personal benefits can be added tax-free. The AC method is in the middle; if additional personal expenditures are added to an efficient expenditure, a fraction of the additional personal value is taxed.

The PC method's ability to reach efficient results with alternative expenditure specifications makes it the method of choice where it is possible to estimate accurately the personal value of an expenditure. Where accurate estimates are not possible, however, or where a specification problem is unlikely to occur, the EC or AC methods may be superior to the PC method. The EC method, for example, is probably the best way to tax the personal benefit that a theater critic receives from free tickets since the size of the personal benefit is hard to calculate and the business benefit from the tickets alone almost certainly justifies their cost. Moreover, it is simple to define the expenditure as the tickets alone and tax any other expenses of theater-going separately.

CONCLUSION

The tax code should encourage businesses to make a mixed personal and business expenditure only if the pre-tax cost of the expenditure is less than its pre-tax benefit. Tax scholars have noted that this result can be achieved by taxing the personal benefit produced by such an expenditure. It is often difficult, however, to determine the size of the personal benefit produced by a mixed expenditure. This Article has demonstrated that efficient results can also be achieved by taxing the excess of the cost of the expenditure over its business value or by taxing a portion of the cost of the expenditure equal to the percentage of the total value of the expenditure represented by its personal value.

These additional methods of encouraging efficient expenditures have different informational requirements than the traditional approach of tax-

ing the personal value of the expenditure. These different informational requirements make it possible for policy-makers to match the method of taxation to the type of information that is likely to be available for each type of mixed expenditure.