Tax Notes

APRIL 11, 1988

HE CASE FOR THE VALUE-ADDED TAX.

AUTHOR: Kotlikoff, Laurence J.
Boston University National Bureau of Economic Research Tax Analysts

Laurence J. **Kotlikoff** is Professor of Economics at Boston University and is a Research Associate at the National Bureau of Economic Research in Boston.

In this article, **Kotlikoff** makes the case for a value-added tax. He argues that a VAT is a flat rate consumption tax. It can be achieved in an income tax by allowing 100 percent expensing of capital outlays. Or it can be achieved through a retail sales tax. It is also equivalent to a tax on labor income plus a tax on wealth. Because of its tax on wealth, a VAT is not the same as simply a tax on labor income. A VAT does not distort saving decisions, and it is more progressive than a proportional income tax. **Kotlikoff** also believes that a VAT is less distortionary than a proportional wage or income tax. The introduction of a VAT will produce a transfer from older generations to younger generations, and it thus is fiscally very conservative. He argues that over a long period, it will increase savings. The switch to a VAT is fiscally conservative, despite the fact that it may not affect the reported government deficit. He concludes that the 1981 tax cut was effectively a move toward a consumption tax but that the 1986 Act aborted this move before it had time to succeed.

Table of Contents

I. What is a Value-Added Tax? 240
Lesson 1 240
Lesson 2 240
Lesson 3 240
Lesson 4 240
Lesson 5 240
Lesson 6 240

II. The Equity and Efficiency Case for a VAT 241
Lesson 7 241
Lesson 8 241

III. The VAT, the Stance of Fiscal Policy, and Savings 242
Lesson 9 242
Lesson 10 242
Lesson 11 243

IV. Conclusion 243

This decade has witnessed two major changes in the basic structure of the U.S. tax system. The 1981 Tax Recovery Act shifted the tax structure away from income taxation toward consumption taxation. The 1986 Tax Reform Act did the reverse. Both of the tax acts lowered tax rates, leaving the rate structure much flatter. Unfortunately, the public debate on taxation has focused primarily on the level of tax rates, rather than the equally important question of what should be taxed. Indeed, the public discussion of the tax base was so limited that most of the public remain unaware that the U.S. tax structure may have more closely resembled a consumption tax than an income tax between 1981 and 1986.

The renewed discussion of the Value-Added Tax (VAT), which is, in essence, a consumption tax, raises the prospect that we may again reverse direction on the tax base. It is hoped that this article, which has the purpose of making

the case for the VAT, will help inform the next flip in the ongoing tax base flip flop. Section I of this article clarifies the relationship of the VAT to consumption, income, wage, and wealth taxation. This section points out that a VAT can effectively be implemented by taxing household consumption, by taxing at the retail level final sales of consumption goods and services, by taxing income while permitting 100 percent expensing, or by taxing current and future labor income plus current wealth.

Section II presents the equity and efficiency arguments for the VAT. Section III discusses the VAT in relationship to concerns about deficits and the general tightness or looseness of fiscal policy. This section points out that moving toward a VAT consumption tax is fiscally very conservative -- actually, a hidden surplus policy. The fact that we shifted toward consumption taxation between 1981 and 1986 means that U.S. fiscal policy was much tighter during this period than is commonly believed. Indeed, when one balances the Reagan tax cuts against the very conservative 1983 change in Social Security legislation, the decline in the 1980s in Federal government consumption, properly measured, and the shift toward consumption taxation, one reaches the conclusion that fiscal policy from 1981 through 1986 was fairly tight, **[*240]** not horrendously loose as many would believe. Section III uses the Auerbach-**Kotlikoff** Dynamic Life Cycle Simulation Model to illustrate the savings effects of a VAT and to illustrate how the combination of U.S. fiscal policies during the period 1981 through 1986 was fiscally fairly tight. Section IV concludes by stressing the need for a VAT or other policies that would help raise the U.S. saving rate. It also stresses that for such policies to succeed they need to be kept in place for decades, and not dickered with by each new administration.

I. What is a Value-Added Tax?

Lesson 1: A Value-Added Tax is a Flat Rate Consumption Tax

A value-added tax, as conventionally implemented, is a tax on the value of output (income) with an exemption (deduction) for investment. Since consumption equals income less investment, taxing income less a deduction for investment is equivalent to taxing consumption. Hence, a value-added tax is a consumption tax. But unlike a personal consumption tax assessed on each household's particular level of consumption, a value-added tax is a consumption tax levied on the goods and services consumed. A personal consumption tax can be progressive, with the average tax rate increasing with the household's level of consumption. This is not the case for a value- added tax, since household consumption is not computed under a VAT. Hence, a VAT is a flat rate consumption tax, and the only indirect way for a VAT to tax one set of households, say households A, at higher rates than another set of households, say households B, is to tax at higher rates those goods consumed more intensively by households A.

Lesson 2: A VAT Can Be Implicitly Implemented by Taxing Income and Permitting the Expensing of Investment

Since a VAT is a flat rate tax on income less investment, one can effectively achieve a VAT by simply taxing income at a flat rate and permitting 100 percent expensing of new investment. Alternatively, one can achieve a VAT by taxing income at a flat rate and providing investment incentives, such as investment tax credits and accelerated depreciation, that amount, in present value, to 100 percent expensing of new investment. Ignoring issues of tax administration, tax compliance, and fiscal illusion, the economic effects of an explicit VAT and an implicit VAT are identical.

Lesson 3: A VAT Can Be Implicitly Implemented through a Flat Rate Retail Sales Tax on Final Consumption Goods

Another way effectively to achieve a VAT is to tax at the retail level the final sale of goods and services. The Federal government's excise taxes on gasoline, cigarettes, and alcohol are examples of such retail sales taxes. In contrast to an explicit VAT, a retail sales tax appears to involve the filing of fewer tax forms, but possibly greater problems of tax compliance.

Lesson 4: A Value-Added Tax is Also Equivalent to a Flat Rate Labor Income Plus a Flat Rate Tax on Wealth

Once one understands that a VAT is a flat rate consumption tax, it is easy to see that a VAT also is equivalent to a flat rate tax on labor income plus a flat rate wealth tax. First, one needs to get out of a static mindset in which individuals live, work, and consume for only one period and think about realistic settings in which individuals live, work, and consume for many years. In such real world settings households have intertemporal budget constraints in which the present value of their current and future consumption expenditures equals the present value of their current and future labor earnings plus the value of their current wealth. Letting PVC stand for the present value of consumption, PVL for the present value of labor earnings, and W for current wealth, the intertemporal budget constraint is: PVC = PVL + W.

Under a flat rate consumption tax (a VAT) and ignoring differences over time or across commodities in tax rates, the intertemporal budget constraint becomes (1+ tau)PVC = PVL + W, where tau is the consumption tax rate. We can re-write this equation as PVC = PVL/(1+ rho) + W/(1+tau).

In its initial form the budget constraint reads that the present value of resources (PVL + W) must be sufficient to finance the present value of consumption expenditures (PVC) plus pay for taxes on those expenditures (tauPVC). In its second form (after dividing by 1+tau), the constraint shows that taxing consumption expenditures is equivalent to taxing current and future labor earnings plus current wealth. If one defines theta as equal to (1-tau), then the second form of the budget constraint can be written as PVC = PVL(1-theta) + W(1-theta), where theta is the flat percentage tax levied on current and future wage income and current wealth. Intuitively, an individual who pays more for consumption with a given set of resources can be in exactly the same economic situation as an individual who pays the same for consumption, but has fewer resources to spend.

In the case that individuals leave bequests to their children the intertemporal budget constraint can be interpreted to correspond to the dynasty's budget constraint; i.e., the present value of current and future consumption of members of a particular dynastic family is financed by the present value of current and future earnings of members of the dynastic family plus the family's initial wealth.

Lesson 5: A Value-Added Tax Differs From a Wage Tax Because it Also Taxes Current Wealth

This is a direct implication of Lesson 2. Many commentators incorrectly view a VAT or consumption tax as equivalent to simply a wage (labor income) tax. As the intertemporal budget constraint indicates, a VAT includes a tax on current wealth. This aspect of a VAT is crucially important to understanding why a VAT may be more efficient and possibly more equitable than either a wage tax or an income tax.

Lesson 6: A Value-Added Tax Does Not Distort Savings Decisions

Unlike a pure income tax that taxes labor and capital income at the same rate, a value-added tax combines a **[*241]** one-time nondistortionary tax on wealth with a distortionary tax on labor income. By not placing a tax on the return from capital, a VAT does not reduce incentives to save. This is one of the reasons a VAT is much more conducive to saving and investment than an income tax.

II. The Equity and Efficiency Case for a VAT

One of the unfortunate legacies of the static as opposed to intertemporal economic thinking of the 1950s and 1960s has been the persistent practice of measuring the progressivity of taxes relative to current income. While current income might be a reasonable reference variable in a world in which taxpayers live for only one year or are cash constrained in their consumption, it is not a reasonable reference variable for the U.S.; in the U.S. the great majority of households expect to live for many years in the future and are not cash constrained. For these households current income can be temporarily high or low without greatly affecting the household's lifetime resources or current consumption. In the case of dynastic families, the dynastic family's current income also can be low or high without greatly affecting the dynasty's present value of resources.

The obsession with current income as a reference base can actually lead to policies that reduce rather than enhance the degree of tax equity. For example, a progressive income tax assessed on current income will place a low burden on a lifetime rich medical student whose income is temporarily low. Another example is the low tax burden that a progressive income tax places on lifetime rich executives whose income is temporarily low because they are between jobs. To the extent that such individuals are really permanently, as opposed to temporarily, worse off, they will show it by consuming less. Hence, by taxing consumption directly, or indirectly through a VAT, one effectively taxes the present value of current and future resources, which is a far better measure of ability to pay for most Americans than is current income.

The standard argument that a consumption tax is regressive is, unfortunately, made with reference to current income, rather than the present value of resources income. It is true that under a consumption tax those with temporarily low current income will exhibit a higher ratio of taxes to income than those whose current income is temporarily high. But measured against lifetime income (the present value of resources) the same consumption tax could well look proportional, if not progressive. To make this point concrete consider two people, person A and person B. Suppose person A earns, in present value, 30 when young and 70 when old, and person B earns 70 when young and 30 when old. If there are not cash constraints, both will consume the same amount when young, say 50, and the same amount when old,

50. Under a VAT the two would pay the same in taxes when young and when old. Since they both have the same lifetime resources, 100, the ratio of taxes paid to lifetime resources would be the same for A and B. While a VAT looks proportional when measured against lifetime resources, it would look regressive when measured against either income when young or income when old. Consider the calculation when A and B are young. On a current income basis, person A would be called 'poor' and person B 'rich.' Since they both pay the same tax under a VAT, the ratio of tax to current income, the average tax rate, is higher for 'poor' person A than for 'rich' person B. Hence, those with static blinders would argue that a VAT is regressive.

Lesson 7: Because it Represents, in Part, a Wealth Tax, a VAT is More Progressive Than a Proportional Income Tax or a Proportional Labor Income Tax

If one considers the present value of resources (PVR) as the appropriate base against which to measure the progressivity of alternative tax structures, then a uniform VAT is neither regressive nor progressive, but rather proportional. In contrast, a proportional labor income tax would be regressive when measured against PVR, since those with very large levels of assets, and hence PVR, would face no explicit or implicit taxation on either their initial wealth or the income from that wealth. An income tax that taxed all capital and labor income at the same rate also would be regressive when measured relative to PVR. While individuals with very large levels of assets would face tax on their capital income, they would face no tax, implicit or explicit, on their initial principal. Hence, under a proportional income tax the very wealthy, including those who have inherited large sums, face a smaller tax burden, when measured relative to their PVR, than do those whose PVR consists mainly of current and future labor earnings.

In the U.S., where taxing fully all income from assets has proved difficult, the introduction of a VAT would provide an additional tax instrument to tax the asset component of lifetime resources. In combination with a tax credit under the Federal income tax, a VAT could certainly add to the progressivity of the U.S. tax structure when measured in reference to the present value of resources. One equity concern, in moving toward a VAT is, however, the treatment of different generations. A VAT, unless accompanied by additional tax relief to the elderly, will place a larger tax burden on the elderly than they would experience under an income tax. The reason is that the elderly are the primary owners of assets; hence, the VAT's implicit taxation of initial assets will hurt the elderly more than other age groups.

Lesson 8: Because it Collects Much of Its Revenue Through a Lump-Sum Tax on Wealth, a VAT May Be Much Less Distortionary Than a Proportional Income Tax or a Proportional Wage Tax

A variety of studies, including Dynamic Fiscal Policy written by myself and Alan Auerbach, have shown that taxing consumption is more efficient than taxing wage income by itself, capital income by itself, or both capital and wage income through an income tax. As mentioned above, taxing consumption through a VAT is equivalent to taxing current and future labor income plus taxing initial wealth. While the VAT's implicit taxation of labor income distorts the work-leisure decision, the VAT's **[*242]** implicit taxation of initial wealth is simply a lump-sum tax with no distortionary consequences. In contrast to a VAT all the revenue from proportional labor, capital income, and income taxes distorts some margin of choice, be it the work-leisure decision or the consumption- saving decision.

In calculating the relative distortions of the VAT these studies have been careful not to confuse economic efficiency with economic redistribution; i.e., the notion of efficiency here is not the weighing of the gains to winners against the loss to losers from switching tax structures, but rather to ask whether the winners could more than fully compensate the losers from the change in the tax structure.

According to the base case simulations in Dynamic Fiscal Policy, switching from a 25 percent proportional income tax to an equal revenue VAT increases economic efficiency by the equivalent of close to 1.5 percent of GNP per year. In contrast, switching from a 25 percent proportional income tax to an equal revenue proportional labor income tax reduces economic efficiency by the equivalent of almost one percent of GNP per year. The magnitude of these efficiency gains and losses are similar to those reported in other simulation studies.

While the simulation models suggest that a VAT with a uniform tax rate on all commodities is more efficient than other proportional tax structures, a VAT that differently taxes different goods and services could well be less efficient than, for example, a proportional income tax. Since the implementation of a VAT would likely involve the exclusion or preferential treatment of certain goods and services, such as food, the efficiency advantage of each particular form of a VAT needs to be carefully considered.

Another caveat to the presumed efficiency advantage of the VAT is that these efficiency gains stem from a one-time enactment of a VAT in which rates are not greatly altered through time. A one-time wealth tax is nondistor-

tionary if everyone believes it will not recur. But if households believe that a VAT's tax rate will be increased substantially in the future they will understand that they will implicitly face another wealth tax in the future. This will make them less inclined to save for the future and represents a distortion of the consumption-saving decision.

III. The VAT, the Stance of Fiscal Policy, and Savings

Lesson 9: Introducing the VAT is Fiscally Very Conservative; Indeed, Enacting a VAT is an Implicit Surplus Policy

As mentioned above, a VAT places a larger tax burden on older generations who are alive at the time the VAT is introduced. Assuming this additional burden is not relieved through, for example, increased tax credits to the elderly, the VAT will redistribute across generations. This intergenerational redistribution from the initial old to the initial young and future generations is precisely the reverse of the kind of redistribution that occurs when the government runs a deficit. Consider, as an example, a deficit cause by a temporary income tax cut. Initial older generations are benefited because the tax increase comes after some of the initial elderly have died. Other elderly will die shortly after the tax rates are increased, and they too will benefit on a remaining lifetime basis from the tax cut. Even the young elderly and late middle age will benefit; those who are very close to retirement prior to the income tax will be retired after the tax rates are increased and, consequently, escape income taxation, at least on their labor earnings, in the years just prior to their retirement.

From the perspective of standard neoclassical economic models, such as the Life Cycle Model of Nobel Laureate Franco Modigliani, switching from an income tax to a VAT is, in terms of its intergenerational redistribution, essentially the reverse of running a deficit due to an income tax cut; hence, instituting a VAT is an implicit surplus policy. Stated differently, while its official deficit may not change when a country switches from income taxation to a VAT, the economic effects of the switch will be quite similar to a temporary tax increase that produces a budget surplus.

Lesson 10: Switching From an Income Tax to a VAT Is Likely to Crowd in Saving and Investment, But the Process Takes a Long Time

What are the saving implications if the government redistributes to older generations through an income tax cut or redistributes away from older generations (effectively runs a surplus) through shifting to a VAT? The Life Cycle Model predicts that such intergenerational redistribution will alter savings. In the Life Cycle Model the old, with fewer years left to live, have a higher marginal propensity to consume than younger generations and, certainly, generations who have not yet been born. These differences in marginal propensities to consume mean that if the government takes a dollar from a younger person and transfers it to an older perosn, the older person will increase his or her current consumption by more than the younger person cuts back on current consumption. A higher value of total current consumption means less total saving.

Now when the government runs a temporary income tax cut it, in effect, takes some money from young and future generations and hands it to current old generations. And because of the differences in marginal propensities to consume between the young, the old, and the unborn, this redistribution will, according to the Life Cycle view, increase the country's current consumption and decrease its saving. In contrast, if the government switches from an income tax to a VAT and, thus, redistributes from initial old generations to include middle age and young generations as well as to unborn generations, the Life Cycle model predicts a crowding in of saving and investment.

Simulations in Dynamic Fiscal Policy, that examine the Life Cycle Model, provide a sense of the magnitude of the crowding in from a VAT as compared to the crowding out from a prolonged, say five year, income tax cut. Consider first a deficit-financed cut in income taxes. In the base case economy the initial proportional income tax rate is **[*243]** 15 percent. Starting in this base case, the book contains a simulation of an immediate cut in the income tax rate to 10 percent that is maintained for five years, after which the income tax rate is increased to balance the budget inclusive of the additional interest payments on the debt issued during the five year period of lower tax rates. The long run effect of this policy is to crowd out the capital stock by 7.2 percent. If the duration of the tax cut were 20 years, rather than just five years, the tax cut would crowd out 49.0 percent of the capital stock. In contrast, starting from the same base case economy, switching from the income tax to a VAT crowds in capital, and the long run increase in capital is 24.2 percent.

These numbers suggest that a VAT can be a very powerful mechanism for increasing the economy's savings, and that the simultaneous effective switch to a VAT by, for example, increasing investment incentives (Lesson 2), could more than offset the crowding out effects of deficit financed short-term tax cuts. The book also points out that the crowding out and crowding in processes are surprisingly slow. For example, the half life of the crowding in from

switching to the VAT is about 15 years. And the half life of the crowding out from the five year income tax cut is about 20 years.

Lesson 11: The Deficit is a Highly Misleading Indicator of the Stance of Fiscal Policy That is Unaffected by Fiscally Very Conservative Policies Like the Switch to a VAT

While tax cuts will lead to reported deficits, switching from an income tax to a VAT is likely to have little or no effect on the reported deficit. In combination such policies may, on balance, crowd in capital, despite the fact that large deficits arise during the period of the tax cuts. This fact should make one ask whether the deficit is a useful measure of the tightness or looseness of fiscal policy. The answer, at least from the perspective of the Life Cycle Model and other neoclassical macro models, is that the deficit is not a useful measure of the stance of fiscal policy.

To show how our fixation with the deficit can lead us to miss the fiscal effects of switching to a VAT as well as those of other policies, I have used the Auerbach-**Kotlikoff** model to simulate the Reagan administration's first-term tax policy. In the base case for this simulation I assume an economy that initially has a 30 percent income tax, an unfunded Social Security system with a 40 percent benefit-wage replacement rate, and a zero rate of expensing of new investment. The initial effective tax rate on capital income in this economy is 30 percent. The policy that I simulated is (1) an eight year (two term) 25 percent cut in the income tax rate, coupled with (2) a reduction from 40 percent to 30 percent in the Social Security benefit-replacement rate for all individuals younger than age 40 at the time the policy is enacted and for all generations born after the policy is enacted, (3) the introduction of a 40 percent rate of expensing, and (4) a reduction in government consumption relative to GNP of 10 percent (this roughly captures the decline in Federal government consumption, properly measured, between 1981 and 1986). The cut in the Social Security benefit replacement rate roughly captures the 1983 Social Security legislation that raised the Social Security retirement age. And, at a 30 pecent income tax rate, a 40 percent expensing rate lowers the effective tax rate on capital income to 20.4 percent, roughly what was observed between 1981 and 1986. In the simulation the changes in the Social Security replacement rate and the rate of expensing are permanent; but after the eighth year of the income tax cut, the income tax rate is raised to restore conventional budget balance.

In the first eight years of the simulation results the economy displays quite sizeable deficits as conventionally measured; the annual deficit during this period is over six percent of GNP. The debt to capital ratio which is initially zero ultimately rises to over one-quarter. The model also predicts an increase in short-term interest rates at the beginning of the policy transition; in the first year of the transition short rates jump from 9.5 percent to 11.0 percent. This increase in interest rates is not due to the deficit finance, but rather to the investment incentives; the firms in the model are forced by competition to pass on the investment incentives in the form of higher interest rates paid to their investors.

Nothwithstanding the significant annual deficits and long run increase in officially reported debt, the combined policy produces a minor crowding in of capital in the long run! The long run capital stock is about one percent larger than its initial value. The reason is that the crowding in associated with reducing Social Security benefits and the crowding in associated with the effective change in the tax structure toward a consumption tax/VAT outweigh the crowding out arising from the 25 percent eight year income tax cut.

In considering these results it is important to understand that the Auerbach-**Kotlikoff** simulation model is the most conventional neoclassical economic model and that it uses very conservative parameter estimates. The model certainly displays nothing akin to the whimsical Laffer curve. The crowding in, rather than crowding out, occurring in the simulation is not due to supply side magic, but rather to the inclusion in the analysis of two previously neglected, but very powerful policies; namely, the change in the effective tax structure toward consumption taxation associated with increased investment incentives and the change in Social Security.

IV. Conclusion

There are a number of important and surprising economic lessons that emerge from the consideration of a VAT. To recall: a VAT can be effectively instituted in a number of different ways; a VAT combines a wealth tax and a labor income tax and, as such, is more progressive than a proportional income tax, when progressivity is measured properly, namely relative to the present value **[*244]** of current and future resources; a VAT appears to be more efficient than either an income tax or a labor income tax because it doesn't distort saving decisions and because it acquires much of its revenues through an implicit nondistortionary tax on wealth; a VAT, unless offset by other policies, redistributes against the aged who are initially alive at the time the VAT is introduced; a VAT redistributes across generations in the reverse direction of a tax cut policy and is, therefore, an implicit surplus policy; a VAT crowds in capital, albeit at a slow rate;

and finally, the crowding in from a VAT can greatly offset the crowding out from tax-cut- induced deficits, even in cases when such deficits are quite large.

As the debate about a VAT proceeds it would be well to bear in mind that we have effectively tried moving toward a VAT in the recent past. This experiment, associated with the Accelerated Cost Recovery System (ACRS), was aborted well before it had a chance to succeed. The argument leading to the adoption of ACRS -- that the U.S. saving rate is too low, compared with our own past and certainly compared with the saving rates of our trading partners -- is as valid today as it was in 1980. We need now, as we needed then, a consumption- oriented tax base. If the move to such a tax base is combined with increased exemptions for the elderly, the change would promote both equity and efficiency. If left in place for several decades, rather than several administrations, it would slowly but surely increase our savings and keep the U.S. from falling further behind in the ranks of wealthy nations.

PRIOR COVERAGE OF VAT ISSUES

The following Tax Notes special reports have discussed the value-added tax:

'The Value Added Tax: Key to Deficit Reduction?,' by Charles E. McLure, Jr., April 6, 1987, p. 83.

'The Canadian Government Develops a Business Transfer Tax,' by Fern Gordon and Larry I. Good, March 23, 1987, p. 1221.

'Tax Reform 1986: A Fragile Victory,' by John H. Makin and Michael T. Allison, January 19, 1987, p. 251.

'Recent Tax Developments in Europe, Canada, and Japan,' by Joseph A. Pechman, January 12, 1987, p. 143.

'Does VAT Provide a Balance of Trade Advantage?,' by Gerard M. Brannon, March 31, 1986, p. 1387.

'The Business Transfer Tax -- A VAT By Any Other Name,' by Richard Gordon, Stephen R. Corrick, and Linda Goold, February 24, 1986, p. 765.

'The Business Transfer Tax: The Value Added by Subtraction,' by Alan Schenk, January 27, 1986, p. 351.

'Implementing a Value-Added Tax in Certain Industries and Activities,' Chapter 6 of Volume 3 of the Treasury Department Tax Reform Study, December 31, 1984, p. 1323.

'A New Federal Tax System,' by Richard L. Lindholm, summarizing his book, Value-Added Tax, July 30, 1984, p. 492.

'Consumption Taxes: Promises & Problems,' by Michael A. Schuyler, November 7, 1984, p. 571.

'Congressional Proposals for Fundamental Tax Reform,' by Margo Thorning, July 30, 1984, p. 494.

'It's VAT Time Again,' by Charles O. Galvin, October 24, 1983, p. 275.

'The Value-Added Tax: Effects on Productivity and Equity,' by Charles E. McLure, Jr., September 26, 1983, p. 971.

'The Irrelevance of the Restricted Origin Principle,' by Sijbren Cnossen, August 15, 1983, p. 521.

'The Coming Re-examination of Tax Policy,' by Harvey Galper, May 2, 1983, p. 379.

'Consumption Taxes: Revenue, Structural, and Equity Effects. A Public Interest Seminar with Henry Aaron and Eugene Steuerle,' May 17, 1982, p. 523.

'The 1983 Budget: A Compromise Is Urgently Needed,' by Joseph A. Pechman, April 26, 1982, p. 251.

'Tax Policy and Capital Formation in the U.S. and Europe: Reconciling Growth with Equity,' by Robert Kuttner, April 19, 1982, p. 163.

'Interpreting Americans' Attitudes Toward Taxes,' by Paul F. Harstad, November 9, 1981, p. 1083.

'Our Troubled Tax Policy: False Routes and Proper Paths to Change,' by Stanley S. Surrey, February 2, 1981, p. 179.

'Thoughts on a Value-Added Tax,' by Charles E. McLure, October 2, 1979, p. 539.

For a Congressional Budget Office study that analyzes deficit- reducing options, including the value-added tax, see Tax Notes, February 14, 1983, p. 649. Doc 83-1508

For excerpts from an address by Council of Economic Advisers former Chairman Martin Feldstein, linking tax reform and consumption taxation, see Tax Notes, January 24, 1983, p. 347.

For a news story on VAT, see 'Why We Need a VAT,' by Lee Sheppard, February 9, 1987, p. 529.

For a story on economist Lester Thurow's proposal to replace the present income tax structure with a progressive consumption tax system, see Tax Notes, January 18, 1982, p. 136.

For an outline of a General Accounting Office report on the pros and cons of the value-added tax, see Tax Notes, March 30, 1981, p. 729. Doc 81-2838

********** End of Document **********