NO. 546 SEPTEMBER 30, 1972 AGRICULTURAL EXTENSION SERVICE, UNIVERSITY OF MINNESOTA

Minnesota AGRICULTURAL ECONOMIST

VALUE ADDED TAXES

John D. Helmberger
Professor, Department of Agricultural and Applied Economics

The rapid increase in the cost of meeting state and local demands for public services has led to a similar rapid increase in state and local taxes. The heavy, regressive, and uneven burden of property taxes has led to what has been called a "taxpayers' revolt." States are increasing nonproperty taxes and state aids in an attempt to take the pressure off the property tax. But interstate competition and income differences among states have made these efforts less than successful. All these factors have led to growing pressure for federal revenue sharing with state and local governments. Such sharing seems to be held up by the lack of a federal surplus to share.

General federal revenue sharing with states might well take its place in competition with other demands on the federal budget and federal funds, whether that revenue is raised by taxes or by borrowing. The absence of a surplus does not seem to prevent spending billions on war materials and space travel. There is no economic basis in the notion that there can be no federal revenue sharing without a federal surplus.

However, since the notion that a surplus is needed to provide funds for sharing seems strongly held, a new tax may be the shortest road to revenue sharing. The value added tax (VAT) was introduced by France a few years ago and has spread rapidly over western Europe. The idea is now cropping up all over the United States.

VAT – A Multiple-Stage Tax

A VAT is a multiple-stage sales tax as opposed, let us say, to a retail sales tax, which is levied only once and at the time of retail sale as a single-stage sales tax. Given a 3-percent retail sales tax, a retailer would collect \$3 for \$100 of taxable sales. A 3-percent VAT would involve taxing that \$100 a little at a time as value is added at each stage of production. For example, the value added might be \$15 at the raw materials stage, \$30 at the manufacturing stage, \$10 at the wholesale stage, and \$45 at the retail stage. The sum of the values added equals the value of the final product, or \$100. The raw materials producer would pay 45 cents in VAT, the manufacturer 90 cents, the wholesaler 30 cents, and the retailer \$1.35. In either case the tax is \$3. With the VAT, the \$3 is simply paid a little at a time as value is added to the product. Note, however, that if at each stage the VAT is shifted completely to the next stage, the burden of the tax falls on the consumer just as the 3-percent retail sales tax does. If there were a federal VAT, it would be included in the selling price of goods on the shelves of retailers. If the state has a sales tax, that too would be added to the price.

Types Of VAT's

A gross product type of VAT applies to all producer (or capital) and consumer goods and services. The collections from such a 3-percent VAT would be the same as those from a 3-percent general sales tax that applied only to final sales, but to producer goods and services as well as to consumer goods and services. However, the incidence of the tax would be different. The incidence of a tax is the point at which the burden of a tax finally rests; i.e., the point at which the tax can no longer be shifted to anyone else. If the consumer really bears the total burden of a tax as he does, for example, with the cigarette tax, the incidence of the tax is on the consumer. If a VAT were adopted and applied to farmers and they could not shift the tax by charging more for their products, then the incidence of the tax would be on farmers.

Some producers would find it difficult to shift much, if any, of a VAT. This is particularly true for producers in areas of declining population, such as those in small towns all over rural America, for producers in declining industries, and for those who, like farmers, are competitive producers for national markets. A gross product type of VAT is an undesirable tax because it discriminates against capital by not allowing for depreciation and against producers who can not shift it.

An income type of VAT allows producers to deduct depreciation from the value added. This version of a VAT is neutral with respect to relative treatment of capital and labor. The base equals sales minus purchases of intermediate goods (but not investment or capital goods) minus depreciation of capital.

With a consumption type of VAT, the base equals sales minus purchases of intermediate goods minus purchases of capital goods. This is the type of VAT used in Europe and the type generally envisaged by VAT backers in the United States. This VAT, with its complete exemption of capital goods, is roughly the equivalent of a general retail sales tax on all consumer goods and services.

Both the income and consumption types of VAT can be made self-policing through the use of the tax credit method of collection. Each taxpayer pays a VAT equal to the tax on his gross sales minus the tax already paid by his suppliers. It is up to the taxpayer to show that his suppliers paid the tax. Of course, bookkeeping could get very involved for multiple-product firms that use a variety of intermediate goods purchased from other firms. Also, such a tax might encourage vertical integration to an undesirable degree.

European Experience With VAT's

Most European countries, including the Common Market countries (France, West

Issued in furtherance of cooperative extension work in agriculture and home economics, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Roland H. Abraham, Director of Agricultural Extension Service, University of Minnesota, St. Paul, Minnesota 55101. We offer our programs and facilities to all people without regard to race, creed, color, sex, or national origin.

Germany, Belgium, the Netherlands, and Italy), the Scandinavian countries, and Great Britain, have a VAT. The Common Market countries have agreed to levy a uniform consumption type of VAT in the future. The existing VAT is rebated at the border to exporters, and, to prevent unfair competion with domestic producers, a tax equal to a local VAT is levied on imports. These border tax adjustments have the approval of the General Agreement on Tariffs and Trade (GATT). GATT rules do not allow the United States to rebate corporate income taxes to exporters. Thus a U.S. VAT would help in our balance of payments problem by encouraging exports and discouraging imports. Alternatively, the United States might insist on modification of GATT rules to permit rebating a part of corporate income taxes on our exports.

Effects Of A VAT

A VAT might be adopted as a substitute for existing taxes, such as corporate income taxes or nonluxury excises, or it might be adopted as a source of new funds for revenue sharing with state and local governments or for other purposes. In a sense, a substantial revenue sharing plan financed with VAT's could result in substituting them for a part of property taxes.

A VAT is essentially a general sales tax on all goods and services. Existing so-called general sales taxes exempt many services and some goods. But a VAT bears on labor, on land, and on capital, whether or not it is corporate, whether or not it is profitable, and whether or not it is borrowed. It is neutral relative to the mix of the factors of production used. In this sense, it is in contrast to:

Corporate income taxes, which bear heavily on the income from the equity capital of profitable corporations relative to the income from labor. Such taxes do not bear on noncorporate capital nor on borrowed capital (to the extent capital earnings are paid out in interest to creditors) whether corporate or not, nor do they bear on nonprofitable corporate capital.

Payroll taxes, which bear heavily on labor but not at all on capital.

Property taxes, which bear heavily on capital investments in real property and, in places, on investments in tangible personal property, but not on investments in intangibles such as research and development, etc.

VAT's, especially consumption types of VAT's, affect economic growth. Since they bear less heavily on capital than do other taxes, saving and investment would increase, provided overall monetary and fiscal policies were appropriate. It is widely believed that increasing the rate of saving out of a given income increases the amount of saving and hence the amount of investment. But this is true only if total demand is adequate to warrant the investment.

If a VAT is adopted as a substitute for all or part of corporate income taxes and the tax is applied to farmers who can shift only a part of it, the overall tax burden of farmers would be increased relative to nonfarmers. Also, the tax burdens of low income people, whether or not they are farmers, would be increased relative to those with higher incomes.[1]

If a VAT is adopted to increase the federal share of the cost of education in order to reduce all property taxes, the overall tax burden would be shifted from those with lower incomes to those with middle or higher incomes because property taxes are even more regressive than general VAT's. However, if such federal revenue is used only to reduce **residential** property taxes, farmers could end up with a bigger share of the overall tax burden than they have now.[2]

The shifting of tax burdens among income classes or occupational groups by adopting a VAT depends on the exact form of the tax (what, if anything, is exempt, and whether the rates are the same for all goods) and what taxes are replaced upon adoption of the VAT.

VAT collections would fluctuate less than collections from net profit taxes or income taxes. They would provide relatively stable, though increasing, funds for revenue sharing if funds were earmarked for that purpose. VAT's are not good for offsetting cyclical economic changes. Rates could be changed for cyclical purposes, but doing so would sacrifice stability of yield. VAT proponents who argue that the tax is good cyclically because it is easy to change the rate cannot at the same time support it as a tax that provides stable yields for dependable revenue sharing.

[1] Jerome M. Stam and Thomas F. Hady, "Alternatives to the Property Tax for Educational Finance," ERS, USDA, April 1972, pp. 3-8.

[2] Ibid, p. 7.

For 1972, a 3-percent federal consumption type of VAT exempting no consumer goods or services might yield $20 billion or more. This broad a tax seems highly unlikely. How much a narrower-based VAT would yield would depend on the exemptions allowed. The closest we have come to a VAT in the United States was Michigan's Business Receipts Tax, which exempted businesses with sales below a certain level, a level that was set high enough to exempt most businesses and virtually all farmers. Each year Michigan increased exemptions to the tax or placed lower rates on some businesses until the law became so unsatisfactory that it was repealed.

Use Of VAT's By Nations

To be feasible, a VAT must bear on value added where the product is produced or where it is consumed. If some nations levy the tax where the product is consumed and others where it is produced, then some value added is taxed more than once and some is not taxed at all. As employed by European nations, the tax is levied where the products are consumed. Each country rebates the tax to the exporter and levies it on the importer. If a national VAT is levied in this country, our place in international trade will be disadvantaged unless we make the same border tax adjustments.

Use Of VAT's By States

Any state that levies a VAT will find interstate competition difficult to meet. Interstate competition would force the state to rebate the VAT to an exporter from within the state. But the state could not levy an import tax on incoming goods because that would be an unconstitutional burden on interstate commerce. The result would be unfair competition to producers within the state.

Property taxes bear heavily on those industries that use much property (farming) and lightly on those that use much service but little property (law firms). Although a VAT is more neutral in this respect, it does bear more heavily on service producers and on producers who use little property.

VAT's appear to provide a balance. But all states have heavy property taxes, so industries that use much property cannot escape property taxation. No state has a VAT, so if one state adopts one, some service industries could relocate in other states. Unfortunately, service industries like finance and insurance companies, which are the types of industries most likely to relocate, may be especially desirable to keep. For one thing, the quality of the environment is not adversely affected by their growth.

Interstate competition is likely to prevent a state from using a VAT successfully except at modest levels. State producers who pay a VAT cannot compete with imports or with producers who do not pay the tax unless the tax is small relative to freight and whatever advantages the state has in producing the goods in question.

By using tax credits, the federal government could coerce all the states into adopting VAT's, but states are not permitted to tax imports from other states, so the VAT would have to be based on where the value is produced. This would mean that the richer states, the industrial states, would get much more revenue than the poorer states. Much of the value added could be attributed to sales in the markets of nonindustrial states, but the industrial states would get the tax revenue. Consider, for example, an item that sells for $1 in a nonindustrial state. Say that 20 cents of the value was added in that state and the other 80 cents was added in the industrial state that produced the product. Presumably, most, if not all, of the tax rests on the consumer in the nonindustrial state since the tax is largely shifted forward. However, the nonindustrial state receives only 20 percent of the VAT, whereas the industrial state receives 80 percent.

Distributing the value added revenue to where the value added is consumed would be more equitable but could hardly be accomplished with state VAT's. Furthermore, even if the Constitution were amended to permit states to tax imports and even if that did not result in an administrative mess and out-and-out protectionism, state VAT's would still be less desirable than federal VAT's if redistributing tax revenue to assist the poorer states is a goal.

Using Proceeds From Federal VAT's For Revenue Sharing

A substantial, relatively neutral VAT could be used to relieve property taxpayers of a significant part of that relatively unneutral tax or, at least, to minimize the increases in property taxes.

VAT's could substantially alleviate our balance of payments problem if floating the dollar doesn't solve it. European and other nations have insisted that the 10-percent surcharge inaugurated in 1971 was contrary to GATT. If we adopted the VAT, we could impose the same tax as a border tax adjustment just as VAT countries already do.

VAT collections could be shared with the states to redistribute income from richer to poorer states. There is no need for permitting the method of raising revenue (whether from taxes or borrowing) or the distribution of tax liability to determine the distribution of shared revenues. A state's fiscal capacity is not necessarily in line with its needs for public services.

Minnesota AGRICULTURAL ECONOMIST

Prepared by the Agricultural Extension Service and the Department of Agricultural and Applied Economics.

Views expressed herein are those of the authors, but not necessarily those of the sponsoring institutions.

Address comments or suggestions to Professor Arley D. Waldo, Department of Agricultural and Applied Economics, University of Minnesota, St. Paul, Minnesota 55101.

A Federal Tax Increase?

Arley D. Waldo
Professor, Department of Agricultural and Applied Economics

Interest in the possible adoption of a national value added tax and in various tax reform measures has been heightened by the prospect that a federal tax hike will soon be necessary. Despite political campaign promises, most budget watchers are convinced that rising federal expenditures will continue to outstrip tax receipts and lead inevitably to higher federal taxes.

Congress already has moved to increase social security taxes as part of its measure granting a 20-percent across-the-board increase in social security benefits. Other federal tax increases will be difficult to avoid.

Faced with what one White House aide termed a "budget emergency," President Nixon called in late July for a $250-billion ceiling on federal spending in the current fiscal year in order to avoid a budget deficit larger than the $25.5-billion included in the administration's budget.

Federal spending in the current fiscal year exceeds by several billion dollars the amount budgeted by the administration. The estimated budget deficit has grown to $27 billion, and the gap between revenues and expenditures appears likely to widen.

Federal spending that exceeds the amount of revenue the economy would generate at full employment could lead to an excessive budget deficit and more inflation. The alternatives are to hold the line on government spending or to increase taxes.

Prospects for checking increases in federal spending appear dim. In order to keep the deficit within bounds, the administration would have to cut several billion dollars out of the expenditure programs now emerging from Congress. From a practical viewpoint, many of these programs enjoy wide public support and are virtually uncuttable. Moreover, a backlog of high-priority national objectives remains unmet, and the job of trimming the budget will be even more difficult next year.

One reason why our present tax structure will not support a faster rate of growth in federal outlays is because potential revenue has been lost through a series of tax reductions. Most recently, the Revenue Act of 1971 increased individual income tax exemptions and deductions, instituted a job development credit for corporations, and repealed the excise tax on cars and small trucks. The effect was to reduce tax receipts by an estimated $6.9 billion in fiscal year 1973. Since 1969, a family of four with an income of $5,000 has had its individual income tax cut by 66 percent, and a family of four with a $10,000 income has had a reduction of 26 percent.

Regardless of the outcome of the November election, the next administration will almost certainly be confronted with an excessive budget deficit, strong opposition to any major budget slashes, and unmet national goals. It and the Congress will be forced to recognize the need for more revenue. As Congressman Wilbur D. Mills, Chairman of the House Ways and Means Committee, has observed, "Anyone is kidding the American people when he tells them definitely there will not be a tax increase sometime in the next Congress."

RECENT PUBLICATIONS

This list of publications, released by the Department of Agricultural and Applied Economics, includes staff papers and reports issued since January 1, 1972. A more complete list of papers and publications covering the period from July 1971 through June 1972 may be obtained by requesting Economic Information Report R72-7, "List of Faculty Publications in Agricultural and Applied Economics."

Please send requests for this report and for those listed below to: Department of Agricultural and Applied Economics, 212 Haecker Hall, University of Minnesota, St. Paul, Minnesota 55101.

Staff Papers

P72-1 The Importance of Regional Differences in Agricultural Development. K. William Easter and Shrinath Singh.

P72-2 Some Speculations on the Long-Run Future of Rice in Thailand. Delane E. Welsch.

P72-3 Livestock Projections by the Technique of Flow Charts. Abdelmagid Slama, Willis Anthony, and John DeBoer.

P72-4 Supply Analysis for Corn in the United States: The Impact of Changing Government Programs. James P. Houck and Mary Ryan.

P72-5 The Economics of Rice Policy in Four Developed Nations. James P. Houck.

P72-6 Background to the Introduction of High Yielding Varieties of Rice in Thailand. Delane E. Welsch and Sopin Tongpan.

P72-7 The Adoption of High Yielding Wheats in Tunisia. Malcolm J. Purvis.

P72-8 Revenue Sharing and Value Added Taxes. John D. Helmberger.

P72-9 Some Market Effects of Agricultural Development on Functional Income Distribution in Developed Countries. Lee R. Martin.

P72-10 Estimation of U.S. Corn Acreage. Mary E. Ryan and Martin E. Abel.

P72-11 Social / Environmental Systems for Regional Development Planning. Wilbur R. Maki.

P72-12 Economic Growth in Minnesota: Compared to Neighboring States and the U.S. John D. Helmberger.

P72-13 Resource Allocation and Decision Analysis for Agricultural Research. W.L. Fishel.

P72-14 The U. S. Food Demand for Wheat by Class. Ju Chun Chai.

P72-15 Needed Research into the Effects of Large Scale Farm and Business Firms on Rural America. Philip M. Raup.

P72-16 The Demand for Cotton in India, 1952-68. Surgit Sidhu, J.S. Mann and Martin E. Abel.

P72-17 Improving Income Distribution as a Development Goal: An Operational Approach. Rainer Schickele.

P72-18 Elements of Banking Performance, Ninth Federal Reserve District. Mathew Shane.

P72-19 Benefit-Cost Analysis of Income Maintenace Proposals. John H. Sanders and Arley D. Waldo.

P72-20 A Programming Approach to Urban Transit Planning. Mathew Shane and Terry Roe.

Economic Study Reports

S72-1 Cash Crop Farms in Southern Minnesota: 1968-1970. Truman R. Nodland and Douglas Pagel.

S72-2 The Minnesota Rural Real Estate Market, 1971. Kenneth Emde and Philip M. Raup.

Economic Information Reports

R72-1 1971 Southwest Minnesota Farm Management Association. Truman R. Nodland.

R72-2 Costs and Returns from Feeding Cattle, 1970-71. Barbara Miller and Truman R. Nodland.

R72-3 1971 Southeast Minnesota Farm Management Association. Truman R. Nodland.

R72-4 Beef Cows in Northwestern Minnesota. Truman R. Nodland.

R72-5 1971 Farm Business Summary by Type of Farming in Northern Minnesota. Truman R. Nodland.

R72-6 Agricultural Outlook, 1973.

R72-7 List of Faculty Publications in Agricultural and Applied Economics.

Agricultural Extension Service
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101

Roland H. Abraham, Director

Cooperative Agricultural Extension Work
Acts of May 8 and June 30, 1914

OFFICIAL BUSINESS

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF
AGRICULTURE