and capricious assessment of the tax base. Because the tax applies to values defined by applying regulations, not values from market transactions, assessment is troublesome and requires special attention. Most problems with the property tax, outside of valuation, can be largely resolved by circuit breakers, deferrals, and the like.

It would be unfortunate if the advantages of the tax were sacrificed solely because of unwillingness to improve administration. The advantages of the property tax for local government finance are several. The base is visible, easily attached in an enforcement action, and physically immobile. The tax can be administered at a leisurely pace and the rate can be adjusted to a fine degree. Those supporting a considerable degree of fiscal independence for the government closest to the people should consider how important the real property tax is to this independence.

QUESTIONS AND EXERCISES

1. Identify these elements of the property tax in your state: Who assesses property? Are some types assessed locally and some types by the state? What valuation standard is used? When was the latest reassessment of real property? Is personal property taxed? What classification system (if any) is used? What circuit-breaker type (if any) is used? Does the circuit breaker extend beyond residential property owned by the elderly?

2. Why is the acquisition value or assessment-on-sale assessment system sometimes called the "Welcome Stranger" assessment system?

3. Knightstown has a property tax base with an appraised value consisting of $142,000,000 of taxable real property and $78,000,000 of taxable personal property. The assessment ratio is 50 percent. Exemptions for the elderly reduce assessed value by $3,000,000. The city has a planned budget of $3,500,000 and expects to receive $750,000 in nonproperty tax revenue.

   a. Compute the statutory property tax rate.
   b. Compute the effective property tax rate.
   c. The Smith family lives in Knightstown. Their property has an appraised value of $42,000. What is their city property tax bill?

4. Central County includes five townships (Nixon, Reagan, Davis, Greasy Creek, Navaho) and one city (Booneville). It is served by two independent school districts: Seagram United (Davis and Greasy Creek Townships) and Yeltsin Consolidated Schools (Nixon, Reagan, and Navaho Townships). Each government in the county levies a property tax to finance its activities, although Booneville has also enacted a local earned income tax (it is expected to yield $750,000 in the next year). Property tax rates are applied to assessed value, defined to equal 50 percent fair cash value. Local unit tax rates fully overlap.

in assessed value and that the city, county, and school districts increase their levies by the maximum allowed, but that there is no increase in levies by any township. What is their new property tax?

5. The state owns 16,500 acres of state forest land in a county. Forest and untilled open areas (the kind of land largely within the boundaries of the state forest) are valued at $180 per acre on average when in private ownership. Assessed value is one-third of that value. The forest area is in two townships of the county. Sixty percent is in a township with a tax rate of $1.72 per $100 and the remainder is in a township with a rate of $1.64 per $100. According to the aid formula for compensating local governments containing substantial amounts of untaxed state property, the county receives in-lieu-of-property-tax payments of $18,000 per year for division among the affected taxing units of the county. Is the state payment about right in comparison to the equivalent property tax the land would bear? Explain.

6. Mr. and Mrs. Woodward, an elderly couple with no dependents, have taxable source income of $8,000 and $26,000 income from Social Security. They own property assessed at $75,000 (current market value of $190,000) and are subject to a property tax rate of $5/$100 assessed value. They each receive an old-age property tax exemption of $500. They are eligible for the state property tax circuit breaker. The relief threshold is 6 percent of total money income; 25 percent of any overload is returned by the state in an income tax credit. Maximum relief paid is $600 per couple.

   a. What property tax would they pay without circuit-breaker relief?
   b. For how much circuit-breaker relief are they eligible?

7. There have been complaints about assessment practices in Garfield County. Each of the three townships in the county assesses property independently, using an elected assessor. State law dictates that assessed value equal one-third of market value; the state constitution contains a clause requiring uniform property tax rates. The state agency of which you are an employee judges assessment quality in counties, recommends multipliers to produce overall balance among townships, and can recommend general reassessments where needed.

   You have obtained a random sample of assessed values and selling prices of the residential properties that have sold during the last quarter in the county. All prices are arm's-length transactions, none involve special financial arrangements, and none involve substantial amounts of personal property. Table A presents these data.

   a. Prepare a preliminary opinion of assessment quality in Garfield County. Compute all important statistics.
   b. The Garfield County Board of Equalization wants multipliers to get each township's assessed-value/market-value (AV/MV) ratio up (or down) to the state-required one-third ratio. What multipliers would you apply in each township? Will the application of these multipliers increase or reduce measured equality of assessment in each township? What would their impact be on measured equality in the county?

Conclusion

Public prices can be an attractive alternative to tax financing. Public prices avoid citizen resistance to taxes and can improve both equity in finance and service provision efficiency. Of the various government levels, cities currently make greatest use of user charges in the United States. User charges have the advantage of voluntarism not found with taxes, but only services with some considerable degree of benefit separability and chargeability are reasonable candidates for user-charge financing. Basic services provided by government usually lack those features. Most governments could increase their user-charge revenues, but seldom can true user charges (not disguised taxes) constitute a major portion of financial support. A similar conclusion is warranted for municipal utilities and state liquor monopolies; it is not clear why, if a government operates such facilities, it would not seek roughly the same objectives as a private owner. Lotteries in recent years have produced, relatively speaking, more public attention and acclaim than revenue.

QUESTIONS AND EXERCISES

1. The Fernwood Wastewater District—at the gentle insistence of both state and federal agencies—is changing methods of financing the operating and maintenance costs of its system. Presently, all users of the system (residential, commercial, agricultural, industrial, etc.) pay for the system by a property tax; payments to the district are assigned according to individual holdings of property value. If a car wash constitutes 0.0001 of total property in the district, the car wash pays 0.0001 of the operating and maintenance cost of the system. The proposed effluent-charge system would assign cost on the basis of estimated toxic-waste quality and quantity introduced into the system. The structure could easily be applied because a federal agency has data on the amount and type of waste that production and consumption processes generate annually, based on national data. These data would then be used to assign an annual effluent charge to each user, based on the total costs of the district.

   How do the two systems differ in terms of incentive to reduce wastewater quantity and toxicity?

2. In mid-1985, the U.S. Customs Service proposed a user-charge system for partial support of its services. The system would charge $2 for every arriving passenger on an international flight, $0.25 for passengers arriving by train from a foreign destination, and $2.50 for arrivals by boat. Fees to inspect airplanes would be $32 and to check passenger and freight carriers, up to $397. The customs system currently is financed by general revenue.

   Does the proposal seem reasonable? Discuss its logic, advantages, and disadvantages.

2. Does your state develop a tax-expenditure budget? Does it prepare fiscal-impact statements? What agency does this work? How are revenue forecasts prepared for the budget process?

3. A state in the southeastern region of the United States operates state liquor stores. Prices at the stores are set in the following fashion: Add 41 percent to the wholesale price at which the system acquires the product. To that is added an excise of $8.10 per case. The state sold roughly 36 million cases. The state, however, increases the excise rate to $9.10 per case, and a tentative revenue estimate shows that excise revenue will increase by $36 million. The state economist objects: "The demand for liquor is inelastic, so sales will be relatively insensitive to a tax increase. Therefore, revenue will increase by more than $36 million." What is your reaction to this objection?

4. Revenue estimates are sometimes at the mercy of the administrative process. Suppose you are developing estimates of corporate income tax collections for a state. In your review of historical data, you find that a large but quantitatively imprecise amount of collections were moved from one fiscal year to another because overlapping vacation schedules caused the collections' mailroom to shut down in the last two weeks of a recent fiscal year. How might you handle this problem in preparing your estimate, both in perfecting the historical data and in delivering your estimate?

5. Your state plans to adopt a tuition tax credit for college students. How would you estimate the revenue impact of this provision? How would the decision to use static, microeconomic feedback, or dynamic approaches influence your estimate?

6. When the Soviet bloc broke up in the early 1990s, the Republic of Vardar declared its independence. As the country established a monetary system, democratic processes, and a controlled fiscal system, the early problems of hyperinflation, unemployment, and declining standards of living slowly subsided. In late 1997 the country initiated a personal income tax, heavily dependent on taxes withheld by large employers on wages and salaries, but still broad in coverage. The country has been collecting about 30 percent of its tax revenue from that tax, although a law passed in 2000 is expected to reduce personal income tax collections by 25 percent in the short term. The lower tax rates are expected to stimulate economic activity and to encourage business to move from the shadow to the official (taxpaying) economy, so some of the revenue loss will ultimately be recovered. The Ministry of Finance forecasts collections of 7,789,000.0 thousand markka (MK) for 2001. Data on tax collections are reported on the following page.

   a. From this information, would you advise the ministry to revise its 2001 forecast? Explain.
   b. What factors may influence the patterns you see in the data?
   c. What other issues would you pursue in addition to the data presented here?

   Collections are in MK thousand.