

JAMES A. GRAASKAMP COLLECTION OF TEACHING MATERIALS
V. INDUSTRY SEMINARS AND SPEECHES - SHORT TERM
B. Assessors and Other Public Officials
2. "The Future in Assessment Appraisal
Techniques", to the Canadian Property Tax
Agents Association, October 28, 1971

THE FUTURE IN ASSESSMENT APPRAISAL TECHNIQUE

A Synthesis of Remarks to:

Canadian Property Tax Agents Association
1971 Annual Meeting
October 28, 1971

Hotel Frontenac
Quebec, Canada

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THE FUTURE IN ASSESSMENT AND APPRAISAL TECHNIQUES

1. Introduction

The opportunity to forecast the future character of appraisal for tax assessment reveals singular political acumen on the part of your program committee. It is well known that a prophet is without honor in his own country and at the same time it would be less than delicate for a Canadian appraiser to suggest that the comprehensive reorganization of tax assessment law just completed here in Quebec will shortly be obsolete in concept and in detail. What could be better than a visiting expert from an obscure small town in America who speaks his mind and then departs for the States before the evening edition reaches the streets? Indeed, neither my English nor my French is so good that I could not plead a bilingual misunderstanding of anything on which someone might take umbrage.

The ultimate concern of your association membership is the total cost of real estate taxes for those property owners you represent. This cost is a function of at least three elements:

1. The future role of the real estate tax in providing for municipal budget requirements relative to other forms of taxation;
2. The equalization process for allocating municipal revenue requirements among various classes of property;
3. The valuation methods utilized in determining assessed value of any individual property.

If you were to press me to forecast total dollar cost of the real estate tax for the next decade, I would have to say that the real estate tax dollar cost will increase at a decreasing rate and eventually decline in absolute terms because of forces presently in operation affecting each of the three above elements.

The theory of public finance and the burden of public tax distribution among alternative sources of revenue is beyond my expertise and therefore must be largely ignored this morning. Still there is in the States, as well as in Canada, considerable research under way to devise means of shifting many urban costs of welfare and education from the real estate tax to other forms of less regressive tax collection. It is these reforms that hold the greatest promise for substantially reducing the budgets which depend on the real estate tax for financing.

The focus this morning must be on the related subjects of individual property appraisal and equalization of valuation among various sub-classifications of property types and taxing districts. Equity among property owners is most sensitive to the accuracy of appraisal techniques employed when assessment at 100% of market value is the goal. A corollary to accuracy and full value assessment is the issue of maintaining assessments at current levels during an era of continuing price increases in a somewhat erratic pattern of change by region and property type. Proper equalization and current assessments for each and every property would produce significant stabilization of the mill rate for the short run, at least dampening the rate of increase. Equalization is in part a political problem of eliminating tax enclaves, of financing staff and training in modern appraising methods, and of control of tax favors granted special groups who are most articulate or best represented in the government process. But equalization is also a problem of appraisal technique and it is technique to which I will address my comments this morning.

II. The Concept of Fair Market Value

The concept of fair market value is a very amorphous idea on which to build a tax system. To the general public "fair" has some ethical connotation, biased by the purpose of the appraisal, while to the appraiser,

"fair" implies something akin to central tendency as in the expression "that's a pretty fair guesstimate." In our country the three approaches to value dogma which presumably must be followed in order to derive "fair market value" is under heavy pressure from those within the American Institute of Real Estate Appraisers who are involved in rewriting their basic course materials. More significantly, in the field the best appraisers simply sidestep the three approaches in narrative appraisals by dismissing one or more of the methods as inappropriate to a particular case or by labeling the conclusion investment market value. The winning essay in a program sponsored by the Society of Real Estate Appraisers in 1970 artfully dismantles the traditional (1) approaches and what remains of it presently appears in the sophistry of courtroom examinations and among the semi-retired appraisers, fearful of being damned to obsolescence if the trinity in their life is officially disavowed.

In my State of Wisconsin both the statutes and 50 years of court cases specify that assessment must reflect the highest dollar sale obtainable from another user (someone purchasing from the present owner). This standard is consistent with the concept of assessment at market value and inconsistent with the equity concept of equalization among property types. For example, I appraised a brand new \$18,000,000 office building of nearly 600,000 gross square feet of space in a small Wisconsin town at \$9,000,000 under the most favorable reuse assumptions imaginable. At the same time it was a good investment for the original owner as it strengthened the company image, personnel recruitment and wage cost, and the productivity of employees. In another case involving a high-rise urban renewal project, the market value approach indicated a value in excess of \$9,000,000 despite the fact that investors are suffering a \$200,000 cash loss (not a tax-shelter loss on paper) each

year with prospect of prolonged rent ceilings. Neither solution produces an equitable allocation of tax as in the first case it is a productive investment for the firm but without any parallel in the community whereas in the second case, it is unproductive for the investor but seemingly parallel on superficial standards of comparison to a number of other major projects in the large metropolitan area. Equalization is not served in either case. It may be that distribution of the real estate burden by means of resale price is not the most equitable method of allocating real estate taxes among property owners, a point which we will return to later this morning. Let us assume for the moment, however, that resale price should be the goal of assessment appraisal for then we can bear down on the issue of new appraisal techniques.

Prof. Richard U. Ratcliff, presently your appraisal theoretician in residence at the University of British Columbia and formerly my mentor at the University of Wisconsin, has pointed the direction for twentieth century appraisal methodology in his usual incisive manner as any technique: (2)

1. Which infers the tendency of price of a particular property from the pattern of past transactions involving related properties, or;
2. Which simulates the most probable buyers investment calculus in order to forecast the top price he would be willing to pay.

Forecasting by inference from past sales of most probable sale price may in some situations permit some use of statistical data techniques such as multiple regression analysis. A variety of innovative experiments applying these techniques to farm lands, single family homes, small apartments, and special commercial sites such as filling stations are appearing with increasing frequency in the literature. At the same

time real estate investment analysis is focusing on computer simulation of after-tax cash flow analysis and modern capital budgeting tools such as internal rate of return, economic modeling, and risk as the probability of variance between expectations and realization. These concepts are playing an increasing role in real estate purchasing decisions as the large corporations move into real estate operations. These large corporations are using statistical marketing analyses and capital budgeting techniques which they have used successfully in manufacturing or financial institution management. The investment bankers who are packaging the bigger real estate deals are more than a little incredulous at the income approach to value as practiced by appraisers.

Why should it be necessary to force these techniques into the three approaches to value mold? For example, in the case involving the \$16,000,000 home office building mentioned earlier, I used square foot sales prices of several outgrown insurance buildings in Wisconsin sold or leased to the state as comparables. At best they represented a total of 80,000 square feet of reused space in major urban areas as opposed to 600,000 square feet in one building. For the income approach I hypothesized leasing to the state to consolidate their upstate agency facilities and then applied the Ellwood approach. However, the local assessor was committed to using an actual cost to replace, and so my report stressed that approach - adjusted for economic depreciation. To measure economic depreciation the cost to replace was reduced by increments of 10% until a purchase price was determined which would permit a cash break-even point including debt service at a net cash cost per square foot of useable space that was 50¢ higher than gross rent in any office building outside the metropolitan Milwaukee area. This approach not only revealed the financial absurdity implied by

the assessors value position but also established the reasonable premise that the cash occupancy cost of general purpose office space is the prudent standard and upper limit of price for any buyer. The reason for a standard of 50¢ above comparable A-quality office space was to avoid argument on the impact of escalator clauses on quoted space rents and recognize the premium paid for status of ownership. The cash cost was after federal income tax so that it represented net dollar outflow and the equity buildup on the hypothetical mortgage was minimal for a 10-year forecast subject to 30 year term financing.

Since the building was a good buy for its builder and present owner but would sell at a discount of 50% to a second buyer by any reasonable standards of resale value, there is obviously an economic flaw in appraisal or perspective. It is the same flaw which results in a site with fair market value of \$60,000 selling to a particular gasoline retailer for \$100,000 or a bankrupt government insured housing project selling for a million dollars despite a long history of negative income. Essentially the problem is that appraisers stand on the outside "looking in" and have no way to simulate the internal economics which are peculiar to the marketing strategy, personnel program, fixed costs, or technical advantages and disadvantages of a particular firm. Commercial or industrial property is viewed as an isolated investment, when in fact it is a capital resource which is contributing to the entire cash flow of an economic process, affecting sales, expenses, investment income and earnings per share in an almost infinite number of complex ways. The assessor in the above case is clearly wrong under Wisconsin law but his intuitions were correct that financial simulation of the firm would have justified the \$18,000,000 investment. Appraisal of industrial and commercial properties cannot arrive at the correct answer unless

it is using the calculus of the investor.

A number of banks and insurance companies have developed flexible and comprehensive computer programs with which to evaluate mortgage loan and equity investment opportunities. The assumptions of a particular deal are carefully detailed including each element of the financial package which may involve sale and leaseback of the land, a leasehold mortgage on improvements, a construction loan, and perhaps, joint venture money up-front. Projections of receipts and outlays are made by quarters for as long as five or ten years according to a time-line of financial events to determine periods of net outlays and net receipts. The outlays are then discounted back to the beginning of the time-line at the opportunity cost of money. Receipts are compounded forward to the end of the full time-line forecast at the reinvestment rate, which is generally the opportunity cost of money, but may be more or less depending on long term capital market trends. The computer then solves for the internal rate of return which equates the present value of the outlays with the compound future value of net receipts on an after-tax basis. Market data provides the basis for revenue estimates; the cost approach provides detail for capital budget allowances; the money market and alternative internal opportunities provide the decision criteria as to which investment to choose and how much to pay for the components of the real estate project. It is not surprising that sophisticated capital makes decisions with the counsel of certified public accountants, engineering professionals, and Wall Street investment bankers and uses the appraiser to provide the required file folder for the insurance regulator and bank auditor.

III. Impact of Innovative Appraisal Technique on Tax Appraisal Methods

At risk of oversimplifying the criteria and constraints influencing tax administration procedures, let me suggest that the acceptability of

new real estate appraisal techniques for tax assessment purposes will be determined in large part as to how each may:

1. Contribute to updating and maintaining assessed values of a particular property type at near-current market levels,
2. Permit use of less-skilled clerical talents or systematized coding standards to reduce the gap between the increasing number of tax parcels and the supply of professionally trained appraisers available to the tax administrator.
3. Facilitate stabilization or reduction in the cost of real estate tax administration, particularly the cost of appeal and defense.

When judged by these standards, statistical regression analysis by computer for certain types of class property is readily acceptable to the sophisticated assessor. Indeed it is the assessor who is 10 years ahead of his colleagues in the operational installation of such systems as originally designed by Gustafson and Hinshaw in California. (3)

There is an initial investment in preparation of a data bank and regression formulas as well as the maintenance costs of sales data banks which require the economics of mass appraisal. Following a major capital investment and transition period, these systems should accomplish all three of the aims above, with the official position of some professional appraisal societies lagging as an anachronism from the 1930's.

Appraisal by means of investment simulation, in all likelihood, will be rejected by tax administrators after some experimentation in court cases to win some long standing arguments with major taxpayers. The difficulties of training a staff, accumulating data, establishing economic models which would be equitable among businesses, and still remaining current in assessed value determination is too complex and overwhelming a problem for hard pressed tax administrators. Appraisal and tax

administration must therefore go another route to nirvana if both are to modernize with the times. Just as a chicken is the egg's way of making another egg, fair market value for the assessor is simply a technique for allocating certain government revenue requirements among property owners. In this age of systems and chromosome predetermination, why not find a more equitable, mechanical and less cumbersome system for distributing the tax burden?

IV. A Modest Proposal

If the essential function of the assessor is to allocate revenue requirements of local governments among local property owners, why not find a more objective standard of real estate productivity than something so ethereal as fair market value? The key attribute of real estate productivity is space, artificially differentiated space. Real estate was first created when some developer rolled a rock in front of a cave to create some amenity, be it defense, warmth, or privacy, which was not an attribute of the natural void. Real estate is therefore artificially differentiated space, sometimes enclosed as cubage and sometimes delineated only by our limitations in reaching into the sky or into the depths of the sea and the earth. Since assessors can measure dimensions so well and since dimensions change with relative infrequency, let us assume the common denominator for allocation of the tax would be the cubage defined for each tax parcel and each sub-class of real estate property. For example, we might identify the following major property types:

1. Agricultural land
2. Conservation and open space land
3. Timber and mineral resource lands
4. Residential property (owner occupied only)
5. Commercial property " " "
6. Industrial property " " "
7. All forms of rental property
8. Public building and property

Various arbitrary standards for calculating cubage of all improvements could be created,

not unlike is presently done in assessment manuals. Cubage assigned land such as a corn field might be the dimension of the property times an arbitrary height of six feet, the height of a corn stalk, or possibly eight feet in Iowa. Mineral lands might be assessed by the cubage of mine shafts or the open pit of the quarry, a factor correlated to rate of mineral recovery and calculated to encourage mining companies to fill in their scars on the earth when they were done. Similarly residential lots and open spaces might be assigned an arbitrary altitude of twenty feet, high-rise sites a hundred feet or more, while conservation lands were granted a tax boon with a height dimension of only three feet, the average operational altitude of butterflies of the field or a tall daisy.

The total governmental revenue requirements would then be divided by the aggregate cubage for all property classes combined, and each class would then further break down its total tax allocation among properties within this class by some simple linear regression formula which might reflect age, occupancy, and some other variables to serve as a proxy for productivity differentials. Such a system would avoid costly sophisticated appraisal innovations and the whole hassle of what is value. Protest and administrative review would rest on relatively objective issues of measurement, age, occupancy by number of family units, employees, etc. and would avoid all of the sophistry which finds fertile ground in the manured field of appraisal.

V. Conclusions

Considerable innovation and reform is quietly taking place in operational real estate appraisal offices and many of these reforms will be reflected in a short time in published appraisal doctrine as promulgated by professional appraisal societies. It is equally clear that

the sophisticated techniques of innovative property valuation will unnecessarily complicate and postpone much needed reform of real estate tax administration. The urgencies of the urban crisis in matters of public finance must therefore force the irrational political system toward a reasonable departure from the present system of relating tax equalization and equitable distribution of municipal revenues to real estate appraisal technique. The rate of advance in appraisal technique will therefore determine the rate of innovative departure of property tax allocation procedures from any dependence on fair market value concepts. I trust you will invite me back in ten years to gloat "I told you so."

Footnotes

- (1) Harry C. Smith and Ronald L. Racster, "Should the Traditional Appraisal Process be Restructured", *The Real Estate Appraiser*, Volume 36, Number 7 (November-December, 1970)
- (2) Richard U. Ratcliff, "Modern Real Estate Valuation", Madison: Democrat Press, 1965.
- (3) Andrew J. Hinshaw, Assessor of Orange County, California, An Address for the 1969 Conference of the International Association of Assessing Officers, Denver, Colorado, September 9, 1969.