Reform Revisited: The 1990 Winnipeg Reassessment

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PRÉCIS

La détermination de l'impôt foncier à Winnipeg continue de faire l'objet d'une vive controverse. Après presque 40 ans d'inaction Winnipeg décida enfin en 1987, à la suite d'une ordonnance de mandamus, de réévaluer l'impôt foncier applicable à toutes les propriétés de la ville. Cette réévaluation fut suivie d'une seconde en 1990. Les disparités s'étaient accumulées au cours des années. Les luttes politiques et juridiques qui avaient donné lieu aux réévaluations avaient été extrêmement âpres, des groupes de pression prétendant que les propriétés du centre de la ville avaient été surévaluées par rapport aux propriétés de la banlieue. Dans un article précédent nous avions examiné la politique et les résultats de la réévaluation de 1987. Nous en avions conclu que la qualité de l'évaluation s'était améliorée dans l'ensemble, mais seulement de façon modérée. Grâce au grand nombre de plaintes et d'appels suscités par les deux réévaluations, et au fait que plusiers de ces plaintes ont porté résultat, il est possible d'examiner une gamme de résultats d'évaluation. Il n'existe pas d'étude publiées portant sur plus d'une seule réévaluation et analysant leurs conséquence après plusieurs années. Winnipeg nous fournit une étude de cas intéressante étant donné que les deux réévaluations récentes font suite à une période d'inaction de près de 40 ans. Grâce à elles, nous sommes capables de vérifier si la qualité des évaluations s'améliore parallèlement à leur fréquence, comme certaines études l'avaient prédit.

Notre étude empirique révèle qu'à Winnipeg la qualité des évaluations s'est quelque peu améliorée après 1987 et 1990. L'amélioration est plus marquée pour les propriété dont la première évaluation était erronnée. Nous avons également examiné la question d'objectivité des évaluations en ce qui concerne certains types d'habitations et de voisinages. Nous sommes arrivés à la conclusion que la qualité des évaluations s'est améliorée dans l'ensemble, donnant suite particulièrement aux demandes de groupes de pression d'éliminer l'influence des facteurs géographiques. Toutefois dans

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d'autres domaines les résultats sont plutôt mixtes, certaines évaluations ayant été effectuées en tenant davantage compte du marché, tandis que d'autres révèlent l'influence significative de d'autres caractéristiques qui n'existaient pas avant les réévaluations.

ABSTRACT

Property tax assessment is an ongoing and bitter controversy in Winnipeg. After nearly 40 years of inaction, Winnipeg finally undertook a citywide reassessment of all properties in 1987 as a result of a court order of mandamus. A second reassessment followed in 1990. Inequities in assessment had accumulated over the years, and the political and legal battles leading up to the reassessments were intensely combative, with special interest groups claiming that property in the city centre was overassessed relative to property in the suburbs. In an earlier article, we examined the politics and outcome of the 1987 reassessment, concluding that the quality of assessment improved overall but not by much. As a result of the large number of complaints and appeals about the reassessments, many of which were successful, it is possible to examine a panel of assessment values. There are no published studies that examine more than one reassessment and document their impact over time. Winnipeg provides a valuable case study since there are two recent reassessments after a lapse of nearly 40 years. We are able from these to determine whether assessment quality improves with the frequency of reassessment, as some studies have predicted.

Our empirical investigation reveals that the quality of assessment in Winnipeg has improved somewhat after both 1987 and 1990. The gain in assessment quality is greater for property that was originally misassessed. We also examined whether assessment was biased with respect to specific housing and neighbourhood characteristics, and conclude that while there was improvement overall, the assessments were particularly successful in addressing demands by special interest groups to eliminate the geographical biases. The record concerning other dimensions is mixed, however, with some property characteristics assessed more closely in line with market evaluation and others revealing significant biases not present before either assessment.

Debate over property tax assessment has raged in Winnipeg for decades. After nearly 40 years of inaction with respect to assessed property values, Winnipeg undertook a citywide reassessment of all properties in 1987 as a result of a court order of mandamus. Numerous inequities had accumulated during the intervening period between assessments and the political and legal battles leading up to the reassessment were intensely combative. Special interest groups argued that property in the city centre was overassessed relative to property in the suburbs, and, not surprisingly, the geographic

dimension of property misassessment became a particular focal point in the ensuing reassessment.

In a recent article in this journal,[1] we examined the politics and the outcome of the 1987 citywide reassessment for single-family dwellings. We described the legal process that led to the court decision ordering the reassessment and reported on the quantitative impact of that reassessment, both across the politically relevant geographic dimension and across other characteristics of property and neighbourhood. We concluded tentatively that the quality of the assessments improved overall, although not by much. In particular, the dollar amount of misassessment associated with the geographic location of the property was reduced, suggesting that reassessment diminished the flagrant errors that had led to the court challenges in the first place. However, the record of achievement across other property and neighbourhood characteristics was mixed, showing an improvement in assessment quality for some characteristics and a worsening for others.

A great many complaints were understandably directed by citizens toward the reassessment process, so much so that the flood of appeals necessitated an extension of the deadline for filing the appeals and the hiring of additional staff to process them. Furthermore, many appeals were successful in having the assessment lowered, including a few high-profile appeals by businesses in the downtown city core.

There are no published studies that examine more than one reassessment and document the impact of each one on the same properties over time—that is, examine a panel of assessment values. That kind of comparison is particularly informative since some writers remain skeptical about whether property tax reform is possible in the face of strong lobbying by special interest groups.[2] Winnipeg's second reassessment in 1990 affords an opportunity to examine whether or not the quality of property tax administration may be improved by frequent assessments.

Winnipeg thus provides a valuable case study because of its two recent citywide reassessments, in 1987 and 1990, after a lapse of nearly 40 years. Since property assessment information is now available for 1990 on the same set of single-family dwellings we studied in 1987, it has been possible for us to examine whether the ongoing reassessment in 1990 continues to improve the quality of property tax administration.

Our sample of properties consists of 1,770 single-family dwellings sold during 1984. The sampling procedure is discussed in our earlier article.[3] For

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[1] James M. Dean, Derek P.J. Hum, and Harvey Stevens, "Improving Property Assessment: A Study of the Winnipeg Reassessment" (1989), vol. 35, no. 1 *Canadian Tax Journal* 93-112.

[2] See Richard M. Bird and Enid Slack, "Can Property Taxes Be Reformed?—Reflections on the Ontario Experience" (Fall 1981), 24 *Canadian Public Administration* 469-85. Roger S. Smith argues that the conditions are not the same in all Canadian cities. See Roger S. Smith, "Why the Canadian Tax(payer) Is Not Revolting" (1990), vol. 38, no. 2 *Canadian Tax Journal* 298-327.

[3] Supra footnote 1.

each property, the assessed value is compared with the actual market value, with appropriate correction for the institutional peculiarities of the Winnipeg legislation. An estimate of the assessment error associated with each property is obtained by taking the difference between the adjusted assessed value and the actual market value of the property. The assessment error may be negative or positive, indicating that the property is either underassessed or overassessed.[4] Further, the assessment error may be either random or systematically associated with one or more of the specific characteristics of the property and the neighbourhood. Systematic errors can be predicted to occur in properties with the specific characteristics; they can be minimized by changing the way in which the assessments are calculated. Random errors are due to the influence of exogenous forces on the market price of individual houses and cannot be predicted or corrected in advance. Improving assessment quality requires minimizing the systematic errors until only the random effect of exogenous forces remains.

Some studies have predicted that assessment quality improves with the frequency of the reassessment.[5] Table 1 provides an indication of the pattern of assessment errors through time, since the assessments refer to the same properties. As table 1 shows, the quality of property assessment in Winnipeg has apparently improved after each reassessment. One measure of quality is the relative coefficient of dispersion, which declined from 19.3 percent in 1984 for all properties before any reassessment, to 16.9 percent following the 1987 reassessment, and to 15.2 percent following the 1990 reassessment. The improvement is observable for all areas of the city.[6] Furthermore, the average amount of misassessment has declined. In table 2, the average amount of misassessment is shown both for properties that were underassessed and overassessed in 1984, 1987, and 1990 respectively. The improvement is particularly noticeable for those properties underassessed in each period. Average underassessment in 1984 amounted to $9,376 and declined to $6,164 by 1990. For properties overassessed, the average amount of the overassessment declined from $8,468 in 1984 to $7,028 in 1990 (see table 2). At an aggregate level, we suggest that the quality of the assessments improved following both reassessments.

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[4] The adjusted assessment value is greater than the market value when the property is overassessed and vice versa. Consequently, a positive sign on the estimates of assessment error indicate that the property is overassessed and a negative sign indicates that the property is underassessed. Presenting the results in this form corresponds to readers' intuitive understanding of over- and underassessment.

[5] John L. Mikesell, "Property Tax Reassessment Cycles: Significance for Uniformity and Effective Rates" (January 1980), 8 *Public Finance Quarterly* 23-37; Richard R. Almy, "The Impact of Assessment Practices upon Assessment Performance," in *Analyzing Assessment Equity: Techniques for Measuring and Improving the Quality of Property Tax Administration*, proceedings of a symposium conducted by the IAAO Research and Technical Services Department in cooperation with the Lincoln Institute of Land Policy (Chicago: International Association of Assessing Officers, 1977), 153-97.

[6] There is one aberrant observation for one community: in St. James-Assiniboia the relative coefficient of dispersion increased from 11.3 to 12.9 percent between 1987 and 1990. The difference is not statistically significant, however.

Table 1 Assessment Quality of Single-Family Dwellings in Winnipeg, 1984, 1987, 1990

Community areas	No. of observations	Median assessment/sales ratio			Relative coefficient of dispersion, %		
		1984	1987	1990	1984	1987	1990
City Centre; Ft. Rouge	280	0.16	0.61	1.09	29.2	25.6	22.6
St. James; Assiniboia	208	0.15	0.58	1.04	11.5	11.3	12.9
Lord Selkirk Park; West Kildonan	337	0.16	0.63	1.06	20.1	19.1	16.9
East Kildonan; Transcona	341	0.15	0.61	1.05	16.5	15.3	14.1
St. Boniface; St. Vital	283	0.14	0.58	1.06	14.9	12.3	12.3
Assiniboine Park; Fort Garry	321	0.14	0.56	1.03	14.1	12.5	11.3
Winnipeg— all areas	1,770	0.15	0.59	1.05	19.3	16.9	15.2

Source: Calculations by the authors using data described in James M. Dean, Derek P.J. Hum, and Harvey Stevens, "Improving Property Assessment: A Study of the Winnipeg Reassessment" (1989), vol. 35, no. 1 *Canadian Tax Journal* 93-112. Property assessments for 1990 were collected by the authors.

Table 2 Average Amount of Misassessment of Residential Properties in Winnipeg, 1984, 1987, 1990

Year of assessment	Percentage of units	Amount of assessment error in		
		1984	1987	1990
		dollars		
1984				
Underassessed	47.5	−9,376	−6,331	−4,206
Overassessed	52.5	+8,468	+5,718	+3,799
1987				
Underassessed	47.9	na	−7,781	−5,382
Overassessed	52.1	na	+7,173	+4,962
1990				
Underassessed	53.3	na	na	−6,164
Overassessed	46.7	na	na	+7,028

na—not available.

Note: Residential properties include properties of under five units. The amount of assessment error for properties misassessed in any year is the average amount of underassessment or overassessment for those properties. For example, the 47.5 percent of properties underassessed in 1984 were underassessed by an average amount of $9,376 in 1984, whereas the same properties were still underassessed in 1990, but by an average amount of $4,206.

Source: See table 1.

The gain in assessment quality has been greater, however, for those properties originally misassessed. This is evident from examining the average assessment error for properties that were misassessed in 1984 and comparing this figure with the amount of misassessment for the same properties following the 1987 and 1990 reassessments. As table 2 shows, those properties

overassessed in 1984 were overassessed by an average of $8,468. Following the 1987 reassessment, the same properties were overassessed by an average of $5,718 compared with an average of $7,173 for all overassessed properties. Following the 1990 reassessment, the same properties were overassessed by an average of $3,799 compared with the average overassessment of $7,028 for all overassessed properties. The same pattern is observable for properties underassessed in previous assessments. The evidence suggests that the improvement in assessment quality has been greater for properties originally misassessed.

We may, in any case, expect a certain amount of overassessment and underassessment simply from the variability in selling prices of similar properties. If the assessment process were unbiased, however, we would expect the variation in assessment errors to be randomly distributed across all property types. If certain types of properties show higher assessment errors than others, then this is prima facie evidence of systematic assessment errors. We attempt to address that issue by estimating a model that relates the magnitude of assessment error to characteristics of the houses as well as the neighbourhoods in which they are located. The regression model is estimated for the same set of houses for the three assessment periods, and these results are reported in table 3.

Overall, systematic assessment biases have fallen with each reassessment. The R^2 statistic fell from 0.34 prior to the reassessments to 0.23 after the first reassessment in 1987 and 0.16 after the second reassessment in 1990. In effect, the two reassessments achieved a 50 percent reduction in the amount of systematic misassessment, all in the period of three years. The lesson here seems to be that the more frequently the properties are reassessed, the less systematic bias is incorporated into the process. Note that the biases associated with location, which we documented for 1984 in our previous article, have been eliminated by 1990. This is particularly important in the context of the political debate over reassessment, which emphasized the disparities among neighbourhoods. Furthermore, the debate focused on geographic differences in income, and our model includes a variable that measures neighbourhood income. The bias associated with neighbourhood income had been reduced after the 1987 reassessment, but still reflected a significant overassessment of lower-income neighbourhoods. After the 1990 reassessment, the income bias is reduced to insignificance.

Nonetheless, assessment quality did not improve uniformly across all property characteristics. Some characteristics show systematic biases after reassessment that were not present before the reassessment. Properties with garages are now systematically overassessed, whereas previously they were not biased. Older properties and lots with additional depth are also overassessed after the two reassessments. On the other hand, larger homes—those with eight or more rooms—were still underassessed in 1990. It appears that assessment quality is improved across the dimensions that were the focus of intense debate, but may become worse across other dimensions.

Table 3 The Impact of Housing Characteristics on the Measured Assessment Error in Winnipeg, 1984, 1987, 1990

	1984		1987		1990	
Variable	Estimated coefficient	t-value	Estimated coefficient	t-value	Estimated coefficient	t-value
Intercept	4630.6	2.48	7602.2	4.41	−3045.0	−1.87
Location						
Assiniboine South	6516.4	−5.55	−2375.0	−2.19	1035.5	1.01
Fort Garry	−4577.6	−3.83	−2493.1	−2.29	−1489.0	−1.44
St. Vital	−5194.1	−5.40	−1067.7	−1.20	52.0	0.62
Norwood	−5210.7	−2.52	−1947.7	−1.02	948.0	0.52
River East	−3185.1	−3.43	642.3	0.75	968.4	1.20
Type of lot						
River	−22562.2	−6.51	−9838.4	−3.07	−5572.4	−1.84
Irregular	291.8	0.30	1550.8	1.72	1858.6	2.18
Corner	3116.8	2.82	2293.8	2.24	2891.8	2.99
Type of garage						
Carport	4626.4	2.20	2635.8	1.36	2374.2	1.29
Driveway	−1267.2	−1.50	1381.8	1.78	1608.4	2.19
Single attached	611.0	0.52	2156.1	1.97	2674.6	2.59
Double attached	−447.8	0.32	−83.2	−0.06	−2517.9	−2.08
None	1345.2	1.40	3115.5	3.52	2969.7	3.55
Multiple	6042.6	1.48	9865.2	2.61	9039.2	2.53
Other	848.9	0.94	2812.3	3.37	1954.7	2.47
Number of rooms						
Under five	2682.4	1.79	1463.8	1.06	880.9	0.67
Five	1669.7	2.11	444.6	0.60	−312.1	−0.44
Seven	−2404.0	−2.56	−1083.5	−1.25	−1272.7	−1.55
Eight	−5859.6	−4.12	−2101.4	−1.60	−3073.0	−2.47
Number of bedrooms						
Under three	2299.5	−2.12	−373.1	−0.37	77.2	0.08
Four	2796.1	4.30	2828.1	3.47	1831.5	2.38
Five	8931.9	4.81	5828.0	3.40	1517.1	0.94
Six	1297.8	0.43	−1025.3	−0.36	−4344.4	−1.63
Number of bathrooms						
Two and one-half	−5729.0	−4.08	−4323.6	−3.34	−3976.0	−3.25
Three and one-half	16414.8	−5.75	−13422.5	−5.09	−12204.5	−4.89
Number of stories						
Two and one-half	−10581.7	−5.17	−1917.5	−1.01	3343.6	1.86
Split-level	1301.7	1.09	1135.7	1.03	1877.5	1.81
Structural type						
Attached	10110.7	10.14	2481.6	2.69	−1468.8	−1.69
Multiple (2 unit)	16102.5	8.21	8549.3	4.72	3410.3	1.99
Multiple (3 or 4 units)	19206.0	5.74	11625.1	3.76	11591.4	3.97
Age of structure (years)	0.47	0.025	−96.0	−5.61	33.1	2.05
Lot depth (metres)	−36.2	−1.08	32.2	1.04	128.8	4.40
Area (sq. metres)	−11.7	−1.24	−32.0	−3.68	−26.3	−3.20
Income of occupant	−0.97	−2.55	−0.19	−5.39	−0.05	−1.67
F		20.84		11.80		7.81
R^2		0.34		0.23		0.16
Degrees of freedom		1361		1361		1361

Note: The coefficients for the dummy variables in the model show the difference for the given characteristic relative to a base characteristic. The variables involved, with the base characteristic in brackets, are as follows: location (Winnipeg #1, the city centre); type of lot (normal); type of garage (single detached); number of rooms (six); number of bedrooms (three); number of bathrooms (one); number of stories (one); structural type (single detached).

We may summarize as follows. Assessment quality improved overall after each reassessment. In particular, the reassessments were successful in addressing demands by special interest groups that the geographic biases in property tax administration be eliminated. However, the record concerning other dimensions is mixed. While some property characteristics are assessed more closely in line with the market evaluation, others are associated with significant biases that were not present before either reassessment occurred. It remains to be seen how easily the remaining differences are eliminated.