Real Estate Appraisers Who Share Sales Information: Are Appraisers Unique or Just Weird?

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Real estate appraisers represent a unique and very interesting form of business organization characterized by both cooperation and competition that is quite unlike any of the normal models of competition (such as perfect competition, oligopoly, or monopoly) that were studied in introductory economic theory courses. The interesting part for an economist is that appraisers are competitors and yet seem to depend on each other. Appraisers are clearly competitors; that is, they all compete for the same set of business opportunities available in the marketplace, just like farmers or barbers or dentists compete for a share of their perspective markets. At the same time, appraisers cooperate through the sharing of information about comparable sales, both through informal networks as well as formally through a sales data bank.[1]

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While the physical form of the primary product that appraisers sell is the written appraisal, what the appraiser offers uniquely is the knowledge, judgment, skill, and experience to conduct and write an appraisal that is professional and reflects true market conditions. Much of the appraiser's task is to apply that knowledge, judgment, skill, and experience to a set of comparable sales and analyze those sales to illustrate the unique value characteristics of the subject property. If comparable sales are the primary input that an appraiser must adjust, then why would he or she ever share those comparable sales? Doing so reduces competitors' cost of doing business, potentially allowing competitors to gain an advantage in the market place. Yet, many appraisers do share information to cut costs and to insure complete coverage of comparable sales.

This article begins with a discussion of the economics that underlie a theory of cooperation among competitors. Next, a survey undertaken in 2005 to ask questions of appraisers regarding their willingness to share sales data with other appraisers and the conditions under which they choose to share or withhold information from competitors is described. An economic model that helps explain the theory and concepts behind the incentives and disincentives for cooperation among cooperators and a statistical test of the validity of that model is presented and explained in Appendix I.

Conceptual Background

The question addressed is under what conditions will an appraiser choose to cooperate with his peers? Information in the form of comparable sales is costly to produce but once produced can be shared without reducing its value to the original producer, that is, comparable sales are a public good. Clearly, appraisers could reduce overall industry costs by sharing information since doing so would reduce the need to incur costs multiple times to produce the same set of comparable sales. Such an information-sharing scheme will increase profits and also benefit consumers by reducing costs.

There is a problem, however, with information sharing, at least sharing outside a fee-based sales data bank or other fee approach. Information sharing can be subject to a "free rider" problem.[2] An unscrupulous appraiser might attempt to "free ride" by utilizing information produced by others without bearing his/her fair share of information production costs thereby gaining a cost advantage over competitors. In deciding whether or not to cooperate, an appraiser must be particularly concerned about "free riding" since this phenomenon will give a competitor a cost advantage which may allow that competitor to lower his/her price bid. Recognizing this, appraisers, like many information producers, can use secrecy as a mechanism for limiting the access of the unscrupulous to information. That is, appraisers can treat the information they generate concerning the value of comparable sales as confidential, limiting access to outsiders in many cases.

Secrecy deals with the "free rider" problem but also prevents the cooperative sharing of information that could benefit all. In the absence of cooperation, each appraiser must generate his/her own comparable sales, incurring costs in the process. The result is multiple generation of the same information. Industry costs increase proportionately, adversely affecting the efficiency and profitability of appraisers as a group, with some appraisers possibly being forced to exit the industry. In addition, secrecy prevents specialization so that an appraiser with knowledge of a particular area can no longer benefit peers by using his/her expertise to generate information at lower cost and with greater accuracy. Thus there is considerable scope for gains from sharing information.

The question then is how to form institutions, both formal and informal, that promote the sharing of comparable sales while avoiding the "free rider" problem. The solution is the formation of long-term relationships characterized by repeated interactions. By engaging in repeated interactions, an appraiser can assure access to valuable information from other appraisers without being subjected to exploitation. In particular, an appraiser can obtain information about real estate conditions by exchanging information with peers. Should a peer not provide reciprocal information, that peer can be excluded from information sharing in the future. Realizing this, an appraiser will provide information when requested so as to continue as a member of the network. Thus "free rider" behavior is minimized. The critical feature for such a scheme to work is the expectation that there will be numerous interactions. Otherwise the threat of exclusion from future information sharing will have no teeth.[3] In this context, multilateral institutions, such as sales data banks and multiple listing services, increase the incentive to cooperate since such institutions provide more

opportunity for repeated interactions. Moreover, the sales data base can be delegated the role of policing information sharing. This argues for the formation of sales data banks.

The market structure also affects appraisers' willingness to cooperate by sharing comparable sales, although the impact is complicated. The appraisal industry is highly competitive.[4] Competition increases the incentive to cooperate in two ways. First, competition increases the incentive to reduce costs since competition prevents appraisers from passing costs to consumers. Since cooperation reduces costs, the incentive to cooperate is increased with competition. Competition also reduces the cost of free riding. The cost of free riding is diffused across many competitors while the benefit of cooperation is concentrated in a specific appraiser, thus tipping the balance toward cooperating.

Competition also reduces the incentive to cooperate. In a market with many competitors, monitoring and enforcing cooperation is more costly as more appraisers must be tracked. Thus, "free riding" is likely to be more of a problem with competition. This problem is made more extreme since the cost of "free riding" by any particular appraiser is diffused; hence, no one appraiser has an incentive to enforce cooperation even though the industry as a whole would benefit from such enforce some "free riding" may result in a breakdown in cooperation. A possible solution would be to delegate monitoring responsibility to a sales data base or a multiple listing service. These can be delegated the role of policing information sharing. This provides another argument for sales data banks.

Results of the Survey

The questionnaire

A survey questionnaire (see Appendix I) was mailed to approximately 1,000 appraisers licensed as appraisers with the state of New Mexico. While New Mexico is somewhat unique among the states, the types of appraisers who seek certified general status are likely not all that much different from those working in any other state. A survey New Mexico licensed appraisers was chosen for several reasons: 1) Avoid surveying just one specialty area (such as rural appraisers); 2) Avoid surveying only members of a particular appraisal organization (such as the ASFMRA or the American Institute); and 3) There were insufficient resources to survey the entire pool of licensed appraisers in all 50 states. The New Mexico list was easiest and relatively inexpensive for the authors to obtain. Statistical analysis of representativeness of the population of all appraisers is not the primary concern of this article; the New Mexico group should be generally indicative of an interesting theoretical phenomenon.

A total of 1,163 usable names of appraisers was obtained from the New Mexico Real Estate Commission. Although 1,163 questionnaires were mailed, 97 were sent to bad addresses. If a survey questionnaire had not been returned within three weeks of its first mailing, a second follow-up questionnaire was mailed. Of the pool of 1,066 good addresses, 413 completed questionnaires were received, a rate of return of 38.7 percent, approximately twice the normal rate of returns on mailed survey questionnaires. While a postage-free return envelope was offered, there was no other incentive to professional appraisers to return their survey forms. Clearly, the survey questionnaire struck a nerve in the minds of appraisers.[5]

Respondents

While the bulk of the appraisers surveyed (77.0%) were New Mexico residents representing just about every one of New Mexico's 33 counties, the original list of 1,163 addresses included 267 residents of 35 states other than New Mexico (23.0% out of state). Of the 413 respondents, 110 (26.6%) live in states other than New Mexico. The typical survey respondent considered him/herself to be a residential appraiser (234 or 56.7%), as shown in Table 1. Appraisers were allowed to choose one or more specialties, so the summation exceeds 100 percent. Commercial appraisers (135 or 32.7%) were the second most numerous specialty, followed by rural, right-of-way, and other appraisers. A wide range of subspecialties was noted, but only 109 or 26.4 percent reported any subspecialty. The most often cited subspecialty was health care-nursing home-retirement communities (10 respondents), closely followed by hospitality-hotel and multi-family dwellings (5 each), and estate-litigation support and high-end residential (4 each).

The average survey respondent had 17.6 years of professional appraisal experience, but 80 had less than 5 years and 67 had more than 30 years of professional appraisal experience. Many appraisers practice their profession within the confines of one

county or metropolitan area (180), while others (101) practiced throughout their state, 65 practiced within a region, and 67 practiced nationally. Because the sample was drawn from licensed New Mexico appraisers, most (61 of 142) who indicated a regional concentration indicated the southwest was their specialty, but at least six appraisers selected one of each of the remaining eight regions as a concentration area.

Sales Data Bank Participation

Most appraisers (284 or 68.8%) reported that they have an accessible sales data bank for their specialty and 228 (55.6%) reported that they participated in a sales data bank that is not operated solely for in-house use within their own firm. The most common reason cited for not participating in a sales data bank was the lack of usefulness (62 of the 161 who indicated they did not participate in a sales data bank), although poor data quality was often cited as well (by 52 respondents). Of those who did participate in a sales data bank (266), 209 contributed data rather than paid for the use of the sales data bank.

Exchange of Comparable Sales Data

A total of 355 appraisers (86.0%) indicated that they exchange comparable sales data with other appraisers. Virtually never were fees charged to other appraisers; 269 of 391 appraisers who answered the question regarding charging fees indicated they never charge fees, while only nine either usually or always charge fees for their comparable sales. Seldom do appraisers share with a large group of competitors. Approximately half (191 of 390) share information with four or fewer other independent appraisers, but 23 appraisers share information with 25 or more independent appraisers.

Generally, appraisers shared comparable sales only with other appraisers in whom they have significant trust. Over half (55.6%) of respondents indicated they exchanged data with others in whom they had a trust level of 6 or 7 on a 7-point scale and 304 (or 78.6%) required a trust level of 5 or higher on that 7-point scale.

On average, only 16 percent percent of sales comparables used by appraiser respondents in their own analyses come from exchanges with other appraisers, but nearly one third indicated they obtain at least 25 percent of their sales comparables through exchanges and 56 indicated they obtain at least half of their sales comparables through exchanges.

Most appraisers consider themselves to be in direct competition with only a few competitors (1-5 was the most cited, by 138 of 401 respondents). Only 87 indicated they are in direct competition with more than 25 appraisers.

Very interestingly, only 26.4 percent (109 of 413) of respondents indicated that there were appraisers with whom they would not share comparable sales information. Generally, the most likely person to not share with was an out-of-town appraiser (173 of 293 responses), a chronic underbidder (72), and one who won't share his data (48) were also cited.

Of those who took a few extra minutes to write a personal comment to the question of why they would not share information, the answer was clear. The lack of trust and respect for competitors was mentioned 105 times. Many appraisers are sensitive about the ethics and competency of others in the business and feel others misuse data. The second most-often mentioned reason was the lack of quality of exchanged data (cited 33 times), but the lack of interest in helping competitors was also mentioned (13 times), lack of reciprocation (10), personal reasons (5), and lack of familiarity with the person making the request (5).

Summary of Results

These results are certainly not totally unknown to appraisal professionals. However, they do shed some light, from an impersonal survey questionnaire approach, on the motivation for appraisers to share the most vital piece of information with which they compete. Conceivably, if the competitor could not obtain data in a cost-effective manner, that competitor would be forced to find an alternative profession, leaving more business and more profit for existing appraisers. But, being squeezed out of the profession by lack of cost-effective data sources applies to all appraisers, not just direct competitors. In other words, it applies to each individual. Thus, by sharing data with trusted competitors, an appraiser helps his/her competition and helps himself or herself at the same time. Few professions share vital information in this substantial of a manner.

Conclusions and Implications

For us, it was very interesting that several appraisers mentioned specifically the lack of desire to help competitors when listing reasons for not sharing data or when making a general comment on the survey form. One respondent with a great sense of

analogy asked us if faculty members would send students to an arch-rival university. One of the most interesting responses of all was a gentle reminder that appraisers are really quite a professional, good-hearted, respectable, sharing group; he said "Appraisers share ideas as well as data. Keep in mind appraisal is an art not a science." In their own separate ways, these two appraisers went straight to the heart of the research question.

The survey results demonstrate the logic of the economic model proposed in the conceptual background section. For most appraisers, the advantages of cooperation outweigh the disadvantages. So, they tend to participate in formal (sales data banks) and informal (inter-personal networks) institutions to share information. There is clearly a "free rider" element, one based more on ethics than originally presumed but also based on lack of reciprocity.

While these results may not be dramatic to a professional appraiser, they do illustrate a very interesting economic phenomenon and tradeoff between cooperation and competition.

End Notes

[1] Sales data banks are collections of recent sales data categorized by types of properties. Some are formal, while many are relatively informal. Some are maintained by professional organizations and some by private organizations.

[2] Free rider is a simple term that describes economic beings who use more than their fair share of the resources or benefits or contribute less than their fair share of costs.

[3] Beyond simple information sharing, the quality of the information shared also is of importance. Again, repeated transactions allow ensure adequate quality of information. Appraisers who habitually share poor quality data will be excluded from future information sharing transactions.

[4] There are currently more than 1,000 appraisers licensed in the relatively small state of New Mexico, for example. The majority of these appraisers report that they are in direct competition with six or more other appraisers.

[5] It could be thought that appraisers are roughly twice as nice (especially to three old college professors) as the general population. As long-term members of ASFMRA, two of us reserve the right to not argue with this supposition – but not necessarily endorse it either.

[6] That is, is the original information set plus the information shared by the appraiser if he chooses to engage in information sharing.

[7] Profit maximizing firms operate in the elastic part of the demand curve, so a fall in price will increase revenues.

[8] Since both μ and $\rho\eta$ are fixed costs, they are irrelevant in determining the equilibrium value of ι.

Appendix I. Appraiser cooperation/competition survey

1. What is your specialty?
   - ❑ Residential
   - ❑ Commercial
   - ❑ Rural / Agricultural
   - ❑ Right of way / Condemnation
   - ❑ Other

2. Do you practice a subspecialty?
   - ❑ Yes. If so, what?_____
   - ❑ No

3. Years of professional appraisal experience
   _____

4. Your location (zip code) _____

5. Which geographical area do you service?
   - ❑ Single county or metropolitan area. Please indicate your state _____
   - ❑ State. Please indicate the state ____
   - ❑ Region (mark all that are relevant)
     - ❑ National
     - ❑ Northeast
     - ❑ Southeast
     - ❑ Midwest
     - ❑ Mountain
     - ❑ Great Plains
     - ❑ Southwest
     - ❑ Pacific West
     - ❑ Northwest
     - ❑ Other _____

6. Is there an accessible sales data bank for your specialty?
   - ❑ Yes
   - ❑ No

7. Do you participate in a sales data bank that is not operated by your company for in-house use only?
   - ❑ Yes
   - ❑ No

8. If not, why not?
   - ❑ Too expensive
   - ❑ Not useful
   - ❑ Poor data quality
   - ❑ Free loaders get the benefits

9. If you do participate in a sales data bank, what is the nature of your participation?
   - ❑ Contribute data
   - ❑ Pay fee

10. Do you exchange comparable sales information with other appraisers?
    - ❑ Yes
    - ❑ No

11. Do you charge a fee when you supply sales data to other appraisers?
    - ❑ Always
    - ❑ Usually
    - ❑ Sometimes
    - ❑ Seldom
    - ❑ Never

12. With how many other independent appraisers (those who are self-employed or work for a firm other than yours) do you exchange information? Number _____

13. What kind of a relationship do you have with other appraisers with whom you exchange information?

No relationship						**Significant Trust**
1	2	3	4	5	6	7

14. What percentage of your sale comparables come from exchanges with other appraisers? _____%

15. How many appraisers do you consider to be in direct competition for your clients / customers?
    - ❑ No others
    - ❑ 1 – 5
    - ❑ 6- 10
    - ❑ 11-25
    - ❑ More than 25

16. Are there appraisers with whom you would not share information?
    - ❑ Yes
    - ❑ No

17. If your answer to question 16 was yes, why will you not share information with those appraisers?
    - ❑ Other appraiser won't share his/her data.
    - ❑ Other appraiser chronically underbids for jobs
    - ❑ Other appraiser is from outside the market area
    - ❑ Another reason_____
      _____
      _____

Appendix II. An economic model

A simple economic model may make more explicit the discussion above. Suppose, for simplicity, that the creation of a report involves only two inputs — information in the form of comparable sales generated by the appraiser (denoted by ι), and shared information (denoted Ω). The decision becomes one of comparing profits with and without cooperation. Profit without cooperation is given by:

$$\pi = P(\Omega)F(\iota,\mathrm{O}) - c\iota \tag{1}$$

where F is the production function for reports, c is the cost per unit of new information generated by the appraiser, and O indicates the null set. Price (P) is dependent on information sharing since information sharing reduces industry costs regardless of the actions of a particular appraiser. Profit under cooperation is given by:

$$\hat{\pi} = P(\hat{\Omega})F(\hat{\iota},\hat{\Omega}) - c\hat{\iota} - \mu \tag{2}$$

where μ is the fixed cost of information sharing, and a hat indicates the profit maximizing value when the appraiser shares information.[6] The appraiser will choose to cooperate if

$$\hat{\pi} > \pi \text{, or equivalently } \hat{\pi} - \pi > 0 \tag{3}$$

or equivalently Equation (3) can be rewritten as follows:

$$\hat{\pi} - \pi \approx \left[(P(\hat{\Omega}) - P(\Omega))F(\iota,\mathrm{O})\right] + \left[P(\Omega)(F(\hat{\iota},\hat{\Omega}) - F(\iota,\mathrm{O}))\right] - \left[c(\hat{\iota} - \iota) + \mu\right] \tag{4}$$

The first bracketed term in equation (4) is the loss in revenue arising from the reduction in the market price. This price effect arises from the reduction in cost from information sharing. The market price will be less under cooperation since cost savings will be at least partially passed on to consumers, thus, the first term is negative. The second bracketed term is the change in revenue due to changes in the volume of reports written. Since the price of reports is less under information sharing, demand should be greater and this term should be positive. Together, the first two terms measure the impact of information sharing on revenue. While the first term is negative and the second term is positive, the overall impact on revenue from information sharing will be positive.[7] The third bracketed term is the change in cost arising from information sharing. This term will be negative as long as the cost of sharing information is small (that is, μ is not too large), making information sharing more likely. From the above, it should be obvious that cooperation is likely to be preferred in an information intensive industry such as appraising. This explains the prevalence of the practice in the appraisal business, where a major cost of doing business is gathering comparables.

Consider the issue of free riding by unscrupulous appraisers. For simplicity assume that the decision is between cooperation and free-riding (that is, not sharing information was ruled out). As a further simplification, assume that the punishment for free riding is permanent exclusion from participation in information sharing. Let the probability of being caught be ρ. An unscrupulous appraiser will choose to free ride if:

$$\pi' = P(\Omega)F(\iota',\Omega) - c\iota' - \rho\eta \tag{5}$$

where π‘ is the profit enjoyed by the cheater, ι‘ is the amount of private information gathered by the free rider, and η is the net present value of future access to information sharing. The term ρη is the expected value of the penalty from being caught free riding.[8]

The choice between sharing information and free riding comes down to comparing profits between the two alternatives:

$$\hat{\pi} - \pi' \approx \left[(P(\hat{\Omega}) - P(\Omega))F(\hat{\iota},\Omega)\right] + \left[P(\Omega)(F(\hat{\iota},\hat{\Omega}) - F(\hat{\iota},\Omega))\right] - \left[c(\hat{\iota} - \iota') + \mu - \rho\eta\right] \tag{6}$$

The first and second terms are similar to the equivalent terms in equation (4). The first term will be negative since cost savings will be passed on to customers in the form of lower prices. The second term will be positive since lower price increases the volume of appraisals. On the net the first two terms will be positive, which tends to promote cooperation. The third involves the cost of cooperating and the penalty from being caught free-riding. Since the first two terms are positive, a firm will choose to free ride only if the cost of participating in the information sharing (i.e., μ) is considerable higher than the penalty of being caught (ρη).

Competition affects the choice to free ride in a complicated manner. On the one hand, with more appraisers, the cost of

administering the program is spread over more firms, so μ should be lower. On the other hand, the more appraisers, the less incentive each has to monitor and detect free riders. (This later effect is mitigated if monitoring is delegated to a third party such as a multiple listing service.) Increased competition could either increase or decrease free riding.

Statistical Analysis

The discussion above makes clear the impact of competition on information sharing is complex. To investigate this issue further, a statistical analysis using logit analysis was conducted. Results are presented in Table 2. The dependent variable is participation in the sharing of comparable sales, which takes the value of one if the appraiser participates in the sharing of information and zero if the appraiser does not. The main variable of focus is competition. As indicated above, the relationship between information sharing and competition is complicated. On the one hand, the inability to pass costs onto customers in competitive markets provides an incentive to share comparables. On the other hand, the incentive to free ride coupled with the increased difficulty in monitoring free-riding in competitive markets makes information sharing schemes harder to enforce. Control variables are experience of the appraiser (experience), the region in which the appraiser does business, and the appraiser's specialty.

Table 2 shows results for several specifications. Columns (1) and (2) show results for the entire sample. Columns (3) and (4) show results for a truncated sample that includes only appraisers that report access to data banks or other information sharing schemes. Columns (1) and (3) include only experience and competition as explanatory variables while Columns (2) and (4) include in addition region and specialty. The five specialty and 10 regional indicators are not included in the interest of space. Three of the four specifications perform reasonably well, having significant log-likelihood tests. The specification reported in Column 4 is not significant.

The main result, consistent across all four columns, is that competition increases the probability of sharing information. Specifically, the coefficient on competition is positive and significant in every specification. It seems that competitive pressures to reduce costs outweigh the negative effect of free-riding. The data weakly supports the conclusion that experience reduces information sharing. he coefficient on experience is negative in three of the specifications (Columns (1), (2) and (3)) and significant in one specification (Column (1)). One explanation for this result may be that the benefit of risk sharing is less for an experienced appraiser who is already familiar with the markets in which he or she works. An alternative explanation, consistent with the story told above, is that experienced appraisers may have developed a reputation for free riding, hence, have lost access to data banks.

Table 1. Responses to survey questions.

Question No.	Options	Responses
1	Appraisal specialty	
	Residential	234
	Commercial	135
	Rural/Agricultural	71
	Right of Way/Condemnation	49
	Other	30
	Total	519
5	Geographical area served	
	Single county or metro area	180
	State	101
	Region	65
	None specified	67
		413
	State Specialization	
	New Mexico	261
	Texas	14
	Arizona	6
	Other States	7
	Regional specialization	
	National	0
	Northeast	6
	Southeast	11
	Midwest	9
	Mountain	15
	Great Plains	6
	Southwest	61
	Pacific West	8
	Northwest	6
	Other	20
	Total	142
6	Accessible sales data bank?	
	Yes	284
	No	129
		413
7	Participate in sales data bank?	
	Yes	228
	No	185
		413
8	Do not participate in sales data bank	
	Too expensive	30
	Not useful	62
	Poor data quality	52
	Free loaders benefit	17
		161
9	Do participate in sales data bank, and:	
	Contribute data	57
	Pay fee	209
		266
10	Exchange comparable sales with others?	
	Yes	355
	No	58
		413
11	Do you charge a fee to supply data?	
	Always	3
	Usually	6
	Sometimes	41
	Seldom	72
	Never	269
		391
12	Exchange with how many others?	
	1 – 4	191
	5 – 9	86
	10 – 14	62
	15 – 19	11
	20 – 24	17
	More than 25	23
		390
	Average	13.5
13	Kind of relationship with other appraisers?	
	1 No	21
	2 Relationship	12
	3	10
	4	40
	5	89
	6 Significant	130
	7 Trust	85
		387
15	Direct competitors	
	No others	45
	1 – 5	138
	6 – 10	82
	11 – 25	49
	More than 25	87
		401
16	Appraisers with whom you will not share?	
	Yes	304
	No	109
		413
17	Will not share information	
	Others won't share	117
	Chronic underbidder	45
	Outside the area	72
	Other reason	173
		407

Table 2.

Dependent Variable: Participation in Information sharing (Yes = 1, No = 0)

Variable	Unrestricted Sample		Restricted Sample*	
	Region and Specialty Not Included	Region and Specialty Included	Region and Specialty Not Included	Region and Specialty Included
	(1)	(2)	(3)	(4)
Constant	-0.2130	-0.1381	0.4150	0.279789
	(0.44)	(2.56)	(1.18)	(0.73)
Experience	-0.0242**	-0.0123	-0.0038	0.0073
	(2.56)	(1.11)	(-0.3139)	(0.50)
Competition	0.2958**	0.2929**	0.1910**	0.2391**
	(3.98)	(3.62)	(2.04)	(2.30)
Sig. Log Likelihood	0.00002	0.0072	0.0911	0.4605
Usable Observations	412	397	283	271
DF	409	381	280	255

t-statistic indicated in parentheses

*Restricted sample excludes appraisers that reported not having access to data banks or other information sharing schemes.

**Significant at more than 5%

Source: Authors' calculations