

12-1994

Buying High and Selling Low in the Lodging-Property Market

John B. Corgel

Cornell University, jc81@cornell.edu

Jan A. deRoos

Cornell University, jad10@cornell.edu

Follow this and additional works at: <http://scholarship.sha.cornell.edu/articles>



Part of the [Hospitality Administration and Management Commons](#)

Recommended Citation

Corgel, J. B., & deRoos, J. A. (1994). Buying high and selling low in the lodging-property market [Electronic version]. *Cornell Hotel and Restaurant Administration Quarterly*, 35(6), 33-38. Retrieved [insert date], from Cornell University, School of Hospitality Administration site: <http://scholarship.sha.cornell.edu/articles/170/>

This Article or Chapter is brought to you for free and open access by the School of Hotel Administration Collection at The Scholarly Commons. It has been accepted for inclusion in Articles and Chapters by an authorized administrator of The Scholarly Commons. For more information, please contact hlmdigital@cornell.edu.

Buying High and Selling Low in the Lodging-Property Market

Abstract

[Excerpt] In this article we explore the idea that the transaction price may be different for a given lodging property in the case of one buyer and seller pair relative to another. The findings reported here are from a statistical exploration that is made possible by a large database of lodging-property transactions that occurred throughout the United States during the late 1980s and early 1990s. We begin with a discussion of previous research on the influence of buyers and sellers on property prices, then we present the findings from our study and their implications.

Keywords

lodging-property market, transaction price, sellers, buyers, property values

Disciplines

Hospitality Administration and Management

Comments

Required Publisher Statement

© [Cornell University](http://www.cornell.edu). Reprinted with permission. All rights reserved.

Buying High and Selling Low

in the Lodging-Property Market

The prices of lodging properties are influenced by the motivations and knowledge level of the parties on both sides of transactions.

by **John B. Corgel** and
Jan A. deRoos

EACH YEAR ownership of hundreds of U.S. lodging properties is transferred in the real-estate market. In theory, the mutually agreed upon sale price for a property is based on the buyer's and the seller's financial

goals, their investment outlook, and their knowledge of the property's characteristics. That price is strongly influenced by the physical characteristics of the property (e.g., number of rooms, restaurants, pools, etc.), its location relative to other land uses, and the economic conditions of the market in which it is located. Physical, locational, and economic factors cumulatively

generate income or loss and cause value changes over time.

Property prices relate directly to property fundamentals. The

***John B. Corgel, Ph.D.**, is an associate professor of properties management at the Cornell University School of Hotel Administration, where **Jan A. deRoos, Ph.D.**, is an assistant professor of properties management.*

analysis of those fundamentals underlies both traditional and currently applied approaches to property valuation in the real-estate-appraisal profession.¹ Because the physical, locational, and economic aspects of a mid-market hotel, for example, are observable and the cash flows from operations and future sales may be estimated by the buyer and seller using standard financial-analysis techniques, the buyer should be able to avoid overpaying for a hotel and the seller should be able to avoid selling a hotel too cheaply. Extending this theoretical argument to the general case of all lodging-property sales, neither a buyer's nor a seller's wealth should be abnormally enhanced or reduced as the result of any transaction.

But not all buyers and sellers are equal. Some buyers are better informed than others about the local economic conditions that affect property prices. Some sellers are not as adept at negotiation as others. Some parties in transactions are more motivated than others to complete transactions in a timely manner and may pay more or accept less for expediency. Japanese hotel buyers during the late 1980s, for example, are thought to have overpaid for properties, perhaps because of their strong motivation to place money in the U.S. real-estate market when it was booming, perhaps because they wished to obtain trophy properties, or perhaps because they made purchase decisions without good information about key

property and market fundamentals.² The Resolution Trust Corporation (RTC) is another example. Some believe that political pressure from Congress pushed the RTC into selling property from its portfolio quickly and cheaply instead of waiting until the real-estate market recovered.

To show that a particular type of buyer overpaid or that a seller undersold in the lodging-property market, however, is far too general a finding to be useful to market participants. If some buyers pay premiums and some sellers offer discounts, do these outcomes persist in all transactions in which a specific type of participant is involved? Suppose buyer premiums and seller discounts are the result of mistakes. The root causes of such "errors" should be of interest to market participants who want to fill information gaps and exploit inefficiencies. Some foreign buyers, for example, are known for their careful examination of the physical characteristics of properties, but because of their foreign residency, they may not astutely evaluate how local market economics affect real-estate prices or they may unduly weight such factors as residual property value much more heavily than do sellers based in the United States. Armed with the knowledge of how mistakes are made, brokers and consultants may be of better service to these buyers by providing detailed local market information.

In this article we explore the idea that the transaction price

may be different for a given lodging property in the case of one buyer and seller pair relative to another. The findings reported here are from a statistical exploration that is made possible by a large database of lodging-property transactions that occurred throughout the United States during the late 1980s and early 1990s. We begin with a discussion of previous research on the influence of buyers and sellers on property prices, then we present the findings from our study and their implications.

What We Already Know

Property-rights theory suggests that private contracts do not influence real-estate prices in competitive markets unless the contracts affect the underlying property rights. Private contracts including leases, management agreements, franchise agreements, and contracts for sale are outside the realm of rent and price formation unless they restrict the use of the property. For example, a contract for sale accompanied by a deed that restricts owners' rights to use a property only as a hotel would diminish value because of the options it destroys.

Only recently has serious testing begun on the effect of private contracts on value. Sirmans and Sirmans present some evidence that professional management has a positive effect on monthly apartment rent.³ Shilling, Sirmans, Turnbull, and Benjamin provide somewhat stronger evidence that contingency clauses in contracts for sale lead to significant increases in the prices of houses (such clauses often involve the ability to obtain

¹ For a summary of appraisal methodology, see Stephen Rushmore, *Hotels and Motels: A Guide to Market Analysis, Investment Analysis, and Valuations* (Chicago: Appraisal Institute, 1992), chapter 5.

² "Why Japanese Buyers Pay a Premium for Hotels," *The Wall Street Journal*, July 9, 1991, p. B1. See also: M. Chase Burritt, "Japanese Investment in U.S. Hotels and Resorts," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 32, No. 3 (October 1991), pp. 60-66; and Tadayuki Hara and James J. Eyster, "Japanese Hotel Investment: A Matter of Tradition and Realty," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 31, No. 3 (November 1990), pp. 98-104.

³ G. Stacy Sirmans and C.F. Sirmans, "Property Management Designation and Apartment Rent," *Journal of Real Estate Research*, Winter 1991, pp. 91-98.

financing and the sale of the currently owned property).⁴ However, Hanson was unable to find differences between the ratios of operating income to replacement costs for hotels affiliating with a chain and engaging a management company versus independent hotels.⁵ Corgel also could not establish that the franchise affiliations of hotels had a statistically significant effect on hotel-sale prices.⁶

Each contract for sale represents the agreement on price and terms reached by a specific buyer and seller combination. The idea that the price of a lodging property may be different in the case of one buyer and seller combination compared to another is rooted in the belief that buyer and seller characteristics influence price formation even though property rights have not been disturbed. In theory, a given buyer behaves differently from other buyers and a given seller behaves differently from other sellers for three reasons.⁷ First, each buyer and seller is capable of pricing errors because neither buyer nor seller has all the information about every property in the market that is necessary to set a perfect price for any single property. Second, buyers and sellers are not equally patient. Some sellers, for example, are overly eager to sell and thus sell

⁴ James D. Shilling, C.F. Sirmans, Geoffrey K. Turnbull, and John D. Benjamin, "Hedonic Prices and Contractual Contingencies," *Journal of Urban Economics*, July 1992, pp. 108-118.

⁵ Bjorn Hanson, "An Exploratory Study of Operating Income Relative to Replacement Cost for Alternative Combination of Affiliation and Management for Mid-Size and Full-Service Hotels," Ph.D. diss., New York University, 1991.

⁶ John B. Corgel, "Brand Name Affiliation and Real Estate Prices," working paper, School of Hotel Administration, Cornell University, 1992.

⁷ A formal presentation of the reasons for the differences in buyer and seller behavior is found in Daniel C. Quan and John M. Quigley, "Price Formation and the Appraisal Function in Real Estate Markets," *Journal of Real Estate Finance and Economics*, June 1991, pp. 127-146.

EXHIBIT 1

Classification of buyers and sellers

CLASSIFICATION	CODE*
I. Individual or husband and wife	Individual
II. Partnerships	
a. Limited partnership—public	Ltd. Partner
b. Limited partnership—private	Ltd. Partner
c. General and other partnerships	Gen. Partner
III. Domestic hotel corporations	Hotel Co.
IV. Domestic real-estate corporations	Real Estate Co.
V. Domestic non-real-estate corporations	Corporation
VI. Domestic institutions	
a. Life-insurance companies	Life Co.
b. Banks	Bank
c. Savings and loan companies	S&L
d. Resolution Trust Corporation	RTC
e. Other institutions (pension, government)	Pension
VII. Foreign individuals, partnerships, banks, hotel companies, and real-estate companies	Foreign

* These codes are used in subsequent exhibits to identify specific buyer and seller classes. Note that some subclassifications were combined.

at low prices while other sellers are willing to wait for their price. Finally, there are strategic reasons why market participants may be willing to transact for the same property at different prices. A hotel company, for instance, may value a property higher than an individual because of the competitive edge the property provides to the brand.

The corporate-finance literature is rich with evidence that the values of securities are affected by the presence of investors driven by tax and leverage clienteles. Maris and Elayan review this literature and find in their study a tax-induced clientele that is willing to pay more for equity REITs.⁸ We know of only one study that addresses these issues in the market for real estate that does not involve securities. During the 1980s some real-estate-market observers believed that limited-partnership syndications overpaid for properties to gain maximum tax subsidies for limited partners. Holding other factors constant, Beaton and Sirmans accept the null

⁸ Brian A. Maris and Fayed A. Elayan, "A Test for Tax-Induced Investor Clienteles in Real Estate Investment Trusts," *Journal of Real Estate Research*, Summer 1991, pp. 169-189.

hypothesis that the prices paid for apartments by different types of buyer organizations are equal.⁹ In other words, their data indicate that the form of the buyer's organization is unrelated to the price paid.

Data on Lodging-Property Transactions

Our statistical study of the effects of buyers and sellers on lodging-property sale prices relies on a large database of hotel and motel transactions. For this purpose, a property is defined as a hotel if it includes at least 150 rooms, meeting and banquet space, and restaurant facilities. The data are national in scope and include a large proportion of the lodging-property transactions that occurred during the period beginning in the first quarter of 1985 and ending in the last quarter of 1992. The data are detailed with respect to property characteristics, location, and local economic information. Buyers and sellers in the transactions are identified so that they may be classified (see Exhibit 1).

⁹ William Beaton and C.F. Sirmans, "Do Syndications Pay More for Real Estate?," *Journal of the Real Estate and Urban Economics Association*, Summer 1986, pp. 206-215.

EXHIBIT 2

Mean values of selected characteristics from lodging-property transactions 1985-1992, by buyer classification

BUYER CLASSIFICATIONS

SELECTED PROPERTY CHARACTERISTICS	All Buyers	Individual	Partnership	Hotel Corporation	Real-Estate Corporation	Other Corporation	Institution	Foreign
All periods (1985-1992)								
Number of transactions	1,314	273	406	221	211	78	51	74
Cash equivalent price	\$11,010,126	5,646,353	9,893,522	10,014,587	8,603,001	7,976,053	20,060,977	43,721,381
Percent hotel (versus motel)	44.5%	17.5	48	55.6	46.9	44.8	60.7	74.3
Age of property	15.8 Yr.	19.3	14.2	16.7	14.5	14.3	12.8	15.9
Distance to airport	15.7 Mi.	19.8	14.7	13.9	14.9	14.6	14.9	14.1
Distance to commercial center	4.9 Mi.	5.3	4.9	4.6	4.9	5.7	3.7	4
Early period (1985-1986)								
Number of transactions	350	59	142	50	65	16	14	4
Cash equivalent price	\$11,742,123	6,667,962	12,058,662	8,372,469	12,401,650	12,023,753	23,353,036	64,987,500
Percent hotel (versus motel)	50%	27	52	58	61	43	50	50
Age of property	14.6 Yr.	16.3	14.6	14.5	12.6	16.4	11.8	24.5
Distance to airport	12.9 Mi.	16.7	10.9	16.8	11.2	12.4	14.5	8.6
Distance to commercial center	4.9 Mi.	5.5	4.9	4.9	5.4	2.6	4.3	1
Middle period (1987-1989)								
Number of transactions	534	109	156	103	70	51	18	27
Cash equivalent price	\$12,495,720	8,657,491	11,329,130	11,277,690	7,365,196	7,414,263	31,737,604	49,449,387
Percent hotel (versus motel)	44.5%	13	52	54	38	47	77	74
Age of property	16.3 Yr.	21.4	13.3	17.1	16	13.8	13.8	17.7
Distance to airport	15.9 Mi.	18.5	16.2	13.2	15.6	14.3	15.9	17.3
Distance to commercial center	5.6 Mi.	6.4	5.5	5	5.2	5.2	4.7	6.9
Late period (1990-1992)								
Number of transactions	430	105	108	68	76	11	19	43
Cash equivalent price	\$8,569,414	1,946,459	4,973,109	9,308,796	6,494,239	4,693,150	6,573,182	38,146,482
Percent hotel (versus motel)	39.9%	16	35.2	55.9	42.1	36.3	52.6	76.7
Age of property	16 Yr.	18.7	14.8	17.9	14.7	13.5	12.7	14.1
Distance to airport	17.6 Mi.	22.9	17.7	13	17.7	18.7	14.2	12.6
Distance to commercial center	4.9 Mi.	3.9	4.2	3.9	4.3	12.1	2.2	2.5

The primary source of transaction information is the database of the Hospitality Market Data Exchange (HMDE) maintained by Hospitality Valuation Services (HVS). The HMDE contains the sale price, number of rooms, date of sale, and general-location information for several thousand properties. Some information about the characteristics of the properties, such as average room rate, age, amenities, and the conditions of the sales (e.g., financing terms and the organization forms of buyers and sellers) were obtained during visits to the HVS office. Other data were gathered from the following sources:

- *Hotel & Travel Index*, the *AH&MA Hotel and Motel Red-book*, and *Mobil Travel Guides*;
- Members of the Hotel and Motel Brokers Association;
- Telephone interviews with hotel and motel managers;
- Bureau of Labor Statistics and U.S. Bureau of the Census; and
- *Sales and Marketing Management* magazine.

The database comprises more than 1,300 transactions. Although the sample was not randomly chosen, efforts were made to avoid concentrations of property sales by quarter, geographic region, chain affiliation, and other property characteristics.

Approximately 40 percent of the sales in the database are omitted from consideration for parts of this study because average daily rate and occupancy statistics are unavailable or the property has extraordinary characteristics, such as casino gambling.

Perspective

A broad perspective on behavioral differences among participants in lodging-property markets is gained from the descriptive statistics presented in Exhibit 2. Although the exhibit presents only averages for selected characteristics of transactions across

buyer classifications, it reveals quite clearly that different buyers favor different types of properties. Not surprisingly, individuals generally purchase lower-price properties, primarily older motels that are at a greater distance from commercial centers and airports than the average. At the other end of the buyer spectrum are institutions and foreigners who favor high-price hotels. Institutions seem to be especially interested in newer hotels. Partnerships, hotel corporations, real-estate corporations, and other corporations represent a large and rather homogeneous middle class of buyers. During the period 1990 through 1992, however, there was greater diversity in the buying behavior of those entities.

Insight on the behavior of lodging-property-market participants is gained from an examination of the prices they paid and received. Holding all other factors constant, we investigated the effects of unique buyer and seller factors on aggregate prices. More specifically, we determined which effects on pricing of particular property characteristics, such as room rate or age of property, caused the different classes of buyers to overvalue or undervalue a property. By *effects* we mean overpayment by buyers and underselling by sellers (i.e., selling too cheaply).

We use multivariate-regression procedures to determine the effects of buyers and sellers on prices while holding other factors constant. The model has the following general form:

$S_i = s(P_i, L_i, E_i, Q_i, T_i, X_i, Y_i; \beta, e)$, where:

- S_i is the cash equivalent sale price of the i^{th} property;
- P_i is a vector of property characteristics of the i^{th} property at the time of sale;

EXHIBIT 3

Buyer and seller effects on sale prices of lodging properties

	Buyers		Sellers	
	PREMIUM (OVERPAID)	DISCOUNT	PREMIUM	DISCOUNT (UNDERSOLD)
All periods 1985-1992 (<i>n</i> = 781)	Individual Ltd. Partner Foreign	Gen. Partner Real Estate Co. Bank Life Co.	Hotel Co. Corporation Foreign	RTC Life Co. S&L
Early period 1985-1986 (<i>n</i> = 206)	Individual Corporation Life Co. S&L	Gen. Partner Hotel Co. Foreign	Bank Pension Foreign	Ltd. Partner Gen. Partner S&L
Middle period 1987-1989 (<i>n</i> = 371)	Individual Ltd. Partner Hotel Co. Foreign	Gen. Partner Bank Life Co. S&L Life Co.	Individuals Ltd. Partner Hotel Co. Corporation	Life Co. RTC
Late period 1990-1992 (<i>n</i> = 204)	Individual Foreign Hotel Co. Bank	Ltd. Partner Gen. Partner Pension	Ltd. Partner Corporation	Bank S&L Life Co. RTC

- L_i is a vector of locational characteristics of the i^{th} property at the time of sale;
- E_i is a vector of economic characteristics of the local area in which the i^{th} property is located at time of sale;
- Q_i is an unobserved quality measure of the i^{th} property at the time of sale;¹⁰
- T_i is the year of sale of the i^{th} property;
- X is a vector of buyer classifications, one buyer class for the i^{th} property;
- Y is a vector of seller classifications, one seller class for the i^{th} property; and
- β, e are estimated parameters and the error terms of the model, respectively.

Exhibit 3 shows which buyer classes paid premiums or gained discounts and which sellers received premiums or gave discounts in the lodging-property market during the study period.

¹⁰ This measure is the output from a room-rate regression. Readers who are interested in knowing how this measure is produced should consult John B. Corgel and Jan A. deRoos, "The ADR Rule-of-Thumb as Predictor of Lodging Property Values," *International Journal of Hospitality Management*, No. 4, 1994, pp. 353-365.

The determination as to whether premiums or discounts occurred comes from the regression coefficients for the X and Y variables. Although the procedure is somewhat complicated, essentially it involves identifying buyer and seller classes that either pay or receive 10 percent more and identifying buyer and seller classes that either pay or receive 10 percent less than the theoretically correct prices predicted by the regression model.

As indicated in Exhibit 3, some buyers consistently bought lodging properties at premiums, particularly individuals and foreign buyers, and some sellers consistently sold at discounts, particularly financial institutions and the RTC. These are not shocking results. Theory tells us that the less-informed buyers will err by overpaying and the less-patient sellers will let properties go at discounts.¹¹

Fortunately the data allow for a more penetrating analysis than

¹¹ It is assumed that domestic partnerships, corporations, real-estate corporations, hotel corporations, and financial institutions are more-informed buyers than individuals and foreign buyers.

EXHIBIT 4**Price (implicit) premiums and discounts of buyers and sellers for selected property characteristics**

	Buyers		Sellers	
	PREMIUM (OVERPAID)	DISCOUNT	PREMIUM	DISCOUNT (UNDERSOLD)
Room Rate	Partnership	None	Partnership Bank RTC	None
Number of Rooms	Individual	Foreign	None	Partnership Hotel Co. Real Estate Co.
Age of Property	None	Real Estate Co. Bank	Corporation	None
Chain Affiliation	None	None	Corporation	None
Distance to Airport	Foreign	None	None	Bank
Distance to Commercial Center	Bank	None	None	RTC
Employment of Local Area	Corporation	None	RTC	Bank
Effective Buying Income of Local Area	Foreign	None	Hotel Co.	None

that just described. The results presented in Exhibit 4 are interesting because they yield information about the characteristics that encouraged buyers to pay premiums and sellers to accept discounts. Partnerships, for instance, paid more per dollar of room rate than other buyers. Likewise, individuals paid more per room, foreign buyers paid more for proximity to an airport, and banks paid a premium for proximity to commercial centers. A proper interpretation of the results is that some buyers were willing to pay significantly more on average than others for additional units of the particular characteristics they sought.

Where did financial institutions and the RTC go wrong as sellers in the lodging-property markets? The analysis of property characteristics suggests that these sellers accepted less than the market was willing to pay for proximity to commercial centers and airports and for property located in areas with greater effective buying income. Discounts, however, were partially offset by premiums received for

room rate and local-area employment strength.

The Right Price

Prices of lodging properties are influenced by the behavior of parties on both sides of transactions. Price discounts and premiums seem to result from buyers' and sellers' information-gathering capabilities, bargaining skills, and patience. As we expected, individuals consistently paid premiums for properties. These premiums are positively related to the number of rooms in a given property. Also as we expected, some foreign buyers paid premiums based on the weight they gave to the effective buying income of the local area and a property's proximity to an airport. Finally, financial institutions and the RTC discounted the properties they sold as compared to the price they might have commanded in consideration of the location and local economic conditions. The implications of our findings are as follows:

(1) When appraisers apply the sales-comparison approach to

value, they are justified in adjusting comparable sales to account for buyer and seller influences.

(2) Brokers are better able to demonstrate the value of their services, particularly in pricing properties for buyers and finding high-paying buyers for sellers. Agents or brokers with access to up-to-date data can recommend certain courses of action based on the most recent transactions available for comparable deals.

(3) Lenders should be more careful when issuing loans to certain classes of buyers for particular types of properties. For example, if an individual (or group of individuals) seeks to purchase a large hotel, the lender may wish to offer a loan at a slightly lower loan-to-value ratio than the lender would offer to other borrowers.

This study does not answer two important questions. First, do all buyers and sellers in a class behave in the same way? Aggregation of market participants into classes is a limitation of the study. Foreign buyers, for example, are not a homogeneous group and the results in Exhibits 3 and 4 tend to confirm that foreign buyers behave differently from one another (e.g., foreign buyers did not overpay during 1985–86). Disaggregation of this and other classes of buyers and sellers was not possible due to sample-size problems.

Second, do the premiums and discounts associated with classes of buyers and sellers persist through time? Another limitation of the study is that the results tend to be time specific. Some market participants are only in the market for a brief period (e.g., RTC) and other market participants will learn from their previous behavior.

The data are constantly improving and future studies using more complete data sets should not be burdened with the same limitations as this study. **CQ**