Private Nonresidential Building and Apartment Prices

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Abstract:

In a previous paper, Loebach (2005), I examined the feasibility of using a data base of contracts from F.W. Dodge to construction nonresidential building price indexes for a single state. This paper is an extension of that research that explores price indexes for seven types of nonresidential buildings and apartments using a national data set for the time period 1995 to 2004. Both annual and quarterly price indexes are generated and analyzed. It is found that the hedonic price measures do not increase faster than those indexes currently used in the NIPA's and many hedonic price measure increase 0.5% to 2% per year less than those currently used. Some suggestions are made as to how the procedures used in this paper can be used in an on-going production framework.

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Section 1: Introduction:

In a previous pilot study, Loebach (2005), I examined the feasibility of using a data base of nonresidential and apartment building contracts from F.W. Dodge to construct nonresidential building and apartment prices for several types of nonresidential buildings and apartments for a single state. I found that the hedonic methodology produced quite feasible indexes and that further research on a nationwide scale would be the next step in this line of research. This paper is that next step as it examines nonresidential building and apartment prices on a national level using a larger data set from Dodge.

The rest of this paper is as follows. Section 2 reviews the tortured history of nonresidential building deflators. Section 3 describes the data and explores different hedonic approaches for a single building type. The various approaches are compared and a single formulation is chosen as the "best" formulation for hedonic pricing. Section 4 describes the nonresidential price indexes for the eight nonresidential building types and apartments in the Dodge data set for a ten year span of annual and quarterly prices. Section 5 concludes with suggestions for further research and a description of how these building prices can be produced in an ongoing fashion.

Section 2: Background:

The deflation of construction expenditures has a long and difficult history. This history goes back to the 1961 NBER Price Statistics Review Committee which commented that BEA's structures deflators are "defective in almost every possible way." Work by Gordon (1968) and Musgrave (1969) led to major revisions in the deflation of construction as described in BEA (1974). The most notable improvement was the introduction of a price index for the construction of single family homes. That index was based on hedonic regressions that provide a better way to control for differences in the characteristics across homes.

The issue was raised again some years later by Pieper (1989) who, once again, pointed out the deficiencies in construction deflation, particularly for nonresidential types of construction. Some improvement was made with work by de Leeuw (1991a) and de Leeuw (1993) which introduced an hedonic price index for multi-family housing. This unpublished index is computed annually by the Census Bureau and is used by BEA.

For other structures, in the most recent (2003) comprehensive revision BEA introduced nonresidential building price indexes for warehouses, office buildings, factories, and schools for 1997 forward. These indexes are based on hedonic regressions of costs and square footage using data from R.S. Means Company's *Square Foot Costs* publication. Though the indexes are cost based measures, they represent a closer match to output-based indexes than the previous deflators. (See BEA (2003) for details.)

De Leeuw (1991b) used data from the major projects file from F.W. Dodge to construct hedonic price indexes for six types of nonresidential buildings. These building types are elementary schools, middle and high schools, office buildings, department stores, food stores, and shopping centers. Indexes for the years 1986 to 1990 were estimated. De Leeuw concluded that although the estimated price indexes did diverge widely, their average tracked closely with the BEA deflator. This observation, along with the observation that the Dodge data set is lacking in other potentially important "quality" variables, led de Leeuw to reject the hedonic approach using the Dodge data set as an improvement over the then-current BEA index.

This paper revisits the usefulness of the Dodge data for constructing indexes and extends the research in my previous paper, Loebach (2005), in light of several developments over the last decade. The primary development is the adoption of chained-type quantity indexes as the featured measure for real expenditures in the National Income and Product Accounts (NIPA's). For the constant dollar measures that BEA used until 1995, the use of an average deflator for nonresidential buildings might not have much impact on the aggregate estimates of real investment or real GDP. However, that cannot necessarily be said for real measures based on the Fisher formula where variations in the component prices and quantities that comprise the index can have a measurable effect on the behavior of the aggregate index. Secondarily, although the indexes based on the limited data in the Dodge data set may be upwardly biased due to a lack of important "quality" characteristics - energy efficiency being a commonly cited characteristic -

other data sources can be used to estimate the magnitude of these biases and then adjust the base index. The energy consumption surveys conducted periodically by the Energy Information Administration (EIA) are an example of supplementary data that could be used to improve a base index based on the Dodge data set. It should be noted, however, that none of the indexes in current use adjust for energy efficiency either. Finally, Pieper (1985) also qualitatively examined the use of hedonics and found them to be promising.

The next section describes the data set and various hedonic forms for hedonic pricing. Results are then provided for a single type of building and a "best" hedonic formulation is chosen.

Section 3: Data Set and Hedonic Forms:

The data set used in this paper is a universe of projects compiled by F.W. Dodge.[1] The complete Dodge file comprises construction projects nationwide, classified by type of construction, type of owner (private or public), location of the project, and some major characteristics of the project. The data used for this paper is a ten year span of projects for eight different types fo buildings. The building types chosen are:

1. Stores
2. Shopping centers
3. Food and beverage stores
4. Warehouses
5. Office buildings
6. Manufacturing buildings
7. Schools (private)
8. Apartment buildings

and the time span is from 1995 to 2004. Table 1 describes the data fields for each project record. The data of most importance to this paper are the types of structures, dates, project value, square footage, and number of stories. Only those projects that were classified as New construction or Addition were included in the regression results as these were the only project types that included square footage as well as contract value. Other project classification such as Alteration or Major Improvement were not included as they do not have square footage associated with them.

[1] See http://dodge.construction.com/Analytics/MarketMeasurement/CAS.asp for a description.

In general, an hedonic pricing function takes the following functional form

$$P_{i,t} = F_t(X_{i,t}) \tag{1}$$

where $P_{i,t}$ is the contract price for the i^{th} project in time period t, F_t is the hedonic function for time period t, and $X_{i,t}$ is the vector of characteristics for the i^{th} project in time period t.

There are many approaches to using (1) to construction price indexes. Table 2 below summarizes the 5 functional forms that will be explored in this section.

The first formulation follows many hedonic studies where the time index is dropped and time dummies are included in the characteristics vector. Such is the case for the current deflators described in BEA (2003). The time index in Formula (1) presupposes the existence of separate hedonic regression for each time period t. This could be annual regressions for the estimation of annual indexes or quarterly regressions for quarterly indexes. In general, this could allow the coefficients on the quality characteristics to vary for each time period. The "Fixed-Fixed" formula in Table 2 approach constrains the coefficients of the hedonic function to be the same for all time periods. Another formulation of the "Fixed-Fixed" approach is

$$\begin{aligned} P_i &= F(X_i) + \sum\nolimits_{j=1}^{n} \alpha_j D_j + \varepsilon_i \\ \hat{P} &= F(X_i) + \sum\nolimits_{j=1}^{n} \alpha_j D_j \end{aligned} \tag{2}$$

where there is a single set of coefficients for the quality characteristics and the presence of time dummies for each time period under study. This essentially imposes a fixed set of coefficients for a fixed set of characteristics over the time period of the function, attributing only time as affecting the price variable.

The second formulation for constructing price indexes from (1) is to estimate hedonic functions for each time period (say annually) and use a fixed set of characteristics to estimate the price over time. This "Fixed characteristics" approach was used in De Leeuw (1993) in his study of multi-family structure prices. In this case, the coefficients are allowed to change over time as the value of the characteristics changes over time. Equation (3) illustrates.

$$
\begin{array}{lll}
t=0: & P_i = F_0(X_i)+\varepsilon_i & \hat{P}_0 = F_0(\bar{X}) \\
t=1: & P_i = F_1(X_i)+\varepsilon_i & \hat{P}_1 = F_1(\bar{X}) \\
\vdots & \vdots & \vdots \\
t=t: & P_i = F_t(X_i)+\varepsilon_i & \hat{P}_t = F_t(\bar{X})
\end{array} \tag{3}
$$

In this case, an hedonic regression is estimated for each time period (year or quarter) and then a fixed set of characteristics is inserted into the hedonic to obtain a price estimate. The deflation of the $F_t(\bullet)$ term with $F_0(\bullet)$ is simply a normalization step.

The third formulation is what I call an "Extrapolation" approach. It is similar to the "Fixed characteristics" approach in that a separate hedonic regressions is estimated for each time period. However, instead of using a fixed set of characteristics with which to estimate $\hat{P}$, the average characteristics for each time period are used.

$$
\begin{array}{lll}
t=0: & P_i = F_0(X_i)+\varepsilon_i & \hat{P}_0 = F_0(\bar{X}_0) \\
t=1: & P_i = F_1(X_i)+\varepsilon_i & \hat{P}_1 = F_1(\bar{X}_1) \\
\vdots & \vdots & \vdots \\
t=t: & P_i = F_t(X_i)+\varepsilon_i & \hat{P}_t = F_t(\bar{X}_t)
\end{array} \tag{4}
$$

In essence this is a simple measure of average hedonic prices for each time period and then extrapolated forward from some base period; almost like a "list-price" approach.

The final two formulations are "Chain-type" indexes explored by Crone, Nakamure, and Voith (2004) in their study of housing service prices. When estimating an hedonic function of the general formulation of equation (1), only two items can change from one period to the next, the hedonic function F_t or the characteristics, X_t. Examining Chain-type 1 closely,

$$\frac{\hat{P}}{\hat{P}_{-1}} = \sqrt{\underset{Paasche}{\frac{F_t(X_t)}{F_{t-1}(X_t)}} \bullet \underset{Laspeyres}{\frac{F_t(X_{t-1})}{F_{t-1}(X_{t-1})}}} \tag{5}$$

the term $F_t(X_t)/F_{t-1}(X_t)$ can be thought of as "Paasche" type in characteristics since the current period characteristics are the same for both the numerator and the denominator. The term $F_t(X_{t-1})/F_{t-1}(X_{t-1})$ can be thought of as "Laspeyres" type in characteristics since the prior period characteristic are the same for both the numerator and the denominator. Examining Chain-type 2 closes yields a similar analysis only the characteristics are allowed to change from on period to the next.

$$\frac{\hat{P}}{\hat{P}_{-1}} = \sqrt{\underset{Paasche}{\frac{F_t(X_t)}{F_t(X_{t-1})}} \bullet \underset{Laspeyres}{\frac{F_{t-1}(X_{t-1})}{F_{t-1}(X_t)}}} \tag{6}$$

The term $F_t(X_t)/F_t(X_{t-1})$ can be thought of as "Paasche" type in hedonic function since the current period hedonic function is the same for both the numerator and the denominator. Term $F_{t-1}(X_t)/F_{t-1}(X_{t-1})$ can be thought of as "Laspeyres" type in hedonic function since the prior period hedonic is the same for both the numerator and the denominator. The geometric average of these ratios is, naturally, a Fisher chain type index. It should be noted that the product of index forms 4 and 5 yield 3. As will be shown below, one of the chain-type indexes is a price measure where the other is a quantity measure.

The specification of equation (1) follows that used in de Leeuw (1991a). The general form of the hedonic function is

$$P_i = AS_i^{\alpha} \prod_{j=1}^{n} e^{\beta_j x_i^j} \prod_{t=1}^{T} e^{\tau_t d_i^t} e^{\varepsilon_i} \tag{7}$$

where P_i is the project value for a particular type of structure, S_i is the square footage of the project, x_i^j are other quality characteristics, d_j^t are year dummies, and ε_i is an error term. The quality characteristics included in the regressions reported here are number of stories of the building and a dummy variable with a value of 1 if the project is an addition/alteration project and 0 if it is new construction. In log form, the estimating equation becomes

$$\ln P_i = \alpha_1 + \alpha_3 \ln S_i + \beta_1 x_i^1 + \beta_2 x_i^2 + \sum_{t=1}^{T} \gamma_i^t d_i^t + \varepsilon_i \tag{8}$$

where x^1 is the number of stories of the building, x^2 is the add/alt dummy, and the *d's* are the year dummies. The variable for number of stories enters in linearly for the simple fact that some projects classified as "Additions" have a zero for the number of stories. Thus, the stories variable cannot enter in log form.

Table 3 shows the regression results for (3) for Stores for the time period 1995 to 2004. The full sample regression has time dummies for the years 1996 to 2004, where the annual regressions do not include time dummies. All variables are significant at 1% or greater. The coefficient on the square footage are all below unity suggesting that there are economies of scale for construction activity for this type of structure. The R-squares for the regressions are very high at around 0.9 and the standard errors are quite consistent at around 0.4. Tests for heteroskedasticity are shown and none were found. Also shown is a set of Wald tests on the coefficient for square footage, α_3 in equation (3). As was shown in Loebach (2005), the square footage variable has the most explanatory power. The Wald tests were performed to test the hypothesis that the coefficient for square footage in the annual regressions was statistically the same as for the full sample regression. Only the 2003 coefficient is found to have a high probability of being the same as the full sample period. These tests show that the elasticity of square footage on price does vary from year to year. Finally, the values for the average price, square footage, stories, and percent of alterations are shown.

Table 4 shows the value for the five index formulation derived from the regression results. Figure 1 shows all five indexes in the same graph. Though a little cluttered it does show that the extrapolation index is the most varied reaching a low of 94.1 in 1996 and a high of 181.1 in 2004. It is also of interest to note that the chain-type 2 index is the only other index to drop below 100 over the time period. The other three indexes tend to follow each other fairly closely, thus suggesting that there is something particular about the other two that warrant special attention.

Figure 2 plots the extrapolation index and the average contract price on the same graph. While not exact, the two graphs do track each other quite closely. The 74.2% increase in the average contract price over the 1995-2004 period also compares well with the 81.0% increase in the extrapolation index. This suggests that the extrapolation index is more a restatement of the average contract price and that both measures may tend to overstate the rate of price change in nonresidential building prices.

Figure 3 plots the chain-type 2 index with average square footage per contract. The two measures track each other quite closely, in much the same manner as the extrapolation index and the average contract price. The 35.8% increase in average square footage also compares well with the 30.7% increase in the index. This may seem to suggest that the chain-type 2 index is a quantity measure. The work of Crone, Nakamure, and Voith (2004) suggests that chain-type indexes of the form of #2 are in fact quantity measures. In this case, the chain-type 2 index is a measure of the changing square footage of building contracts.

To put it another way; construction activity can be thought of as to evolve along two margins, an extensive margin and an intensive margin. This is analogous to the measurement of labor input. Labor input is typically measured in hours of work. Hours of work can change in two ways; by how many workers are working, the extensive margin; and by how many hours each worker works, the intensive margin. In much the same way, building activity evolves along two similar margins; how many buildings are built, the extensive margin; and how big they are, the intensive margin. As to constructing a deflator for building activity, the extensive margin is automatically accounted for by a natural focus on the average contract price, whether directly or through use of an hedonic equation. However, as was shown above, the average contract price (or its hedonic equivalent in the extrapolation index) can tend to overstate price changes since it does not account for changing building size. The other three indexes account for these changes, though in varying degrees.

The next question is then, which of three remaining formulations; the Fix-fix, the Fixed characteristics, or the chained-type index; is most appropriate. While all three indexes tend to give similar results, it is my opinion that the chained-type index is marginally superior to the other two. The chained-type index can account for variations in the elasticity of square footage on price (and on coefficient variations of the other variables as well) which the Fix-fix formulation cannot. The chained-type index can also account for variations in characteristics over time which the Fixed characteristics formulation cannot. It is also a nice property that the product of the two chained-type indexes yields an hedonic measure of the average contract price for a given year suggesting that the chained-type price measure fully accounts for variations in the square footage. Finally, the chained-type formulation has nice features that make it easy to use in an ongoing production basis where the price index is constantly updated over time. For these reasons, the chained-type formula is used for the rest of this paper.

The next section describes the indexes for the eight building types described above.

4. Price Indexes:

Annual indexes constructed using the chained-type 1 formulation are shown in Table 5. Annual regression results are also shown in Table 5. Figure 5 shows graphically the annual indexes.

In general, the annual indexes have quite similar patterns over the time period. All the indexes increase from 1995 to 1996 with most of them either dropping or flattening over the 1997 to 1998 period. All the indexes then begin a steady increase in the 1999 to 2004 period. Shopping centers show the largest increase over the period with a 40.6% increase while office buildings show the smallest increase over the period with a 21.6% increase.

A vast majority of the coefficients are significant at 1% with only a handful of coefficients for number of stories and the alteration dummy variable not significant at 1% (not marked). Across the years for each type of structure, the coefficients are roughly consistent with each other. The constant terms tend to rise over the time period reflecting the generally increasing prices. The coefficient on square footage are roughly stable in the .85 to .95 range for with a few instances where it is outside the range and only three instances where it is equal to or slightly greater than unity. Elasticities below unity suggest increasing returns to scale while values at unity reflect constant returns to scale. The regression results suggest that there is a slight increasing returns to scale for nonresidential building activity. The explanatory power of the regressions is high with R^2's in the .85 to .95 range with Food and Beverage stores being the exception with R^2's in the .70 to .80 range.

Quarterly indexes constructed using the chained-type 1 formulation are shown in Table 6. Quarterly regression results are also shown in Table 6. Figure 6 shows graphically the quarterly indexes.

In general, the quarterly indexes follow the annual but have quite varying patterns over the time period. In addition, the indexes appear to have a much higher volatility than the annual indexes. Table A, below, summarizes the percent change in the annual and quarterly indexes with the quarterly percent changes expressed at annual rates.

Table A - Percent Changes in the Annual and Quarterly Indexes

	Max	Min	Avg.	St. dev.
Annual Indexes				
Stores	9.3	-0.5	3.7	2.9
Shopping centers	7.1	-5.7	2.8	3.7
Food & bev. Stores	8.3	-4.5	2.3	4.3
Warehouses	6.8	-3.8	2.3	3.6
Offices	10.5	-0.8	3.8	3.5
Manufacturing	6.2	1.7	3.9	1.5
Schools (pvt.)	7.4	-0.7	3.7	3.2
Apartments	7.3	-1.9	2.9	2.6
Quarterly Indexes				
Stores	22.2	-16.3	4.1	9.0
Shopping centers	24.7	-29.0	2.7	11.8
Food & bev. Stores	36.2	-35.4	2.3	16.0
Warehouses	21.5	-36.1	3.1	11.5
Offices	53.0	-41.7	3.7	19.6
Manufacturing	49.2	-33.5	5.4	19.8
Schools (pvt.)	32.4	-20.2	4.0	11.0
Apartments	30.6	-24.5	3.3	13.1

It is quite apparent that the quarterly indexes are some three to five times more volatile than the annual indexes depending on the type of structure. There also does not seem to be any consistent pattern in the quarterly indexes that might be caused by seasonality. Running the quarterly indexes through the X-12 seasonal adjustment program showed that, with a single exception, none of the indexes had any seasonality in the quarterly movements. Only shopping centers showed any type of seasonality. Figure 7 shows the seasonally adjusted and non-seasonally adjusted indexes with very little difference in the overall quarterly pattern.

An alternate method to derive quarterly indexes is a distribution of smoothed quarterly values that are controlled to the annual index values. This can be accomplished by a numerical optimization of the form

$$\min_{x_1 \cdots x_{4n}} \sum_{i=2}^{4n} (x_i - x_{i-1})^2 \quad st. \sum_{i=1,4} x_i = A_1, \ldots, \sum_{i=4n-3,4n} x_i = A_n \tag{4}$$

where x_i are the quarterly values and A_n are the annual controls. Figure 8 shows graphically the quarterly indexes. Table B, below, summarizes the percent change in the annual and quarterly indexes with the quarterly percent changes expressed at annual rates.

Table B - Percent Changes in the Annual and Quarterly Indexes

	Max	Min	Avg.	St. dev.
Annual Indexes				
Stores	9.3	-0.5	3.7	2.9
Shopping centers	7.1	-5.7	2.8	3.7
Food & bev. Stores	8.3	-4.5	2.3	4.3
Warehouses	6.8	-3.8	2.3	3.6
Offices	10.5	-0.8	3.8	3.5
Manufacturing	6.2	1.7	3.9	1.5
Schools (pvt.)	7.4	-0.7	3.7	3.2
Apartments	7.3	-1.9	2.9	2.6
Quarterly Indexes				
Stores	12.0	-3.7	3.6	3.1
Shopping centers	9.8	-12.0	2.7	4.4
Food & bev. Stores	14.6	-10.9	2.2	5.8
Warehouses	12.0	-9.8	2.3	4.4

Offices	15.9	-5.0	3.8	4.4
Manufacturing	8.5	-0.2	3.7	1.9
Schools (pvt.)	9.5	-3.5	3.7	3.6
Apartments	9.4	-4.3	2.8	2.9

A quick look at the standard deviations of percent change show that these alternate indexes are much more in line with the annual values.

To summarize, the indexes computed here use a chain-type formulation where the index between two time periods can be expressed by the formula

$$\frac{I_t}{I_{t-1}} = \sqrt{\frac{F_t(X_t)}{F_{t-1}(X_t)} \bullet \frac{F_t(X_{t-1})}{F_{t-1}(X_{t-1})}} \tag{9}$$

where I_t is the price index, $F_t(\bullet)$ is the hedonic function for period t, and X_t are average characteristics for the structure for period t. The regressions were quite good with high R^2's, significant coefficients, and generally expected results. The regressions do show that construction activity has slight increasing returns to scale as evidenced by the elasticity of price to square footage in the 0.9 range. Quarterly indexes were also computed with the same general results. However the quarterly indexes showed much more volatility, in the three to five times range, than the annual indexes.

The next section concludes with a comparison of the indexes computed here with the published NIPA indexes and some thoughts on how the procedure used here can used in an on-going production framework. Some suggestions for future work are also considered.

5. Conclusion:

A natural question to ask is "How do the Dodge indexes compare to published estimates?" Figure 9 shows a graphical comparison between the indexes computed here and those used in the NIPA's. It should be noted that there is a break in the definition of the types of structures used in the NIPA's with a single overlap year in 1997. For 1997 to 2004, the current set of definitions are used in Figure 9. The closest analogs were used to backcast the NIPA indexes to 1995. The NIPA indexes were then rebased to 1995=100 for ease of comparison. The NIPA indexes for Multimerchandise stores, Food and Beverage stores, and Warehouses were back cast using the Commercial Building index, the index for Offices was backcast using the index for Offices including Medical Buildings, and the indexes for Manufacturing, Educational buildings, and Multifamily residential buildings are consistent across the two sets of definitions.

The price indexes for Stores, Shopping Centers, and Schools, the Dodge indexes track the published reasonably well with the same approximate increase over the time period. The price index for Food and Beverage Stores also tracks the published with a drop in the Dodge index from 1996 to 1997. This drop is probably due to the fact that the average square footage increased from 3710 sq-ft to 4340 sq-ft, an increase of 17%, between 1996 and 1997 while the average contract value increased from $348.4 thousand to $398.0 thousand, an increase of 14%. This one year decrease caused the price index for Food and Beverage Stores to increase some 12% less over the time period than its NIPA counterpart. The price indexes for Warehouses, Offices, Manufacturing, and Apartments all increased less over the time period than their NIPA counterparts with Warehouses increasing 10% less, Offices increasing 20% less, Manufacturing increasing 15% less, and Apartments increasing about 7% less. These results seem to suggest, at least for these types of structures, that hedonic based price indexes have a lower rate of increase of between 0.5% and 2% per year over the indexes currently used.

Finally, some observations can be made as to how the procedures used here could be used to set up an on-going production framework for the generation of price indexes. At the conclusion of a calendar quarter an hedonic formula, such as equation (3) above, is estimated for a chosen type of structure and the coefficients and average characteristics are added to a database of previous coefficient and average characteristics. Formula (5) is then used to generate the current period price index. The use of the chain-type formula has a primary benefits that no previous observations are incorporated into the current period hedonic so no previous index values need be changed as more projects are observed. At the conclusion of a calendar year, an annual index value is computed in the standard fashion and the quarters interpolated to the annual value. Seasonal adjustment could then be applied to the interpolated quarterly index as needed.

As always, a few areas of further research can be pursued. Of primary concern is the excessive volatility of the quarterly indexes. This may possibly be due to the inherent nature of construction activity where there is such heterogeneity in construction projects that this shows up in the price indexes. It should also be noted that construction expenditures as tabulated by the Census Bureau's Value-put-in-place report is on a "put-in-place" basis where expenditures for a given project are distributed over the time it takes to complete the project. While it is certainly possible for the value of projects to be quite erratic, the distribution of expenditures over time most likely leads to a smoothing out of expenditures. The price indexes computed for the current paper are technically price indexes of construction starts. It is possible that the incorporation of distribution weights that would transform these price indexes from construction starts to construction put-in-place may reduce the volatility seen in the quarterly indexes.

Nevertheless, the use of this data for the construction of true output price indexes for nonresidential and apartment construction shows much promise.

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Table 1 - Description of Data Fields for each Project

Field Name	Field Description	Example
MO	Month	8
YEAR	Year	2004
YEARMO	Year:Month	2004:08
STC	Dodge Structure Code	3
STCNAME	Dodge Structure Code Name	Warehouses (Non-Refrig.)
STG	Dodge Structure Group code	2
STGNAME	Dodge Structure Group Name	Warehouses (ex. mfg. owned)
STHNAME	Dodge Structure Header (Nonres, Res, NonBuilding)	Nonres.
NAAMN	New/Add/Alt (goes farther back in history than NAA4)	NEW
NAA4	New/Add/Alt/Add & Alt Code	1
NAA4NAME	New/Add/Alt/Add & Alt Name	New
OWN	Owner Code	1
OWNNAME	Owner Code Name (Private, Public)	PRIVATE
STRYS	Number of Storys	1
AREA	Square Footage of the building in thous.	10
VALUE	Construction contract value in thous.	400
STAMN	State code	MD
FIPS	FIPS county code (a few exceptions)	24015
FIPSNAME	County Name	CECIL, MD

Table 2 - Hedonic Formulations for Price Indexes

	Name	Formulation
1.	Fixed-Fixed	$\hat{P} = \bar{F}(\bar{X})$
2.	Fixed Characteristic	$\hat{P} = F_t(\bar{X}) / F_0(\bar{X})$
3.	Extrapolation	$\hat{P} = F_t(X_t) / F_{t-1}(X_{t-1})$
4.	Chain-type 1	$\hat{P} = \sqrt{\frac{F_t(X_t)}{F_{t-1}(X_t)} \cdot \frac{F_t(X_{t-1})}{F_{t-1}(X_{t-1})}}$
5.	Chain-type 2	$\hat{P} = \sqrt{\frac{F_t(X_t)}{F_t(X_{t-1})} \cdot \frac{F_{t-1}(X_t)}{F_{t-1}(X_{t-1})}}$

Table 3 - Regression Results for Stores

	Full	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Coefficient estimates:											
(Standard errors in parenthesis)											
Constant	3.894	3.929	3.959	3.995	4.052	4.022	4.025	4.014	4.066	4.146	4.213
	(0.006)	(0.017)	(0.016)	(0.014)	(0.013)	(0.013)	(0.013)	(0.014)	(0.012)	(0.012)	(0.012)
LOG(SQ)	0.911	0.904	0.917	0.888	0.890	0.916	0.932	0.927	0.868	0.913	0.929
	(0.001)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.003)
STRY	0.113	0.097	0.088	0.145	0.127	0.145	0.085	0.128	0.285	0.098	0.041
	(0.003)	(0.015)	(0.014)	(0.012)	(0.011)	(0.011)	(0.010)	(0.012)	(0.012)	(0.008)	(0.007)
D_ALT	0.070	0.051	0.050	0.066	0.078	0.065	0.109	0.097	0.033	0.084	0.139
	(0.004)	(0.011)	(0.012)	(0.012)	(0.012)	(0.012)	(0.013)	(0.014)	(0.014)	(0.014)	(0.013)
D1996	0.047	-	-	-	-	-	-	-	-	-	-
	(0.006)	-	-	-	-	-	-	-	-	-	-
D1997	0.084	-	-	-	-	-	-	-	-	-	-
	(0.006)	-	-	-	-	-	-	-	-	-	-
D1998	0.126	-	-	-	-	-	-	-	-	-	-
	(0.006)	-	-	-	-	-	-	-	-	-	-
D1999	0.169	-	-	-	-	-	-	-	-	-	-
	(0.006)	-	-	-	-	-	-	-	-	-	-
D2000	0.156	-	-	-	-	-	-	-	-	-	-
	(0.006)	-	-	-	-	-	-	-	-	-	-
D2001	0.176	-	-	-	-	-	-	-	-	-	-
	(0.006)	-	-	-	-	-	-	-	-	-	-
D2002	0.214	-	-	-	-	-	-	-	-	-	-
	(0.006)	-	-	-	-	-	-	-	-	-	-
D2003	0.243	-	-	-	-	-	-	-	-	-	-
	(0.006)	-	-	-	-	-	-	-	-	-	-
D2004	0.294	-	-	-	-	-	-	-	-	-	-
	(0.006)	-	-	-	-	-	-	-	-	-	-
R-sq	0.910	0.910	0.904	0.895	0.900	0.911	0.916	0.914	0.897	0.913	0.921
S.E.	0.387	0.394	0.391	0.394	0.393	0.388	0.377	0.383	0.405	0.372	0.357
# Obs.	79139	7992	7827	8786	8949	8921	8307	7417	6847	6817	7276
White Heteroskedasticity Test:											
F-stat	328.1	60.6	58.3	162.4	108.7	71.2	86.8	106.7	110.6	134.1	58.6
(prob)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Obs*R2	4342.2	292.2	281.4	743.6	512.8	342.7	412.7	498.0	512.0	611.0	281.9
(prob)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Wald-test for LOG(SQ) coefficient:											
Chi-sq	-	4.834	2.405	46.18	42.22	2.224	42.94	20.91	100.2	0.177	29.84
(prob)	-	(0.028)	(0.121)	(0.000)	(0.000)	(0.136)	(0.000)	(0.000)	(0.000)	(0.674)	(0.000)
Other statistics:											
Avg.Pr.	1185.4	906.6	867.2	867.3	1030.2	1164.7	1307.9	1342.6	1407.5	1554.8	1579.5
Avg.Sqft.	24.55	21.58	18.96	19.04	22.49	23.70	27.06	27.39	28.01	30.71	29.31
Avg.Sty.	0.994	1.049	1.043	0.976	0.981	0.970	1.000	0.973	0.877	0.998	1.070
% D_ALT	15.1	21.6	18.4	16.8	15.4	15.4	12.1	12.0	14.2	12.0	12.0

Table 4 - Indexes for Stores

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Fix-fix	100.0	104.8	108.8	113.5	118.4	116.9	119.2	123.8	127.5	134.2
Fix char.	100.0	105.1	108.3	113.3	118.4	116.8	119.1	127.2	127.4	134.7
Extrap.	100.0	100.9	109.4	130.2	138.1	150.4	155.7	171.6	196.2	193.7
Chain 1	100.0	104.7	108.8	113.8	118.8	117.2	119.5	125.3	128.1	135.3
Chain 2	100.0	96.3	100.5	114.4	116.3	128.3	130.3	136.9	153.2	143.1

Table 5 - Annual Indexes and Regression Results for Selected Nonresidential Buildings and Apartments

Annual Indexes

	Stores	Shopping Centers	Foodbev Stores	Ware-houses	Offices	Mfg.	Schools	Apartments
1995	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000
1996	106.049	106.113	102.342	104.898	106.816	103.282	110.474	104.340
1997	107.255	108.942	96.504	106.710	102.764	98.591	110.169	103.767
1998	112.416	112.915	101.013	109.307	106.948	104.670	114.499	107.538
1999	120.334	117.703	102.585	111.952	111.158	107.050	119.855	109.148
2000	120.512	121.359	105.723	116.942	114.473	108.793	120.505	112.098
2001	122.207	123.426	107.222	125.446	114.655	117.816	126.309	114.224
2002	121.407	131.060	111.524	126.911	111.376	113.628	125.242	118.608
2003	128.953	136.504	119.436	124.486	115.574	120.634	131.184	126.000
2004	138.461	140.580	127.004	128.683	121.645	121.745	138.990	137.741

Regression Results

STORES

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Constant	3.929	3.959	3.995	4.053	4.021	4.024	4.015	4.064	4.147	4.213
	(0.017)	(0.016)	(0.014)	(0.013)	(0.013)	(0.013)	(0.014)	(0.012)	(0.012)	(0.012)
LOG(SQ)	0.904	0.917	0.888	0.890	0.916	0.932	0.927	0.869	0.912	0.929
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.003)
STRY	0.097	0.088	0.145	0.127	0.145	0.085	0.128	0.284	0.099	0.041
	(0.015)	(0.014)	(0.012)	(0.011)	(0.011)	(0.010)	(0.012)	(0.012)	(0.008)	(0.007)
D_ALT	0.051	0.050	0.066	0.077	0.066	0.111	0.095	0.034	0.081	0.139
	(0.011)	(0.012)	(0.012)	(0.012)	(0.013)	(0.013)	(0.014)	(0.014)	(0.014)	(0.013)
R-sq	0.910	0.904	0.895	0.900	0.911	0.916	0.914	0.897	0.912	0.922
S.E.	0.394	0.391	0.394	0.393	0.388	0.377	0.383	0.403	0.374	0.357
# Obs.	7991	7826	8784	8947	8915	8307	7416	6847	6817	7289

SHOPPING CENTERS

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Constant	3.815	3.809	3.920	3.855	3.957	3.826	3.915	3.864	3.915	4.148
	(0.055)	(0.055)	(0.046)	(0.044)	(0.040)	(0.051)	(0.044)	(0.053)	(0.050)	(0.035)
LOG(SQ)	0.972	0.981	0.975	0.960	0.984	0.984	0.981	1.005	1.004	0.985
	(0.011)	(0.012)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.014)	(0.011)	(0.009)
STRY	0.112	0.103	0.075	0.215	0.064	0.195	0.163	0.153	0.158	0.032
	(0.040)	(0.042)	(0.036)	(0.033)	(0.025)	(0.043)	(0.032)	(0.041)	(0.040)	(0.021)
D_ALT	0.057	0.253	0.076	0.180	0.150	0.335	0.127	0.349	0.229	0.326
	(0.042)	(0.044)	(0.040)	(0.042)	(0.039)	(0.042)	(0.043)	(0.048)	(0.043)	(0.038)
R-sq	0.908	0.900	0.912	0.912	0.914	0.916	0.922	0.883	0.902	0.913
S.E.	0.462	0.471	0.449	0.449	0.426	0.406	0.398	0.435	0.379	0.355
# Obs.	839	898	996	1025	1098	940	892	825	950	1156

Table 5 - Annual Indexes and Regression Results for Selected Nonresidential Buildings and Apartments (Cont.)

FOOD & BEVERAGE STORES

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Constant	4.590	4.612	4.368	4.187	4.216	4.152	4.232	4.294	4.714	4.856
	(0.031)	(0.030)	(0.022)	(0.026)	(0.026)	(0.032)	(0.028)	(0.018)	(0.017)	(0.016)
LOG(SQ)	0.833	0.851	0.945	0.954	0.987	0.995	0.959	0.809	0.885	0.890
	(0.007)	(0.007)	(0.010)	(0.010)	(0.010)	(0.010)	(0.011)	(0.011)	(0.010)	(0.008)
STRY	0.118	0.093	0.154	0.360	0.291	0.378	0.372	0.613	0.104	-0.001
	(0.030)	(0.030)	(0.018)	(0.023)	(0.023)	(0.030)	(0.027)	(0.016)	(0.010)	(0.011)
D_ALT	-0.087	-0.066	-0.098	0.027	0.021	0.002	-0.020	-0.060	-0.096	0.082
	(0.014)	(0.014)	(0.021)	(0.024)	(0.024)	(0.025)	(0.025)	(0.020)	(0.022)	(0.020)
R-sq	0.818	0.843	0.739	0.762	0.760	0.754	0.724	0.782	0.754	0.834
S.E.	0.332	0.315	0.414	0.416	0.415	0.385	0.398	0.344	0.361	0.305
# Obs.	4687	4085	3872	3733	3845	3773	3530	3346	3195	3079

WAREHOUSES

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Constant	3.769	3.681	3.818	3.876	3.948	3.878	3.866	3.862	3.767	3.742
	(0.013)	(0.015)	(0.021)	(0.020)	(0.018)	(0.022)	(0.021)	(0.023)	(0.019)	(0.019)
LOG(SQ)	0.916	0.933	0.901	0.896	0.899	0.903	0.933	0.930	0.950	0.969
	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)	(0.004)	(0.005)	(0.005)	(0.004)	(0.004)
STRY	0.027	0.102	0.104	0.070	0.017	0.106	0.061	0.095	0.095	0.074
	(0.011)	(0.013)	(0.016)	(0.014)	(0.008)	(0.015)	(0.014)	(0.016)	(0.014)	(0.015)
D_ALT	-0.012	0.011	0.003	0.046	0.020	0.039	0.078	0.023	0.007	0.070
	(0.009)	(0.009)	(0.014)	(0.015)	(0.016)	(0.015)	(0.017)	(0.018)	(0.015)	(0.015)
D_REF	0.091	0.046	-0.106	0.131	0.252	0.139	0.135	0.216	0.093	0.067
	(0.018)	(0.017)	(0.024)	(0.029)	(0.034)	(0.035)	(0.042)	(0.043)	(0.035)	(0.030)
R-sq	0.937	0.947	0.908	0.904	0.901	0.906	0.907	0.904	0.926	0.918
S.E.	0.329	0.312	0.383	0.380	0.379	0.381	0.386	0.388	0.364	0.392
# Obs.	7558	7122	4616	4493	4383	4623	4093	3461	3946	4759

OFFICES

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Constant	4.318	4.350	4.254	4.264	4.261	4.263	4.286	4.324	4.327	4.343
	(0.006)	(0.005)	(0.006)	(0.005)	(0.005)	(0.005)	(0.006)	(0.008)	(0.008)	(0.007)
LOG(SQ)	0.887	0.919	0.933	0.949	0.964	0.967	0.960	0.922	0.935	0.948
	(0.003)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.003)	(0.004)	(0.004)	(0.003)
STRY	0.055	0.025	0.046	0.043	0.037	0.037	0.046	0.079	0.059	0.037
	(0.003)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.002)
D_ALT	0.030	0.035	0.007	0.010	0.001	0.084	0.061	0.019	0.030	0.170
	(0.007)	(0.007)	(0.008)	(0.007)	(0.008)	(0.008)	(0.009)	(0.010)	(0.010)	(0.010)
D_BANK	0.429	0.401	0.442	0.323	0.384	0.435	0.367	0.397	0.518	0.554
	(0.009)	(0.008)	(0.011)	(0.009)	(0.009)	(0.009)	(0.010)	(0.010)	(0.010)	(0.009)
R-sq	0.919	0.936	0.915	0.939	0.945	0.945	0.930	0.901	0.902	0.914
S.E.	0.329	0.308	0.377	0.350	0.337	0.324	0.348	0.361	0.360	0.344
# Obs.	10979	11993	13191	14505	13839	13499	11151	9608	9205	10234

Table 5 - Annual Indexes and Regression Results for Selected Nonresidential Buildings and Apartments (Cont.)

MANUFACTURING

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Constant	3.753	3.729	3.674	3.800	3.665	3.654	3.713	3.814	3.705	3.829
	(0.022)	(0.022)	(0.017)	(0.016)	(0.021)	(0.026)	(0.025)	(0.030)	(0.030)	(0.038)
LOG(SQ)	0.947	0.963	0.961	0.988	0.982	0.964	1.007	0.947	0.998	0.987
	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.007)	(0.008)	(0.010)	(0.009)	(0.009)
STRY	0.178	0.181	0.185	0.025	0.189	0.260	0.143	0.240	0.204	0.112
	(0.016)	(0.016)	(0.012)	(0.005)	(0.015)	(0.019)	(0.014)	(0.024)	(0.024)	(0.025)
D_ALT	0.019	0.011	0.042	0.045	0.083	0.143	0.086	0.047	0.091	0.151
	(0.014)	(0.014)	(0.013)	(0.014)	(0.017)	(0.020)	(0.021)	(0.024)	(0.024)	(0.027)
R-sq	0.900	0.914	0.908	0.910	0.922	0.908	0.918	0.896	0.921	0.902
S.E.	0.467	0.444	0.433	0.427	0.430	0.446	0.426	0.443	0.423	0.466
# Obs.	4354	4030	4727	3874	2943	2356	1872	1430	1311	1327

SCHOOLS (private)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Constant	4.183	4.248	4.092	4.126	4.120	4.166	4.169	4.302	4.410	4.530
	(0.026)	(0.026)	(0.026)	(0.027)	(0.022)	(0.023)	(0.027)	(0.028)	(0.031)	(0.031)
LOG(SQ)	0.891	0.926	0.958	0.958	1.000	0.970	0.976	0.976	0.896	0.936
	(0.010)	(0.009)	(0.011)	(0.012)	(0.009)	(0.010)	(0.011)	(0.012)	(0.012)	(0.012)
STRY	0.243	0.189	0.235	0.233	0.192	0.226	0.244	0.148	0.286	0.139
	(0.019)	(0.020)	(0.017)	(0.018)	(0.015)	(0.014)	(0.016)	(0.012)	(0.017)	(0.019)
D_ALT	0.071	0.126	0.180	0.203	0.166	0.166	0.184	0.129	0.127	0.181
	(0.024)	(0.023)	(0.025)	(0.025)	(0.021)	(0.022)	(0.025)	(0.025)	(0.029)	(0.031)
R-sq	0.897	0.902	0.892	0.879	0.915	0.898	0.884	0.871	0.874	0.874
S.E.	0.421	0.409	0.448	0.476	0.421	0.435	0.489	0.490	0.508	0.508
# Obs.	1316	1401	1442	1557	1764	1785	1718	1607	1380	1256

APARTMENTS

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Constant	3.949	3.976	3.924	3.927	3.977	4.063	4.005	4.072	4.097	4.183
	(0.010)	(0.010)	(0.008)	(0.008)	(0.009)	(0.010)	(0.008)	(0.008)	(0.009)	(0.009)
LOG(SQ)	0.954	0.962	0.966	0.976	0.967	0.948	0.969	0.958	0.970	0.973
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
STRY	0.030	0.022	0.037	0.034	0.033	0.041	0.039	0.045	0.040	0.036
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)
R-sq	0.955	0.956	0.944	0.949	0.943	0.932	0.945	0.946	0.942	0.945
S.E.	0.318	0.314	0.340	0.348	0.376	0.404	0.376	0.384	0.382	0.349
# Obs.	4682	4660	7760	7990	8219	7448	8331	8846	8587	8303

Table 6 - Quarterly Indexes and Regression Results for Selected Nonresidential Buildings and Apartments

	Stores	Shopping Centers	Foodbev Stores	Ware- houses	Offices	Mfg.	Schools	Apartments
Quarterly Indexes								
1995								
Q1	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000
Q2	101.870	107.612	97.350	99.224	104.368	99.111	100.554	102.418
Q3	102.777	105.308	100.136	104.152	103.936	99.702	98.672	102.886
Q4	103.308	110.298	103.059	104.049	106.827	100.905	95.708	103.997
1996								
Q1	105.139	101.062	100.052	106.678	108.283	107.853	105.676	105.529
Q2	108.307	113.480	102.488	107.123	110.705	103.643	110.080	105.544
Q3	109.204	122.312	102.430	105.914	111.775	102.053	108.972	108.610
Q4	109.398	118.173	104.249	107.949	113.198	102.260	106.442	107.387
1997								
Q1	110.316	115.328	96.679	110.692	106.485	98.568	106.920	105.557
Q2	107.996	124.789	94.934	109.850	103.019	97.840	103.269	103.011
Q3	111.292	118.009	98.600	109.796	107.914	102.475	116.945	107.903
Q4	108.934	114.619	94.868	105.141	110.797	95.341	109.146	107.747
1998								
Q1	111.668	123.416	98.614	113.176	113.077	103.977	111.048	107.166
Q2	112.514	127.251	101.723	110.759	110.863	104.273	113.533	110.718
Q3	116.852	121.330	104.923	112.404	110.980	102.410	118.361	113.749
Q4	119.528	122.888	99.408	111.815	110.539	102.614	112.423	109.119
1999								
Q1	122.128	119.274	101.888	112.914	114.256	104.325	116.633	109.091
Q2	122.269	130.691	103.557	112.846	115.886	105.738	117.789	113.407
Q3	121.627	132.327	102.796	116.559	115.677	107.856	120.472	112.329
Q4	126.921	136.330	102.098	117.105	117.036	109.652	122.938	111.870
2000								
Q1	123.615	134.485	104.617	113.474	116.730	105.487	117.775	112.903
Q2	123.599	136.945	107.252	121.172	119.425	105.195	122.768	114.435
Q3	120.848	128.899	105.821	120.620	119.177	114.154	119.189	113.200
Q4	125.930	136.165	104.458	124.656	121.872	109.992	121.053	118.902
2001								
Q1	123.851	132.650	105.469	126.208	118.771	116.862	119.109	119.078
Q2	128.352	137.146	109.298	132.831	119.942	120.980	127.926	116.029
Q3	124.197	135.623	108.917	124.692	120.585	115.772	124.097	115.990
Q4	123.314	138.053	105.091	132.076	116.491	112.978	133.635	117.930
2002								
Q1	120.030	139.145	110.830	125.864	117.288	117.945	119.694	121.731
Q2	129.265	145.630	112.265	133.549	120.032	116.924	123.539	121.301
Q3	122.722	145.384	110.630	132.548	109.188	106.565	122.947	122.087
Q4	124.974	142.808	109.371	128.829	115.047	114.963	128.066	121.816
2003								
Q1	124.519	139.603	112.299	128.347	114.812	117.993	121.071	120.871
Q2	126.728	151.606	115.187	130.993	118.951	121.712	126.384	127.110
Q3	136.979	151.923	122.289	126.376	122.708	121.546	138.819	134.168
Q4	136.844	158.152	125.529	124.428	122.645	123.584	144.191	135.984
2004								
Q1	141.109	145.836	122.686	125.657	122.160	122.239	143.040	137.594
Q2	139.576	151.956	124.437	131.222	127.574	124.220	137.633	138.789
Q3	141.820	156.928	125.977	137.020	128.058	120.617	140.522	142.506
Q4	145.342	160.475	128.305	135.232	132.914	120.834	137.257	147.813

Table 6 - Quarterly Indexes and Regression Results for Selected Nonresidential Buildings and Apartments (Cont.)

STORES

	1995q1	1995q2	1995q3	1995q4	1996q1	1996q2	1996q3	1996q4
Constant	3.911	3.961	3.903	3.804	3.918	3.954	3.966	3.992
	(0.046)	(0.025)	(0.046)	(0.045)	(0.030)	(0.037)	(0.031)	(0.040)
LOG(SQ)	0.896	0.907	0.906	0.905	0.919	0.904	0.927	0.916
	(0.007)	(0.006)	(0.006)	(0.007)	(0.008)	(0.007)	(0.006)	(0.007)
STRY	0.114	0.059	0.124	0.229	0.092	0.139	0.060	0.071
	(0.043)	(0.019)	(0.043)	(0.041)	(0.022)	(0.033)	(0.027)	(0.038)
D_ALT	0.079	0.038	0.050	0.037	0.063	0.018	0.069	0.045
	(0.023)	(0.021)	(0.021)	(0.024)	(0.026)	(0.025)	(0.021)	(0.022)
R-sq	0.912	0.912	0.912	0.903	0.898	0.906	0.906	0.903
S.E.	0.389	0.393	0.393	0.401	0.409	0.394	0.388	0.376
# Obs.	1792	2221	2170	1808	1690	1849	2289	1998

	1997q1	1997q2	1997q3	1997q4	1998q1	1998q2	1998q3	1998q4
Constant	3.897	4.014	3.986	3.969	4.115	3.996	4.047	3.994
	(0.042)	(0.025)	(0.026)	(0.029)	(0.024)	(0.029)	(0.031)	(0.026)
LOG(SQ)	0.896	0.895	0.885	0.872	0.877	0.877	0.885	0.911
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.006)
STRY	0.226	0.084	0.179	0.212	0.072	0.194	0.160	0.158
	(0.039)	(0.020)	(0.023)	(0.027)	(0.017)	(0.026)	(0.027)	(0.024)
D_ALT	0.039	0.092	0.065	0.078	0.070	0.114	0.073	0.076
	(0.026)	(0.024)	(0.024)	(0.025)	(0.026)	(0.025)	(0.026)	(0.023)
R-sq	0.896	0.892	0.896	0.898	0.897	0.894	0.888	0.919
S.E.	0.388	0.406	0.394	0.382	0.398	0.401	0.400	0.370
# Obs.	1804	2354	2371	2254	1943	2289	2282	2433

	1999q1	1999q2	1999q3	1999q4	2000q1	2000q2	2000q3	2000q4
Constant	3.934	3.998	4.018	4.034	4.099	3.962	3.914	4.046
	(0.030)	(0.030)	(0.030)	(0.021)	(0.022)	(0.031)	(0.029)	(0.034)
LOG(SQ)	0.917	0.904	0.897	0.943	0.924	0.925	0.942	0.925
	(0.007)	(0.006)	(0.007)	(0.006)	(0.007)	(0.007)	(0.006)	(0.007)
STRY	0.216	0.200	0.195	0.076	0.045	0.165	0.137	0.109
	(0.027)	(0.028)	(0.027)	(0.016)	(0.013)	(0.026)	(0.027)	(0.031)
D_ALT	0.100	0.074	0.073	0.060	0.063	0.170	0.142	0.087
	(0.027)	(0.025)	(0.025)	(0.024)	(0.025)	(0.028)	(0.025)	(0.029)
R-sq	0.912	0.905	0.899	0.927	0.913	0.900	0.926	0.926
S.E.	0.380	0.397	0.401	0.366	0.371	0.403	0.364	0.360
# Obs.	2053	2423	2359	2080	1997	2252	2356	1702

Table 6 - Quarterly Indexes and Regression Results for Selected Nonresidential Buildings and Apartments (Cont.)

	2001q1	2001q2	2001q3	2001q4	2002q1	2002q2	2002q3	2002q4
Constant	3.936	3.957	4.075	4.016	4.029	4.066	4.065	4.083
	(0.032)	(0.038)	(0.024)	(0.023)	(0.026)	(0.023)	(0.025)	(0.024)
LOG(SQ)	0.936	0.938	0.927	0.888	0.847	0.892	0.846	0.884
	(0.007)	(0.007)	(0.006)	(0.008)	(0.010)	(0.008)	(0.009)	(0.008)
STRY	0.157	0.176	0.061	0.247	0.364	0.237	0.353	0.217
	(0.027)	(0.034)	(0.017)	(0.024)	(0.027)	(0.022)	(0.026)	(0.020)
D_ALT	0.159	0.060	0.074	0.104	0.063	0.025	0.041	-0.008
	(0.032)	(0.029)	(0.026)	(0.028)	(0.033)	(0.027)	(0.027)	(0.029)
R-sq	0.914	0.910	0.919	0.917	0.884	0.907	0.894	0.906
S.E.	0.397	0.389	0.374	0.368	0.439	0.388	0.396	0.384
# Obs.	1673	1921	2097	1725	1665	1813	1798	1571

	2003q1	2003q2	2003q3	2003q4	2004q1	2004q2	2004q3	2004q4
Constant	4.079	4.023	4.222	4.172	4.264	4.223	4.224	4.110
	(0.027)	(0.026)	(0.021)	(0.024)	(0.024)	(0.026)	(0.021)	(0.027)
LOG(SQ)	0.861	0.867	0.930	0.936	0.916	0.921	0.930	0.952
	(0.008)	(0.008)	(0.006)	(0.007)	(0.007)	(0.006)	(0.006)	(0.007)
STRY	0.295	0.339	0.008	0.033	0.034	0.038	0.034	0.083
	(0.022)	(0.025)	(0.011)	(0.016)	(0.011)	(0.017)	(0.013)	(0.018)
D_ALT	0.059	0.144	0.078	0.083	0.112	0.169	0.076	0.201
	(0.032)	(0.030)	(0.023)	(0.027)	(0.027)	(0.028)	(0.024)	(0.027)
R-sq	0.897	0.904	0.932	0.930	0.916	0.913	0.931	0.928
S.E.	0.399	0.395	0.331	0.331	0.365	0.382	0.330	0.344
# Obs.	1605	1815	1829	1568	1655	2051	1978	1605

SHOPPING CENTERS

	1995q1	1995q2	1995q3	1995q4	1996q1	1996q2	1996q3	1996q4
Constant	3.648	3.923	3.765	3.911	3.689	3.815	3.953	3.695
	(0.124)	(0.160)	(0.084)	(0.112)	(0.142)	(0.117)	(0.084)	(0.110)
LOG(SQ)	0.963	0.951	0.986	0.984	0.935	0.965	1.020	1.000
	(0.023)	(0.025)	(0.020)	(0.022)	(0.026)	(0.025)	(0.018)	(0.025)
STRY	0.230	0.081	0.114	0.034	0.300	0.145	-0.106	0.147
	(0.095)	(0.143)	(0.052)	(0.080)	(0.118)	(0.090)	(0.065)	(0.076)
D_ALT	0.162	0.248	-0.069	-0.083	0.193	0.330	0.138	0.329
	(0.087)	(0.095)	(0.071)	(0.084)	(0.098)	(0.093)	(0.078)	(0.085)
R-sq	0.911	0.885	0.922	0.919	0.886	0.877	0.934	0.899
S.E.	0.468	0.513	0.421	0.435	0.525	0.508	0.388	0.458
# Obs.	193	206	233	207	185	243	262	208

Table 6 - Quarterly Indexes and Regression Results for Selected Nonresidential Buildings and Apartments (Cont.)

	1997q1	1997q2	1997q3	1997q4	1998q1	1998q2	1998q3	1998q4
Constant	3.766	3.886	3.911	4.061	3.976	3.795	3.944	3.845
	(0.113)	(0.085)	(0.080)	(0.112)	(0.116)	(0.089)	(0.096)	(0.083)
LOG(SQ)	0.968	1.005	0.961	0.969	0.955	0.967	0.935	0.978
	(0.023)	(0.019)	(0.018)	(0.023)	(0.024)	(0.023)	(0.020)	(0.017)
STRY	0.235	0.034	0.125	-0.065	0.120	0.254	0.215	0.154
	(0.091)	(0.058)	(0.063)	(0.103)	(0.099)	(0.050)	(0.083)	(0.069)
D_ALT	-0.047	0.096	0.115	0.021	0.192	0.267	0.120	0.124
	(0.089)	(0.073)	(0.069)	(0.099)	(0.092)	(0.090)	(0.080)	(0.081)
R-sq	0.919	0.909	0.912	0.905	0.897	0.899	0.915	0.927
S.E.	0.409	0.433	0.467	0.476	0.498	0.477	0.415	0.417
# Obs.	178	289	302	226	212	260	255	298

	1999q1	1999q2	1999q3	1999q4	2000q1	2000q2	2000q3	2000q4
Constant	4.036	3.928	3.954	3.864	3.745	3.897	3.929	3.718
	(0.078)	(0.079)	(0.101)	(0.074)	(0.127)	(0.103)	(0.095)	(0.089)
LOG(SQ)	0.966	0.998	0.991	0.987	0.993	0.978	0.969	1.005
	(0.019)	(0.018)	(0.022)	(0.019)	(0.024)	(0.021)	(0.020)	(0.019)
STRY	0.005	0.048	0.054	0.182	0.243	0.165	0.124	0.239
	(0.038)	(0.062)	(0.082)	(0.044)	(0.112)	(0.084)	(0.079)	(0.078)
D_ALT	0.039	0.160	0.201	0.213	0.349	0.424	0.330	0.258
	(0.085)	(0.065)	(0.086)	(0.077)	(0.088)	(0.090)	(0.082)	(0.082)
R-sq	0.913	0.923	0.889	0.933	0.893	0.912	0.914	0.941
S.E.	0.429	0.406	0.467	0.384	0.433	0.403	0.427	0.355
# Obs.	259	303	293	243	225	238	255	222

	2001q1	2001q2	2001q3	2001q4	2002q1	2002q2	2002q3	2002q4
Constant	3.829	4.041	3.815	4.050	3.675	4.099	3.885	3.671
	(0.089)	(0.090)	(0.081)	(0.092)	(0.100)	(0.100)	(0.122)	(0.116)
LOG(SQ)	0.980	0.975	0.994	0.976	0.991	0.981	1.028	0.995
	(0.023)	(0.021)	(0.018)	(0.020)	(0.029)	(0.026)	(0.033)	(0.024)
STRY	0.225	0.078	0.217	0.052	0.368	0.039	0.053	0.360
	(0.058)	(0.063)	(0.064)	(0.076)	(0.093)	(0.058)	(0.100)	(0.101)
D_ALT	0.111	0.128	0.032	0.283	0.298	0.291	0.361	0.419
	(0.099)	(0.085)	(0.075)	(0.085)	(0.098)	(0.085)	(0.111)	(0.091)
R-sq	0.909	0.904	0.941	0.933	0.910	0.871	0.856	0.895
S.E.	0.420	0.424	0.373	0.360	0.414	0.430	0.483	0.404
# Obs.	225	249	229	187	175	217	198	235

Table 6 - Quarterly Indexes and Regression Results for Selected Nonresidential Buildings and Apartments (Cont.)

	2003q1	2003q2	2003q3	2003q4	2004q1	2004q2	2004q3	2004q4
Constant	3.886	3.827	4.017	3.929	4.027	4.145	4.177	4.153
	(0.113)	(0.107)	(0.090)	(0.088)	(0.079)	(0.077)	(0.063)	(0.073)
LOG(SQ)	0.986	1.025	0.993	1.016	0.964	0.983	0.991	1.000
	(0.025)	(0.024)	(0.019)	(0.022)	(0.020)	(0.018)	(0.018)	(0.018)
STRY	0.199	0.155	0.117	0.142	0.176	0.036	0.010	-0.011
	(0.101)	(0.088)	(0.069)	(0.064)	(0.063)	(0.059)	(0.025)	(0.055)
D_ALT	0.073	0.372	0.181	0.318	0.221	0.243	0.199	0.692
	(0.100)	(0.091)	(0.065)	(0.090)	(0.069)	(0.077)	(0.079)	(0.077)
R-sq	0.888	0.897	0.914	0.917	0.921	0.909	0.916	0.916
S.E.	0.424	0.419	0.332	0.331	0.349	0.373	0.339	0.340
# Obs.	227	237	260	226	250	314	294	298

FOOD & BEVERAGE STORES

	1995q1	1995q2	1995q3	1995q4	1996q1	1996q2	1996q3	1996q4
Constant	4.572	4.649	4.530	4.624	4.627	4.669	4.565	4.601
	(0.064)	(0.062)	(0.052)	(0.069)	(0.056)	(0.084)	(0.063)	(0.055)
LOG(SQ)	0.842	0.795	0.857	0.849	0.834	0.841	0.869	0.853
	(0.014)	(0.013)	(0.012)	(0.013)	(0.016)	(0.014)	(0.011)	(0.013)
STRY	0.117	0.092	0.151	0.089	0.081	0.053	0.111	0.121
	(0.063)	(0.059)	(0.050)	(0.068)	(0.053)	(0.083)	(0.062)	(0.054)
D_ALT	-0.033	-0.146	-0.091	-0.054	-0.081	-0.075	-0.037	-0.077
	(0.030)	(0.028)	(0.025)	(0.027)	(0.033)	(0.030)	(0.024)	(0.028)
R-sq	0.819	0.782	0.840	0.838	0.812	0.828	0.871	0.849
S.E.	0.328	0.361	0.312	0.321	0.353	0.324	0.286	0.306
# Obs.	1044	1267	1260	1116	856	990	1211	1028

	1997q1	1997q2	1997q3	1997q4	1998q1	1998q2	1998q3	1998q4
Constant	4.369	4.125	4.386	4.329	4.097	4.154	4.293	4.194
	(0.081)	(0.056)	(0.035)	(0.045)	(0.051)	(0.055)	(0.052)	(0.050)
LOG(SQ)	0.988	0.917	0.994	0.857	0.958	0.967	0.913	0.967
	(0.022)	(0.020)	(0.020)	(0.021)	(0.021)	(0.020)	(0.020)	(0.020)
STRY	0.113	0.404	0.085	0.308	0.402	0.372	0.362	0.320
	(0.075)	(0.054)	(0.024)	(0.040)	(0.045)	(0.052)	(0.046)	(0.044)
D_ALT	-0.203	0.115	-0.135	-0.038	0.133	0.056	-0.035	-0.028
	(0.044)	(0.048)	(0.040)	(0.041)	(0.048)	(0.049)	(0.049)	(0.045)
R-sq	0.741	0.735	0.761	0.734	0.776	0.780	0.753	0.743
S.E.	0.396	0.412	0.413	0.416	0.404	0.412	0.412	0.427
# Obs.	830	1078	1004	960	806	935	935	1057

Table 6 - Quarterly Indexes and Regression Results for Selected Nonresidential Buildings and Apartments (Cont.)

	1999q1	1999q2	1999q3	1999q4	2000q1	2000q2	2000q3	2000q4
Constant	4.187	4.084	4.125	4.259	4.217	4.094	4.127	4.158
	(0.059)	(0.059)	(0.057)	(0.042)	(0.061)	(0.066)	(0.064)	(0.062)
LOG(SQ)	0.917	0.991	1.002	1.024	0.985	0.998	0.996	1.006
	(0.022)	(0.021)	(0.019)	(0.020)	(0.020)	(0.022)	(0.020)	(0.020)
STRY	0.406	0.433	0.361	0.186	0.329	0.444	0.402	0.341
	(0.056)	(0.057)	(0.054)	(0.031)	(0.059)	(0.064)	(0.059)	(0.058)
D_ALT	0.159	0.021	0.038	-0.039	-0.097	0.058	0.027	0.025
	(0.052)	(0.047)	(0.053)	(0.044)	(0.050)	(0.050)	(0.049)	(0.050)
R-sq	0.722	0.764	0.765	0.792	0.759	0.745	0.744	0.770
S.E.	0.439	0.401	0.404	0.406	0.388	0.384	0.403	0.361
# Obs.	930	955	1071	889	929	942	1039	863

	2001q1	2001q2	2001q3	2001q4	2002q1	2002q2	2002q3	2002q4
Constant	4.192	4.230	4.281	4.252	4.286	4.273	4.365	4.247
	(0.061)	(0.070)	(0.059)	(0.045)	(0.035)	(0.033)	(0.036)	(0.039)
LOG(SQ)	0.987	0.952	1.021	0.871	0.794	0.818	0.776	0.849
	(0.024)	(0.021)	(0.022)	(0.021)	(0.020)	(0.020)	(0.022)	(0.023)
STRY	0.357	0.405	0.235	0.485	0.649	0.633	0.594	0.585
	(0.058)	(0.067)	(0.055)	(0.042)	(0.033)	(0.032)	(0.031)	(0.033)
D_ALT	-0.073	0.003	0.036	-0.057	-0.035	-0.033	-0.088	-0.089
	(0.051)	(0.057)	(0.048)	(0.048)	(0.041)	(0.037)	(0.044)	(0.042)
R-sq	0.725	0.727	0.699	0.763	0.814	0.807	0.744	0.759
S.E.	0.399	0.400	0.411	0.370	0.335	0.326	0.347	0.367
# Obs.	808	935	1032	755	787	874	905	780

	2003q1	2003q2	2003q3	2003q4	2004q1	2004q2	2004q3	2004q4
Constant	4.303	4.568	4.866	4.844	4.991	4.800	4.789	4.867
	(0.038)	(0.041)	(0.024)	(0.051)	(0.051)	(0.055)	(0.035)	(0.029)
LOG(SQ)	0.810	0.817	0.873	0.905	0.843	0.905	0.898	0.898
	(0.022)	(0.023)	(0.014)	(0.015)	(0.017)	(0.014)	(0.014)	(0.017)
STRY	0.628	0.342	0.000	-0.008	-0.075	0.025	0.053	-0.008
	(0.036)	(0.032)	(0.009)	(0.047)	(0.045)	(0.053)	(0.029)	(0.012)
D_ALT	-0.129	-0.097	-0.014	0.029	0.006	0.050	0.117	0.178
	(0.043)	(0.051)	(0.038)	(0.036)	(0.039)	(0.039)	(0.039)	(0.048)
R-sq	0.772	0.715	0.822	0.840	0.826	0.859	0.843	0.802
S.E.	0.354	0.396	0.294	0.293	0.312	0.286	0.306	0.313
# Obs.	826	752	849	768	682	803	867	727

Table 6 - Quarterly Indexes and Regression Results for Selected Nonresidential Buildings and Apartments (Cont.)

WAREHOUSES

	1995q1	1995q2	1995q3	1995q4	1996q1	1996q2	1996q3	1996q4
Constant	3.684	3.811	3.755	3.695	3.615	3.710	3.681	3.701
	(0.043)	(0.022)	(0.020)	(0.036)	(0.039)	(0.031)	(0.024)	(0.027)
LOG(SQ)	0.898	0.906	0.924	0.927	0.927	0.937	0.933	0.933
	(0.006)	(0.006)	(0.005)	(0.005)	(0.006)	(0.005)	(0.005)	(0.005)
STRY	0.140	-0.009	0.036	0.079	0.178	0.060	0.092	0.099
	(0.041)	(0.017)	(0.017)	(0.034)	(0.035)	(0.028)	(0.022)	(0.024)
D_ALT	-0.011	-0.010	-0.022	-0.002	0.018	0.023	0.009	-0.007
	(0.020)	(0.019)	(0.016)	(0.018)	(0.021)	(0.019)	(0.016)	(0.018)
D_REF	0.119	0.054	0.096	0.104	0.065	0.060	0.057	-0.012
	(0.043)	(0.038)	(0.033)	(0.035)	(0.042)	(0.030)	(0.029)	(0.039)
R-sq	0.930	0.926	0.946	0.944	0.936	0.948	0.957	0.945
S.E.	0.340	0.352	0.306	0.317	0.339	0.315	0.281	0.319
# Obs.	1605	1913	2033	2007	1542	1661	2063	1856

	1997q1	1997q2	1997q3	1997q4	1998q1	1998q2	1998q3	1998q4
Constant	3.739	3.793	3.796	3.952	3.856	3.835	3.929	3.862
	(0.044)	(0.040)	(0.045)	(0.043)	(0.047)	(0.039)	(0.039)	(0.040)
LOG(SQ)	0.921	0.917	0.883	0.863	0.892	0.888	0.896	0.907
	(0.009)	(0.009)	(0.008)	(0.009)	(0.010)	(0.008)	(0.008)	(0.009)
STRY	0.140	0.069	0.182	0.076	0.120	0.127	0.021	0.043
	(0.035)	(0.027)	(0.036)	(0.031)	(0.034)	(0.026)	(0.026)	(0.026)
D_ALT	-0.010	-0.005	0.014	-0.001	0.026	0.068	0.056	0.031
	(0.027)	(0.030)	(0.027)	(0.031)	(0.033)	(0.027)	(0.029)	(0.030)
D_REF	-0.201	0.102	0.151	0.019	0.045	0.042	0.231	0.204
	(0.032)	(0.070)	(0.064)	(0.062)	(0.066)	(0.048)	(0.059)	(0.060)
R-sq	0.933	0.904	0.902	0.889	0.905	0.912	0.904	0.896
S.E.	0.352	0.391	0.378	0.396	0.383	0.356	0.386	0.391
# Obs.	1074	1143	1296	1103	890	1142	1292	1169

Table 6 - Quarterly Indexes and Regression Results for Selected Nonresidential Buildings and Apartments (Cont.)

	1999q1	1999q2	1999q3	1999q4	2000q1	2000q2	2000q3	2000q4
Constant	3.864	3.955	4.009	3.921	3.897	3.963	3.852	3.807
	(0.038)	(0.033)	(0.036)	(0.045)	(0.044)	(0.042)	(0.044)	(0.044)
LOG(SQ)	0.894	0.891	0.903	0.901	0.895	0.890	0.906	0.918
	(0.009)	(0.009)	(0.009)	(0.011)	(0.009)	(0.009)	(0.009)	(0.009)
STRY	0.088	0.033	-0.037	0.044	0.062	0.086	0.126	0.144
	(0.026)	(0.011)	(0.015)	(0.026)	(0.033)	(0.027)	(0.032)	(0.031)
D_ALT	0.091	-0.045	-0.011	0.069	0.069	0.037	-0.004	0.065
	(0.029)	(0.029)	(0.031)	(0.036)	(0.030)	(0.030)	(0.030)	(0.031)
D_REF	0.089	0.274	0.297	0.292	0.133	0.143	0.159	0.122
	(0.072)	(0.067)	(0.061)	(0.079)	(0.071)	(0.062)	(0.079)	(0.069)
R-sq	0.911	0.903	0.901	0.890	0.909	0.899	0.907	0.909
S.E.	0.346	0.378	0.382	0.407	0.375	0.383	0.388	0.372
# Obs.	1060	1212	1177	934	1046	1227	1246	1104

	2001q1	2001q2	2001q3	2001q4	2002q1	2002q2	2002q3	2002q4
Constant	3.844	3.872	3.973	0.918	3.847	3.811	3.913	3.859
	(0.038)	(0.041)	(0.046)	(0.045)	(0.044)	(0.050)	(0.044)	(0.045)
LOG(SQ)	0.934	0.938	0.903	0.382	0.931	0.940	0.917	0.931
	(0.009)	(0.009)	(0.010)	(0.010)	(0.010)	(0.011)	(0.010)	(0.011)
STRY	0.057	0.067	0.054	0.067	0.079	0.125	0.106	0.080
	(0.023)	(0.027)	(0.031)	(0.031)	(0.029)	(0.036)	(0.031)	(0.032)
D_ALT	0.105	0.062	0.032	0.126	-0.002	-0.001	0.051	0.048
	(0.033)	(0.031)	(0.035)	(0.035)	(0.035)	(0.037)	(0.035)	(0.036)
D_REF	0.167	0.110	0.105	0.190	0.117	0.334	0.174	0.214
	(0.079)	(0.072)	(0.090)	(0.100)	(0.100)	(0.093)	(0.088)	(0.073)
R-sq	0.920	0.910	0.884	0.918	0.913	0.900	0.902	0.903
S.E.	0.355	0.376	0.420	0.382	0.367	0.408	0.388	0.382
# Obs.	992	1155	1113	833	808	851	972	830

Table 6 - Quarterly Indexes and Regression Results for Selected Nonresidential Buildings and Apartments (Cont.)

	2003q1	2003q2	2003q3	2003q4	2004q1	2004q2	2004q3	2004q4
Constant	3.869	3.885	3.804	3.643	3.812	3.737	3.636	3.775
	(0.047)	(0.046)	(0.036)	(0.032)	(0.043)	(0.032)	(0.039)	(0.041)
LOG(SQ)	0.932	0.933	0.946	0.962	0.947	0.970	0.981	0.975
	(0.011)	(0.011)	(0.008)	(0.008)	(0.010)	(0.008)	(0.008)	(0.009)
STRY	0.065	0.072	0.067	0.156	0.046	0.066	0.152	0.051
	(0.034)	(0.029)	(0.029)	(0.024)	(0.033)	(0.022)	(0.032)	(0.034)
D_ALT	0.037	0.000	0.015	-0.021	0.043	0.087	0.131	0.020
	(0.036)	(0.037)	(0.028)	(0.026)	(0.031)	(0.030)	(0.031)	(0.031)
D_REF	0.253	0.147	0.082	-0.008	0.025	0.034	0.106	0.063
	(0.081)	(0.082)	(0.065)	(0.058)	(0.062)	(0.063)	(0.049)	(0.076)
R-sq	0.910	0.911	0.927	0.935	0.903	0.919	0.925	0.925
S.E.	0.369	0.381	0.361	0.344	0.427	0.386	0.376	0.373
# Obs.	783	791	1185	1187	1125	1322	1247	1065

OFFICES

	1995q1	1995q2	1995q3	1995q4	1996q1	1996q2	1996q3	1996q4
Constant	4.259	4.295	4.365	4.285	4.343	4.348	4.329	4.368
	(0.016)	(0.012)	(0.011)	(0.013)	(0.013)	(0.011)	(0.009)	(0.009)
LOG(SQ)	0.851	0.890	0.884	0.899	0.910	0.923	0.917	0.921
	(0.007)	(0.006)	(0.005)	(0.006)	(0.006)	(0.005)	(0.004)	(0.004)
STRY	0.124	0.066	0.030	0.076	0.021	0.022	0.046	0.020
	(0.012)	(0.007)	(0.005)	(0.008)	(0.005)	(0.004)	(0.005)	(0.004)
D_ALT	0.050	0.032	-0.011	0.051	0.044	0.004	0.056	0.028
	(0.016)	(0.013)	(0.014)	(0.014)	(0.017)	(0.015)	(0.012)	(0.012)
D_BANK	0.464	0.432	0.408	0.422	0.423	0.384	0.392	0.412
	(0.021)	(0.017)	(0.018)	(0.018)	(0.022)	(0.018)	(0.014)	(0.016)
R-sq	0.912	0.926	0.914	0.928	0.917	0.934	0.941	0.943
S.E.	0.342	0.314	0.339	0.315	0.344	0.323	0.289	0.288
# Obs.	2431	2893	3005	2650	2305	2682	3682	3324

Table 6 - Quarterly Indexes and Regression Results for Selected Nonresidential Buildings and Apartments (Cont.)

	1997q1	1997q2	1997q3	1997q4	1998q1	1998q2	1998q3	1998q4
Constant	4.266	4.225	4.265	4.267	4.278	4.270	4.280	4.238
	(0.013)	(0.013)	(0.012)	(0.011)	(0.012)	(0.012)	(0.012)	(0.008)
LOG(SQ)	0.925	0.926	0.926	0.946	0.956	0.944	0.936	0.948
	(0.006)	(0.006)	(0.006)	(0.005)	(0.006)	(0.005)	(0.005)	(0.004)
STRY	0.046	0.048	0.058	0.035	0.024	0.046	0.056	0.062
	(0.006)	(0.006)	(0.006)	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)
D_ALT	-0.029	0.031	0.008	0.010	-0.008	0.005	-0.007	0.044
	(0.016)	(0.018)	(0.015)	(0.014)	(0.017)	(0.015)	(0.017)	(0.012)
D_BANK	0.540	0.424	0.427	0.411	0.398	0.322	0.368	0.251
	(0.024)	(0.023)	(0.020)	(0.019)	(0.021)	(0.018)	(0.019)	(0.013)
R-sq	0.916	0.889	0.924	0.930	0.933	0.935	0.935	0.948
S.E.	0.358	0.421	0.367	0.352	0.357	0.359	0.373	0.315
# Obs.	2646	3463	3442	3640	2931	3579	3463	4532

	1999q1	1999q2	1999q3	1999q4	2000q1	2000q2	2000q3	2000q4
Constant	4.250	4.256	4.281	4.253	4.246	4.247	4.262	4.294
	(0.010)	(0.010)	(0.010)	(0.011)	(0.011)	(0.011)	(0.009)	(0.010)
LOG(SQ)	0.959	0.967	0.962	0.967	0.965	0.969	0.968	0.964
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
STRY	0.046	0.039	0.031	0.041	0.038	0.039	0.040	0.033
	(0.004)	(0.004)	(0.003)	(0.005)	(0.004)	(0.004)	(0.005)	(0.004)
D_ALT	0.022	-0.024	-0.002	0.012	0.102	0.098	0.032	0.111
	(0.014)	(0.015)	(0.016)	(0.016)	(0.017)	(0.016)	(0.013)	(0.015)
D_BANK	0.368	0.397	0.348	0.429	0.394	0.474	0.420	0.452
	(0.017)	(0.017)	(0.019)	(0.019)	(0.020)	(0.020)	(0.017)	(0.018)
R-sq	0.944	0.947	0.944	0.944	0.936	0.941	0.952	0.951
S.E.	0.325	0.329	0.349	0.344	0.346	0.341	0.297	0.311
# Obs.	3616	3495	3530	3198	3199	3282	3762	3256

Table 6 - Quarterly Indexes and Regression Results for Selected Nonresidential Buildings and Apartments (Cont.)

	2001q1	2001q2	2001q3	2001q4	2002q1	2002q2	2002q3	2002q4
Constant	4.276	4.303	4.260	4.317	4.313	4.323	4.342	4.325
	(0.012)	(0.014)	(0.011)	(0.015)	(0.013)	(0.016)	(0.016)	(0.018)
LOG(SQ)	0.953	0.963	0.977	0.917	0.928	0.932	0.845	0.928
	(0.006)	(0.006)	(0.005)	(0.008)	(0.008)	(0.008)	(0.009)	(0.009)
STRY	0.061	0.031	0.032	0.097	0.094	0.074	0.193	0.051
	(0.005)	(0.005)	(0.004)	(0.008)	(0.007)	(0.006)	(0.010)	(0.005)
D_ALT	0.051	0.040	0.070	0.082	0.005	0.042	0.001	0.029
	(0.017)	(0.018)	(0.016)	(0.021)	(0.017)	(0.020)	(0.019)	(0.022)
D_BANK	0.394	0.358	0.381	0.325	0.315	0.417	0.400	0.435
	(0.020)	(0.020)	(0.017)	(0.023)	(0.018)	(0.021)	(0.020)	(0.023)
R-sq	0.952	0.926	0.931	0.902	0.925	0.908	0.894	0.879
S.E.	0.312	0.357	0.333	0.385	0.318	0.359	0.359	0.391
# Obs.	2639	2805	3259	2448	2462	2370	2447	2329

	2003q1	2003q2	2003q3	2003q4	2004q1	2004q2	2004q3	2004q4
Constant	4.308	4.321	4.374	4.323	4.415	4.305	4.340	4.323
	(0.018)	(0.018)	(0.015)	(0.015)	(0.017)	(0.014)	(0.013)	(0.015)
LOG(SQ)	0.892	0.936	0.936	0.931	0.906	0.955	0.946	0.978
	(0.010)	(0.008)	(0.006)	(0.007)	(0.007)	(0.006)	(0.006)	(0.006)
STRY	0.157	0.063	0.024	0.066	0.039	0.045	0.042	0.024
	(0.010)	(0.006)	(0.004)	(0.007)	(0.004)	(0.005)	(0.004)	(0.004)
D_ALT	-0.023	-0.062	0.081	0.107	0.126	0.186	0.180	0.165
	(0.022)	(0.022)	(0.018)	(0.018)	(0.020)	(0.019)	(0.018)	(0.019)
D_BANK	0.431	0.526	0.531	0.543	0.548	0.572	0.561	0.528
	(0.024)	(0.021)	(0.017)	(0.017)	(0.020)	(0.016)	(0.016)	(0.019)
R-sq	0.889	0.903	0.911	0.913	0.896	0.918	0.922	0.922
S.E.	0.390	0.371	0.334	0.328	0.373	0.335	0.326	0.337
# Obs.	2154	2148	2425	2478	2418	2748	2750	2318

Table 6 - Quarterly Indexes and Regression Results for Selected Nonresidential Buildings and Apartments (Cont.)

MANUFACTURING

	1995q1	1995q2	1995q3	1995q4	1996q1	1996q2	1996q3	1996q4
Constant	3.813	3.697	3.710	3.696	3.665	3.774	3.717	3.728
	(0.042)	(0.048)	(0.052)	(0.041)	(0.055)	(0.042)	(0.038)	(0.047)
LOG(SQ)	0.951	0.927	0.939	0.966	0.977	0.950	0.974	0.954
	(0.011)	(0.010)	(0.010)	(0.010)	(0.011)	(0.010)	(0.009)	(0.010)
STRY	0.106	0.285	0.234	0.182	0.221	0.182	0.156	0.198
	(0.025)	(0.037)	(0.044)	(0.029)	(0.046)	(0.030)	(0.027)	(0.036)
D_ALT	0.031	0.015	0.026	0.005	0.041	0.016	-0.022	0.014
	(0.031)	(0.029)	(0.028)	(0.028)	(0.033)	(0.029)	(0.027)	(0.028)
R-sq	0.897	0.898	0.898	0.908	0.914	0.917	0.914	0.909
S.E.	0.473	0.479	0.466	0.448	0.461	0.438	0.440	0.438
# Obs.	947	1166	1151	1090	791	981	1204	1054

	1997q1	1997q2	1997q3	1997q4	1998q1	1998q2	1998q3	1998q4
Constant	3.675	3.646	3.699	3.682	3.709	3.668	3.892	3.659
	(0.038)	(0.037)	(0.032)	(0.034)	(0.035)	(0.039)	(0.036)	(0.035)
LOG(SQ)	0.970	0.963	0.969	0.936	0.978	0.977	0.965	0.977
	(0.010)	(0.010)	(0.009)	(0.010)	(0.011)	(0.011)	(0.011)	(0.010)
STRY	0.153	0.212	0.168	0.213	0.134	0.167	0.010	0.166
	(0.025)	(0.028)	(0.024)	(0.023)	(0.024)	(0.028)	(0.006)	(0.027)
D_ALT	0.043	0.011	0.047	0.078	0.064	0.105	0.017	0.098
	(0.028)	(0.028)	(0.025)	(0.026)	(0.029)	(0.029)	(0.030)	(0.028)
R-sq	0.910	0.907	0.916	0.897	0.918	0.910	0.893	0.922
S.E.	0.432	0.451	0.407	0.437	0.395	0.421	0.461	0.407
# Obs.	991	1189	1259	1288	885	975	998	1016

	1999q1	1999q2	1999q3	1999q4	2000q1	2000q2	2000q3	2000q4
Constant	3.726	3.607	3.661	3.649	3.674	3.638	3.694	3.594
	(0.043)	(0.044)	(0.039)	(0.043)	(0.059)	(0.052)	(0.049)	(0.047)
LOG(SQ)	0.964	0.967	0.996	0.998	0.960	0.958	0.974	0.962
	(0.012)	(0.012)	(0.011)	(0.013)	(0.016)	(0.013)	(0.013)	(0.013)
STRY	0.189	0.275	0.151	0.160	0.225	0.279	0.220	0.325
	(0.028)	(0.035)	(0.028)	(0.029)	(0.045)	(0.037)	(0.036)	(0.036)
D_ALT	0.037	0.123	0.074	0.111	0.142	0.099	0.172	0.171
	(0.033)	(0.034)	(0.031)	(0.039)	(0.046)	(0.037)	(0.037)	(0.035)
R-sq	0.912	0.911	0.940	0.925	0.882	0.913	0.909	0.930
S.E.	0.426	0.450	0.381	0.457	0.513	0.427	0.451	0.376
# Obs.	766	841	703	634	563	601	654	538

Table 6 - Quarterly Indexes and Regression Results for Selected Nonresidential Buildings and Apartments (Cont.)

	2001q1	2001q2	2001q3	2001q4	2002q1	2002q2	2002q3	2002q4
Constant	3.560	3.705	3.775	3.725	3.773	3.813	3.904	3.749
	(0.049)	(0.053)	(0.044)	(0.059)	(0.061)	(0.063)	(0.066)	(0.049)
LOG(SQ)	1.009	1.009	1.010	0.976	0.940	0.975	0.883	0.979
	(0.013)	(0.016)	(0.013)	(0.018)	(0.023)	(0.020)	(0.021)	(0.018)
STRY	0.267	0.177	0.070	0.197	0.338	0.157	0.334	0.198
	(0.036)	(0.028)	(0.020)	(0.037)	(0.056)	(0.039)	(0.054)	(0.046)
D_ALT	0.126	0.076	0.058	0.114	0.076	0.069	0.024	0.017
	(0.038)	(0.042)	(0.040)	(0.049)	(0.053)	(0.050)	(0.049)	(0.042)
R-sq	0.941	0.899	0.927	0.906	0.891	0.882	0.873	0.935
S.E.	0.372	0.465	0.402	0.450	0.451	0.466	0.458	0.376
# Obs.	467	532	500	373	339	387	366	338

	2003q1	2003q2	2003q3	2003q4	2004q1	2004q2	2004q3	2004q4
Constant	3.688	3.717	3.758	3.780	3.524	3.823	3.806	3.889
	(0.055)	(0.060)	(0.062)	(0.087)	(0.140)	(0.056)	(0.081)	(0.077)
LOG(SQ)	0.976	0.985	1.010	1.001	0.973	1.001	0.982	0.985
	(0.019)	(0.022)	(0.016)	(0.017)	(0.025)	(0.016)	(0.015)	(0.019)
STRY	0.272	0.276	0.116	0.116	0.424	0.072	0.152	0.085
	(0.044)	(0.055)	(0.041)	(0.070)	(0.119)	(0.034)	(0.061)	(0.044)
D_ALT	0.113	0.020	0.082	0.159	0.203	0.206	0.123	0.077
	(0.049)	(0.054)	(0.045)	(0.047)	(0.069)	(0.047)	(0.046)	(0.055)
R-sq	0.923	0.915	0.932	0.917	0.859	0.919	0.921	0.903
S.E.	0.430	0.465	0.375	0.415	0.565	0.425	0.415	0.462
# Obs.	340	324	323	324	291	372	358	306

SCHOOLS (PRIVATE)

	1995q1	1995q2	1995q3	1995q4	1996q1	1996q2	1996q3	1996q4
Constant	4.126	4.221	4.206	4.091	4.160	4.254	4.244	4.344
	(0.052)	(0.054)	(0.044)	(0.060)	(0.056)	(0.061)	(0.037)	(0.061)
LOG(SQ)	0.905	0.899	0.888	0.859	0.936	0.889	0.957	0.892
	(0.019)	(0.021)	(0.017)	(0.022)	(0.020)	(0.021)	(0.014)	(0.022)
STRY	0.263	0.188	0.234	0.380	0.207	0.242	0.163	0.173
	(0.040)	(0.034)	(0.034)	(0.047)	(0.045)	(0.049)	(0.025)	(0.052)
D_ALT	0.080	0.130	0.047	-0.024	0.163	0.200	0.059	0.100
	(0.047)	(0.050)	(0.042)	(0.055)	(0.052)	(0.049)	(0.035)	(0.052)
R-sq	0.931	0.858	0.911	0.898	0.915	0.855	0.935	0.889
S.E.	0.360	0.486	0.386	0.413	0.390	0.460	0.351	0.424
# Obs.	261	402	382	271	274	382	444	301

Table 6 - Quarterly Indexes and Regression Results for Selected Nonresidential Buildings and Apartments (Cont.)

	1997q1	1997q2	1997q3	1997q4	1998q1	1998q2	1998q3	1998q4
Constant	4.039	4.066	4.063	4.192	4.094	4.173	4.132	4.089
	(0.065)	(0.048)	(0.048)	(0.051)	(0.060)	(0.064)	(0.047)	(0.048)
LOG(SQ)	0.963	0.930	0.987	0.958	0.966	0.913	0.993	0.962
	(0.027)	(0.022)	(0.021)	(0.023)	(0.028)	(0.026)	(0.022)	(0.020)
STRY	0.248	0.258	0.239	0.192	0.250	0.284	0.180	0.236
	(0.041)	(0.030)	(0.032)	(0.034)	(0.037)	(0.041)	(0.030)	(0.039)
D_ALT	0.190	0.222	0.235	0.043	0.114	0.212	0.209	0.233
	(0.059)	(0.045)	(0.046)	(0.052)	(0.054)	(0.054)	(0.047)	(0.048)
R-sq	0.885	0.877	0.902	0.903	0.883	0.818	0.895	0.906
S.E.	0.454	0.461	0.443	0.425	0.449	0.539	0.464	0.436
# Obs.	261	432	431	318	289	417	438	413

	1999q1	1999q2	1999q3	1999q4	2000q1	2000q2	2000q3	2000q4
Constant	4.134	4.115	4.141	4.087	4.173	4.196	4.130	4.164
	(0.057)	(0.040)	(0.041)	(0.043)	(0.043)	(0.055)	(0.043)	(0.046)
LOG(SQ)	0.984	1.000	1.004	1.013	0.996	0.952	0.961	0.970
	(0.024)	(0.017)	(0.017)	(0.019)	(0.019)	(0.023)	(0.019)	(0.021)
STRY	0.188	0.203	0.175	0.201	0.155	0.255	0.273	0.226
	(0.043)	(0.025)	(0.031)	(0.030)	(0.024)	(0.032)	(0.028)	(0.029)
D_ALT	0.199	0.115	0.159	0.215	0.136	0.178	0.140	0.197
	(0.052)	(0.037)	(0.038)	(0.044)	(0.040)	(0.044)	(0.042)	(0.047)
R-sq	0.882	0.919	0.914	0.936	0.918	0.860	0.905	0.907
S.E.	0.473	0.404	0.424	0.382	0.373	0.480	0.440	0.426
# Obs.	373	488	540	363	410	493	492	390

	2001q1	2001q2	2001q3	2001q4	2002q1	2002q2	2002q3	2002q4
Constant	4.193	4.262	4.077	4.149	4.371	4.372	4.259	4.190
	(0.050)	(0.060)	(0.048)	(0.057)	(0.050)	(0.056)	(0.054)	(0.062)
LOG(SQ)	0.951	0.925	0.998	1.026	0.934	0.934	0.945	1.033
	(0.021)	(0.025)	(0.021)	(0.024)	(0.024)	(0.025)	(0.024)	(0.024)
STRY	0.248	0.297	0.256	0.184	0.185	0.182	0.238	0.097
	(0.026)	(0.037)	(0.033)	(0.028)	(0.031)	(0.029)	(0.029)	(0.016)
D_ALT	0.136	0.180	0.171	0.226	0.027	0.122	0.143	0.211
	(0.046)	(0.052)	(0.045)	(0.053)	(0.050)	(0.049)	(0.048)	(0.056)
R-sq	0.920	0.850	0.880	0.900	0.890	0.849	0.879	0.874
S.E.	0.400	0.560	0.484	0.451	0.446	0.514	0.500	0.469
# Obs.	347	509	523	339	380	462	459	306

Table 6 - Quarterly Indexes and Regression Results for Selected Nonresidential Buildings and Apartments (Cont.)

	2003q1	2003q2	2003q3	2003q4	2004q1	2004q2	2004q3	2004q4
Constant	4.377	4.378	4.556	4.371	4.574	4.390	4.721	4.389
	(0.069)	(0.060)	(0.058)	(0.068)	(0.064)	(0.063)	(0.061)	(0.059)
LOG(SQ)	0.845	0.880	0.914	0.916	0.922	0.931	0.924	0.969
	(0.032)	(0.027)	(0.020)	(0.024)	(0.026)	(0.023)	(0.023)	(0.024)
STRY	0.369	0.327	0.167	0.315	0.158	0.226	0.018	0.177
	(0.044)	(0.031)	(0.031)	(0.043)	(0.033)	(0.040)	(0.038)	(0.035)
D_ALT	0.098	0.074	0.160	0.179	0.168	0.220	0.225	0.107
	(0.063)	(0.054)	(0.053)	(0.060)	(0.064)	(0.055)	(0.064)	(0.059)
R-sq	0.849	0.874	0.884	0.893	0.888	0.873	0.846	0.911
S.E.	0.524	0.504	0.505	0.474	0.483	0.513	0.552	0.424
# Obs.	319	391	384	286	265	372	371	248

APARTMENTS

	1995q1	1995q2	1995q3	1995q4	1996q1	1996q2	1996q3	1996q4
Constant	4.003	3.907	3.944	3.928	3.962	3.978	3.971	3.989
	(0.023)	(0.021)	(0.018)	(0.021)	(0.022)	(0.022)	(0.018)	(0.019)
LOG(SQ)	0.943	0.956	0.951	0.962	0.966	0.956	0.969	0.959
	(0.007)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)	(0.006)	(0.006)
STRY	0.016	0.043	0.039	0.032	0.017	0.027	0.021	0.024
	(0.004)	(0.006)	(0.004)	(0.006)	(0.004)	(0.004)	(0.004)	(0.004)
R-sq	0.949	0.956	0.956	0.957	0.959	0.954	0.962	0.947
S.E.	0.334	0.313	0.314	0.311	0.317	0.326	0.309	0.308
# Obs.	1036	1158	1358	1130	913	1041	1271	1489

	1997q1	1997q2	1997q3	1997q4	1998q1	1998q2	1998q3	1998q4
Constant	3.888	3.927	3.890	3.968	3.967	3.950	3.905	3.895
	(0.018)	(0.017)	(0.015)	(0.016)	(0.018)	(0.015)	(0.019)	(0.015)
LOG(SQ)	0.978	0.957	0.973	0.958	0.957	0.976	0.991	0.977
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.005)	(0.006)	(0.005)
STRY	0.028	0.037	0.049	0.038	0.036	0.026	0.031	0.042
	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.003)	(0.004)	(0.004)
R-sq	0.955	0.937	0.949	0.939	0.940	0.951	0.947	0.954
S.E.	0.321	0.358	0.317	0.353	0.349	0.338	0.366	0.341
# Obs.	1398	2028	2107	2227	1892	2134	1708	2256

Table 6 - Quarterly Indexes and Regression Results for Selected Nonresidential Buildings and Apartments (Cont.)

	1999q1	1999q2	1999q3	1999q4	2000q1	2000q2	2000q3	2000q4
Constant	3.970	4.010	3.956	3.968	4.039	4.061	4.078	4.084
	(0.018)	(0.017)	(0.017)	(0.018)	(0.019)	(0.020)	(0.019)	(0.023)
LOG(SQ)	0.961	0.967	0.975	0.964	0.956	0.945	0.940	0.951
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)
STRY	0.038	0.026	0.031	0.044	0.031	0.046	0.043	0.042
	(0.004)	(0.003)	(0.003)	(0.004)	(0.004)	(0.003)	(0.004)	(0.003)
R-sq	0.943	0.944	0.942	0.943	0.937	0.935	0.929	0.927
S.E.	0.378	0.370	0.369	0.385	0.383	0.389	0.407	0.436
# Obs.	1910	2175	2110	2025	1926	1901	1936	1685

	2001q1	2001q2	2001q3	2001q4	2002q1	2002q2	2002q3	2002q4
Constant	3.963	4.013	4.066	3.949	4.072	4.056	4.055	4.108
	(0.018)	(0.017)	(0.016)	(0.016)	(0.014)	(0.015)	(0.016)	(0.018)
LOG(SQ)	0.985	0.965	0.943	0.987	0.958	0.962	0.963	0.948
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
STRY	0.036	0.038	0.052	0.033	0.046	0.043	0.046	0.047
	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)
R-sq	0.949	0.944	0.933	0.954	0.945	0.952	0.943	0.940
S.E.	0.364	0.377	0.397	0.358	0.375	0.359	0.396	0.408
# Obs.	1751	2101	2346	2133	2426	2203	2204	2013

	2003q1	2003q2	2003q3	2003q4	2004q1	2004q2	2004q3	2004q4
Constant	4.156	4.122	4.047	4.032	4.241	4.134	4.111	4.248
	(0.018)	(0.017)	(0.018)	(0.017)	(0.019)	(0.017)	(0.019)	(0.019)
LOG(SQ)	0.931	0.957	0.997	1.001	0.947	0.982	0.994	0.972
	(0.007)	(0.006)	(0.006)	(0.006)	(0.006)	(0.005)	(0.006)	(0.006)
STRY	0.052	0.044	0.031	0.035	0.043	0.035	0.034	0.032
	(0.004)	(0.003)	(0.003)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)
R-sq	0.933	0.935	0.949	0.953	0.939	0.947	0.947	0.949
S.E.	0.417	0.416	0.346	0.323	0.379	0.337	0.339	0.333
# Obs.	2093	2425	2051	2018	2016	2235	2122	1929