

Reducing the Cost of Corporate Employee Relocation

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Abstract. Over 400 corporate relocation transactions from forty-one states were examined to identify factors affecting variable relocation costs. Analysis of covariance disclosed that corporate relocation costs could be significantly reduced over time by not remodeling substandard properties, fully evaluating the impact of local/regional economic conditions on market value, and adopting policies encouraging employees to purchase homes without swimming pools and homes with smaller lots.

Introduction

Both the cost of employee relocation and the number of companies offering financial assistance to transferred employees has increased significantly in the last two decades. In 1987, over \$6 billion was spent relocating more than 200,000 employees at an average cost exceeding \$36,000 per employee [5, 2]. Corporations offer financial assistance to transferred employees both to (1) reimburse them for associated transfer expenses¹ and, (2) defray the financial uncertainty of selling their current homes.² Corporate relocation financial assistance packages are designed to encourage job transfers, and constitute a fringe benefit to employees. But from the corporate employers' perspective, they represent an additional cost of doing business which rationally should be minimized.

Some employee relocation expenses are predictable and not subject to sizable variation because they can be arranged for contractually. For example, a contract with a moving company can reduce uncertainty of the cost of shipping household goods. On the other hand, the costs associated with the home-purchase programs are less predictable and subject to sizable variation [13]. Two major sources of financial uncertainty assumed by employers under home-purchase programs are:

- gain or loss from acquisition and subsequent resale of the employee's house, and
- holding costs (interest, taxes, maintenance and insurance) incurred between acquisition and resale.

These variable relocation costs are minimized when the acquisition price and resale price are equal and the resale occurs immediately. The purpose of this research was to identify and examine strategies to minimize variable relocation costs in home-purchase programs.

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Previous Literature in Corporate Employee Relocation

Previous literature regarding corporate employee relocation costs is limited. Voles [13] listed major cost items as capital loss on resale, remodeling costs, marketing time and other selling costs. Lotty [8] suggested that expenses could be reduced in three ways: a) control volume of moves, b) reduce relocation policy benefits, and c) adopt innovative inventory resale strategies. Other articles [3, 4, 9, 10, 11] have cited difficulties with and aspects of the relocation appraisal process.

The Corporate Relocation Home Purchase Process

From the employer's perspective, the typical employee home-purchase program can be described as a **four-step** process.

Step One: Retain at least two independent appraisers to estimate the most probable sales price for the employee's home.³ A real estate broker often is asked to estimate current value as well, providing supplemental information to the appraisers' reports.

Step Two: The acquisition of the home from the employee. The acquisition price is often determined to be the average of at least two appraisals [10]. The employee typically has thirty to ninety days to accept or reject the "take-out" offer. During this period, the employee usually lists his house for sale at a price above the company offer. When a sales contract is negotiated during this interim period, the employee may assign the contract to the employer and receive his equity in advance, leaving the employer with the responsibilities and liabilities associated with the sale. When this occurs, it is called an assigned sale.

If the employee is unable to sell his house during the offer period, he must then either accept or reject the corporate offer. Employees that accept the corporate offer transfer title to the corporation and all subsequent marketing decisions are made by the employer or a corporate relocation firm retained for this purpose. The relocation company may either be a division of the employing corporation (in-house relocation) or it may be an unrelated company working for a fee (third-party relocation firm). The relocation firm must borrow money to purchase the transferee's equity, and accrued interest on this loan represents one of the relocation costs.

Step Three: Marketing the property to prospective purchasers. The relocation company lists the property for sale with a broker of their choice. In addition, brokers handling relocation properties often pay utility bills, oversee and coordinate repairs and maintenance, and file biweekly reports on market activity and condition of the property. Broker performance is reviewed by the relocation company and under-performing brokers are replaced.

Each day that the property is held in inventory between acquisition and closing increases holding costs. These holding costs include mortgage payments, taxes, insurance premiums, maintenance expenses and interest on equity funds advanced to the transferee.

Step Four: Negotiating sale and closing the transaction. The sales price may vary, as holding costs are considered in pricing negotiations.

Alternative Corporate Policies Regarding Home Purchase Relocation Costs

At the outset, it should be noted that it may well be rational for firms to subsidize home purchase employee relocation programs. That is, when key employees are relocated to new positions the overall profit position of the firm may be enhanced by an amount which exceeds the relocation subsidy.

Note that it is possible for employees to be encouraged to relocate using financial incentives not covered in this research. Relocation bonuses could be paid directly to the employee. Also, relocation bonuses could take the form of a home purchase price above market value. Note that the former would create taxable income while the latter *might not* if a replacement principal personal residence is purchased within the two-year period allowed by law.⁴ Furthermore, it is possible that any relocation bonus could be associated with allocation of the risk of loss on the home sale to the employee, therefore permitting total corporate relocation costs to be known with greater certainty.

From the perspective of the employer, if the chosen policy is for the home purchase program to be costless, then:

$$E(VRC) = 0 \quad (1)$$

where

VRC = variable relocation costs.

However, if the corporate policy is to subsidize the home purchase program, then:

$$E(VRC) = S \quad (2)$$

where

S = subsidy.

Furthermore, since the cost of time on the market has been shown elsewhere to be 0.05% per day [4], if the relocation company does not pay either sales concessions (points) or remodeling expenses, and if the relocation company wishes to shift variable costs to the employee, then:

$$AQ = MV - 0.0005AQ(DOM)$$

or

$$AQ = \frac{1}{1 + 0.0005DOM} MV \quad (3)$$

where

AQ = acquisition costs;
 DOM = days on the market; and
 MV = estimate of market value.

Then:

$$MV = E(SP^*) \quad (4)$$

where

SP^* = Sales price net of sales concessions and remodeling expenses.

Moreover,

$$SP^* = SP \quad (5)$$

when there are no sales concessions or remodeling expenses.

However, most home purchase employee relocation policy decisions have been for the employer to bear the burden of relocation variable costs. Then, a model for total relocation costs associated with home purchase programs would be:

$$TRC = AV - SP + SC + \{HC \times DOM\} + REM + FE + UR \quad (6)$$

where

TRC = total relocation costs

AV = price at which the relocation firm acquires the house from the employee

SP = contract sales price paid to a relocation firm when an acquired house is resold

SC = sales concessions (such as points, loan costs) paid by the relocation firm upon resale

HC = holding costs including interest on equity funds advanced to the transferee + monthly mortgage payments + utilities, maintenance and repairs + insurance

DOM = number of days on the market between the date of listing and closing dates

REM = remodeling/reconditioning expenditures to improve properties in sub-standard physical condition.

FE = appraisal fees, brokerage commissions, relocation firm's service fee, overhead and clerical expenses

UR = random unpredictable events that require repair or replacement of property components.

Three sources of variability in home purchase program expenses that can be minimized by efficient management policies are identified in the model presented in equation 6. These are:

- Gain/loss on resale of the transferee's home. These expenses are minimized when the company can efficiently acquire properties at the same price that they will ultimately receive upon resale. Relocation companies are often compensated by a fee based upon the value of the acquired property and do not systematically seek to resell property above the acquisition price.

- The per diem amount of holding costs can be accurately estimated, but a high degree of uncertainty comes from the difficulty of predicting how long the property will remain in inventory.
- Many companies systematically remodel substandard properties to improve their marketability. They attempt to recapture the cost of remodeling from an increase in the sales price and/or a reduction in holding costs due to a quicker sale. Others have specific policies of selling acquired properties without remodeling.

These variable relocation costs can be calculated for each individual transferee as the sum of the gain/loss on the resale of the property and the associated holding costs. Equation 7 defines the resale gain/loss as the difference between the resale price received (net of sales concessions and remodeling expenses) and the acquisition price paid to the transferees.

$$\text{Gain/loss} = SP - (AQ + PTS + REM) \quad (7)$$

where

- SP = contract sales price received at resale
- PTS = sales concessions made by relocation firm when resold
- REM = remodeling expenses incurred by the relocation firm
- AQ = acquisition price⁵ paid to the transferee.

Equation 8 defines the holding costs to be a function of the acquisition price and the number of days required to sell the property. All of the relocation firms that supplied data for the research expect holdings costs to average 1.5% of the acquisition price per month (0.05% per day). Hence, holding costs increase linearly as the marketing time (DOM) increases. Therefore,

$$\text{Holding Costs} = 0.0005 (AQ) (DOM) \quad (8)$$

where

- AQ = acquisition price paid to the transferee⁶
- DOM = the number of days⁷ the property was on the market.

Consequently, total variable costs associated with home purchase programs can be calculated as shown in equation 9.

$$VRC = (SP - PTS - REM) - AQ - 0.0005 (AQ)(DOM) \quad (9)$$

Description of Data

The data used to examine factors that influence total employee relocation costs consists of financial information from over 400 transactions of properties that were acquired and subsequently resold by corporate relocation firms, including:

- actual sales price of the transferee's property,
- date the sales contract was signed by the buyer,
- the amount of discount points and other financing concessions paid by the seller on behalf of the buyer,
- the amount spent for remodeling and reconditioning of the properties to increase their marketability,
- date property was listed for sale,
- number of days the property was offered for sale by the relocation firm, and
- the appraisal reports utilized to determine the acquisition price of the employees' homes.

The data represents transactions randomly selected from six relocation firms located throughout the United States and are composed entirely of transactions sold and closed between January 1984 to August 1986. The sample also includes assigned sales which were sold by the employees prior to acquisition by the relocation company. Properties from forty-one states are represented in the sample and the sales prices of the properties ranged from \$19,500 to \$395,000.

Factors Associated with Variation in Variable Relocation Costs

To identify factors that are significantly associated with variable relocation costs, an analysis of covariance test was constructed such that

$$VRC = f(A, B, C, X_1 \dots X_j)$$

with three non-metric factors defined as:

A = month in which the property was acquired and listed for sale

B = 1, if property was remodeled
= 0, if not

C = economic region in which the property was located.⁸

The metric covariates which were included in the model were defined as:

X_1 = house size measured in square feet

X_2 = age of improvements

X_3 = lot size measured in square feet

X_4 = number of garage parking spaces

X_5 = 1, if house had swimming pool
= 0, if not

X_6 = 1, house was not a one-story ranch style
= 0, house was one-story style

X_7 = number of bedrooms

X_8 = number of baths

The results of the ANCOVA, presented in Exhibit 1, indicated that over 26% of the variation in relocation costs was explained by the model. Relocation costs were found to be significantly related to the following factors:

Exhibit 1 ANCOVA Results

Source	DF	Sum of Squares	Mean Square	F Value
Model	24	1.5888	0.662	4.20
ERROR	280	4.4138	0.0157	
TOTAL	304	6.0026		

Source	DF	Type I SS	F Value	P Value
MONTH	11	0.2563	1.48	0.139
REGION	4	0.4579	7.26	0.001
REMODEL	1	0.7067	44.83	0.001
BEDROOMS	1	0.0007	0.05	0.829
BATHS	1	0.0042	0.27	0.606
STYLE	1	0.0257	1.63	0.202
HOUSE SIZE	1	0.0088	0.56	0.456
LOT SIZE	1	0.0618	3.92	0.048
GARAGE	1	0.0001	0.00	0.957
AGE	1	0.0117	0.74	0.389
POOL	1	0.0548	3.48	0.063

Coefficient of Determination = 0.2647

- remodeling substandard properties,
- the economic region in which the transaction occurred,
- properties with swimming pools, and
- lot size of the properties.

The remodeling of substandard properties was the most significant factor that explained the variation in relocation costs. Many relocation firms remodel homes in substandard condition in an attempt to increase the marketability of the properties and reduce the marketing time (holding costs) of their acquired homes. The decision to remodel minimizes cost only if the remodeling costs are more that fully offset by an increased selling price, reduced holding costs, or a combination of both factors. A comparison of the mean relocation costs for the remodeled properties and those that were not remodeled are shown in Exhibit 2. Relocation costs averaged 17.8% for the remodeled properties, over 300% higher than the average of 5.4% for the non-remodeled group.

These results indicate that a corporate policy of remodeling substandard properties does not result in lower relocation costs. There are several reasons that may explain the sizable losses experienced in these properties. First, it may be impossible to completely eliminate all objectionable deficiencies in substandard houses. Consequently, a remodeled property may still possess objectionable qualities that reduce marketability. Second, relocation firms may have difficulty identifying profitable remodeling projects where costs are fully offset by increased value and/or decreased holding costs. Third, appraisers may not correctly evaluate the negative impact on value of objectionable

Exhibit 2
The Impact of Remodeling on Relocation Costs

Property Type	N	Average Cost
Remodeled	138	17.8%
Not Remodeled	167	5.4%

features in houses. Based upon these factors, a corporate policy of selling substandard houses in "as is" condition appears to be the optimal method of minimizing relocation costs.

Variation in relocation costs was also shown to be significantly explained by the economic conditions in the region at the time of the transaction. The results presented in Exhibit 3 show that relocation costs were lowest in the High Tech region, averaging only 4.6% of the acquisition price of the properties. Higher costs were incurred in the Pacific Northwest and the Great Lakes regions where they averaged 8.6% and 8.1% respectively. Highest average relocation costs were 16.3% experienced in the Oil Patch and 10.5% in the Farm Belt.

Exhibit 3
The Impact of Regional Economic Conditions on Relocation Costs

Region	N	Average Cost
Oilpatch	104	16.3%
Farmbelt	57	10.5%
Northwest	32	8.6%
Greatlakes	76	8.1%
Hitech	36	4.6%

These results clearly indicate that relocation firms are not fully evaluating the impact of current economic conditions on property values when determining acquisition prices. Variable costs for properties located in the Oil Patch region were more than 300% higher than for properties located in the High Tech region. This may suggest that relocation appraisers are not fully measuring the impact of changing market conditions on property values and that additional procedures should be implemented to allow firms to recognize high relocation cost regions and modify acquisition policies to mitigate the problem.

Results presented in Exhibit 4 indicate that houses with swimming pools also experienced significantly higher relocation costs. The small proportion of houses with pools had average costs of 17.2% compared to 10.5% for houses without pools.

Exhibit 4
Impact of Swimming Pools on Relocation Costs

Type of Property	N	Average Cost
WITHOUT POOL	284	10.5%
WITH A POOL	21	17.2%

Lot size was also found to significantly explain relocation costs. To provide additional insight, the sample was grouped according to the size of lot into three groups including: small lots under 10,000 square feet, larger lots from 10,000–25,000 square feet, and the largest lots exceeding 25,000 square feet. The results presented in Exhibit 5 show that costs are positively correlated with lot size.⁹ Properties on the smallest lots had average costs of 10.6%. The properties with lots between 10,000 and 25,000 square feet had an average cost of 13.5% and the largest lots (in excess of 25,000 square feet) averaged 16.1%. Since relocation costs are higher for larger lots, a corporate policy encouraging the purchase of smaller lots would assist in minimizing relocation costs over time.

Exhibit 5
Impact of Lot Size on Relocation Costs

Lot Size	N	Average Cost
under 10,000 sq.ft.	292	10.6%
10,000–25,000 sq.ft.	12	13.5%
over 25,000 sq.ft.	14	16.1%

Additional testing was done to determine if relocation costs vary across price range of the properties in the sample. The results indicated that only 2% of variation in cost is explained by price of the property.

Summary and Policy Implications

Corporate employee relocation programs are an employee fringe benefit developed by large national firms as an incentive for key employees to accept relocation to a new area. Although employee relocation costs should be minimized, reimbursing employees for all expenses associated with moves still may be rational because the firm’s overall profit position may be enhanced by reassignment of competent managers.

If, from the employee’s standpoint, a move may be accomplished at no cost, the prospect of corporate advancement and a higher paying job may be sufficient to offset

the negative impact of uprooting the employee's family. If this is not a sufficient incentive to move and if moving key employees may sufficiently improve the corporation's financial position, the corporate employer may choose to further subsidize the move through the payment of relocation bonuses or perhaps by purchasing the employee's old home for more than it would pay under its usual procedures. To the extent that the latter does not create taxable income, purchasing the old home at a higher price could result in a smaller outlay of corporate funds than relocation bonuses while providing equal after-tax compensation to the employee.

In examining corporate employee home purchase programs, four variables were identified as significant to corporate employers wishing to minimize home purchase program costs. These four variables, which explained 26% of the variation in relocation costs, include:

- remodeling substandard property
- regional economic conditions at the time of the transfer
- the presence or absence of a swimming pool
- lot size

The empirical results suggest the following corporate policy implications. First, this research suggests that remodeling substandard properties, in an attempt to increase the sales price and/or reduce time on the market, is an unprofitable venture for relocation companies. Relocation costs averaged 17.8% of the sales price for remodeled properties, while those not remodeled only averaged 5.4%. This evidence suggests that the optimal policy is to sell acquired properties in "as is" condition.

Second, the economic conditions existing in the region at the time of the transaction also was a significant explanatory variable of relocation costs, with average costs ranging from a low of 4.6% in the Hi Tech regions to a high of 16.3% in the Oil Patch. This suggests that current home purchase procedures are inefficient and cannot be expected to result in reasonably consistent cost factors nationwide. Additional efforts must be made to monitor the economic conditions affecting the regional and local residential markets so that relocation firms can adjust their acquisition policies to prevent excessive costs. For example, if a firm notices excessive relocation costs in a specific area for an extended time period, meetings should be called with appraisers and brokers who are employed in the affected area to determine what modifications should be made to eliminate the excessive costs.

Third, homes with swimming pools also had significantly higher relocation costs than homes without pools (17.5% v. 10.5%). These results indicate that homes with swimming pools should be bought at a discount of up to 7% of the market value estimated by the relocation appraisers.

Fourth, lot size was also found to be significantly associated with relocation costs. Costs were found to increase as lot size increased. The data suggests that firms should purchase properties with larger lots at a discount from the appraisers' market value estimates by a factor of 3-6%, depending upon size of the lot.

Note that both the existence of swimming pools and lot size are variables within the control of employees at the time of installation or purchase. If a corporation were to adopt procedures that the employee would bear any loss associated with pools and lot size, and if employees were aware of this policy, over the long run these two significant sources of relocation costs could be reduced.

Notes

¹Including shipment of household goods, mortgage interest subsidies, temporary living quarters, and househunting trips.

²A survey of major industrial employers disclosed that 83% have a home purchase plan [7].

³The relocation appraisal assignment has been defined as a fair market value estimate that will, when converted to a purchase offer by the employer, compete favorably in the marketplace with other offers a transferee may or could receive if he were to market the house privately with a broker of his choice [1].

⁴Perhaps depending on whether an audit investigated the market value of the house sold.

⁵The acquisition price is usually determined by averaging the appraisal value estimates. Consequently, *AQ* was defined to be the average of the appraisal estimates.

⁶Actual acquisition prices were deemed to be proprietary information and not divulged by the relocation firms. Hence, acquisition price was estimated to be the average of appraisal estimates of value that were used by the companies to determine the actual acquisition price.

⁷The number of days on the market was calculated from the time the property was listed for sale by the relocation company until the date the resale contract was signed. Actual closing dates were not available.

⁸Using a grouping procedure similar to that used by Hartzell, Shulman and Wurtzback [6], the sample was grouped into the following regions with similar economic conditions.

- The Pacific Northwest = Washington, Oregon, Idaho
- The Great Lakes = Ohio, Illinois, Indiana, Michigan, Pennsylvania, Wisconsin
- The Oil Patch = Oklahoma, Texas, Louisiana
- High Tech = California, New York, Delaware, New Jersey, Minnesota, Massachusetts, Connecticut
- Farm Belt = Iowa, Nebraska, Kansas, Missouri, South Dakota, Colorado, Montana, Wyoming

⁹Correlation coefficients disclosed that lot size was not correlated with any other variable, including days on the market and sales price.

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