be no net energy savings, and possibly an increased energy requirement of 10 percent or more for AGT modes.

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An Application of the Lens Model in Measuring Retail Attractiveness and the Effects of Alternative Public and Private Policies on a Retail Area

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ABSTRACT

The objective of this research was to use the lens model as a technique to measure the effect of an automobile-restricted zone and other private and public policies in the downtown Boston retail area on shopping trips to the area. The lens model accounts for perceptions and preference in the individual choice process. Findings were that individual's preferences for hypothetical futures for the Downtown Crossing could be linked to actual choice of shopping area only by explicitly accounting for measurement errors and feedback effects of preferences on perceptions. Removal of the automobile-restricted zone was predicted to decrease shopping trips to the shopping area by about 8 percent. Better maintenance and security were predicted to increase trips by about 5 percent. New retail development was predicted to increase trips by 10 to 11 percent; and vastly improved parking was predicted to increase trips by 6 percent.

In 1978 the city of Boston made a major effort to improve its major downtown retail area by implementing an automobile-restricted pedestrian mall known as the Downtown Crossing. More than $5 million were spent on capital improvements from combined city and federal funds. Traffic was removed from streets in the heart of the retail district and rerouted to other corridors. Streets were bricked over and new lighting and benches were provided.

Although consultant reports after the first 2 years of the pedestrian zone showed that sales in current dollars were up by about 12 percent and thus keeping pace with inflation (1), a feeling of gloom overshadowed the area in the summer of 1981. The city of Boston was suffering from a tax limitation law that severely limited the budgets of city departments. The result for the retail area meant that maintenance was inadequate, the area was quite dirty, and there were concerns about safety because of limited police protection. Spokespersons for the two major department stores in the area asked the city to consider ending its experiment and put the automobiles back on the street. They argued that automobile traffic would make the area feel safer, particularly at night.

At this same time the Boston Redevelopment

Authority (BRA) began an UMTA-sponsored study to determine how to better manage and develop the automobile-restricted area. Because it is largely respected as a retail analysis tool by retailers, a detailed shopping gravity model was built by the BRA to address the development questions. However, the gravity model would not address some of the basic policy issues such as the effect of eliminating the automobile-restricted zone, the effect of better maintenance and security, the effect of improved parking, or even the effect of different types of department stores on people's choice of shopping area. In order to address these issues a new analysis methodology was required. The BRA, although skeptical of state-of-the-art techniques, was willing to provide a small subsidy for Massachusetts Institute of Technology (MIT) research that held some promise for addressing the key policy issues.

THE LENS MODEL

The MIT approach was the lens model. The lens model is a representation of the human decision-making process. It was named by Egon Brunswik (2), a psychologist who described perceptions as lenses through which a human being interprets reality. The lens model has been further developed by researchers such as Hammond (3), Anderson (4), Fishbein (5), Hauser and Urban (6), and Holbrook (7), among others.

The lens model theory is that physical features or characteristics of an object or concept, for example a shopping area, are perceived through the senses of individual human beings. The image of an object or concept retained in the memory is based more on a limited number of qualitative impressions of the physical features rather than on numerous separate physical details. These qualitative impressions or perceptions form the basis of an individual's evaluation or preference. An individual's choice between alternative objects or concepts is related to preference but will be affected by environmental constraints. In the case of a shopping area, such constraints include travel time or distance.

The research steps required to implement the lens model were to (a) determine the important attributes of shopping areas, (b) determine the scenarios to test, (c) conduct a survey to gather the required data, (d) specify model form, and (e) estimate the model. The steps are described in the following sections.

DEFINITION AND MEASUREMENT OF LENS MODEL VARIABLES

Hypothetical Scenarios

MIT researchers worked closely with the BRA to determine the scenarios and the physical features that should be tested for the Downtown Crossing. It was important to measure the effect of the automobile-restricted zone itself on retail shopping trips to determine if this change had helped or hurt the area. The procedure for evaluating the effect of the automobile-restricted zone was to propose scenarios that would include allowing automobiles back on the pedestrian street. The change in shopping trips was expected to be of similar magnitude but opposite sign of the change in shopping trips caused by the implementation of the automobile-restricted zone.

The five other features of interest were those that would strengthen the area. These were better maintenance, better security, improved parking, and the addition of high-fashion or national chain department stores.

The chosen experimental design organized the 6 features into 11 different scenarios or hypothetical futures that included combinations of features of interest. No more than three features were included in any one scenario in order to minimize the burden of survey respondents.

Perceptions

The next step in implementing the lens model was to determine how people perceive a shopping area and how to measure their perceptions. There have been many studies of shopping center image that attempt to define the perceptual constructs. The approach taken for this research was to select a set of constructs that were commonly found in the literature and that would be useful for the analysis at hand. Five major constructs for shopping area attractiveness or image were selected as perceptual variables to be measured for this research. These constructs were identified in many studies of retail image including those by Stephenson (8), Koppelman and Hauser (9), and Gautschi (10). The five constructs of retail attractiveness were (a) quality, (b) variety, (c) value, (d) parking convenience, and (e) attractiveness of the walk environment.

The measurement instrument for the perceptions was a categorical rating scale. Following is an example of a portion of a categorical rating scale as it was used in a mail questionnaire for the study:

Rating for Downtown Crossing
(circle your answer)

	Unusually High						Very Low
Quality	+++	++	+	0	-	--	---

Categorical rating scales were used for measuring perceptions because they are simple to use and because the results compare very favorably to more accurate but complex methods such as paired comparisons, which will be discussed in the following section.

Preference

The preference variable in the lens model tells how much one alternative is liked compared with another alternative. The measurement instrument used for preference in this research was constant sum-paired comparisons.

With constant sum-paired comparisons, the respondent must divide, for example, 100 points between a set of two alternatives to show how much one alternative is preferred over another. Respondents can indicate the intensity of their preference as well as the order in their distribution of points. Constant sum-paired comparisons have been found to be more powerful discriminators than either rank order or category scale data (11).

Because only one preference measure per alternative was required for this research (in comparison with five perceptual measures), the more powerful technique of paired comparisons was chosen to measure preference over the category scaling technique.

DATA COLLECTION AND EVALUATION

Survey Approach

The survey approach used was a randomly selected telephone survey followed by a mail survey. Dillman's

(12) recommendations for approach, style, and followup were closely adhered to for both the telephone and mail survey used in this research.

Households were randomly selected from the telephone book from communities in the Boston area in proportion to the number of households in each community. Persons responding to the telephone survey were asked if they had shopped in the Downtown Crossing in the last year. Those who had done so and who could name one other shopping area where they had shopped were asked if they would be willing to fill out a mail survey. Those who agreed to complete a mail survey were sent one. Followup telephone calls were made to encourage response.

Evaluation of the Survey Data

Before the data collected in the telephone and mail surveys were used for model estimation purposes, they were evaluated in terms of overall quality and representation of the population of shoppers of interest. Of all telephone calls attempted, 64 percent of the persons called agreed to take the mail survey, and there were 1,894 telephone interviews. Of 1,174 telephone survey respondents who agreed to take the mail survey, 44 percent actually responded, providing 518 completed questionnaires.

Respondents who worked in downtown Boston had a higher mail response rate than others, and these respondents tended to use the Downtown Crossing more frequently. Thus, there was a need to separate workers and nonworkers in the modeling analysis work to correct for the different response rates.

The data from the survey were found to be of reasonably high quality. Where there was more than one measure of perceptual, preference, and choice variables, these different measures were significantly correlated. Respondents did discriminate well between preference and choice, and they did discriminate between a number of the perceptual variables. Respondents had difficulty discriminating between the perceptual variables of quality, variety, and value. Thus, these variables were averaged as a single store-related variable for analysis purposes.

MODEL ESTIMATION

Figure 1 shows the submodels to be estimated. Information was available from the surveys to estimate both a preference model (linking perceptions with preference) and a choice model (linking preference and travel impedance with choice) for the real shopping alternatives of the Downtown Crossing and the most used alternative shopping area. Information was also available to estimate a perceptual model (linking features with perceptions) and a preference model for hypothetical futures for the Downtown Crossing.

In order to link the changes in features for the Downtown Crossing with changes in patronage for the area, it was necessary to link the two partial lens systems. This was to be done by comparing the preference model for real alternatives with the one for hypothetical futures. If these two models were similar in a statistical sense, changes in perceptions predicted from the perceptual model for hypothetical futures could be used with the lens system for real alternatives to predict changes in patronage due to the changes in features of the Downtown Crossing.

Logistic Preference Model

The next task was to find an appropriate form for the relationship between preferences and perceptions.

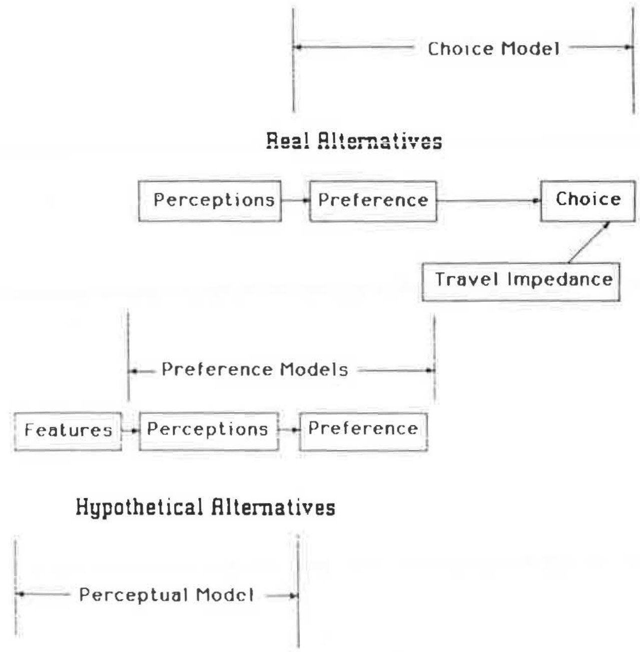


FIGURE 1 Relationship of the submodels to the lens model system.

Constant sum-paired comparisons are often assumed to have ratio scale properties. That is, respondents are assumed to divide points among alternatives so that the ratio of points indicates how much one alternative is preferred over the other. Transitivity tests performed on the survey data showed that there was indeed justification for the ratio scale assumption. On the other hand, the perceptual rating questions were designed to encourage interval scale responses. If preferences are ratio scaled and perceptions interval scaled, a functional form is required for the preference model that will map the interval scale perceptions to the ratio scale preferences. A form that will accomplish this for ratio scale constant sum-paired comparison preference data is a logistic function as shown:

$$PREFj1/100 = 1/\{1 + \exp[-B'(PERCj1-PERCj2)]\} \times e \quad (1)$$

where

PREFj1 = observed number of points given to alternative j1 out of a 100 point paired comparison between j1 and j2,
exp = exponential,
PERCj1-PERCj2 = vector of observed perceptual rating differences for alternatives j1 and j2, and
e = error term assumed to have a mean of 1 and a log normal distribution.

Regression estimation of the logistic form can be done by taking the ratio of the preferences for two alternatives in a paired comparison, and then taking logs. Table 1 gives the results of ordinary least-squares regressions for the logistic preference models for the Downtown Crossing and the most-used other shopping area (the real alternatives), and separately for the different Downtown Crossing futures (the hypothetical alternatives). As can be observed, the order of the coefficients is the same. The magnitudes are very different from one another, however.

TABLE 1 Estimation of Logistic Preference Models

	Downtown Crossing Versus The Alternative Mall		Hypothetical Futures	
Variable	Value	t-Statistic	Value	t-Statistic
Constant	.22	1.84[a]	−.03	−.92
STOREDIF	.44	8.45[b]	.21	4.70[b]
PARKDIF	.05	1.69[a]	.11	7.45[b]
WALKDIF	.11	3.97[b]	.20	11.64[b]
OBSERVATIONS	211		741	
R-SQUARED	.44		.30	
F(3.00, 737)	54.38		103.51	

Note: Estimated Model:
log(PREFj1/PREFj2) = B0 + B1 x STOREDIF + B2 x PARKDIF + B3 x WALKDIF

PARKDIF and WALKDIF are the difference in categorical ratings for parking convenience, and the attractiveness of the walk environment, respectively. STOREDIF is the average difference between the three store-related variables of quality, variety, and value. PREFj1/PREFj2 is the ratio of preference points for alternatives j1 and j2 given in a paired comparison.

[a] Significant at the 5 percent level, 1 tailed test.
[b] Significant at better than the 2.5 percent level, 1 tailed test.

Use of Instrumental Variables

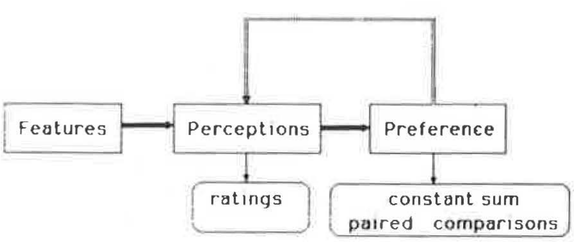
There are two factors that could cause problems with the regressions. First, measurement error in the independent variables will result in biased and inconsistent coefficients (13). In general, the greater the measurement error, the smaller the coefficient.

Probably a more serious problem with the data is the existence of halo effects that can affect the measurement of perceptions. Halo effects occur when respondents give perceptual ratings that reflect their preferences. Such effects are commonly found in data such as that collected for this research (14).

One theory about the feedback of perceptions to preference for the hypothetical alternatives is shown in Figure 2. Rectangles are used to indicate true values, and ovals are used to indicate measurements. The assumption in Figure 2 is that preference does affect the perceptions of attributes for a hypothetical alternative. A set of equations can be specified for the relationships shown in Figure 2.

The true value of the log of the preference ratio is assumed to be equal to a linear function of the true differences in perceptions plus a disturbance term due to omitted variables. Equation 2 shows this structural relationship. Equation 3 shows that the log of the measured preference ratio is equal to the log of the true preference ratio plus measurement error. Preference does not affect the measured perceptual differences directly; thus they are equal to the true differences plus measurement error. Equations 4-6 show these relationships. Measurement error is assumed to be uncorrelated with the true variables.

The true perceptual differences are assumed equal



Note: Rectangles indicate true values, and ovals indicate their measurement.

FIGURE 2 Representation of the relationship between features, perceptions, preference, and their measures.

to a linear-in-parameters function of the differences in relevant features, the log of the preference ratio, and a disturbance term due to omitted variables. The measured perceptual differences are therefore assumed to be equal to a linear-in-parameters function of the differences in relevant features, the log of the preference ratio, and an error term that includes measurement error as well as omitted variables. The equations for the measured perceptual variables are shown in Equations 7-9:

$$\text{*LPREFDIF} = B0 + B1 \times (\text{*STOREDIF}) + B2 \times (\text{*PARKDIF}) + B3 \times (\text{*WALKDIF}) + e0 \quad (2)$$

$$\text{LPREFDIF} = \text{*LPREFDIF} + u0 \quad (3)$$

$$\text{STOREDIF} = \text{*STOREDIF} + u1 \quad (4)$$

$$\text{PARKDIF} = \text{*PARKDIF} + u2 \quad (5)$$

$$\text{WALKDIF} = \text{*WALKDIF} + u3 \quad (6)$$

$$\text{STOREDIF} = C0 + C1 \times \text{NATDIF} + C2 \times \text{FASHDIF} + F1 \times (\text{*LPREFDIF}) + (e1 + u1) \quad (7)$$

$$\text{PARKDIF} = A0 + A1 \times \text{GARAGEDIF} + F2 \times (\text{*LPREFDIF}) + (e2 + u2) \quad (8)$$

$$\text{WALKDIF} = D0 + D1 \times \text{CLEANDIF} + D2 \times \text{SECURDIF} + D3 \times \text{AUTODIF} + F3 \times (\text{*LPREFDIF}) + (e3 + u3) \quad (9)$$

where

*LPREFDIF = the difference of the logs of the true preferences;
*STOREDIF = the true difference in store perceptions for the two alternatives;
*PARKDIF = the true difference in parking convenience perception;
*WALKDIF = the true difference in walk environment perception;
NATDIF = an indicator variable that is 1 if the first alternative alone has a national chain department store, -1 if the second alternative alone has a national chain department store, and 0 if both alternatives either have a national chain store or if both do not;
FASHDIF = an indicator variable for the high fashion department store;
GARAGEDIF = an indicator variable for the parking garage;
CLEANDIF = an indicator variable for improved maintenance;
SECURDIF = an indicator variable for improved security;
AUTOSDIF = an indicator variable for allowing automobiles back on Washington Street;
LPREFDIF = the difference in the logs of the measured preferences from the constant sum-paired comparisons;
STOREDIF = the average measured difference in perceptual ratings for store variables of quality, variety, and value;
PARKDIF = the measured difference in perceptual ratings for parking convenience;
WALKDIF = the measured difference in perceptual ratings for the attractiveness of the walk environment;
ei = errors due to omitted variables in the equations;
ui = errors due to measurement error; and
Bi, Ci, Di, and Fi = coefficients.

This set of equations can be estimated with the use of instrumental variables. An instrument for preference can be obtained by a dummy variable regression of the measured preference on the features as follows:

$$\text{LPREFDIF} = E0 + E1 \times \text{NATDIF} + E2 \times \text{FASHDIF} + E3 \times \text{GARAGEDIF} + E4 \times \text{CLEANDIF} + E5 \times \text{SECURDIF} + E6 \times \text{AUTODIF} + \text{error} \quad (10)$$

An estimate (LESTPREF) for the preference difference can then be obtained from the right side of the estimated regression equation.

Because *LPREFDIF, or the true preference difference, is not observed but is measured with error, a least-squares regression can lead to biased and inconsistent parameter estimates (13). The problem is that when LPREFDIF is substituted in Equations 7-9, the preference measurement error, u0, becomes part of the error term. LPREFDIF is correlated with u0, so the least-squares assumption that the error is uncorrelated with the independent variables fails. However, LESTPREF, which is independent of the measurement error, can be used as an instrumental variable in Equations 7-9. Least squares will then provide consistent estimates for the parameters.

With consistent estimates for Ci, Ai, and Di, instrumental variables can be derived for the true perceptual differences, *STOREDIF, *PARKDIF, and *WALKDIF. Call these instruments ESTSTOR, ESTPARK, and ESTWALK, respectively. Then ESTSTOR, ESTPARK, and ESTWALK may be substituted into Equation 2 and used to obtain least-squares estimates of the coefficients (Bi).

The data in Table 2 show the results of the regressions for Equations 7-10. All coefficients in these regressions other than the constant term are highly significant. As expected, the variable LESTPREF was found to contribute significantly to the perceptual model regressions for Equations 7-9 verifying the existence of halo effects.

TABLE 2 Dummy Variable Regressions for Equations 7-10

	Equation			
Variable	10	7	8	9
Dependent variable	LPREFDIF	STOREDIF	PARKDIF	WALKDIF
Independent variables	Value	Value	Value	Value
Constant	-.02	.01	-.02	.00
CLEANDIF	.52			.94
SECURDIF	.49			.62
AUTOSDIF	-.60			-1.64
GARAGEDIF	.59		3.08	
NATDIF	.38	.49		
FASHDIF	.35	.59		
LESTPREF		.34	.54	.93
CLEANSEC				-.55
OBSERVATIONS	1,215	1,053	1,013	1,086
R-SQUARED	.22	.19	.52	.38
F STATISTIC	58.19	80.89	548.40	135.06

The final step in this analysis is to use the estimates of the perceptual differences (ESTSTOR, ESTPARK, ESTWALK) derived from the regressions as instrumental variables to estimate Equation 2. Table 3 gives the regression estimation results for the preference model for the hypothetical alternatives and also compares these results with those for real alternatives previously shown in Table 1.

The estimated coefficients for hypothetical futures are reasonably close to the coefficients estimated for real alternatives. The store coefficients are about the same magnitude, and the order is correct. The estimated coefficients for the store perception variable and the parking perception variable are not significantly different for the hypothetical alternatives and for the real alternatives. The walk coefficients are still significantly different.

Comparing the coefficients in Table 3 for hypothetical futures with Table 1, it can be observed that the major difference from incorporating estimated variables rather than measured variables for perceptions is to increase the coefficient of the store-related perceptions. This implies that the store perceptions may be measured with more error relative to the parking and walk environment perceptions in the hypothetical case. A logical explanation for this is that most of the alternative futures affected the perceptual variables other than the store-related variables. Inspection of the ratings for each perceptual variable in the mail survey showed that variance among respondents increased when they rated perceptual attributes that were not expected to change. Thus, it is likely that there was more error in the ratings of the store-related perceptions than in the parking or walk environment perceptions.

In comparing the coefficients for the real and hypothetical alternatives, an assumption is made that the perceptions for the real alternatives are not affected by the preferences as in the case for the hypothetical alternatives. Because the real alternatives are shopping areas currently used by the respondents, it appears reasonable that perceptions of their attributes would be less susceptible to halo effects than perceptions of hypothetical shopping areas. It must also be assumed that there is little measurement error in the perceptions for the real alternatives. Because there is little reason to believe that the store-related perceptual variables for real alternatives were more subject to measurement error than the parking- and walk-related variables, and because the parking- and walk-related variables appear not to suffer from measurement error, at least in the hypothetical case, this appears to be a reasonable assumption.

Choice Model

The lens model represents choice as an action that is dependent on preference and on environmental constraints. In the case of shopping area choice, the environmental constraint is the travel impedance to the shopping areas.

A logit random utility model has often been used to predict choice of shopping area, given data on individual choices (15). A very simple logit model was used for the choice model for this research. Independent variables used as part of the choice utility function were the log of the preference points, an indicator variable for workers, and travel time in minutes. Further details on the choice model are provided by Karash (16).

FORECASTING WITH THE MODELING SYSTEM

In order to use the models to forecast changes in trips to the Downtown Crossing, some important assumptions must be made about the difference in human perceptions and preferences, given real alternatives that were discovered for the hypothetical alternatives. Given plenty of time to observe changes in the Downtown Crossing, it is assumed that perceptions of the area can be assessed independent of preference so that there will be no halo effect. This is a conservative assumption in that the impacts of changes will be less if there is no halo effect.

TABLE 3 Preference Model Using Estimated Perceptions as Independent Variables for the Hypothetical Futures for the Downtown Crossing Compared with the Preference Model for Real Alternatives

Hypothetical Futures			Real Alternatives		
Variable	Value	t-Statistic	Variable	Value	t-Statistic
Constant	-.01	-.51	Constant	.22	1.84[a]
ESTSTORE	.42	4.80[b]	STOREDIF	.44	8.45[b]
ESTPARK	.10	6.16[b]	PARKDIF	.05	1.69[a]
ESTWALK	.24	10.47[b]	WALKDIF	.11	3.97[b]
OBSERVATIONS	1,215		OBSERVATIONS	211	
R-SQUARED	.20		R-SQUARED	.44	
F(3.00, 1,211)	100.71		F(3.00, 737)	54.38	

Note: Estimated model for hypothetical futures:
LPREFDIF = -.01 + .42 x ESTSTORE + .10 x ESTPARK + .24 x ESTWALK

Estimated model for real alternatives:
LPREFDIF = .22 + .44 x STOREDIF + .05 x PARKDIF + .11 x WALKDIF

[a]Significant at the 5 percent level, 1 tailed test.
[b]Significant at the 2.5 percent level, 1 tailed test.

Equations 7-9 can then be used to estimate average changes in perceptions due to hypothetical futures.

Given the predicted changes in the perceptual ratings for the changes in the Downtown Crossing, the next step is to predict the average change in preferences. To do so the assumption is made that the appropriate preference model to use is the one estimated for the real alternative shopping areas as given in Table 1.

The new market share for trips to the Downtown Crossing out of the trips to either the Downtown Crossing or the alternative mall due to preference changes can be calculated by using the logit choice model knowing only the existing market share and the change in the log of the preference ratio. The data in Table 4 show the new market shares and the percent change in market shares computed for the last trip for workers and for others. To determine the overall effect on the Downtown Crossing, the shares of last trips for workers and others must be weighted to account for different current use of the Downtown Crossing. The overall effect is also shown in Table 4.

The predicted change in market share of shopping trips is around 10 percent for adding department stores. A garage that would make parking readily available and cheap would be expected to increase trips by about 6 percent. Superior maintenance or highly visible security would increase trips around 3 or 4 percent, whereas the combination would increase trips by about 5 percent. Allowing automobiles back on Washington Street would reduce trips by about 8 percent.

These predictions were accepted as reasonable by the Boston Redevelopment Authority staff and the retail experts who were hired to predict retail sales for the Downtown Crossing, given similar development scenarios to those tested in this research. The gravity model could not be an independent check on the results given in Table 4, however, since early results from this research heavily influenced the calibration process for the gravity model.

The MIT research thus helped to quantify the retail experts' intuition. For example, the finding that better maintenance and security could increase traffic by 5 percent was consistent with recent experience in shopping centers that had been revitalized by new management (17).

The major result of interest, however, is the impact of allowing automobiles back on Washington Street. The prediction that workers' trips increased by 6 percent and others increased by 10 percent is compatible with the pedestrian counts taken in 1978 before the mall was implemented and in 1980 after implementation (18). Thus these results clearly indicate that the pedestrian mall was a positive development for the area, holding all else constant.

DISCUSSION AND CONCLUSIONS

This research accomplished its objectives, which were to measure the effect of an automobile-restricted zone in downtown Boston on retail trips to the area and to use a theory of consumer decision making known as the lens model to determine the effect of a number of hypothetical changes in the downtown Boston retail area. In order to link hypothetical changes with actual choice using the lens model it was necessary to show that shoppers' preferences for the hypothetical futures for the Downtown Crossing were formed on a similar basis as their preferences between real alternatives. Preference models for real and hypothetical alternatives were found to be reasonably similar, but only if problems of measurement error and halo or feedback effects were explicitly accounted for in the analysis for the hypothetical alternatives.

This research work has influenced policy in the Downtown Crossing. The predicted increases in trips due to improved maintenance and security helped to provide economic justification for the establishment of a tax district that would raise fees to provide better area management. Legislation for such a tax

TABLE 4 Percent Change in Market Shares

	Downtown Workers	Other Shoppers	Weighted Total
Addition of a high-fashion department store	8	14	11
Addition of a national chain department store	6	12	10
Addition of a large parking garage	4	8	6
Improved maintenance	3	5	4
Improved security	2	4	3
Improved maintenance and security	3	6	5
Automobiles allowed on Washington Street	-6	-10	-8

district was developed at the request of area merchants, although no district has been created to date.

Finally, the findings of the positive impact of the automobile-restricted zone have certainly quieted criticism of that program. The prediction of the loss in patronage due to removal of the automobile-restricted zone has eliminated consideration of that option by merchants upset about other problems that have beset the Downtown Crossing.

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