

# THESIS ABSTRACTS

**INCOME PROCUREMENT  
AND RESOURCE  
ALLOCATION VARIABLES  
AS PREDICTORS OF  
THE PERCENTAGE OF  
INCOME SPENT ON HOUSING**

**Lois Ann Woltz**  
Master of Science  
The Ohio State University, 1974  
(Thesis Advisor: Anne R. Coveney)

The purpose of this study was to determine the relationship between the percentage of total dollar income devoted to total housing expenditures and income procurement and resource allocation variables. The sample consisted of 302 randomly drawn households living in Census designated poverty areas in Toledo, Ohio and East Chicago, Indiana. Data were analyzed using Pearson product-moment correlations and step-wise regression. Correlations were used to test null hypotheses between dependent and independent variables. Null hypotheses were rejected for total dollar income, the income index used by the United States Census Bureau, a husband's contribution to earned income, and discretionary fixed financial commitments because correlation coefficients were significant at the .01 or .001 levels. Null hypotheses were not rejected for situational income, returns from investments, armed service benefits, gifts and inheritances, other family members' contributions to earned income, and nondiscretionary fixed financial commitments because correlation coefficients were not significant at the .05 level. Multiple regression analysis provided the following prediction equation:

$$Y = .3320918 - .0000151 X_1 - .0000150 X_2 + .0000306 X_3 - .0000070 X_4 + .1043137 e$$

where,

Y = percentage of total dollar income devoted to total housing expenditures

X<sub>1</sub> = total dollar income

X<sub>2</sub> = discretionary fixed financial commitments

X<sub>3</sub> = returns from investments

X<sub>4</sub> = situational income

e = error term

**HOUSING MAINTENANCE  
AND REPAIR COSTS**

**Jan Catherine Wahl**  
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Purdue University, 1975  
(Major Professor: Kathleen A. Johnston)

Housing maintenance and repair is a key factor in the rehabilitation and conservation of the present housing stock. In addition, housing maintenance is a major variable in determining homeownership costs. Only "rules of thumb" are given for expected annual costs for house maintenance and repair. These estimates date back twenty to thirty years ago. Recent data is needed to test their validity for the present housing market. The purpose of this study is to determine the expenditures for housing maintenance and repair and to test some factors that may influence the amount of expenditures.

A total of 132 homeowners with prefabricated houses of five, ten, and twenty years of age and at the lower and middle price levels were inter-

viewed. The costs of maintenance and repair of exterior, interior, and utility items were asked for two years than aggregated into appropriate categories.

The study surveyed the actual costs of specific maintenance and repair items. High variation of expenditures among homeowners was noted. Most respondents had costs under \$25 for most groups of costs—exterior, interior and utility. Many had no costs and few had expenditures over \$500.

The age groups had varied costs with exterior costs increasing as the age of the house increased. The lower and middle price levels of prefabricated housing had similar costs and the house and family characteristics were not shown to be influencing factors upon housing maintenance and repair costs.

Families following a regular program of maintenance and repair did not have significantly lower costs than families who had no program. In some cases their expenditures were higher.

For prefabricated houses the annual estimate of maintenance expenditures as a percent of house value was about half the “rule of thumb” which is 1 to 1 1/2 per cent for houses less than 10 years old and 2 to 2 1/2 per cent for houses over 10 years old.

**RESIDENTIAL KITCHENS:  
PLANNING PRINCIPLES  
AS EVIDENCED IN  
SURVEYED LITERATURE  
1844-1970.**

**Louannah Abbott  
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Purdue University, 1975  
(Major Professor: Kathleen A. Johnston)**

An historical perspective is used to explore the planning principles in relation to residential kitchens between 1844 and 1970.

One hundred and eleven sources were surveyed for the period from material available on the Purdue University main campus. Data sources in-

cluded general books, text books, extension and government publications, magazines, planning magazines and a general “other” literature sources.

It was found that the planning principles, as defined, were emphasized in the surveyed literature. Most often, the planning principles were expressed in generally implied terms.

The principles most often expressed were the more glamorous principles such as arrangement of furnishings for functional use. The more glamorous principles were more likely to be expressed in specifically stated terms.

Cyclic trends appeared to be evidenced in relation to the evidencing of the principles in the literature. In a majority of the data, the principles were least likely to appear during the 1930's.

Extension publications were most likely to state the defined planning principles. The extension publications least frequently stated the principles of psychological and sociological space required.

**INTERNAL-EXTERNAL  
CONTROL ORIENTATION  
OF OHIO HOMEOWNERS  
RELATED TO MAINTENANCE  
AND IMPROVEMENT  
OF HOUSING:  
A VALIDATION STUDY**

**Carolyn S. Edwards  
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The Ohio State University, 1974  
(Thesis Advisor: Anne R. Coveney)**

The purpose of the study was to determine the concurrent validity of two, eight-item modified I-E scales for housing in relation to the original Rotter I-E scale and to analyze the relationship between I-E and housing maintenance and improvement behavior. The two short scales were those used in Hatch 407, “Maintenance Aspects of Owned, Single Family Dwellings Related to Selected Economic Factors in Small Towns and Metropolitan Areas,” headed by Dr. R. Deacon

and Dr. F. Firebaugh.

The nonrandom sample was composed of 135 homeowners who were members of men's civic or professional organizations. The questionnaire obtained demographic data, scores on the three I-E scales and totals for number of maintenance and improvement jobs performed.

Correlation coefficients, the Spearman Brown formula, and the Kuder-Richardson formula 21 were used to assess reliability and validity of the I-E scales; least squares analysis of variance was used for the association among variables.

Acceptable concurrent validity but low reliability coefficients were obtained for the modified I-E scales. Demographic data did not account for significant variation in I-E scores or behavioral measures. I-E scores did not account for significant variation in behavioral measures.

**A STUDY OF MAINTENANCE  
AND REPAIR ITEMS IN  
INDUSTRIALIZED HOUSING OF  
VARIOUS AGES, CONSTRUCTION  
DESIGN AND MAINTENANCE  
AND REPAIR PROGRAMS.**

**Kathryn C. Payne Hill  
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**Purdue University, 1975**

**(Major Professor: Kathleen A. Johnston)**

Home maintenance and repair is rapidly becoming one of the most critical areas of the housing field. As urban sprawl reaches its limits, central cities continue to decline and the cost of new construction rises; the maintenance and repair of existing housing stock becomes imperative. Although it is recognized that the cost of maintenance and repair items affects the cost of housing to the consumer, little is known about the characteristics of these maintenance and repair items. The purpose of this study is to investigate the effect of the age, construction design and type of maintenance and repair program followed by

the homeowner on the number and types of maintenance and repair items in the single-family prefabricated house.

A total of 132 families were interviewed in six subdivisions of houses built to minimum property standards and above minimum property standards of approximately five, ten and twenty years of age. Data was collected under the headings of Exterior, Interior, Utility and Structure maintenance and repair items. Each item listed was classified as a major or minor item of maintenance and repair.

Maintenance and repair items become more numerous and more major as the age of the house increases, particularly exterior items in the form of roof and paint items and utility items in the form of furnace and water heater items.

Major items of maintenance and repair appear to be more numerous among minimum property standard houses than above minimum property standard houses.

Homeowners following a regular program of maintenance and repair have a lower frequency of major structure items of maintenance and repair.

Specific categories and items of maintenance and repair vary with the age, construction type and type of maintenance and repair program resulting in possible characteristic patterns of maintenance and repair that can be expected.

**RESIDENTIAL MOBILITY  
AND REFRIGERATOR  
MOVING DECISIONS**

**Rachel Dianne Warren  
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**The Ohio State University, 1973**

**(Thesis Advisor: Anne R. Coveney)**

The purpose of this study was to determine if residentially mobile families made the decision to move or replace their household refrigerator in an open or closed system of decision-making. Both economic/rational and environmen-

tal/behavioral variables were tested for significance in influencing the refrigerator moving decision.

A sample of 150 homeowners in Franklin County, Ohio were selected from a source listing deeds. A total of 57 households completed the telephone interview of which 46 moved and 11 replaced the refrigerator. The 3-form questionnaire consisted of structured, non-disguised questions.

Chi square analysis for independent samples was used to test conformity of the households to a cost-based decision model. This same type of statistical analysis was used to test each economic and environmental variable for significance in influencing the refrigerator moving decision.

Of the three economic/rational variables used to test a closed system of decision-making, the cost-based decision model and refrigerator replacement cost were significant in influencing the refrigerator moving decision. Of the three environmental/behavioral variables tested for compliance with an open system of decision-making, only satisfaction with the refrigerator owned prior to moving influenced the refrigerator moving decision.

Variables indicative of a closed and open system of decision-making influenced the refrigerator moving decision. It was concluded that residentially mobile families make decisions in both open and closed systems of decision-making when choosing to move or replace a refrigerator.

### **THE INFLUENCE OF CHAIR TYPES ON VERBAL INTERACTION**

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(Major Professor: Marjorie A. Inman)

Chair types and chair-type situations were studied to determine what influence they each had on the verbal interaction within a dyad.

The method of research used was to record the pronoun usage in oral reports of the decision-making process occurring in a dyad. Eighty female college students enrolled in a Purdue University housing class signed up in pairs for the experiment. Each dyad was given fifteen minutes to discuss a topic of common interest, after which time the researcher entered the experiment room and initiated a short question-answer session. A record was made of each subject's pronomial usage as she answered the questions. The subjects were not aware of what the researcher was recording.

Certain noticeable trends supporting the hypotheses were found, despite the fact that the statistical results did not conclusively prove that chair types affect interaction. Within the limitations of the experiment, the following conclusions were made:

- 1.) People seated in hard chairs tend to use more first-person singular pronouns than first-person plural pronouns.
- 2.) People seated in soft chairs tend to use more first-person plural pronouns than first-person singular pronouns.
- 3.) People tend to use the same total number of pronouns when seated in either chair type.
- 4.) Chair type has no apparent influence on the decision-making process within a dyad.