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A DESIGN TO EVALUATE
URBAN HOUSING PROJECTS
IN HONDURAS

May 1982

I. BACKGROUND

Honduras has experienced rapid urbanization of its population in recent decades. The migration of people from rural to urban areas has been most pronounced in Tegucigalpa, the capital, although San Pedro Sula and many other towns have experienced substantial growth. Major needs created by the influx of people into urban areas have been housing and basic services like water and sewers. Over the years, the Government of Honduras and other agencies and organizations have worked toward alleviating housing and service shortages. New, low cost housing has been constructed and basic services have been provided to existing housing.

USAID/Honduras has taken an active interest in urban housing for more than a decade. The Mission has helped fund a variety of housing programs. The Mission has also sponsored several studies of the characteristics of the residents in various housing settings.

Programatically, three types of housing areas can be identified in urban locales in Honduras. These are:

- (1) Neighborhoods that have developed on their own with no outside inputs,
- (2) Existing neighborhoods that have received limited inputs in the form of basic services, and
- (3) Neighborhoods that have been newly created as a function of the construction of new housing complexes.

In order to best use development assistance resources to meet housing needs, it would be desirable to know what impacts housing programs have had on residents in the three types of areas. The purpose of this paper is to present a design for such a study.

The design builds upon two sources of housing data that are already available. One, a data tape and a report exist for the survey conducted in 1976 by the Cooperative Housing Foundation (CHF), formerly the Foundation for Cooperative Housing. In 1978, CHF administered a lengthy questionnaire to probable participants in the cooperative housing project "Centro Americano" and to a similar group of people who would not receive new housing. This housing project was the primary

responsibility of FEHCOVIL, Federacion Hondurena de Cooperativas de Vivienda. Two, reports are available which present findings from the 1980 and 1981 surveys conducted by USAID/Honduras, in cooperation with the Central District Metropolitan Council, Concejo Metropolitano del Distrito Central (CMDC). The same questionnaire was administered in both years to residents in AID-supported housing project barrios and non-project barrios.

In addition, other existing housing information may be useful. FEHCOVIL, has issued several reports that have included information on the general characteristics of the recipients of new cooperative housing. Some of these reports also include financial aspects of its housing projects. Additional information about the "Centro Americano" project is contained in the FEHCOVIL liquidation report on the project. The USAID/Honduras paper outlining its proposed up-grading projects contains substantial data about the areas where improvements were to be made. Since this paper was written, improvements have been made in a variety of neighborhoods and information has been collected on some of these neighborhoods in the CMDC/USAID surveys.

II. DESIGN OVERVIEW

To evaluate the impacts of urban housing projects, the primary focus of the study design is on the three housing strategies: untouched neighborhoods (no outside inputs); improved neighborhoods (provision of basic services to existing housing); and new neighborhoods (provision of new housing).

A secondary focus of the study design is on the two management approaches used with the creation of new housing neighborhoods. The two types of new housing are: cooperative housing projects and non-cooperative housing projects.

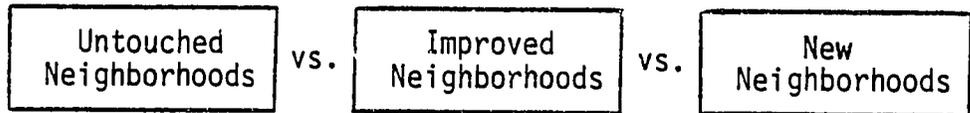
Exhibit 1 illustrates the primary housing comparison groups and the secondary management comparison groups. Level I identifies the three housing strategies and Level II identifies the two new housing management strategies. Within each of these levels, key topics of investigation are listed.

Exhibit 2 illustrates the potential comparison groups across time, within the three housing strategy categories and the two management subcategories. Data are

EXHIBIT 1
OVERVIEW OF EVALUATION DESIGN

LEVEL I:

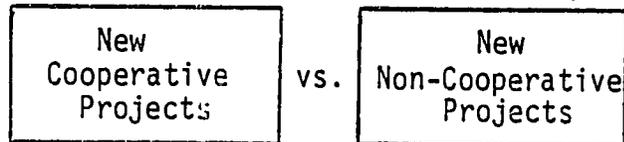
Housing
Strategies



- Self-help improvements to houses
- Social and educational services
- Health and sanitation services
- Health of residents
- Family expenditures
- Income distribution

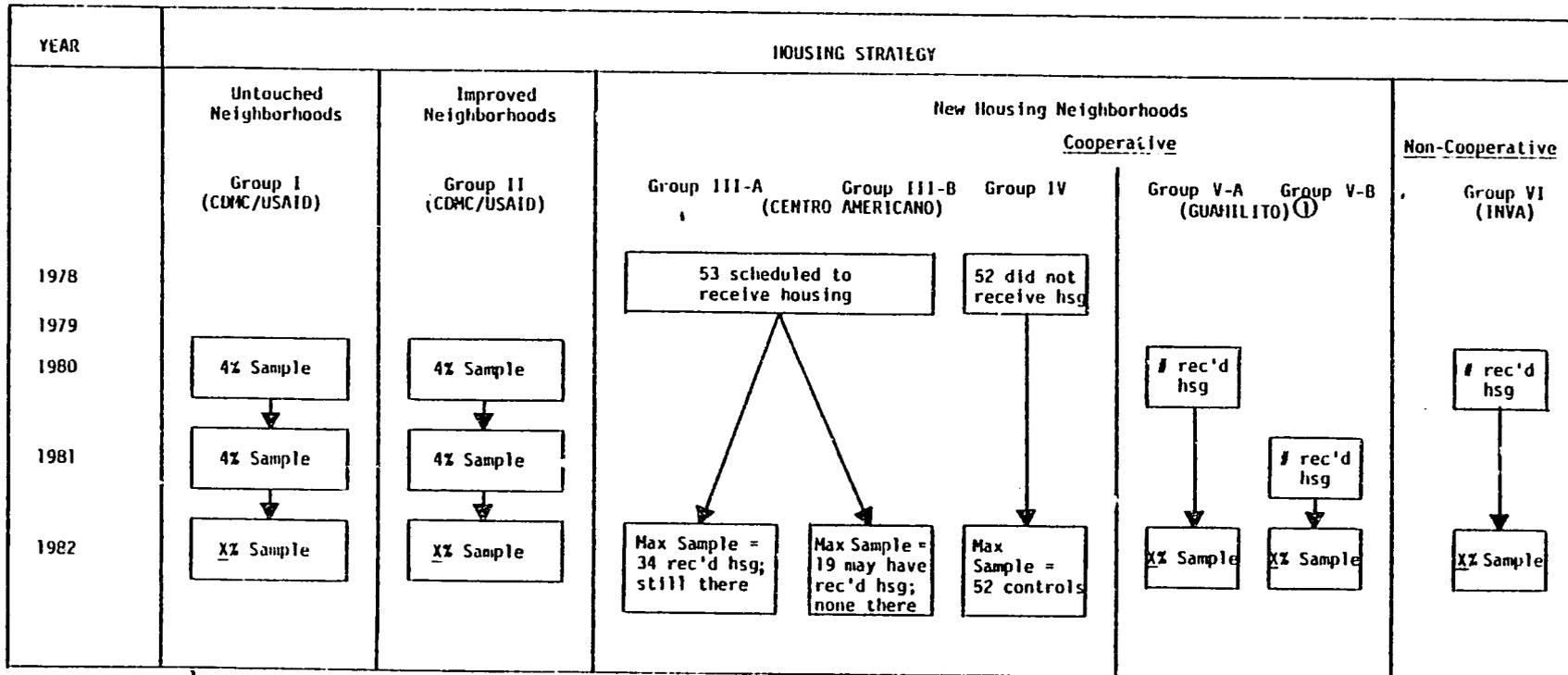
LEVEL II:

New Housing
Management
Strategies



- Delinquency and default rates
- Rate of return to developer
- Equity holding of residents
- Community self-help projects
- Involvement in community/civic affairs

EXHIBIT 2
 POTENTIAL COMPARISON GROUPS ACROSS TIME BY HOUSING STRATEGY



① Based on available information, Guamilito has been shown here as a cooperative new housing project. This categorization may be incorrect.

clearly available for 1980 and 1981 for Groups I and II as a result of the CMDC/USAID surveys and for 1978 for Groups III and IV as a result of the CHF survey. Additional information about the Centro Americano project is available in FEHCOVIL's liquidation report on the project. Some data, perhaps of a limited nature, may be available for Group V-A for 1980 and for Group V-B for 1981 in FEHCOVIL reports and in participant selection documents for Guamilito. Similarly, limited data for Group VI should be available for 1980 in INVA reports and in participant selection documents.

Proposed data collection in 1982 may not be feasible for some groups since current whereabouts of group members are unknown. This is the case for Groups III-B and IV. While desirable to follow-up these groups in 1982, associated costs may make it prohibitive.

In addition, the size of most 1982 samples is negotiable. While it may be desirable to increase the sampling rate beyond 4% in each of the 10 barrios making up CMDC/USAID Groups I and II to insure adequate representative samples, such additional demands on data collection and processing may prove excessive. Furthermore, the size of the samples for Groups V-A, V-B, and VI need to be determined, given constraints of available resources. In general, identifying and surveying members of Groups III-B and IV provide data for important comparison groups, and increasing the sample size of the CMDC/USAID survey Groups I and II increases confidence in the representativeness of the information obtained. Furthermore, the sample sizes for Groups V-A, V-B and VI will influence the degree to which resulting data are representative.

Exhibit 3 presents the evaluation study questions and their indicators for both Levels I and II in the study design. Level II questions and indicators are presented in two categories: those concerned only with cooperative housing projects and those concerned with both cooperative and INVA housing projects.

To collect information in 1982 to help answer the study questions presented in Exhibit 3, the sources of information and the methods of data collection are listed for each study question in Exhibit 4. Information coding forms should be tailored to the type of information to be collected.

EXHIBIT 3

EVALUATION QUESTIONS AND INDICATORS FOR LEVEL I HOUSING STRATEGIES
AND LEVEL II MANAGEMENT STRATEGIES IN NEW HOUSING

Level I - Housing Strategies (Untouched Neighborhoods v. Improved Neighborhoods
v. New Neighborhoods)

1. What housing resources, services or technologies were provided?

Indicators:

- houses -- size, cost, materials, etc.
- basic services like sewer and water
- training and/or technical assistance in such areas as housing construction, repair, painting, gardening

2. What were the characteristics of the residents receiving the housing resources, services or technologies?

Indicators

- occupation
- family income
- social status in the community

3. Once housing inputs were provided, what improvements did residents make in their housing?

Indicators

- types of improvements made
- types of resources, services or technologies used
- unit measures of amounts of resources, services and technologies used

4. Once housing inputs were provided, did residents use social services, educational services and additional health and sanitation services?

Indicators

- social services
- educational services
- health care services
- assistance in sanitation services

5. Once housing inputs were provided, did the health status of residents improve?

Indicators

- disease rates
- nutrition needs met

Exhibit 3 (Cont.)

6. How did housing inputs influence the economic circumstances of residents? Did housing differentially affect residents according to their economic circumstances?

Indicators

- decreased family expenditures
- increased family income

Level II - Management Strategies in New Housing Neighborhoods (Cooperatives v. Non-Cooperatives)

A. Cooperatives Only

1. How was the need for a cooperative organization established?

Indicators

- presence of a needs assessment
 - economic need of community
 - lack of appropriate existing institution to meet need
 - appropriateness of cooperative structure for the culture setting
2. How were the appropriate resources for the development of a cooperative organization identified?

Indicators

- presence of resource assessment
 - available leadership and expertise
 - available capital
3. Was the cooperative organization structured according to cooperative principals?

Indicators

- voluntary nature of membership
- lack of discrimination in membership guidelines
- leader selection by democratic procedures
- equal or equitable voting procedures
- limited return on capital investment
- use or distribution of surplus democratically determined
- distribution of surplus, if any, in proportion to transactions
- provision of educational services to members, employees and the general public
- break even operating budget
- break even total budget
- constraints of government rules and regulations

Exhibit 3 (Cont.)

4. Was the cooperative legally constituted?

Indicators

- adoption of a constitution or bylaws
- recognition as a legal entity

5. How many members of the cooperative were there? What was the economic condition of members?

Indicators

- membership requirements
- membership totals by year
- annual family income per member
- source of family income
- number of dependents
- quality of family dwelling

6. How actively did members participate in the cooperative?

Indicators

- frequency of meetings
- attendance at meetings
- participation in the activities of the cooperative

B. Cooperatives v. INVA

1. What was the role of the cooperative and INVA in the management of new housing?

Indicators

- sale and resale
- maintenance
- collection of payment
- supervision of modifications to housing

2. What were the responsibilities of cooperative and INVA employees in the operations of the projects?

Indicators

- duties of managers
- duties of fiscal agents
- functions of other personnel
- fiscal auditors

Exhibit 3 (Cont.)

3. What were the responsibilities of the cooperative board and community groups in the operations of the projects?

Indicators

- duties of the board of directors
- role of civic associations

4. What were the fiscal characteristics of the housing projects?

Indicators

- delinquency and default rates on payments
- rate or return to developer
- equity holdings of residents

5. To what degree did the cooperative organization and INVA project achieve self-sufficiency?

Indicators

- income transactions v. expenses by year
- size of capital outlay across time
- staffing pattern (paid v. volunteer, full time v. part time)
- relationship with other organizations (e.g., cooperative or INVA headquarters, host government, private sector)
- length of time in existence
- size of organization
- verbal approval by beneficiaries
- support from other organizations
- autonomy
- spread of innovative norms to others

6. To meet community needs, did the cooperative and the INVA-sponsored civic association increase the level of community self-reliance instead of reliance on government institutions?

Indicators

- community initiated planning and needs assessment
- community initiated projects

7. Did residents increase their level of political participation in their society?

Indicators

- voting behavior in the cooperative and civic association
- participation in meetings, etc.

EXHIBIT 4
STUDY QUESTIONS, DATA SOURCES AND METHODS OF DATA COLLECTION

<u>Study Question</u>	<u>Data Source</u>	<u>Data Collection Method</u>
I-1	Housing Officials ¹ /Housing Project Records	Information Coding Form
I-2	Residents/Housing Project Records (Applications, etc.)	Questionnaire ² Information Coding Form
I-3	Resident Housing/Residents	Observation Checklist New Questions Added to Questionnaire
I-4	Residents	Questionnaire
I-5	Residents	New Questions Added to Questionnaire
I-6	Residents	Questionnaire
I-7	Residents	Questionnaire
II-A1	Cooperative Staff/Cooperative Records	Information Coding Form
II-A2	Cooperative Staff/Cooperative Records	Information Coding Form
II-A3	Cooperative Staff/Cooperative Records	Information Coding Form
II-A4	Cooperative Staff/Cooperative Records	Information Coding Form
II-A5	Cooperative Staff/Cooperative Records	Information Coding Form
II-A6	Cooperative Staff/Cooperative Records	Information Coding Form
II-B1	Housing Project Staff Housing Project Records	Information Coding Form
II-B2	Housing Project Staff Housing Project Records	Information Coding Form
II-B3	Housing Project Staff Housing Project Records	Information Coding Form
II-B4	Housing Project Staff Housing Project Records	Information Coding Form
II-B5	Housing Project Staff Housing Project Records	Information Coding Form
II-B6	Housing Project Staff Housing Project Records Civic Association Staff Civic Association Records	Information Coding Form
II-B7	Housing Project Staff Housing Project Records Civic Association Staff Civic Association Records	Information Coding Form

¹ Refers to both FEHCOVIL and public housing officials.

² CMDC/USAID Questionnaire.

III. DISCUSSION

A. Answering Level I Study Questions

Based on a preliminary review of the 1981 report presenting findings from the CMDC/USAID 1980 and 1981 surveys, it appears that the questionnaire solicits information that would be useful in answering Level I study questions 2, 4, and 6. New questions should be added to more completely answer study question 4. In addition, it may be desirable to add questions to expand on the information collected for study questions 2 and 6.

Housing agency staff should be queried and/or housing project records should be searched to collect information to answer study question 1 about what housing inputs were provided. An observation checklist could be constructed to code improvements made to housing to answer study question 3. To determine amounts of resources, services and technologies used to make improvements, new questions should be added to the questionnaire.

A different questionnaire was used to gather baseline data in 1978 from Groups III and IV. There is relatively little exact duplication of items in the CHF questionnaire with items in the CMDC/USAID questionnaire. However, a fair number of similar items are included in both questionnaires. The extent of overlap is illustrated in Exhibit 5. The comments column notes when duplication is identical and when coding categories differ as well as other information.

If the CMDC questionnaire is used in 1982 with Groups III and IV, manipulation of most of the items in Exhibit 5 for the CHF questionnaire would be required to make responses compatible with those obtainable with the CMDC/USAID questionnaire. Out of the near 300 items comprising the CHF questionnaire, results from 52 items were presented in the survey report. These 52 items appear to be the most relevant in an impact evaluation. An alternative to using the CMDC/USAID questionnaire exclusively with Groups III and IV, as

EXHIBIT 5
 SPECIFICATION CMDC/USAID ANC CHF VARIABLES IN INSTRUMENTS

Item Description	CMDC/USAID		CHF		Comments
	Question	Variable	Question	Variable	
Sex, head	4.1	SEXO	20	V009	Codes same
Mar.Sta., head	4.1	ESTCIV	20	V010	Codes differ
Age, head	4.1	EDAD	22.23	V011	Codes same
Occ., head	4.1	ACTIVIDAD	25.26	V013	See V014
Hrs work, head	4.1	DIAS/HORAS	36.37	V019	Codes differ
Income, head	4.1	GANANCIA	INGRESOS	V025	Ck periods
Ages in house	4.1	EDAD	V105-V117		Codes differ
House expense	12a-12b	GASRNT/GASBUY		V056	Combine codes
Food costs	12h	GASFOOD		V057	Codes same
Family income	14	GANSUELDO	(Sum V031/39/45/51)		Codes same
Reside time	5	TENRES	6.8	V177	Codes same
Floor	6c	MATPISO	59.68	V207	Codes differ
Roof	6a	MATROOF	59.69	V208	Codes differ
Walls	6b	MATWALL	59.70	V209	Codes differ
Bath	9	BANO	59.66	V205	Codes same
Tenancy	11	TENANCIA	6.9	V178	Codes differ
Commute costs	12a	GASTRANS		V059	Codes same
Ed costs	12f	GASEDUC		V062	Codes same

relevant, is to ask the 52 items from the CHF questionnaire in addition to using the CMDC/USAID questionnaire. An explanation could be given to respondents about the duplication of questions.

B. Answering Level II Study Questions

Available cooperative and INVA records and discussion with cooperative and INVA staff represent the major sources of information to answer Level II questions. The INVA-sponsored civic association staff and association records are key data sources for questions IIB3, IIB6 and IIB7.

C. Data Analysis

The existence of the Centro Americano data tape in CHF, data on the CMDC/USAID surveys, and probably some information from selection documents greatly improve the possibility of meaningful analyses. The computer capability of USAID/Honduras, and the survey resources of the several institutions contemplating cooperation with the study, further enhance the potential for worthwhile results.

Descriptive statistics, including measures of central tendency like means and medians, and percentages, should be computed on all items. Statistical significance should also be calculated.

Because of different numbers of data items and varying numbers of categories within individual items, tests of statistical significance must be carefully interpreted. There may be cases of statistical significance that have no practical significance.

Preliminary analyses and interpretation may single out some variables of potentially greater impact. Analysis of variance (ANOVA) procedures could help clarify the contributions of the examined items to project impact. These may be further explicated by deriving the relative contributions of a set of items using stepwise regression.

The USAID/Honduras computer system is being updated and should include the full capabilities of the Statistical Package for the Social Sciences (SPSS) when completed. That system should provide all the capability necessary to perform the statistical calculations needed for the evaluation. Longitudinal assessments are somewhat more difficult with SPSS than with some other systems but careful coding of the data in specified formats can alleviate the problems.

D. Summary

To summarize, the study is intended to address two major urban housing issues. First, the study is concerned with changes over time that have occurred as a result of each of the three housing strategies -- no inputs, limited inputs in the form of basic services, and major inputs in the form of new housing. Second, the study is concerned with the effects of providing new housing by cooperatives as contrasted with INVA provided new housing.