Urban Social Indicators: A Comparative Study of Census Tracts in the Biloxi-Gulfport Standard Metropolitan Statistical Area, 1970

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MISSISSIPPI-ALABAMA
SEA GRANT CONSORTIUM

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CENSUS TRACTS IN THE BILOXI-GULFPORT STANDARD

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Preface

The research and studies forming the basis for this report were financed in part through a consortium grant by The National Oceanic and Atmospheric Administration, Office of Sea Grant, U.S. Department of Commerce to researchers at The University of Southern Mississippi, Mississippi State University and The University of Mississippi. The purpose of this cooperative project was to provide urban administrators and planners with a detailed analysis of demographic growth components for the coastal region of Mississippi.

This particular report which focuses upon census tracts of the Biloxi-Gulfport Standard Metropolitan Statistical Area is also the product of an ongoing program involving research on urban indicators for urban areas in Mississippi at The Institute of Urban Research, The University of Mississippi. The main objectives of this program are to provide urban practitioners with a wide variety of urban indicators which can be used to document existing quality of life conditions in urban areas in the state and to monitor changes in these conditions over time.

Table of Contents

List of Figures

List of Tables

List of Exhibits

Introduction

In the past decade a large body of literature has been published on social and/or urban indicators.[1] Interest in the subject has been, to a considerable extent, stimulated by the process of urbanization and subsequent urban revolution and the various social pathologies which have evolved from the urbanization process in general. Most of the research on social indicators as they relate specifically to urban areas had had a two-fold purpose. In the first place, there has been the tendency to structure research in such a way as to document the state of urban conditions in a particular urban area at a specific point in time, usually a census year. In the second place, researchers have studied the change component of urban

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[1]See, for example, U.S. Bureau of the Census, Census Tract Papers, Series GE-40, No. 9, Social Indicators for Small Areas, presented at the Conference on Small-Area Statistics, American Statistical Association, Montreal, Canada, August 14, 1972 (Washington, D.C.: U.S. Government Printing Office, 1973); Raymond A. Bauer, ed., Social Indicators (Boston: Massachusetts Institute of Technology Press, 1966); George C. Meyers, "Variations in Urban Population Structure," Demography, I (1964), 156-163; Michael J. Flax, A Study in Comparative Urban Indicators: Conditions in 18 Large Metropolitan Areas, The Urban Institute, Paper No. 20006 (Washington, D.C., 1972).

indicators to monitor and evaluate changes in urban conditions which could affect the quality of urban life either positively or negatively.[2]

The rationale for research on social indicators was to:

Evaluate particular public (government) programs

Establish a system of social accounts analogous to our system of national accounts

Establish social goals and set social policy.[3]

The hope and intent of research was to provide urban administrators and planners with input mechanisms for guiding and controlling policy decisions at the local level in the same way that our system of national economic indicators serves as the underpinning for much of the guidance and control of our national economy.[4]

Although such a general system of social indicators has not emerged, there are certain aspects of current research on the subject to provide impetus to further attempts

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[2]See, for example, Jack L. Bullard and Robert J. Smith, Community Conditions in Charlotte, 1970: A Study of Ten Cities Using Urban Indicators with a Supplement on Racial Disparity (Charlotte: Charlotte-Mecklenburg Community Relations Committee, 1974).

[3]Kenneth C. Land, "Social Indicators Models: An Overview," in Kenneth C. Land and Seymour Spilerman (eds.), Social Indicator Models (New York: Russell Sage Foundation, 1975), pp. 5-6.

[4]Albert Mindlin, "Introduction," Social Indicators for Small Areas, p. 1.

at isolating workable descriptive indicators. It is to
this end that this study of social indicators in the
Biloxi-Gulfport Standard Metropolitan Statistical Area
(SMSA) is directed.

This study in particular has certain noteworthy
features which make it unique in terms of focus and geo-
graphic area of study. First, where much current research
has been national or macro-oriented, this project is local
or micro-oriented.[5] Secondly, this research offers possi-
bilities of relating to both aims of current research on
social indicators, i.e., to document the state of existing
social conditions in the SMSA and to monitor changes in
these conditions over time. This is possible because the
1970 United States Census of Population provided the first
point in time in which the Biloxi-Gulfport Area was de-
lineated as a Standard Metropolitan Statistical Area. Thus,
we have a considerable amount of data available in the 1970
Census at the SMSA level which will be available in subse-
quent census periods for comparative purposes.

A third unique feature of this research relates
specifically to the geographic location of the SMSA under

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[5]For more on this subject see Herbert Bixhorn and
Albert Mindlin, "Composite Social Indicators for Small
Areas--Methodology and Results in Washington, D.C.," Social
Indicators for Small Areas, pp. 3-17.

investigation. Few studies of social indicators have used as their laboratory an urban area which is so closely linked and dependent upon a marine-oriented economy for its existence. Also, few studies have focused upon an urban area which has experienced the inordinate rate of growth which the Biloxi-Gulfport SMSA has manifested over the past few decades. An analysis of such an area offers an opportunity for observing structural stresses manifested by high growth coastal areas which could be characteristic of and/or unique to areas strongly dependent upon marine-oriented economies. Although it is not within the framework of this research to make comparisons of growth patterns in the Biloxi-Gulfport SMSA with other SMSA's, the data presented in this paper will provide benchmark data for such a comparative study.

Key Concepts

Based upon the discussion of methodological and substantive definitions of social indicators by Land,[6] Garn and Flax,[7] Sheldon and Freeman,[8] and others, we

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[6]Kenneth E. Land, "On the Definition of Social Indicators," The American Sociologist, VI, No. 4 (November, 1971), 322-325.

[7]Harvey A. Garn and Michael J. Flax, "Indicators and Statistics: Issues in the Generation and Use of Indicators," Social Indicators for Small Areas, pp. 37-49.

[8]E. B. Shelton and A. E. Freeman, "Notes on Social Indicators: Promises and Potential," Policy Sciences, I (1970), 97-111.

consider urban or social indicators generally as quantita-
tive measures of qualitative aspects of social life and
conditions related to human well-being and satisfaction.
In our research these variables pertain specifically to
the area bounded and encompassed by the Biloxi-Gulfport
SMSA which is coterminous with the boundary of Harrison
County.

Units of Analysis

The basic units of analysis for this study are
census tracts as delineated in the 1970 United States Cen-
sus of Population (Figure 1). Census tracts are small
areas into which large cities and adjacent areas have been
divided for statistical purposes. As stated previously,
tracts were first established for the Biloxi-Gulfport
SMSA for the 1970 Census, and research based upon the 1970
tract boundaries constitutes an important foundation for
studies of intra- and inter-urban growth and change. Tracts
are generally designed to be relatively uniform with respect
to population characteristics, economic status, living
conditions and other qualitative aspects of social and
economic life. Their boundaries are established with the
intention of being maintained over a long period of time
so that comparisons may be made from census to census.[9]

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[9]For a further discussion of census tract data and

Figure 1.

CENSUS TRACTS IN THE BILOXI-GULFPORT, MISS. SMSA
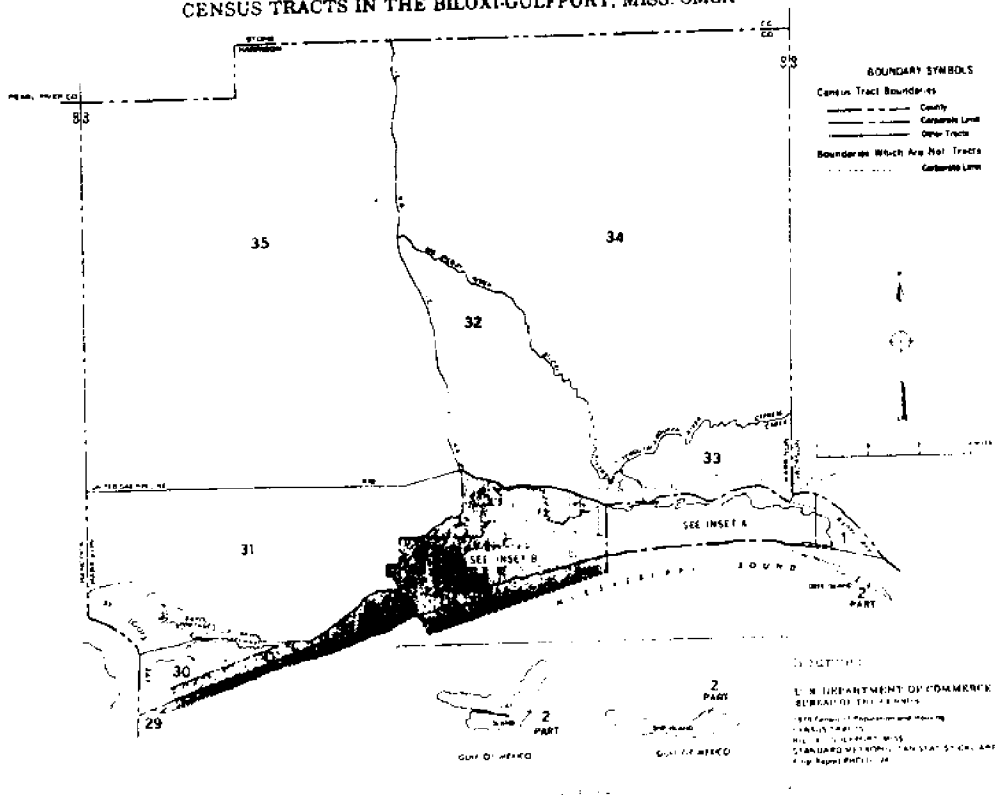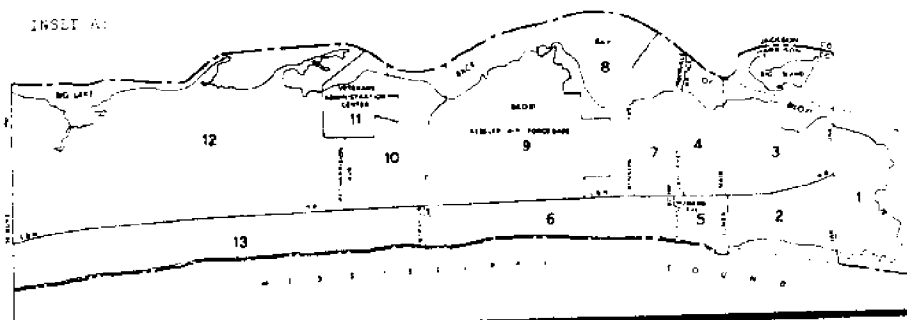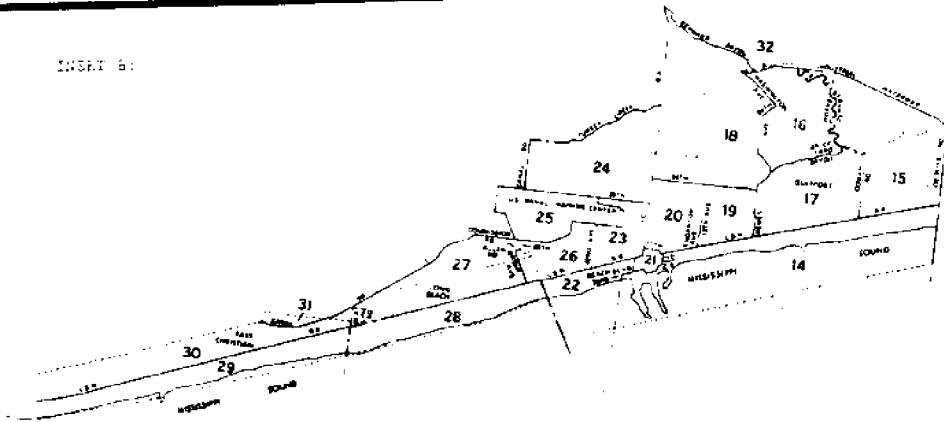
An analysis of a metropolican area using census tracts as the basic areal unit of analysis allows one to evaluate intra-urban variation in a variety of significant urban indicators and identify areas where urban service programs need to be located. For example one can distinguish where there are large concentrations of the aged population, concentrations of young children, concentrations of poverty families, etc. and use such data to provide justification for developing and locating programs to meet the respective needs of these groups.

The Biloxi-Gulfport SMSA is divided into 35 tracts ranging in size from 276 (Tract 21) to 10,344 residents (Tract 9) with an average tract size of 3,845 residents (Table 1). Of the 35 tracts, 13 are in Biloxi, 13 are in Gulfport, and 9 are in adjacent areas of Harrison County outside of the two cities. Three of the tracts, Tract 9, Keesler Air Force Base, Tract 11, Veteran's Administration Center, and Tract 25, U.S. Naval Training Center, are institutional tracts and even though raw data are presented for these tracts (Table 2), they are excluded from statistical analyses. This exclusion is necessary because the atypical demographic and social characteristics usually

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their uses, see U.S. Bureau of Census, Census Tract Manual, 5th ed. (Washington, D.C.: U.S. Government Printing Office, 1966).

Table 1

Distribution of Census Tracts in the Biloxi-Gulfport SMSA
by Population Size Category and Actual Population Size

Size Category	Tract Number	Population Size
Greater than 6,000	9	10,344
N=3	33	6,277
	17	6,099
5,001-6,000	31	5,942
N=6	35	5,931
	32	5,842
	3	5,723
	10	5,556
	12	5,375
4,001-5,000	15	4,842
N=6	20	4,667
	27	4,666
	19	4,606
	16	4,372
	18	4,210
3,001-4,000	26	3,947
N=9	23	3,654
	14	3,359
	13	3,288
	6	3,282
	34	3,213
	2	3,105
	7	3,035
	28	3,005
2,001-3,000	4	2,862
N=5	24	2,565
	22	2,424
	25	2,292
	30	2,223
1,001-2,000	1	1,905
N=4	8	1,897
	29	1,682
	11	1,512
Less than 1,000	5	604
N=2	21	276

Note: Total population = 134,582; mean tract size = 3,845.

associated with institutional tracts can bias any findings and conclusions which result from this study.

Urban Indicators

Urban indicators used in this study were selected using the following basic criteria. First, we have relied upon standard measures of social and economic conditions which have been used in previous research to monitor effectively human well-being and satisfaction in the urban environment. Second, we have selected for analysis only indicators which relate directly to variations in urban conditions in our categories. We have avoided constructing abstract statistical indexes because these might not be of value to many to whom this research is directed. Last, we have selected indicators which are sensitive to the high levels of growth and redistribution characteristics of the area.

The eight indicator categories used in this research and the surrogate indicators for each category are presented in Exhibit 1. Data for each variable are presented in Table 2. No claim is made that these categories are mutually exclusive or that they represent rigid groupings in themselves. We do claim, however, that each of the surrogave indicators is linked on various social structural dimensions documented in other studies to the various

Exhibit 1

Urban Indicator Categories and Surrogate Indicators

Urban Indicator Categories		Surrogate Indicators	
I.	General Demographic Characteristics	I1.	Sex ratio; ratio of males to females x 100
		I2.	Percent males, 20-34; percent of the total male population in the age category 20-34
		I3.	Percent females, 20-34; percent of the total female population in the age category 20-34
		I16.	Youth dependency ratio; ratio of the population in the 0-18 age category to the population in the 18-64 age category
		I17.	Aged dependency ratio; ratio of the population in 65+ category to the 18-64 age category
II.	Race and Ethnic Composition	I5.	Foreign stock; percent of the population who are foreign born or native born of foreign or mixed percentage
		I6.	White; percentage of household population white
		I7.	Black; percentage of household population black
		I8.	Other; percentage of household population nonwhite and nonblack

Exhibit 1 (continued)

Urban Indicator Categories		Surrogate Indicators	
III.	Family Status and Structure	I9.	Families in poverty; percent of families in poverty based on census poverty classifications
		I10.	Families in poverty with male head of household
		I11.	Familes in poverty with female head of household
		I14.	Husband-wife household; percent of all households with husband-wife families
		I15.	Families with female head; percent of all families with wife as head of household
IV.	Housing	I18.	Housing units overcrowded; percent of persons in households in housing units with 1.01 or more persons per room
		I19.	Substandard housing; percent of occupied housing units with lack of direct access/ complete plumbing and kitchen facilities for exclusive use
		I20.	Single dwelling units; percent of occupied housing units that are single detached
V.	Socio-economic Status	I12.	Low occupational status; percent of employed population 16 and over who are operatives, service workers, and laborers except farm laborers

Exhibit I (continued)

Urban Indicator Categories	Surrogate Indicators	
	I13.	High occupational status; percent of employed population 16 and over who are professionals, technical and kindred workers, and managers except farm
	I21.	Median income; median income of all families
	I22.	Educational level; median number of school years completed
VI. Population Density	I23.	Total population per square mile
VII. Community Instability	I24.	Recent movers; percent of the population who moved into present resident housing unit in a tract (1965-1970)
	I25.	Recent movers; percent of population who moved into the tract (1965-1970)
VIII. Fertility	I4.	Fertility index; child-women ratio; ratio of children 0-5 years to women 15-44 years x 100

categories to which they are grouped. We do also claim
that each of the indicator categories lends itself to the
goals of this research, i.e., to document the current state
of affairs in the area and to link this to future growth
and change. For example, whereas six of the indicator
categories (I-VI) relate to documentation of the existing
conditions in the urban area, two categories (VII and VIII)
relate specifically to the dynamic nature of the area in
terms of growth potential.

Data Sources and Methodology

The basic data sources used in this research are
the summary tapes for the 1970 United States Census of
Population for the state of Mississippi. These summary
tapes are maintained as data sources within the Institute
of Urban Research at the University of Mississippi. All
of the data used in construction of the urban indicators
were pulled from the Second and Fourth Counts of the United
States Census using census tracts as the level of summa-
tion for all indicators. All tapes and computer programs
for accessing the tapes were purchased from the National
Data Use and Access Laboratories, Clearinghouse and Labora-
tory for Census Data in Rosslyn, Virginia. The Institute
of Urban Research was designated as a User Contact Site
for the Clearinghouse in 1971 and has maintained data files

from the U.S. Census and from other sources since that
date.

Methodological procedures used in analyzing the
data were basically descriptive, utilizing standard statis-
tical programs in the Computer Center at the University of
Mississippi. Our analysis was in two stages. First, all
indicators presented in Table 2 were standardized after the
appropriate descriptive statistics, i.e., means, standard
deviations, etc., were calculated and ranked from high
positive standard scores to high negative standard scores
by census tract. The results of this procedure are pre-
sented in Table 3. In other words, tracts were ranked from
the highest tract above the average value for a particular
indicator to the lowest tract below the average value on
that indicator. We have also included in Table 3 the
ranked raw scores for each tract to enable one to observe
the range of values for each indicator and the position of
each tract relative to the average for the whole SMSA.

After all indicators were ranked, percentile values
were computed and tracts were grouped into four groups with
Group I representing those tracts falling above the 75th
percentile; Group II representing those tracts falling be-
tween the 50th and the 74th percentile; Group III repre-
senting tracts falling between the 25th and the 49th per-
centile; and Group IV representing tracts falling below

the 25th percentile. These groups represent four quanti-
tative levels of relative social conditions based upon our
indicators. Group I represents those tracts which we would
classify as having the "highest level" on a particular
indicator; Group IV represents those tracts which would
have the "lowest level": and Groups II and III represent
those in "intermediate levels" on the indicators.

This descriptive analytical procedure allows us to
compare (using Figure 1 as a reference map) those tracts
which have high levels of poverty (Group I: I9) to those
with high levels of substandard and overcrowded housing
(Group I: I18 and I19), high levels of fertility and in-
stability (Group I: I4, I24, and I25) to see if these
areas overlap. Such an overlap documents the potential
for the urban area to experience increased growth and con-
centration of these poverty tracts.

In the second stage of our analysis all of the
25 indicators representing the eight social indicator
categories are used in an attempt to evaluate the inter-
relationships among them. To do this, we use two methodo-
logical techniques to cluster the 25 indicators and the 32
tracts into categories representing nodal classifications
of tracts based upon similarity in certain underlying
dimensions among the indicators. The two techniques which
we have employed are Hierarchical Grouping (H-Group) and

factor analysis.[10] The H-Group technique enables one to compare a series of score profiles on objects such as census tracts and progressively to associate them into groupings in such a way as to minimize an overall estimate of variation within groups or clusters. For example, given our set of 32 census tracts (or 25 indicators), each measured on 25 different variables (or 32 tracts), we wish to obtain natural groups of tracts, i.e., natural groups which would maximize the average inter-group distance while minimizing the average intra-group distance. This will enable us to observe, based upon our analysis of the whole SMSA, those areas which are similar in terms of all 25 urban indicators. Not only are we concerned about natural groupings of census tracts, but we are also concerned about how our eight arbitrary urban indicator categories merge into a general pattern of quality of life or general social conditions in the area. We thus subject both the set of 25 variables and the set of 32 tracts to Veldman's H-Group program to establish natural clusters

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[10]Our discussion of both techniques will be general in this report. For a detailed description of both methods, see Donald J. Veldman, Fortran Programming of the Behavioral Sciences (New York: Holt, Rinehart and Winston, 1967), pp. 206-246, 308-318. Also an additional publication is being prepared from these data which will present a more general methodological discussion of the two techniques in terms of relative strengths and weaknesses of each.

of first variables and then census tracts. This allows
for a general observation of the natural tract clusters
and an inference as to what groupings of indicators were
used in our H-Group analysis as the basis for grouping
census tracts in the second stage of the analytical pro-
cedure.

We have used the factor analysis technique to
document and support the pattern of dimensions underlying
the 25 indicators used in the H-Group analysis. Although
both techniques allow us to observe dimension patterns,
they use different procedures in establishing the patterns.
Whereas the H-Group procedure clusters together tracts
using the absolute distances among the tracts on the 25
indicators (or 32 tracts), the factor analysis procedure
allows us to cluster together tracts based upon factor
scores computed from an intercorrelation matrix of the
25 indicators.[11]

The results of the second stage of our analysis
using the H-Group and factor analysis procedures are pre-
sented in Exhibit 2 and Exhibit 3 for the clustering of
indicators and Exhibits 4 and 5 for the clustering of tracts.

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[11]The intercorrelation matrix and detailed factor
analysis procedures including factor loadings and factor
scores are presented in the paper mentioned in footnote 10.

Exhibit 2

Urban Indicator Categories (Grouped by H-Group)
and Surrogate Indicators

Urban Indicator Categories	Surrogate Indicators	
Group A	I6.	White (percentage)
	I13.	High status occupations
	I14.	Husband-wife household
	I21.	Median income
	I22.	Median educational level
Group B	I7.	Black (percentage)
	I9.	Families in poverty
	I10.	Families in poverty with male head
	I11.	Families in poverty with female head
	I12.	Low status occupations
	I15.	Families with female head
	I19.	Housing units substandard
Group C	I4.	Fertility index
	I16.	Youth dependency ratio
	I18.	Housing Units overcrowded
	I20.	Single dwelling units
Group D	I1.	Sex ratio
	I2.	Percent males (20-34)
	I17.	Aged dependency ratio
Group E	I3.	Percent females (20-34)
	I5.	Foreign stock (percentage)
	I8.	Other (percentage)
	I23.	Density, population/area
	I24.	Recent movers (housing unit)
	I25.	Recent movers (population)

Exhibit 3

Urban Indicator Categories (Grouped by Factor
Analysis*) and Surrogate Indicators

Urban Indicator Categories	Surrogate Indicators	
Group A	I6.	White
	I13.	High status occupations
	I14.	Husband-wife household
	I21.	Median income
	I22.	Median educational level
Group B	I4.	Fertility index
	I7.	Black (percentage)
	I9.	Families in poverty
	I10.	Families in poverty with male head
	I11.	Families in poverty with female head
	I12.	Low status occupations
	I15.	Families with female head
	I18.	Housing units overcrowded
	I19.	Housing units substandard
Group C	I4.	Fertility index
	I16.	Youth dependency ratio
	I18.	Housing units overcrowded
	I20.	Single dwelling units
Group D	I2.	Percent males (20-34)
	I5.	Foreign stock (percentage)
	I17.	Aged dependency ratio
Group E	I2.	Percent males (20-34)
	I3.	Percent females (20-34)
	I8.	Other (percentage)
	I24.	Recent movers (housing unit)
	I25.	Recent movers (population)

*See footnotes 10 and 11.

Exhibit 4

Grouping of Tracts Using H-Group Procedures

Group	Tracts in Group
Group A N=4	16, 22, 28, 29
Group B N=7	8, 10, 12, 15, 27, 32, 33
Group C N=4	5, 6, 13, 14
Group D N=11	1, 2, 7, 17, 19, 20, 26, 30 31, 34, 35
Group E N=5	3, 4, 18, 23, 24
Group F N=1	21

Exhibit 5

Grouping of Tracts Using Factor Analysis

Group	Tracts in Group
Group A	10, 12, 15, 16, 27, 28, 29, 32
Group B	6, 8, 13, 14, 17, 19, 22, 23
Group C	1, 2, 5, 7, 20, 21, 34, 35
Group D	3, 4, 18, 23, 24, 26, 30, 31

Urban Structure and Dynamics

From an analysis of the grouping patterns in
Exhibit 2 and Exhibit 3, certain consistencies can be ob-
served in the overall urban structure in the Biloxi-Gulf-
port SMSA. Perhaps the most pronounced pattern observable
is the consistency of the two analytical procedures in
grouping together those indicators relating to the poverty
vs. non-poverty dimensions (Groups A and B). Both tech-
niques cluster in Groups A and B those indicators which
document the persistent patterns of indicators which have
been characteristically linked to poverty or lack of such
in the urban environment. Group A in both exhibits is com-
posed of those indicators which document high status areas,
i.e., high percentages of white population in the area;
high percentages of high status occupations, high levels
of education and income, etc. At the other extreme,
Group B documents and supports the interrelationships of
a number of poverty linked indicators which characterize
low status areas, i.e., high percentages of black popula-
tion, high percentages of families in poverty, high per-
centages of low status occupations, substandard and over-
crowded housing.

As we have stated previously, we are not only
concerned with the documentation of existing conditions in

terms of our indicators, but we are also concerned with how the Biloxi-Gulfport SMSA varies in terms of intra-area growth potential and urban change. Consequently, we want to observe whether there are discernible patterns of fertility and migration that might suggest a population build-up or potential for such by socio-economic area. For example, is there persistent evidence of high fertility and high migration levels being grouped with indicators documenting the poverty vs. non-poverty dimensions? If such is the case, we might expect over a rather extended time period to get increased concentrations of low income poverty families in specific areas. By the same token, an increased concentration of high income families in high status areas could also indicate a pattern of population redistribution along socio-economic lines.

To get some indication of the possible linkage of our growth dimensions, fertility and migration, to socio-economic area, we used information from Table 3 and Exhibits 2 and 3 to determine whether there was the tendency for the growth indicators to cluster with the high or low status dimensions. While no consistent pattern relating migration to our dimensions emerged, a rather clear fertility pattern is observed. From Table 3 and Exhibits 2 and 3, it can be seen that those areas with a preponderance of low status characteristics are also

those areas of high fertility. Specifically in those tracts where we have overcrowded and substandard housing, a high proportion of families in low status occupations, and a high proportion of families in poverty (Group I, Table 3), we also have high levels of fertility. Conversely, in those tracts which manifest high status characteristics, we generally exhibit low levels of fertility. Based upon this observation, we would expect continual growth in the low status areas in terms of natural increase (an excess of births over deaths) in spite of a lack of consistent pattern of migration into the area.

Because of the documented patterns of poverty vs. non-poverty dimensions and the relative strengths of the interrelationship among the indicators, our concern in the second step of this phase of the research was to use our methodological procedures to designate or cluster tracts using the indicator categories in Exhibits 2 and 3. Based upon the clusters of tracts presented in Exhibits 4 and 5 and Table 2, we are able to designate rather consistently those tracts which cluster on the high status criteria and those which cluster on the low status criteria (Exhibit 6). Using composite evaluations of both the H-group and factor analysis procedures, eleven tracts cluster consistently on the high status criteria. These are tracts 8, 10, 12, 15, 16, 22, 27, 28, 29, 32, and 33. (See Figure 1.) Using a

Exhibit 6

Composite Tract Groups by Status Level

Group	Tracts in Group
High status N=11	8, 10, 12, 15, 16, 22, 27, 28, 29, 32, 33
Intermediate/high status transitional N=5	6, 13, 14, 17, 19
Intermediate/low status transitional N=11	1, 2, 5, 7, 20, 21, 26, 20, 31, 34, 35
Low status N=5	3, 4, 18, 23, 24

similar comparison, five tracts--Tracts 3, 4, 18, 23, and 24--cluster on those dimensions characteristics of low status areas. The remaining sixteen tracts are not consistently clustered, so we cannot make general categories or groupings by socio-economic area. We can state, however, that of these intermediate tracts, five tracts-- Tracts 6, 13, 14, 17, and 19--cluster more consistently into a group we label intermediate/high-status transitional because of their tendency to group in the direction of those tracts clustering in high status criteria. In a similar fashion, the remaining eleven tracts--Tracts 1, 2, 5, 7, 20, 21, 26, 30, 31, 34, and 35--would be labeled intermediate/low status transitional because of their tendency to group in the direction of the low status tracts.

In summarizing this section, it should be emphasized that the tract groupings presented in Exhibit 6 are nodal classifications based upon 25 indicators and a tract's group membership does not imply that it would be in the "highest" or "lowest" group on all ranked variables in Table 3. We can say, however, that the two research stages are consistent in that tracts which compose the high status groups in Exhibit 6 with few exceptions fall in either the high or high intermediate groups in Table 3. The same is true for the low status groups. Thus using the nodal groups in Exhibit 6 and the ranked tract values in Table 3,

one can easily document a tract's position in a particular
group on any variable of interest.

Summary

As we stated in a previous section, the intent of
this research was to provide an intra-area comparative
analysis of relative urban conditions in the Bilox-Gulfport
SMSA. Perhaps the most dramatic finding in our analysis
relates to the considerable amount of variation evident
across the area as measured by the various urban indicators
used in this analysis. One fact is clear as one evaluates
this intra-area variation and this is that the Biloxi-
Gulfport SMSA is not a homogeneous area, but it manifests
many of the ecological patterns of urban structure which
characterize other urban areas. It was not our intent to
say that the Biloxi-Gulfport SMSA is "better" or "worse"
at this stage in its growth than other SMSA's of comparable
size because no inter-urban comparisons were made. We do
think this research will provide a basis for further re-
search in the SMSA and an evaluation in subsequent periods
regarding whether the quality of life is improving or
deteriorating.

Table 2

Urban Indicators from the 1970 Census of Population
Second and Fourth Counts (All Files)*

Tract Number	I1. Sex Ratio	I2. Percent Males 20-34	I3. Percent Females 20-34
1	90.12	9.03	8.24
2	93.82	11.72	10.79
3	87.58	9.31	10.83
4	86.33	10.48	9.82
5	80.30	14.40	12.25
6	84.07	14.44	12.70
7	94.55	13.87	14.23
8	92.39	12.18	11.60
9	521.63	43.03	6.19
10	98.92	12.04	13.32
11	9980.00	5.55	0.07
12	100.11	9.52	10.88
13	95.95	19.65	17.00
14	83.11	14.14	14.68
15	101.00	10.16	11.48
16	100.00	6.75	8.28
17	97.57	11.89	10.94
18	88.37	8.48	10.55
19	95.17	10.27	10.55
20	91.90	10.95	10.28
21	232.53	27.17	6.88
22	85.89	9.08	8.91
23	90.61	9.06	9.28
24	95.65	9.28	10.37
25	270.27	43.37	7.68
26	94.05	11.45	11.98
27	100.86	9.94	11.59
28	78.87	7.09	8.42
29	92.23	6.48	6.42
30	99.91	8.32	8.82
31	95.65	9.17	9.90
32	101.24	11.45	13.23
33	99.46	12.04	12.55
34	104.00	10.86	11.42
35	102.29	10.39	10.49

*See Exhibit 1 for definitions of the variables.

Table 2 (continued)

Tract Number	I4. Fertility Index	I5. Percent Foreign Stock	I6. Percent White
1	41.80	10.15	99.63
2	39.51	5.41	78.94
3	57.79	1.22	46.95
4	50.99	3.98	53.63
5	27.07	11.39	95.61
6	22.09	7.57	98.65
7	58.73	7.08	86.39
8	28.35	9.87	98.52
9	39.88	7.74	93.82
10	41.64	8.89	96.84
11	0.00	7.69	96.43
12	31.91	11.80	97.83
13	33.26	8.92	98.66
14	30.95	9.79	99.31
15	39.52	0.00	92.16
16	27.36	7.45	99.70
17	38.44	4.67	78.58
18	63.06	1.81	18.07
19	44.67	0.67	80.48
20	43.99	1.65	78.51
21	23.08	3.77	86.33
22	34.61	3.82	99.30
23	42.24	7.77	53.66
24	52.64	2.67	29.31
25	69.78	1.16	84.42
26	48.78	5.80	48.75
27	45.51	6.54	93.79
28	22.00	7.40	99.21
29	36.50	5.19	92.45
30	53.45	2.43	53.75
31	64.16	2.03	75.75
32	48.44	3.15	99.67
33	43.76	2.73	99.57
34	49.70	7.57	93.03
35	46.25	0.60	92.42

Table 2 (continued)

Tract Number	I7. Percent Black	I8. Percent Other	I9. Percent families in poverty
1	0.26	0.10	24.07
2	20.97	0.10	22.49
3	52.92	0.12	39.59
4	46.34	0.03	30.99
5	3.34	1.05	35.65
6	0.95	0.40	11.28
7	12.85	0.76	21.64
8	0.26	1.21	14.98
9	4.57	1.61	3.13
10	2.31	0.85	9.32
11	3.57	0.00	0.00
12	1.42	0.75	7.68
13	0.37	0.97	10.06
14	0.21	0.48	14.54
15	7.22	0.62	13.35
16	0.23	0.07	3.95
17	20.98	0.44	16.72
18	81.85	0.07	50.04
19	19.15	0.37	15.02
20	21.19	0.30	17.28
21	12.95	0.72	13.51
22	0.21	0.50	15.38
23	45.89	0.44	35.77
24	70.65	0.04	33.42
25	15.33	0.24	11.08
26	49.24	2.01	26.93
27	5.37	0.84	9.27
28	0.00	0.79	4.87
29	7.19	0.36	6.77
30	46.20	0.04	41.20
31	23.76	0.49	30.36
32	0.12	0.21	10.15
33	0.16	0.27	10.95
34	6.82	0.15	19.98
35	7.57	0.02	16.96

Table 2 (continued)

Tract Number	I10. Percent families in poverty; male head	I11. Percent families in poverty; female head	I12. Percent families low status occupations
1	18.85	5.22	46.80
2	15.05	7.44	52.23
3	20.54	19.04	61.13
4	17.93	13.07	60.76
5	25.46	10.19	24.04
6	9.32	1.96	11.92
7	13.34	8.30	46.92
8	13.66	1.32	32.02
9	3.13	0.00	36.27
10	7.48	1.84	23.70
11	0.00	0.00	0.00
12	7.06	0.62	17.97
13	9.40	0.65	25.23
14	13.79	0.75	13.34
15	10.23	3.12	18.40
16	2.66	1.29	12.93
17	11.74	4.99	34.64
18	26.57	23.47	70.17
19	10.10	4.92	32.98
20	11.30	5.98	40.74
21	0.00	13.50	36.76
22	13.27	2.12	19.91
23	21.62	14.14	59.16
24	20.92	12.50	65.57
25	8.62	2.46	46.76
26	15.62	11.31	51.34
27	4.04	5.23	24.12
28	0.62	4.25	13.93
29	6.77	0.00	16.89
30	28.91	12.29	53.70
31	26.52	3.83	42.94
32	8.95	1.20	23.95
33	7.20	3.75	27.06
34	17.48	2.50	35.00
35	15.09	1.87	40.54

Table 2 (continued)

Tract Number	I13. Percent families with high status occupations	I14. Percent husband-wife families	I15. Percent families with female head
1	15.65	83.40	13.40
2	17.56	80.73	14.92
3	14.42	73.08	23.82
4	16.58	78.79	17.52
5	24.02	83.33	10.49
6	46.35	88.17	10.03
7	11.49	86.09	12.01
8	32.81	87.88	10.34
9	32.84	98.48	0.41
10	28.24	92.54	6.21
11	45.45	100.00	0.00
12	36.20	91.40	7.21
13	32.72	89.93	8.02
14	47.21	89.99	8.73
15	35.20	88.83	9.50
16	48.58	92.88	5.62
17	25.71	85.00	11.10
18	9.43	66.13	28.15
19	24.22	84.59	13.36
20	18.12	80.40	16.61
21	19.12	63.33	30.00
22	30.53	85.84	12.09
23	13.32	75.86	20.69
24	8.53	77.52	16.82
25	9.58	87.41	11.22
26	19.31	79.32	18.39
27	28.71	91.47	7.73
28	34.46	89.31	9.00
29	41.36	85.65	11.16
30	11.90	80.04	16.05
31	14.19	86.39	10.49
32	32.32	92.95	5.52
33	20.99	91.96	6.03
34	17.39	88.18	7.96
35	14.86	89.44	7.76

Table 2 (continued)

Tract Number	I16. Youth dependency ratio	I17. Age dependency ratio	I18. Percent of housing units overcrowded
1	54.07	19.84	11.57
2	49.89	18.40	10.78
3	80.92	12.99	18.72
4	63.15	17.42	15.37
5	22.68	25.61	3.94
6	37.09	17.84	4.23
7	71.71	12.54	12.57
8	46.00	11.38	5.39
9	89.35	0.75	12.62
10	78.42	3.29	7.93
11	47.37	0.00	0.00
12	73.43	5.77	8.26
13	39.30	9.77	4.31
14	34.92	20.43	4.77
15	78.84	6.53	8.69
16	68.69	6.89	4.12
17	60.24	11.80	9.33
18	94.73	11.36	22.08
19	61.55	12.03	9.62
20	46.83	17.95	8.93
21	14.15	32.08	6.67
22	43.35	24.70	6.13
23	60.33	17.81	12.24
24	93.95	8.53	23.14
25	91.63	5.58	14.46
26	79.91	10.99	19.55
27	84.27	7.90	12.34
28	55.89	17.41	3.73
29	59.37	21.08	6.33
30	77.77	16.36	20.94
31	102.38	10.23	20.86
32	76.47	6.08	9.81
33	71.63	8.29	12.41
34	71.08	14.07	15.12
35	76.87	10.85	16.35

Table 2 (continued)

Tract Number	I19. Percent of housing units substandard	I20. Percent of housing units which are single dwelling units	I21. Median income
1	5.86	68.22	$5,565
2	6.36	69.68	5,641
3	7.12	63.13	4,733
4	11.01	79.02	5,611
5	7.17	39.36	5,155
6	0.82	53.26	6,732
7	1.90	56.00	5,718
8	0.77	78.60	6,568
9	1.78	51.49	7,553
10	1.98	74.89	8,293
11	0.00	72.73	0
12	0.46	79.94	8,381
13	0.40	44.19	7,083
14	0.98	60.53	7,805
15	3.25	83.75	8,623
16	0.82	97.46	13,264
17	4.45	73.96	7,828
18	24.30	72.66	3,986
19	2.83	91.06	7,893
20	8.75	71.38	5,995
21	36.00	16.33	8,375
22	2.41	76.15	7,627
23	15.84	82.66	4,721
24	16.77	88.29	5,630
25	4.82	82.38	7,284
26	6.24	69.41	6,250
27	2.86	88.14	8,500
28	1.53	85.34	9,625
29	1.92	83.39	10,455
30	7.24	76.38	4,731
31	6.12	82.85	6,664
32	4.00	89.90	8,688
33	4.14	74.31	7,783
34	13.28	81.40	5,949
35	17.17	80.97	7,242

Table 2 (continued)

Tract Number	I22. Median educational level	I23. Density measure, population/ area	I24. Percent moved into housing unit, 1968-1970	I25. Percent of population moving into area, 1968-1970
1	8.1	3,192	30.21	34.98
2	10.3	513	47.17	56.35
3	9.0	5,995	40.41	40.44
4	8.9	7,632	27.18	22.99
5	12.0	2,648	56.09	62.81
6	12.5	3,812	50.04	49.07
7	12.1	6,127	61.67	70.28
8	12.5	3,345	44.59	45.61
9	12.7	5,267	94.93	96.87
10	12.6	6,549	61.83	66.74
11	10.0	4,459	0.00	50.79
12	12.6	1,350	53.74	56.32
13	12.5	925	69.31	70.55
14	13.0	1,201	52.25	54.82
15	12.6	1,147	48.83	48.79
16	13.1	1,841	23.27	24.28
17	12.2	2,306	46.12	42.52
18	9.2	768	46.71	45.05
19	12.1	4,117	31.05	34.35
20	10.5	3,257	38.40	41.18
21	10.4	1,318	51.39	75.41
22	12.5	3,840	35.91	39.93
23	10.1	3,643	35.43	36.50
24	8.9	788	29.30	32.87
25	12.0	1,316	67.83	80.79
26	10.6	3,391	48.34	44.o0
27	12.3	1,626	42.55	43.99
28	12.6	1,637	38.38	38.17
29	12.7	663	28.33	31.41
30	9.1	311	49.78	55.23
31	11.1	81	51.57	61.63
32	12.3	175	61.91	63.40
33	12.2	493	54.38	53.72
34	11.8	16	26.70	33.02
35	11.1	28	35.62	40.24

Table 3

Rank of Tracts by Z-Score and Raw Score with Variable
Mean, Standard Deviation, Skewness, and Kurtosis

Group	I1. Sex Ratio			I2. Percent Males, 20-34		
	Tract	Z-Score Rank	Raw Score	Tract	Z-Score Rank	Raw Score
I Highest Level	21	5.37	232.5	21	4.13	27.2
	34	0.24	104.0	13	2.17	19.6
	35	0.17	102.3	6	0.82	14.5
	32	0.13	101.2	5	0.81	14.4
	15	0.12	101.0	14	0.74	14.1
	27	0.12	100.0	7	0.67	13.9
	12	0.09	100.1	8	0.23	12.2
	16	0.08	100.0	10	0.20	12.1
II High Intermediate Level	30	0.08	99.9	33	0.20	12.0
	33	0.06	99.5	17	0.16	11.9
	10	0.04	98.9	2	0.11	11.7
	17	-0.02	97.6	26	0.04	11.5
	13	-0.08	96.0	32	0.04	11.4
	24	-0.09	95.7	20	-0.09	11.0
	31	-0.09	95.6	34	-0.11	10.9
	19	-0.11	95.2	4	-0.21	10.5
III Low Intermediate Level	7	-0.14	94.6	35	-0.23	10.4
	26	-0.16	94.0	19	-0.26	10.3
	2	-0.17	93.8	15	-0.29	10.2
	8	-0.22	92.4	27	-0.35	9.9
	29	-0.23	92.2	12	-0.46	9.5
	20	-0.24	91.9	3	-0.51	9.3
	23	-0.29	90.6	24	-0.52	9.2
	1	-0.31	90.1	31	-0.55	9.1
IV Lowest Level	18	-0.38	88.4	22	-0.57	9.0
	3	-0.41	87.6	23	-0.58	9.0
	4	-0.46	86.3	1	-0.59	9.0
	22	-0.48	85.9	18	-0.73	8.5
	6	-0.55	84.1	30	-0.77	8.3
	14	-0.59	83.1	28	-1.09	7.1
	5	-0.71	80.3	16	-1.19	6.7
	28	-0.76	78.9	29	-1.25	6.5

Mean		97.95
Standard deviation		24.44
Skewness		11.09
Kurtosis		26.69

Mean		11.28
Standard deviation		3.91
Skewness		5.45
Kurtosis		8.14

Table 3 (continued)

Group	13. Percent Females 20-34			14. Fertility index		
	Tract	Z-Score Rank	Raw Score	Tract	Z-Score Rank	Raw Score
I Highest Level	13	2.77	17.0	31	1.97	64.2
	14	1.72	14.7	18	1.88	63.1
	7	1.52	14.2	7	1.50	58.7
	10	1.10	13.3	3	1.42	57.8
	32	1.06	13.2	30	1.04	53.4
	6	0.82	12.7	24	0.96	52.6
	33	0.75	12.6	4	0.82	56.0
	5	0.62	12.2	34	0.71	49.7
II High Intermediate Level	26	0.49	12.0	26	0.63	48.8
	8	0.32	11.6	32	0.60	48.4
	27	0.32	11.5	35	0.40	46.2
	15	0.27	11.4	27	0.34	45.5
	34	0.24	11.4	19	0.27	44.7
	17	0.02	10.9	20	0.21	44.0
	12	-0.01	10.8	33	0.19	43.8
	3	-0.03	10.8	23	0.05	42.2
III Low Intermediate Level	2	-0.05	10.7	1	0.01	41.8
	18	-0.16	10.6	10	0.00	41.6
	19	-0.16	10.5	15	-0.19	39.5
	35	-0.18	10.4	2	-0.19	39.5
	24	-0.24	10.3	17	-0.28	38.4
	20	-0.28	10.2	29	-0.45	36.5
	31	-0.45	9.9	22	-0.62	34.6
	4	-0.49	9.8	13	-0.73	33.3
IV Lowest Level	23	-0.73	9.3	12	-0.85	31.9
	22	-0.90	8.9	14	-0.94	31.0
	30	-0.93	8.8	8	-1.16	28.4
	28	-1.13	8.4	16	-1.25	27.4
	16	-1.19	8.3	5	-1.28	27.1
	1	-1.21	8.2	21	-1.63	23.1
	21	-1.83	6.9	6	-1.71	22.1
	29	-2.03	6.4	28	-1.72	22.0

Mean	10.90	
Standard deviation	2.24	
Skewness	.89	
Kurtosis	.61	

Mean	41.63	
Standard deviation	11.59	
Skewness	.13	
Kurtosis	-.83	

Table 3 (continued)

Group	15. Percent foreign stock			16. Percent white		
	Tract	Z-Score Rank	Raw Score	Tract	Z-Score Rank	Raw Score
I Highest Level	12	1.91	11.8	16	0.81	99.7
	5	1.78	11.4	32	0.80	99.6
	1	1.41	10.2	1	0.80	99.6
	8	1.33	9.9	33	0.80	99.5
	14	1.30	9.8	14	0.79	99.4
	13	1.04	8.9	22	0.79	99.3
	10	1.04	8.8	28	0.78	99.2
	23	0.70	7.8	13	0.76	98.7
II High Intermediate Level	6	0.64	7.6	6	0.76	98.6
	34	0.64	7.5	8	0.75	98.5
	16	0.60	7.4	12	0.72	97.8
	28	0.59	7.4	10	0.68	96.8
	7	0.49	7.1	5	0.62	95.6
	27	0.33	6.5	27	0.54	93.8
	26	0.11	5.8	34	0.51	93.0
	2	-0.01	5.4	29	0.48	92.5
III Low Intermediate Level	29	-0.07	5.2	35	0.48	92.4
	17	-0.28	4.7	15	0.47	92.2
	4	-0.43	4.0	7	0.21	86.4
	22	-0.48	3.8	21	0.21	86.3
	21	-0.50	3.7	19	-0.06	80.5
	32	-0.68	3.2	2	-0.13	78.9
	33	-0.81	2.7	17	-0.14	78.6
	24	-0.83	2.6	20	-0.14	78.5
IV Lowest Level	30	-0.90	2.4	31	-0.27	75.8
	31	-1.02	2.0	30	-1.25	53.8
	18	-1.08	1.8	23	-1.26	53.7
	20	-1.13	1.6	4	-1.26	53.6
	3	-1.26	1.2	26	-1.48	48.8
	19	-1.42	0.7	3	-1.56	47.0
	35	-1.45	0.6	24	-2.35	29.3
	15	-1.63	0.0	18	-2.85	18.1

	Percent foreign stock	Percent white
Mean	5.43	81.73
Standard deviation	3.39	22.66
Skewness	.38	-3.09
Kurtosis	-1.28	.86

Table 3 (continued)

Group	I7. Percent black			I8. Percent other		
	Tract	Z-Score Rank	Raw Score	Tract	Z-Score Rank	Raw Score
I Highest Level	18	2.86	81.8	26	3.55	2.0
	24	2.36	70.6	8	1.69	1.2
	3	1.57	52.9	5	1.31	1.1
	26	1.41	49.2	13	1.13	1.0
	4	1.28	46.3	10	0.85	0.9
	30	1.27	46.2	27	0.82	0.8
	23	1.26	45.9	28	0.71	0.8
	31	0.27	23.8	7	0.64	0.8
II High Inter- mediate Level	20	0.15	21.2	12	0.61	0.8
	17	0.14	21.0	21	0.54	0.7
	2	0.14	20.9	15	0.31	0.6
	19	0.06	19.2	22	0.03	0.5
	21	-0.22	13.0	31	0.01	0.5
	7	-0.22	12.8	14	-0.02	0.5
	35	-0.46	7.6	17	-0.11	0.4
	15	-0.47	7.2	23	-0.11	0.4
III Low Inter- mediate Level	29	-0.47	7.1	6	-0.20	0.4
	34	-0.49	6.8	19	-0.27	0.4
	27	-0.55	5.4	29	-0.30	0.4
	5	-0.65	3.3	20	-0.44	0.3
	10	-0.69	2.3	33	-0.51	0.3
	12	-0.73	1.4	32	-0.65	0.2
	6	-0.75	1.0	34	-0.79	0.2
	13	-0.78	0.4	3	-0.86	0.1
IV Lowest Level	1	-0.78	0.3	1	-0.90	0.1
	8	-0.78	0.3	2	-0.90	0.1
	16	-0.78	0.2	16	-0.97	0.1
	14	-0.78	0.2	18	-0.97	0.1
	22	-0.78	0.2	24	-1.04	0.0
	33	-0.79	0.2	30	-1.04	0.0
	32	-0.79	0.1	4	-1.07	0.0
	28	-0.79	0.0	35	-1.09	0.0

Mean			17.78	Mean		.49
Standard deviation			22.74	Standard deviation		.44
Skewness			3.10	Skewness		3.31
Kurtosis			.89	Kurtosis		3.15

Table 3 (continued)

Group	I9. Percent families in poverty			I10. Percent families in poverty, male head		
	Tract	Z-Score Rank	Raw Score	Tract	Z-Score Rank	Raw Score
I Highest Level	18	2.60	50.0	30	2.08	28.9
	30	1.84	41.2	18	1.76	26.6
	3	1.70	39.6	31	1.75	26.5
	23	1.37	35.8	5	1.61	25.5
	5	1.36	35.6	23	1.09	21.6
	24	1.17	33.4	24	1.00	20.9
	4	0.96	31.0	3	0.95	20.5
	31	0.91	30.4	1	0.72	18.8
II High Inter- mediate Level	26	0.61	26.9	4	0.60	17.9
	1	0.37	24.1	34	0.54	17.5
	2	0.23	22.5	26	0.29	15.6
	7	0.16	21.6	35	0.22	15.1
	34	0.01	20.0	2	0.21	15.0
	20	-0.22	17.3	14	0.04	13.8
	35	-0.25	17.0	8	0.02	13.7
	17	-0.27	16.7	7	-0.02	13.3
III Low Inter- mediate Level	22	-0.38	15.4	22	-0.03	13.2
	19	-0.41	15.0	17	-0.23	11.7
	8	-0.42	14.9	20	-0.29	11.3
	14	-0.45	14.5	15	-0.44	10.2
	21	-0.54	13.5	19	-0.46	10.1
	15	-0.56	13.4	13	-0.55	9.4
	6	-0.73	11.3	6	-0.56	9.3
	33	-0.76	11.0	32	-0.61	9.0
IV Lowest Level	32	-0.83	10.2	10	-0.81	7.5
	13	-0.84	10.1	33	-0.85	7.2
	10	-0.90	9.3	12	-0.86	7.1
	27	-0.91	9.2	29	-0.90	6.8
	12	-1.04	7.7	27	-1.27	4.0
	29	-1.12	6.8	16	-1.46	2.7
	28	-1.29	4.9	28	-1.73	0.6
	16	-1.37	4.0	21	-1.81	0.0

Mean			19.82	Mean		13.48
Standard deviation			11.81	Standard deviation		7.55
Skewness			1.88	Skewness		0.60
Kurtosis			0.27	Kurtosis		-0.67

Table 3 (continued)

Group	Ill. Percent families in poverty, female head			I12. Percent families with low status occupations		
	Tract	Z-Score Rank	Raw Score	Tract	Z-Score Rank	Raw Score
I Highest Level	18	2.96	23.5	18	2.02	70.2
	3	2.20	19.0	24	1.78	65.6
	23	1.35	14.1	3	1.52	61.1
	21	1.24	13.5	4	1.49	60.8
	4	1.17	13.1	23	1.40	59.2
	24	1.07	12.5	30	1.08	53.7
	30	1.03	12.3	2	0.99	52.2
	26	0.86	11.3	26	0.94	51.3
II High Inter- mediate Level	5	0.67	10.2	7	0.67	46.9
	7	0.34	8.3	1	0.67	46.8
	2	0.19	7.4	31	0.44	42.9
	20	-0.06	6.0	20	0.31	40.7
	27	-0.18	5.3	35	0.30	40.5
	1	-0.19	5.2	21	0.07	36.8
	17	-0.23	5.0	34	-0.03	35.0
	19	-0.24	4.9	17	-0.05	34.6
III Low Inter- mediate Level	28	-0.36	4.2	19	-0.15	33.0
	31	-0.43	3.8	8	-0.21	32.0
	33	-0.45	3.7	33	-0.50	27.1
	15	-0.56	3.1	13	-0.61	25.2
	34	-0.66	2.5	27	-0.68	24.1
	22	-0.73	2.4	5	-0.68	24.0
	6	-0.76	2.0	32	-0.69	23.9
	35	-0.77	1.9	10	-0.70	23.7
IV Lowest Level	10	-0.78	1.8	22	-0.92	19.9
	8	-0.87	1.3	15	-1 01	18.4
	16	-0.87	1.3	12	-1.04	18.0
	32	-0.89	1.2	29	-1.10	16.9
	14	-0.97	0.8	28	-1.28	13.9
	13	-0.98	0.7	14	-1.31	13.3
	12	-0.99	0.6	16	-1.34	12.9
	29	-1.10	0.0	6	-1.40	11.9

Mean	6.33	Mean	35.52
Standard deviation	5.88	Standard deviation	17.16
Skewness	2.69	Skewness	.88
Kurtosis	0.82	Kurtosis	-1.17

Table 3 (continued)

Group	I13. Percent families with high status occupations			I14. Percent husband-wife families		
	Tract	Z-Score Rank	Raw Score	Tract	Z-Score Rank	Raw Score
I Highest Level	16	2.12	48.6	32	1.18	93.0
	14	2.00	47.2	16	1.17	92.9
	6	1.92	46.4	10	1.12	92.5
	29	1.48	41.4	33	1.04	92.0
	12	1.02	36.2	27	0.98	91.5
	15	0.92	35.2	12	0.97	91.4
	28	0.86	34.5	13	0.76	89.9
	8	0.72	32.8	14	0.76	89.8
II High Inter-mediate Level	13	0.71	32.7	35	0.70	89.4
	32	0.67	32.3	28	0.68	89.3
	22	0.51	30.5	15	0.61	88.8
	27	0.35	28.7	34	0.52	88.2
	10	0.31	28.2	6	0.52	88.1
	17	0.09	25.7	8	0.48	87.9
	19	-0.05	24.2	31	0.28	86.4
	5	-0.06	24.0	7	0.23	86.1
III Low Inter-mediate Level	33	-0.33	21.0	22	0.20	85.8
	26	-0.48	19.3	29	0.17	85.6
	21	-0.50	19.1	17	0.08	85.0
	20	-0.59	18.1	19	0.03	84.6
	2	-0.64	17.6	1	-0.14	83.4
	34	-0.65	17.4	5	-0.15	83.3
	4	-0.72	16.6	2	-0.51	80.7
	1	-0.81	15.6	20	-0.55	80.4
IV Lowest Level	35	-0.88	14.9	30	-0.60	80.0
	3	-0.92	14.4	26	-0.70	79.3
	31	-0.94	14.2	4	-0.77	78.8
	23	-1.02	13.3	24	-0.91	77.8
	30	-1.14	11.9	23	-1.18	75.9
	7	-1.18	11.5	3	-1.56	73.1
	18	-1.36	9.4	18	-2.52	66.1
	24	-1.44	8.5	21	-2.91	63.3

Mean	24.72	Mean	84.40
Standard deviation	11.44	Standard deviation	7.36
Skewness	1.27	Skewness	-2.76
Kurtosis	-0.82	Kurtosis	1.28

Table 3 (continued)

Group	I15. Percent families with female head			I16. Youth dependency ratio		
	Tract	Z-Score Rank	Raw Score	Tract	Z-Score Rank	Raw Score
I Highest Level	21	2.81	30.0	31	1.91	102.4
	18	2.51	28.2	18	1.53	94.7
	3	1.81	23.8	24	1.50	94.0
	23	1.30	20.7	27	1.02	84.3
	26	0.92	18.4	3	0.86	80.9
	4	0.78	17.5	26	0.81	79.9
	24	0.67	16.8	15	0.76	78.8
	20	0.63	16.6	10	0.73	78.4
II High Inter- mediate Level	30	0.54	16.0	30	0.70	77.8
	2	0.36	14.9	35	0.66	76.9
	1	0.11	13.4	32	0.64	76.5
	19	0.11	13.3	12	0.49	73.4
	22	-0.10	12.1	7	0.41	71.7
	7	-0.11	12.0	33	0.40	71.6
	29	-0.25	11.2	34	0.37	71.1
	17	-0.26	11.1	16	0.26	68.7
III Low Inter- mediate Level	5	-0.36	10.5	4	-0.01	63.2
	31	-0.36	10.4	19	-0.09	61.6
	8	-0.39	10.3	23	-0.15	60.3
	6	-0.44	10.0	17	-0.16	60.2
	15	-0.52	9.5	29	-0.20	59.4
	28	-0.60	9.0	28	-0.37	55.9
	14	-0.65	8.7	1	-0.46	54.1
	13	-0.76	8.0	2	-0.66	49.9
IV Lowest Level	34	-0.77	7.9	20	-0.81	46.8
	35	-0.80	7.8	8	-0.85	46.0
	27	-0.81	7.7	22	-0.98	43.4
	12	-0.89	7.2	13	-1.18	39.3
	10	-1.06	6.2	6	-0.29	37.1
	33	-1.09	6.0	14	-1.40	34.9
	16	-1.15	5.6	5	-2.00	22.7
	32	-1.17	5.5	21	-2.42	14.2

Mean		12.71
Standard deviation		6.25
Skewness		2.81
Kurtosis		1.09

Mean		63.43
Standard deviation		20.72
Skewness		-0.94
Kurtosis		-0.29

Table 3 (continued)

Group	I17. Age dependency ratio			I18. Percent of housing units overcrowded		
	Tract	Z-Score Rank	Raw Score	Tract	Z-Score Rank	Raw Score
I Highest Level	21	2.81	32.1	24	2.07	23.1
	5	1.80	25.6	18	1.89	22.1
	22	1.66	24.7	30	1.69	20.9
	29	1.10	21.1	31	1.67	20.8
	14	1.00	20.4	26	1.45	19.6
	1	0.91	19.8	3	1.31	18.7
	2	0.68	18.4	35	0.90	16.4
	20	0.61	18.0	4	0.73	15.4
II High Inter-mediate Level	6	0.60	17.8	34	0.69	15.1
	23	0.59	17.8	7	0.25	12.6
	4	0.53	17.4	33	0.22	12.4
	28	0.53	17.4	27	0.21	12.3
	30	0.37	16.4	23	0.19	12.2
	34	0.01	14.1	1	0.08	11.6
	3	-0.16	13.0	2	-0.06	10.8
	7	-0.23	12.5	32	-0.23	9.8
III Low Inter-mediate Level	19	-0.31	12.0	19	-0.26	9.6
	17	-0.34	11.8	17	-0.31	9.3
	8	-0.41	11.4	20	-0.38	8.9
	18	-0.41	11.3	15	-0.42	8.7
	26	-0.47	11.0	12	-0.49	8.3
	35	-0.49	10.8	10	-0.55	7.9
	31	-0.59	10.2	21	-0.77	6.7
	13	-0.66	9.8	29	-0.83	6.3
IV Lowest Level	24	-0.85	8.5	22	-0.86	6.1
	33	-0.89	8.3	8	-0.99	5.4
	27	-0.95	7.9	14	-1.10	4.8
	16	-1.11	6.9	13	-1.17	4.3
	15	-1.16	6.5	6	-1.19	4.2
	32	-1.23	6.1	16	-1.21	4.1
	12	-1.28	5.8	5	-1.24	3.9
	10	-1.67	3.3	28	-1.27	3.7

Mean		14.01
Standard deviation		6.53
Skewness		1.62
Kurtosis		.26

Mean		11.13
Standard deviation		5.90
Skewness		1.32
Kurtosis		-0.92

Table 3 (continued)

Group	I19. Percent of housing units substandard			I20. Percent of housing units which are single dwelling units		
	Tract	Z-Score Rank	Raw Score	Tract	Z-Score Rank	Raw Score
I Highest Level	21	3.74	36.0	16	1.49	97.5
	18	2.23	24.3	19	1.10	91.1
	35	1.31	17.2	32	1.03	89.9
	24	1.26	16.8	24	0.94	88.3
	23	1.14	15.8	27	0.93	88.1
	34	0.81	13.3	28	0.76	85.3
	4	0.52	11.0	15	0.66	83.8
	20	0.22	8.8	29	0.64	83.4
II High Inter- mediate Level	30	0.03	7.2	31	0.60	82.8
	5	0.02	7.2	23	0.59	82.7
	3	0.01	7.1	34	0.52	81.4
	2	-0.09	6.4	35	0.49	81.0
	26	-0.10	6.2	12	0.43	79.9
	31	-0.12	6.1	4	0.37	79.0
	1	-0.15	5.9	8	0.35	78.6
	17	-0.33	4.4	30	0.21	76.4
III Low Inter- mediate Level	33	-0.37	4.1	22	0.20	76.2
	32	-0.39	4.0	10	0.12	74.9
	15	-0.49	3.2	33	0.09	74.3
	27	-0.54	2.9	17	0.06	74.0
	19	-0.54	2.8	18	-0.01	72.7
	22	-0.60	2.4	20	-0.09	71.4
	10	-0.65	2.0	2	-0.20	69.7
	29	-0.66	1.9	26	-0.21	69.4
IV Lowest Level	7	-0.66	1.9	1	-0.28	68.2
	28	-0.71	1.5	3	-0.59	63.1
	14	-0.78	1.0	14	-0.75	60.5
	6	-0.80	0.8	7	-1.03	56.0
	16	-0.80	0.8	6	-1.19	52.3
	8	-0.81	0.7	13	-1.74	44.2
	12	-0.85	0.5	5	-2.04	39.4
	13	-0.86	0.4	21	-3.44	16.3

Mean	7.02	Mean 72.89
Standard deviation	7.86	Standard deviation 16.72
Skewness	4.67	Skewness -3.50
Kurtosis	4.94	Kurtosis 3.02

Table 3 (continued)

Group	I21. Median income			I22. Median educational level		
	Tract	Z-Score Rank	Amount	Tract	Z-Score Rank	Raw Score
I Highest Level	16	3.26	$13,264	16	1.20	13.1
	29	1.77	10,455	14	1.13	13.0
	28	1.34	9,625	29	0.93	12.7
	32	0.84	8,688	10	0.86	12.6
	15	0.81	8,623	15	0.86	12.6
	27	0.74	8,500	28	0.86	12.6
	12	0.68	8,381	12	0.86	12.6
	21	0.68	8,375	6	0.79	12.5
II High Inter- mediate Level	10	0.63	8,293	8	0.79	12.5
	19	0.42	7,893	13	0.79	12.5
	17	0.39	7,828	22	0.79	12.5
	14	0.37	7,805	27	0.65	12.3
	33	0.36	7,783	32	0.65	12.3
	22	0.28	7,627	17	0.58	12.2
	35	0.08	7,242	33	0.58	12.2
	13	-0.01	7,083	7	0.51	12.1
III Low Inter- mediate Level	6	-0.19	6,732	19	0.51	12.1
	31	-0.23	6,664	5	0.44	12.0
	8	-0.28	6,568	34	0.30	11.8
	26	-0.54	6,250	31	-0.18	11.1
	20	-0.58	5,995	35	-0.18	11.1
	34	-0.61	5,949	26	-0.53	10.6
	7	-0.73	5,718	20	-0.59	10.5
	2	-0.77	5,641	21	-0.66	10.4
IV Lowest Level	24	-0.78	5,630	2	-0.73	10.3
	4	-0.79	5,611	23	-0.87	10.1
	1	-0.81	5,565	18	-1.49	9.2
	5	-1.03	5,155	30	-1.56	9.1
	3	-1.25	4,733	3	-1.63	9.0
	30	-1.25	4,731	4	-1.70	8.9
	23	-1.26	4,721	24	-1.70	8.9
	18	-1.64	3,986	1	-2.25	8.1

Mean	7097.31	Mean	11.36
Standard deviation	1922.21	Standard deviation	1.47
Skewness	2.23	Skewness	-1.78
Kurtosis	1.80	Kurtosis	-0.91

Table 3 (continued)

Group	I23. Density measure, population/area			I24. Percent moved into housing unit, 1968-1970		
	Tract	Z-Score Rank	Number	Tract	Z-Score Rank	Raw Score
I Highest Level	4	2.59	7,632	13	2.14	69.3
	10	2.06	6,549	32	1.50	61.9
	7	1.86	6,127	10	1.50	61.8
	3	1.79	5,995	7	1.48	61.7
	19	0.87	4,117	5	1.01	56.1
	22	0.74	3,840	33	0.86	54.4
	6	0.72	3,812	12	0.81	53.7
	23	0.64	3,643	14	0.68	52.2
II High Inter-mediate Level	26	0.52	3,391	31	0.62	51.6
	8	0.49	3,345	21	0.60	51.4
	20	0.45	3,257	6	0.49	50.0
	1	0.42	3,192	30	0.47	49.8
	5	0.15	2,648	15	0.39	48.8
	17	-0.01	2,306	26	0.34	48.3
	16	-0.24	1,841	2	0.24	47.2
	28	-0.34	1,637	18	0.20	46.7
III Low Inter-mediate Level	27	-0.35	1,626	17	0.15	46.1
	12	-0.48	1,350	8	0.02	44.6
	21	-0.50	1,318	27	-0.15	42.6
	14	-0.56	1,201	3	-0.34	40.4
	15	-0.58	1,147	20	-0.51	38.4
	13	-0.69	925	28	-0.51	38.3
	24	-0.76	788	22	-0.72	35.9
	18	-0.77	768	35	-0.75	35.6
IV Lowest Level	29	-0.82	663	23	-0.76	35.4
	2	-0.89	513	19	-1.14	31.0
	33	-0.90	493	1	-1.21	30.2
	30	-0.99	311	24	-1.29	29.3
	32	-1.06	175	29	-1.37	28.3
	31	-1.10	81	4	-1.47	27.2
	35	-1.13	28	34	-1.51	26.7
	34	-1.16	16	16	-1.80	23.3

Mean	2335.47	Mean	44.33
Standard deviation	2075.71	Standard deviation	11.87
Skewness	2.18	Skewness	0.09
Kurtosis	0.03	Kurtosis	-0.94

Table 3 (continued)

Group	I25. Percent of population moving into area, 1968-1970		
	Tract	Z-Score Rank	Raw Score
I Highest Level	21	2.08	75.4
	13	1.72	70.6
	7	1.70	70.3
	10	1.43	66.7
	32	1.19	63.4
	5	1.14	62.8
	31	1.06	61.6
	2	0.66	56.4
II High Inter- mediate Level	12	0.66	56.3
	30	0.58	55.2
	14	0.55	54.8
	33	0.47	53.7
	6	0.12	49.1
	15	0.10	48.8
	8	-0.13	45.6
	18	-0.17	45.0
III Low Inter- mediate Level	26	-0.24	44.1
	27	-0.25	44.0
	17	-0.36	42.5
	20	-0.46	41.2
	3	-0.52	40.4
	35	-0.53	40.2
	22	-0.55	39.9
	28	-0.68	38.2
IV Lowest Level	23	-0.81	36.5
	1	-0.92	35.0
	19	-0.97	34.4
	34	-.107	33.0
	24	-1.08	32.9
	29	-1.19	31.4
	16	-1.71	24.3
	4	-1.81	23.0

Mean	47.40
Standard deviation	13.70
Skewness	0.65
Kurtosis	-0.86

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