AUTHOR TITLE Purohit, Sally R.; Molnar, Joseph J.
A Longitudinal Analysis of Satisfaction with Selected
Community Services in a Non-Metropolitan Area.
Alabama Agricultural Experiment Station, Auburn.
Department of Agriculture, Washington, D.C.

INSTITUTION SPONS AGENCY PUB DATE NOTE

Apr. 76 - 24p.; Research supported as Auburn Agricultural Experiment Station Project 1-054, Title V of the Purel Poyclopport Lot

Rural Development Act

BORS PRICE DESCRIPTORS MF-\$0.83 HC-\$1.67 Plus Postage.

*Community Attitudes; Community Leaders; *Community Satisfaction; *Community Services; *Community Surveys; Comparative Analysis; Family (Sociological Unit); Health Services; *Longitudinal Studies; Public Officials; Recreation; *Rural Areas; Schools; Utilities

IDENTIFIERS *Alabama (Central)

ABSTRACT

Longitudinal, changes in satisfaction with selected community services were examined in three nonmetropolitan counties in central Alabama, focusing on variation in changes across three groups (government officials; business leaders, household respondents) and on the relation of changes in satisfaction for individual services to overall community satisfaction. Interviews were conducted in 1974 and 1977, with longitudinal data available for 110 business leaders, 92 government officials, and 101 household residents. Services rated were water, sewage, garbage, telephone, fire protection, health care, public schools, and recreation. In general, levels of satisfaction of officials and business respondents toward services increased; while those of household residents declined. However, households showed a greater increase in overall community satisfaction, indicating a relative absence of relationship between change in satisfaction with services and change in everall community satisfaction, as for influence of community group membership, government officials held consistently more positive views of services over time than either business leaders or household respondents. Dissatisfaction was greatest for all groups with recreation. There was little support for the thesis that increased movement to rural areas is fied to greater satisfaction with rural community services. (RS)

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A LONGITUDINAL ANALYSIS OF SATISFACTION WITH SELECTED COMMUNITY SERVICES IN A NON-METROPOLITAN AREA

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A LONGITUDINAL ANALYSIS OF SATISFACTION WITH SELECTED COMMUNITY SERVICES IN A NON-METROPOLITAN AREA

An important aspect of the overall quality of life for many individuals is community satisfaction. The local community serves as a link between the individual and the larger society, and as the setting for the majority of life cycle events (Rossi, 1972). Based on the premise that the nature of the community in which an individual lives affects that person's overall quality of life, a great deal of attention has been given to identifying conditions which tend to promote or retard favorable perceptions of a community as a place to live (Campbell et al., 1976; Goudy, 1977). Among the factors contributing to community satisfaction as a component of quality of life are the objective characteristics of the community as well as the subjective predispositions of residents. Objective factors presumably shape the individual's accumulated experience with community features, whereas the subjective reactions of individuals influence the definition and evaluation of that experience.

A central set of objective community features are the services that residents receive. A major source of dissatisfaction in non-metropolitan areas often is the absence of or poor quality of basic services. A dominant theme in the Economic Pevelopment Act of 1968, the Rural Development Act of 1972, and other legislation has been the improvement of public services, channeling federal funds to rural areas through block grants and loans. The success of these efforts may be reflected in the disproportionate population growth of rural areas in recent years, suggesting that many of the major sources of dissatisfaction with rural life have been alleviated, and that small town living is becoming increasingly attractive to many people (Beale, 1975).

An important question, then, is the extent and distribution of changes in satisfaction with rural services. An individual's location in the local

social structure may have an important influence on perceptions and evaluations of community features. In addition, improvement may be restricted to persons residing in population centers, or to residents willing and able to undergo tax increases and higher user charges. Furthermore, limited improvements may serve only to raise expectations and increase overall dissatisfaction with essentially stable conditions.

Several studies have dealt solely or partially with satisfaction with community services or community assessments (Carruthers et al., 1975; Kuehn, 1976; Smith and Klindt, 1976; Crawford et al., 1975). One study of community satisfaction in the northeast reported rather high levels of satisfaction generally, but wide variability in satisfaction with specific community services between geographical areas (Kuehn, 1977). Also, out of a wide range of possible factors that might influence the relationship between a particular service and satisfaction with that service, the northeastern study did not discover a variable that had much of an effect on satisfaction with community services (Kuehn, 1977:1; Kuehn, 1976:1-2). Few studies have charted satisfaction with community services over an extended period.

The objective of this paper is to examine longitudinal changes in satisfaction with selected community services in three non-metropolitan counties. We focus on the perceptions of three groups of community residents: government officials (elected and appointed), owners or managers of businesses, and random household respondents, comparing satisfaction ratings for eight basic community services. We examine changes over time, as well as variation in change across the three groups. Finally, changes in satisfaction with individual services are related to overall community satisfaction.

It is hypothesized that community group membership is a major determinant of satisfaction, accounting for a great deal of variability in assessments of community services. Several control variables are introduced into the analysis in order to reduce spurious relationships between group

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membership and changes in satisfaction with community services.

Research and Models in Community Satisfaction

Recent research in the area of community satisfaction tends to suffer from problems of comparability in two major ways. First, the concept of community itself is so broad and encompassing that it contains a variety of subjective and objective meanings. Research in community, residential and neighborhood satisfaction often is confounded by the absence of a clear and unambiguous referent. Secondly, conceptual meanings and measurements of satisfaction vary widely, further restricting comparison (Deseran et al., 1976).

To overcome these problems, researchers have developed models of community satisfaction that identify components of community and incorporate specific dimensions of satisfaction for each component. One of the most well developed models is that utilized by Marans and Rodgers (1975) and elaborated by Campbell and associates (1976). It represents an attempt to place the different concepts of locality in some meaningful temporal and physical order. In this model, the levels of specificity in residential milieu generally move from dwelling unit to neighborhood to community, although Marans and Rodgers (1975) make a further distinction between two levels of neighborhood (micro- and macro-). Levels of satisfaction with these different "domains" of experience also influence and are influenced by satisfaction with other areas of life, which in turn influence, the total quality of life experience (Marans and Rodgers, 1975:306; Campbell et al., 1976:220).

The work of Marans and Rodgers (1975) builds on earlier research in the area of community satisfaction which suggested that satisfaction is



a multi-dimensional variable (Johnson and Knopp, 1970). A central component of overall community satisfaction is assessment of local services and facilities. Marans and Rodgers found that "assessments of perceived environmental attributes," such as schools, taxes, etc. strongly influenced community satisfaction. This finding was also supported by Goudy (1977), although his study suggested that social dimensions are of more importance than institutional factors in explaining community satisfaction.

Personal characteristics, such as age, income or race, which might be thought to be highly correlated with levels of community satisfaction, were actually demonstrated by Marans and Rodgers (1975) and Goudy (1977) to have little direct effect on community satisfaction. Personal characteristics assume more importance, however, when they are used/to explain attachment to the community rather than community evaluation (Goudy, 1977: 380). Other studies which have utilized personal characteristics as correlates of satisfaction have produced findings which are inconclusive and sometimes contradictory (Rojek et al., 1975:184-185). In particular, the role of different measures of sacioeconomic status as determinants of satisfaction deserves further investigation.

Community Group Membership

Different segments of a community may have differential perceptions of various community services. Government officials may have more positive avaluations than other groups because of their role in securing improvements and maintaining current levels of community services. Also, studies have shown that knowledge about public issues and policies often is limited to a small minority of the population, usually the leadership sector (Oskamp, 1977:117). Business interests may be particularly concerned with services as a factor in the production process or the operation of a retail

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or service establishment. Household respondents may be especially sensitive to changes in community services, particularly if new taxation or user charges are involved.

Some studies have shown wide variability between attitudes of leaders and nonleaders (Nix et al., 1970; Nix and Seerley, 1973; Molnar and Purohit, 1977) in such areas as orientation to change, perceived community needs, and ratings of services and facilities. However, one study (Smith and Klindt, 1976) did demonstrate similar perceptions of community needs among leaders and other residents. Our study is unique in its inclusion of those engaged in business and commerce as a separate group. The addition of this group was considered important because in rural communities business managers and proprietors are often community leaders as well, but unlike government officials, are not directly responsible to the general public.

Research Procedures

Sample and Data Collection

The data for this study were collected as part of a research project funded under Title V of the Rural Development Act of 1972. A three county study area was selected on the basis of its predominantly rural character, its proximity to other growing urban centers, and its similarities to other central Alabama counties in the types of problems the area faced in promoting development. The area's potential to respond to efforts of extension personnel to encourage economic development was an additional selection factor.

The data for this study was obtained in interviews conducted in 1974 and again in 1977. Interviewers contacted a sample of business leaders,

a nearly complete enumeration of elected and appointed officials at the local, state, and federal levels, and a random sample of households in the three counties. In 1977, a subsample of household residents, business respondents, and government officials was recontacted. Longitudinal data were available for 110 business leaders, 92 government officials, and 101 household residents.

Different selection procedures were used to sample the three groups of respondents. For the household sample, a three percent sample of the total number of households in the three county area was utilized. A multi-stage random sampling design was employed to select respondents.

Census enumeration districts were identified and areas within the districts were divided into sectors which served as the basic sampling unit. Households in each sector were systematically approached for interview until the quota of six interviews was completed for each sector. A 23% subsample was selected for reinterview in 1977. Limited funding precluded recontacting all 1974 respondents.

In order to obtain the sample of business leaders in 1974, a complete list of businesses and industries was assembled for the three counties and a 30 percent sample was drawn. Only owners and/or managers of businesses were interviewed. The 1977 study represents reinterviews with a 42 percent subsample.

The government leadership sector was defined as the set of county government leaders, municipal leaders, as well as state and federal agency personnel located in the three county area. The 1974 study identified and interviewed 115 officials and in the 1977 study, 92 officials were recontacted. In this study, the term "government official" or "knowledgeable" is applied to individuals in the community who held formal positions with responsibility for important community resources and decision-making processes.

Thus, these individuals were selected because of their status as positional leaders rather than reputational leaders. Since the term "header" generally tends to be employed ambiguously, this study will utilize either government official or knowledgeable as alternatives to the term leader. The term "knowledgeable" has been utilized by others (Steelman and Evans, 1976) to refer to a similar grouping of public officials.

Measurement

In 1974, satisfaction with selected community services was measured by an adequacy rating; respondents were asked to assess whether a particular service was "not available," "less than adequate," "adequate," or "more than adequate," coded one to four. Respondents were asked to rate the following services: water, sewage, garbage, telephone, fire protection, health care, public schools, and recreation. These ratings ranged from one to four.

In 1977, satisfaction with the same community services was measured by a scale that ranged from "very dissatisfied" to "very satisfied," with values ranging from one to seven. In order to deal with the discrepancy in response frameworks, the 1974 and 1977 ratings were standardized on a 100 point scale so that the values represented percentage of scale. In this way, data from the two time periods could be compared by computing a difference score between the two ratings. Any bias in this scoring procedure is a constant one, and should not affect differences between groups.

Changes in satisfaction with selected community services were compared by community group membership and then control variables were introduced in order to eliminate the effects of these variables on satisfaction levels. County was a classification variable coded as 1, 2 or 3 for each

county in the study. Sex was utilized as a classifactory variable and coded as 1 or 2. Length of residence in the community was measured in terms of actual number of years spent in the area. Income was measured by 12 categories ranging from \$0-1,999 to \$30,000 or above. Education was measured by the actual number of years of schooling completed through college and 17 was assigned to graduate training.

<u>Analysis</u>

To examine changes in levels of satisfaction from 1974 to 1977, mean scores of satisfaction with each service in 1974 and 1977 are presented, along with the net change, evaluated by a t-test of differences. Analysis of variance was used to evaluate differences in satisfaction with local services across community groups. Multiple classification analysis was employed to obtain mean scores adjusted for a series of control variables. Length of residence, income and education were employed as covariates, and county, sex and community group were included as independent variables. The dependent variable was change in satisfaction levels with a specific community service from 1974 to 1977, focusing on community group membership as a key independent variable.

Results

In order to examine the nature and extent of change in levels of satisfaction with selected community services over time, mean scores for each individual community service from 1974 to 1977 were compared. In Table 1 these mean scores are presented, along with the mean change during this period for each of the three community groups. The net difference may vary slightly from the specific numerical value obtained by subtraction of the 1974 rating from the 1977 rating, due to missing data:

10,

The magnitude of the net difference is the central focus of this analysis.

A t-test of paired comparisons was employed to test the significance of these differences.

-(Table 1 here)

The officials ratings of water and sewage showed significant improvements, business ratings were essentially unchanged, and household ratings showed significant declines. Garbage collection ratings improved for officials and business respondents, as did business ratings of telephone services, whereas household ratings declined. Business and household respondents saw significant declines in fire protection. No significant changes were reported in health care. Officials and household respondents reported improvements in public schools. All three groups tended to downgrade recreation opportunities in the area. All, however, showed significant increases in overall community satisfaction, particularly the household residents.

In general, the levels of satisfaction of the officials and business respondents tended to increase, while satisfaction levels for household residents declined. The increase in community satisfaction of households may reflect a tendency to respond to small changes in service delivery that may represent a much greater marginal improvement for these individuals.

(Table 2 here)

Table 2 presents changes in attitudes over time by community group membership. Analysis of variance was employed to assess differential fevels of change in satisfaction with local services across community groups. The data reveal broad differences between groups in changes in satisfaction for five of the eight community services. In some cases,



the direction of the relationship was the same for all three groups. For example, the general trend was toward a decline in satisfaction with fire protection and recreation among all residents. Also, satisfaction with garbage service improved with time for all three groups.

Table 2 reveals that the government officials generally reported greater increases in satisfaction with community services over time when compared to the other two groups, household residents and business owners or managers. Household residents generally decreased their evaluations of community services over time. An exception to this generalization is Found in their attitudes toward public schools. While the business group showed some slight dissatisfaction over time, both the government officials and household residents felt that public schools had improved from 1974 to 1977.

(Table 3 here)

In Table 3, control variables are introduced to further specify the relationship between levels of satisfaction of community groups and community services. Multiple classification analysis was employed to examine the net effect of community group membership on satisfaction with community services when other factors were held constant. With county, sex, length of residences income and education held constant, statistically significant relationships were found between group membership and changes in satisfaction with six out of eight services: water, sewage, garbage, felephone, fire protection and public schools.

Community group membership was thus an important factor in explaining change in satisfaction levels even with the addition of local and socioeconomic contexol variables. Adjusted levels of mean change in satisfaction with a particular community service for each community group did not

differ greatly from the unadjusted mean change levels presented in Table

2. Generally the same relationships were found when control variables
were introduced. However, group differences emerged in change in satisfaction with garbage and fire protection and group differences were diminished for health care and recreation when controls were introduced. Group
membership was a factor associated with differential levels of change in
satisfaction for the services of water, sewage, telephone and public
schools with or without residence and socioeconomic variables held constant.

(Table 4 here)

Table 4 presents the results of a regression analysis of selected community services by community groups on change in community satisfaction. This analysis shows that very little of the total variation in change in community satisfaction could be explained by change in satisfaction with selected community services among community groups as none of the equations were significant. The regression coefficients show that for both the government leaders and households, a change in satisfaction with garbage service was positively associated with a change in community satisfaction. For the business group, an inverse relationship was found between a change in community satisfaction and a change in satisfaction with both public schools and sewage. These negative associations are difficult to explain theoretically, but generally it is possible to conclude that changes in satisfaction with the selected community services do not seem to be related to change in overall community satisfaction.

Discussion

Three years is a relatively short period of time for introducing intensive improvements in rural public services, though most showed some

expectations for higher quality and more widely available community services, especially among household respondents. From this type of analysis, it is not possible to determine whether changes in attitudes over time are due to actual changes in the quality of community services, or to a heightened awareness of discrepancies between the quality of urban and rural community services. The longitudinal nature of the data, however, do reveal an upward trend in satisfaction for the majority of services.

One of the most significant findings of this study is the relationship of community group membership to changes in satisfaction with community services. Government officials held consistently more positive
views of services over time than either business leaders or household
respondents. This result may perhaps be explained by: greater awareness
of improvements by leaders, the vested interests of government leaders
in improving community services, and a more holistic approach to local
services in contrast to a more personal approach by random household residents. The business respondents seemed to share more moderate attitudes
towards change in satisfaction with community services, with the possible
exception of recreational services; toward which they exhibited a high
degree of dissatisfaction.

In general, regardless of community group membership, the highest level of dissatisfaction was expressed in relation to recreation. The greatest satisfaction was shown by government officials in relation to water services, but there was also a great deal of satisfaction with public schools expressed by government leaders and household residents. During the interim, the area had received federal block grants for water systems and state funding to local school systems had improved.

Looking at each community group individually, government leaders became increasingly satisfied with water services and less satisfied with recreation; business leaders became more satisfied with garbage services and more dissatisfied with recreation; and the household respondents expressed increased satisfaction toward public schools and lessened satisfaction with fire protection.

Another important finding is the relative absence of a relationship between change in satisfaction with selected community services and change in overall community satisfaction. This may be due to the fact that this study compares changes in satisfaction, rather than the more traditional approach of comparing satisfaction levels at one point in time. It may also be attributed to the overall measure of community satisfaction which perhaps did not discriminate well or reflect sufficient variation in attitudes. Other studies may employ a community satisfaction scale or multiple dimensions of satisfaction to assess change.

One implication of this analysis is that the most basic public services, such as water systems or telephone service, are among the first rural community services to receive public attention and outside funding. Thus, it is more likely that improvements will occur first in these primary physical services than in human services which may be assigned lower priority, such as recreation. Also, there may be a greater chance of local citizen action in regard to narrowly based local utility projects than there might be in relation to recreation, for example, where the power to set priorities more likely lies at the state or federal level.

This analysis provides little support for the proposition that part of the renewed appeal of rural areas lies in their increased capacity to meet some of the basic community needs essential to group living. While some important community services were not included in this study, a look



At satisfaction levels over time between different community groups provides some insight into the different ways in which community services are perceived and the ways in which services affect different segments of a community. Future research may examine the relationship between incremental improvements in community services, the distribution of such improvements, and changes in satisfaction among those receiving the services.

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Table 1. Changes in Satisfaction with Selected Community Services 1974-1977 for Government Officials, Business, and Household Groups: Paired Comparison T-Test Between Ratings

		Mean Satisfaction						1001	
•	Government Officials (N=92)		Business (N=110)			Household (N=100)			
Service :	74 rating	77 rating	Difference.	74 rating	77 rating	Difference	74 rating	77 rating	Difference
Water	56.52	74.46	17 . 93***	50.69	53.21	2.52	38.50	. 34.50	-4.00**
Sewage	45.11	50.91	5.80*	45,37	41.82	, 3.55	34.25	29.67	' -4.58**' "
Garbage •	68.75	¹ 73.73	4.98*	^ 65 . 19	. 70.25	5.06*	65.81	64.18	1.63
Telephone	65.38	70.15	4.76	61.93	66.67	4.74**	65.79	61.05	-4.74*
Fire Protection	60.44	58:24	-2.20	56.13	49.21	-6.92**	49.73	41.13	-8.60***
Health Care	65.66	70.15	4.49	59.07	58.44	 74 .	° 59.27	55.43	13.84
Public Schools	62.08	69.10	7.02**	63.14	61.86	-1.29	58.11	64.86	6.76**
Recreation	57.02	49.25	-7 . 77** *	50.71	36.51	-14.21***	36.58	29.82	-6.75 *,**
Community Satisfaction	75.82	82.60	6.79*	68.64	78.31	9.67***	65.00°	85.43	20.43***

^{*}p '< .05 **p -< .01 ***p < .001

Table 2. Mean Change in Satisfaction by Community Group Membership

Service	Mean Change in Some Officials Business		F-value	Probability
Water	17.94 '2.53 (92) (109)	· -4.00 · (100)	21.64	.000
Sewage	5.79 -3.55 (92) (108)	-4.59 (100) · ·	6.71	,001
Garbage	4.98. 5.06 (92) (107)	1.63 (97)	.60	.549
Telephone	4.76 4.74 (91) (109)	-4.74 (95)	6 82	.001
Fire Protection	-2.20 -6.92 (91) (106)	-8.60 -(94)	1.87	.156
Health Care	4.4974 (91) (102)	-3.84 ' (89)	3.19	.043
Public Schools	7.031.28 (89) (97)	6.76 (74)	4.31	.014
Recreation	-7.78 -14.21 (89) (105)	-6.76 (95)	3.29	.039

Table 3. Mean change in satisfaction with selected community services by community group adjusted for county, sex, length of residence, income and education.

					
Service	. Comm	unity Gro	up -	F-Value	Probability
	officials Bu		Household		
	` -	· ·	,		•
Water	16.84 w (92)	2.06 (108)	\$2.59 (99)	5.32	.000
Countý		a, `*		,:51	.602
Sex	6.	ano.	,	.01	.927
Length of residen	ce	•		53	.469
Income"	, , , , , , , , , , , , , , , , , , ,	. « •	•	5.67	.018
Education		0	., :	3.18	.076
Combined Effect	•	٩ ﴿ وَ مَا	,	3.07	.000
	ç ्	,	*		•
Sewage	6.11 ° (92)	-3.83 (107)	-4.31 (99)	2.72	.020
County			, ,	2.49	085
π		ο ,	•	.00	.965
Sex	1	•	•	.00	
Length of residen	cev	• ,	.'6	.30	584
Inco yl e Education		• , .		2.63	.106
Combined Effect	÷ ,			1.91	.012
Compitted Firecr	, · ·	, , , , ,		1.71	°.
	6	. °a .			,
Garbage	4.29	6 ₽82	.42	5.72	.000
· · · · · · · · · · · · · · · · · · ·	(92)	(106)	(96)	1	,
County	•		, , , , ,	12.15	.000
Sex	•	1 4.	, ,	.11	.745
Length of resider	ıc ı	ē		. 1.13	.288∖
Income	· da·	, `		5.36	.021
Education-	· · · · · ·	•		2.11	.147
Combined Effect		٠,	3., " - 4	2.87	000
			1		
Malanhana	4.06	5 1 4 ¹	-4.07	3.37	.006
Telephone	(91)	(108) -	(94)	. 3.31	/ / / / /
			•		000
County				3.88	.022
Sex		(.00	.968 878
Length of resider	rce	٠,		.02	
Income		,	,	.53	.469
Education	• /	~ °	•	.99	.320
Combined Effect	, •	14		1.62	.048

Table 3. (Continued)

Service	, ca	mmunity Gro	F-Value	Probability	
gerArce ,	Officials		Hóusehold	· · · · · · · · · · · · · · · · · · ·	
^			<u> </u>		
Fire Protection:	-3.99 [*]	-6.42	△ -6.22 · (93)	2.69	.022
	(91)	(105)	(93)		•
,	•	• • • •	,	4.41	.013
County	•	-	•	2.11	.147
Sex				.19	.663
Length of resid	ence	•	~ .	.03	.860
Education -	•		• • •	1.65	.200
Combined Effect			•	1.24	.220
Comprised Errece	•	•	**	•	
•	•	•	•		
Health Care	2.11	19	-1.58 [°]	1.72 '	.131
Hoaren ours	(91)	(102)	(88)	₩	,
		, ,	9	•	•
County	,			3.48	.032
Sex.			` ^	.03	.868 ·
Length of resid	len ce	,	•• (^	1.94	.165
Income.		- market	,	1.11	્રે.294
Education		`		1.34	.248
Combined Effect	**	•		` 1.50	, `.080
•		•			
		<i>t</i>			
Public Schools	7.48	-1.9.	7.07	4.09	001
	(89)	· (· 97·)	(72)	•	•
	****		•		.003
County	\$	•	• •	. 5.99 · .09	.767
Sex		/	•	•	.908
Length of resid	dence		*	.01 1.12	.291
Income		(1.85	.175
Education	•	-	•	1.79	.022
Combined Effect			Í	2000	
	4		1		
,	.27	-13.98	-7.26	. 2.15	.060
Recreation	(89)	(104)	(94)	,,	
	(0)	(104)	(-,)	• •	¥
County			•	.92 /	.400
Sex		-		2.60	~.108
Length of resid	dence	•	•	.03	.863
Income			Ł	1.86	. 174
Education			•	.95	.330
Combined Effect	-	•	•	1.24	.223
, , , , , , , , , , , , , , , , , , ,	•	•	-		· _

Table 4. Regression of Selected community Services by Community Group on Change in Community Satisfaction

	Change in Community Satisfaction .							
les &	Gov't Officials (N=92) Business (N=110) Househol					old (N=101)		
Service /	В	<u>ь/s.e.</u>	<u> </u>	b/s.E.	В`	<u>ь/s.е.</u>		
Water	116	989/.121	086	.915/.116	. - ~100	150/.216		
Sewage	.053	.526/.137	-,229*	283/.136	, .011	.150/.202		
Garbage	.250*	.306/.149	137	\.145/.115	.294*	.258/.122		
Telephone	072	769/:131	005	.727/.167	.081	.997/.195		
Fire Protection	073	761/.125	.109	.129/.134	• .097	.909/.129		
Health Care	051	•.531/.133	008	133/.149	008	896/.156		
Public Schools	.123	.135/.137	309**	403/.144	036	460/.182		
Recreation	.077	.741/.119	:135	. 164/.131	.201	.289/.192		
R ²		.053		.170		.161		
F-Value	, ,	.532	· 2,	.02	i	.22		
Probability	•	NS '	. 1	NS .		NS		

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^{*}p < .05

^{**}R < .01