

# Residents' Satisfaction with Community Services: Predictors and Outcomes

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**Abstract.** We report on a study that empirically tested a model that integrates the relationships among important determinants and outcomes of residents' satisfaction with community services. Our model of satisfaction with community services is highly complex. In order to facilitate reader comprehension, we presented the model in five stages. *Stage 1* shows the most proximal determinants and outcomes of satisfaction with community services--satisfaction with community conditions (predictor of satisfaction with community services) and community satisfaction (determined by both satisfaction with community conditions and services). *Stage 2* adds another outcome to the model, namely community commitment. The model shows that community satisfaction leads to community commitment. *Stage 3* adds two additional variables--confidence in local institutions and power in influencing local institutions--to further account for variation in satisfaction with community services, community satisfaction, and community commitment. *Stage 4* focuses on factors added to the model to help explain the drivers underlying satisfaction with community conditions. These drivers include satisfaction with neighborhood conditions, neighborhood satisfaction, and housing satisfaction. Finally, *Stage 5* adds satisfaction with life domains such as financial life, social life, family life, and work life to help account for additional variation in the model's key constructs. We tested our model using a survey study in a community in the State of Michigan. The results were mostly supportive of the theoretical model.

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# 1. Introduction

One important area of research inquiry in planning and community development is residents' satisfaction with community services (e.g., Sirgy, Rahtz, Cicic, & Underwood, 2000; Sirgy and Cornwell, 2001). Community services involve government services (police, fire/rescue, library, etc.), business services (banking/savings, insurance, department stores, etc.), and nonprofit services (alcohol/drug abuse services, crisis intervention, religious services, etc.). Past research has shown that satisfaction with community services plays an important role in community satisfaction (referred to also as "global satisfaction with one's community," "perception of community quality of life," and "perceived community quality of life") (e.g., Bruin & Cook, 1997; Lansing, Marans, & Zehner, 1970; Salster & Hesser, 1981; Sirgy et al., 2000; Sirgy and Cornwell, 2001; Vrbka & Combs, 1993) and quality of life, specifically perceived quality of life (also referred to as "life satisfaction," "happiness," and "subjective well-being") (e.g., Andrews & Withey, 1976; Barresi, Ferraro, & Hobey, 1984; Campbell, Converse, & Rodgers, 1976; Morris & Winter, 1978; Sirgy, et al., 2000; Sirgy & Cornwell, 2001). Research on the drivers of satisfaction with community services and overall community satisfaction is important for at least three reasons. First, such research provides insight into the underlying mechanisms that lead to satisfaction with community services and helps identify specific predictors or determinants. Second, such research facilitates a deeper understanding of the interrelationships between satisfaction with community services, overall community satisfaction, and satisfaction in other domains related to residential satisfaction such as neighborhood and housing satisfaction. And, third, such research offers guidance to developing policies and plans related to community development. The purpose of this paper is to report a study focusing on the determinants of community satisfaction and demonstrating the nature of the interrelationships among the determinants.

## **Background**

Sirgy, Rahtz, Cicic, and Underwood (2000) developed a community-based QOL (global life satisfaction) measure based on a theoretical model that makes the distinction between "community" and "other" life domains, both contributing to the perceived QOL (global life satisfaction). The community life domain pertains to one's global perception of his or her community. In contrast, "other" life domains are those that pertain to non-community domains, such as health, work, marriage and family, physical fitness, income, standard of living, neighborhood, among others (e.g., Andrews & Withey 1976; Campbell, Converse, & Rodgers 1976). Sirgy et al. hypothesized that satisfaction with community is mostly determined by satisfaction with government, business, and nonprofit services. In turn, satisfaction with government services is mostly determined by satisfaction with

specific government services perceived to be important. Similarly, satisfaction with business and nonprofit services is mostly determined by satisfaction with specific (business and nonprofit) services perceived to be important. Thus, Sirgy et al. argued that there is an indirect relationship between life satisfaction and satisfaction with a specific community service (e.g., police) mediated by satisfaction with the category of service (overall government services, business services, nonprofit services) and overall community satisfaction. These hypotheses were empirically tested in a study involving a sample from four communities. The study results supported the hypotheses and thus lent support for the nomological validation of the community QOL measures. By the same token, the results of the Sirgy et al.'s study suggested that the model might better fit the data given the following four modifications:

1. There is high multicollinearity among other life domain satisfaction constructs (e.g., job, family, leisure, among others). Hence, regressing life satisfaction against satisfaction with individual life domains produces results indicating that satisfaction with only certain life domains account for significant variability in life satisfaction scores. A solution around the multicollinearity problem would be to compute a composite index of satisfaction with all other life domains by summing or averaging the satisfaction scores across all other life domains (other than community).
2. Community satisfaction is influenced not only by satisfaction with business, government, and nonprofit services but also by satisfaction with other life domains. A new and improved measure of community QOL should be based on the theoretical notion that satisfaction with the community-at-large (community satisfaction) is mostly determined by satisfaction with government services (police, fire/rescue, library, etc.), business services (banking/savings, insurance, department stores, etc.), nonprofit services (alcohol/drug abuse services, crisis intervention, religious services, etc.), *as well as* satisfaction with other aspects of the community such as quality of the environment, rate of change to the natural landscape, race relations, cost of living, crime, ties with people, neighborhood, and housing. In turn, community satisfaction together with satisfaction with other overall life domains (work, family, leisure, etc.) affects global life satisfaction
3. There is high multicollinearity among the three services satisfaction constructs (business services satisfaction, government services satisfaction, and nonprofit services satisfaction) suggesting the possibility of combining these three services satisfaction into one construct, which can be referred to as "services satisfaction."
4. Community satisfaction influences services satisfaction. That is, there is a reciprocal link between these two constructs.

Sirgy and Cornwell (2001) conducted a study addressing these issues and accordingly developed a modified measure of community quality of life. Survey data from a variety of communities located in southwest Virginia were collected to further test the nomological validity of the measure. The results provided additional nomological validation support to the new and improved community QOL measure.

### ***Purpose of our Study***

The objective of this study is to build on the research of Sirgy and colleagues (e.g., Sirgy et al., 2000; Sirgy and Cornwell, 2001) focusing on the psychological determinants and outcomes of satisfaction with community services. Doing so should assist community planners to two ways. First, community planners would be in a better position to appreciate the importance of the behavioral phenomenon of satisfaction with community services if the research clearly shows that such a construct leads to important outcomes such as overall community satisfaction (or the perceived community quality of life) and commitment to the community. Traditionally, community planners consider community satisfaction and commitment as end goals in their community development efforts.

Second, understanding the drivers, determinants, or sources of satisfaction with community services should assist community planners with developing strategies to establish new government, business, and nonprofit services or modify them to maximize residents' overall satisfaction with the community and enhance their commitment to the community.

## **2. A Model of Satisfaction with Community Services**

Our model of satisfaction with community services is highly complex. In order to facilitate reader comprehension, we decided to present the model in five stages. Stage 1 shows the most proximal determinants and outcomes of satisfaction with community services--satisfaction with community conditions (predictor of satisfaction with community services) and community satisfaction (determined by both satisfaction with community conditions and services). Stage 2 adds another outcome to the model, namely community commitment. The model shows that community satisfaction leads to community commitment. Stage 3 adds two additional variables--confidence in local institutions and power in influencing local institutions--to further account for variation in satisfaction with community services, community satisfaction, and community commitment. Stage 4 focuses on factors added to the model to help explain the drivers underlying satisfaction with community conditions. These drivers include satisfaction with neighborhood conditions, neighborhood satisfaction, and housing satisfaction. Finally, Stage 5 adds satisfaction with life domains such as financial life, social life, family

life, and work life to help account for additional variation in the model's key constructs.

### Stage 1: The Most Proximal Antecedent and Consequence Variables of Satisfaction with Community Services

The most simplified model of satisfaction with community services involves two most proximal factors, namely satisfaction with community conditions and community satisfaction. Satisfaction with community conditions is surmised to be a key determinant of satisfaction with community services, whereas community satisfaction is believed to be a key consequence (see Figure 1).



**Figure 1.** Determinants and Consequences of Satisfaction with Community Services (STAGE 1)

*Satisfaction with community services* is defined as residents' evaluations of the various government services (police, fire/rescue, library, etc.), business services (banking/savings, insurance, department stores, etc.), nonprofit services (alcohol/drug abuse services, crisis intervention, religious services, etc.). This construct is typically measured as a composite of residents' satisfaction ratings of a variety of government, business, and nonprofit services available in one's community (e.g., Sirgy, et al., 2000; Sirgy & Cornwell, 2001). *Community satisfaction* refers to residents' overall satisfaction with the community-at-large. It is typically measured by asking residents to rate the overall quality of life in their community (e.g., Andrews and Withey 1976; Campbell et al., 1976; Sirgy, et al., 2000; Sirgy & Cornwell, 2001). With respect to *satisfaction with community conditions*, this construct refers to residents' evaluations of the quality of various physical, social, and economic conditions and aspects of the community. Examples of community conditions and aspects include race relations, crime and safety, recreational and entertainment activities, religious activities, the appearance of the conspicuous places within the community such as commercial and business areas and certain residential areas, the street conditions (e.g., potholes), traffic condi-

tions (e.g., crowdedness, traffic jams, traffic signs and lights), the climate, parks, job opportunities available in the area, property taxes, and so on.

Sirgy et al. (2000) and Sirgy and Cornwell (2001) have argued and empirically demonstrated that satisfaction with community services (government, business, and nonprofit services) as well as community conditions (physical, social, and economic aspects of the community) predict a significant portion of the variance in community satisfaction, which in turn is predictive of life satisfaction. The authors explained this relationship using the *bottom-up spillover theory* (Andrews and Withey 1976; Campbell et al. 1976; Diener 1984; Sirgy 2001, 2002). The basic premise of bottom-up theory is that life satisfaction is functionally related to satisfaction with all of life's domains and sub-domains. Life satisfaction is thought to be on top of an attitude (or satisfaction) hierarchy. Thus, life satisfaction is influenced by satisfaction with life domains (e.g., satisfaction with community, family, work, social life, health, and so on). Satisfaction with a particular life domain (e.g., community satisfaction), in turn, is influenced by lower levels of life concerns within that domain (e.g., satisfaction with community conditions and services). That is, life satisfaction is mostly determined by evaluations of individual life concerns. Thus, the greater the satisfaction with individual community services (e.g., police, fire and rescue services, shopping malls, health care, banking services, churches and synagogues), as well as community conditions (e.g., race relations, crime rate, cost of living, and environmental quality), the greater the satisfaction with community life (i.e., community satisfaction). Furthermore, the greater the satisfaction with community life, social life, family life, work life, spiritual life, etc., the greater the satisfaction with life overall (e.g., life satisfaction, perceived quality of life, happiness, and subjective well-being). Specifically, bottom-up theory postulates that affect within a life domain spills over vertically to the most super-ordinate domain (life in general), thus influencing life satisfaction. Similarly, this theory postulates that global satisfaction with a given life domain (community life) is mostly determined by satisfaction with the life conditions/concerns (i.e., community services and conditions) making up that domain. From this discussion we can deduce two testable hypotheses:

- H<sub>1a</sub>: The greater the resident's satisfaction with community conditions, the greater the resident's satisfaction with the community.*
- H<sub>1b</sub>: The greater the resident's satisfaction with community services, the greater the resident's satisfaction with the community.*

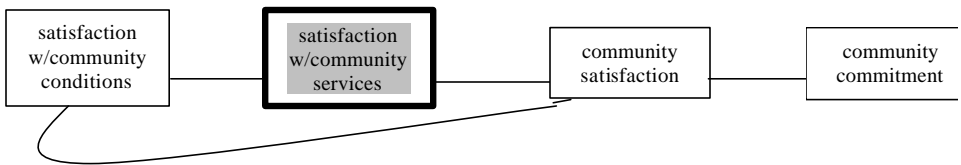
We also believe that *satisfaction with community conditions* plays a major role in determining satisfaction with community services. One can argue that this relationship is quite evident. Take the example of crime in the community. This is a community condition. Law enforcement efforts in the community combat crime in the community. Law enforcement is a commu-

nity service. Residents are likely to make causal attributions about their evaluations of community services based on their evaluations of community conditions. For example, the extent to which residents are happy or not happy with the police in their community is likely to depend on their evaluations of the crime rate. If they know that the crime rate is high in their community, they may infer that the police are not doing a satisfactory job. Therefore, a negative evaluation of a community condition such as crime rate may lead to a negative evaluation of the community service that assumes responsibility for the community condition in question. Similarly, positive evaluations of community conditions should lead to positive evaluations of community services. Based on this discussion, we hypothesize the following:

*H<sub>1c</sub>: The greater the resident's satisfaction with community conditions, the greater the resident's satisfaction with community services.*

## Stage 2: Adding Community Commitment as an Outcome Variable

Figure 2 shows the model's second-step expansion. We added an outcome variable, namely *community commitment*. The model shows that community satisfaction leads to community commitment (see Figure 2).



**Figure 2.** Determinants and Consequences of Satisfaction with Community Services (STAGE 2).

Community commitment refers to the extent to which residents internalize the community as their own, feel loyal to it, and would not consider moving out of the community at will. Therefore, commitment is construed as the sum of two key dimensions, namely affective and conative. For example, one can measure the affective dimension of community commitment by asking residents if they enjoy living in the community. The conative dimension can be captured by asking residents to indicate if they would move away from the area if they could.

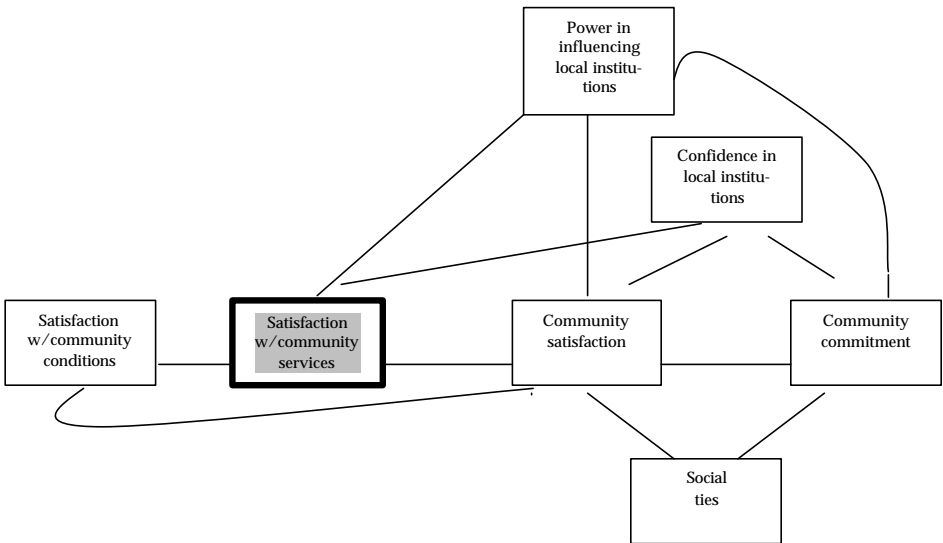
There is quite a bit of evidence in the marketing literature about the interrelationships between customer satisfaction and commitment (or brand loyalty). The more consumers are satisfied with products and services they

purchased, the more they become committed to these products and services (e.g., Crosby & Stephens, 1987; Dwyer, Schurr, & Oh, 1987; Fournier, 1998; Ganesan, 1994; Gundlach, Achrol, & Mentzer, 1995; Morgan & Hunt, 1994; Sheth & Sharma, 1997). The same psychological dynamics should apply in relation to community commitment. That is, community commitment is likely to be determined for the most part by community satisfaction (cf. Speare, 1974). Based on this discussion, we advance the following hypotheses:

*H<sub>2</sub>: The greater the resident's overall satisfaction with community, the greater the resident's community commitment.*

**Stage 3: Adding Confidence, Power, and Social Ties to Further Explain the Outcome Variables**

Figure 3 shows the model's third-step expansion. We added three constructs--confidence in local institutions, perceived power in influencing local institutions, and social ties--to help explain the outcome variables (see Figure 3).



**Figure 3.** Determinants and Consequences of Satisfaction with Community Services (STAGE 3).

With respect to *confidence in local institutions*, this construct refers to the extent to which residents feel that local institutions (i.e., government, business, and nonprofit services within the community) can be trusted to provide the reliable service well into the future. We believe that this construct plays an important role in influencing residents' satisfaction with community services, community satisfaction, and community commitment. Consider the

following study. Widgery (1982) developed a predictive model of community quality of life, looking both at community (Flint, Michigan) and neighborhood. Significant predictors of community-wide satisfaction were trust in government and the political system and optimism about the community. One can argue that trust, optimism, and confidence are highly inter-related constructs (e.g., Ganeson, 1991; Moorman, Desphande, & Zaltman, 1993; Morgan & Hunt, 1994; Sheth & Sharma, 1997). That is, community residents who have a high degree of trust in their local government and are optimistic about their community are also likely to have a high degree of confidence in their local institutions. This confidence contributes significantly to residents' feelings about community services, their overall attitude toward the community, and their commitment to staying in the area. Based on this discussion, we advance the following hypotheses:

- H<sub>3a</sub>: The greater the resident's confidence in local institutions, the greater the resident's satisfaction with community services.*
- H<sub>3b</sub>: The greater the resident's confidence in local institutions, the greater the resident's community satisfaction.*
- H<sub>3c</sub>: The greater the resident's confidence in local institutions, the greater the resident's community commitment.*

The concept of *perceived power in influencing local institutions* is highly akin to the general psychological concept of locus of control (Rotter, 1966). People who perceive that they have more control over things that affect their lives are more satisfied with their lives (see Diener 1984 for literature review). By extrapolation, one can argue that residents who perceive greater control (or "power") in influencing local institutions (those institutions that affect their lives at the community level) are likely to be more satisfied with community services, the community at large, and feel commitment to stay in the area. Hence, we offer the following testable hypotheses:

- H<sub>3d</sub>: The greater the resident's perceived power in influencing local institutions, the greater the resident's satisfaction with community services.*
- H<sub>3e</sub>: The greater the resident's perceived power in influencing local institutions, the greater the resident's satisfaction with the community overall.*
- H<sub>3f</sub>: The greater the resident's perceived power in influencing local institutions, the greater the resident's commitment to the community.*

*Social ties* is another important factor in explaining community satisfaction and commitment. When residents have close friends and relatives residing in the same community, they feel committed to stay in the area. Moving out of the area amounts to abandoning one's friends and relatives. The anticipated loss of friendships and possible social disapproval resulting from moving out may play an important role in feeling committed to the area.

There is much evidence in the residential mobility literature supporting the contention that social ties plays a key role in residential mobility decisions (e.g., Cadwallader, 1992; Kasarda & Janowitz, 1974; Morris, 1978; Rossi, 1955, 1980; Shumaker & Taylor, 1983; Varady, 1982, 1983). The literature also shows that social ties contribute positively to residents' overall feelings about the community. For example, Widgery (1982) found that satisfaction with family and friends in the community is a significant and an important predictor of community-wide satisfaction. Based on this discussion, we offer the following testable hypotheses:

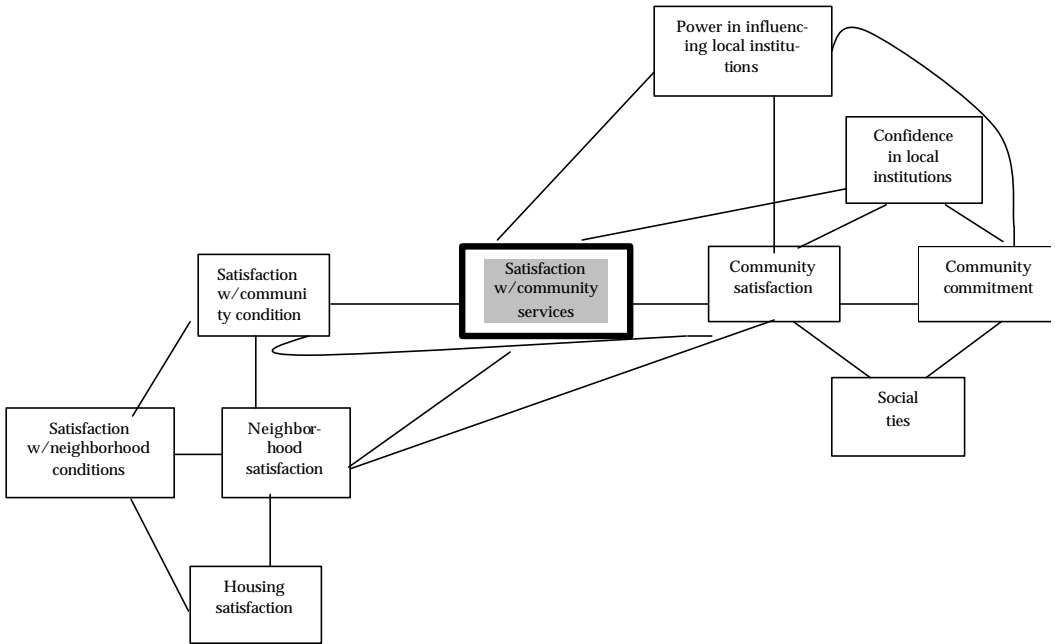
- H<sub>3g</sub>*: The greater the resident's social ties in the community, the greater the resident's satisfaction with the community overall.
- H<sub>3h</sub>*: The greater the resident's social ties in the community, the greater the resident's commitment to the community.

#### **Stage 4: Adding Satisfaction with Housing, Neighborhood, and Neighborhood Conditions to Explain the Key Determinant (Satisfaction with Community Services)**

Figure 4 shows the model's fourth-step expansion. We added three additional constructs--housing satisfaction, neighborhood satisfaction, and satisfaction with neighborhood conditions--to help explain the key determinant, namely satisfaction with community conditions (see Figure 4).

*Neighborhood satisfaction* refers to residents' overall evaluation of their neighborhoods. We believe that *neighborhood satisfaction* is an important predictor of satisfaction with community conditions and services and overall satisfaction toward the community. This is because the neighborhood is essentially the resident's most proximal, psychological representation of the community. Therefore, any feelings of satisfaction or dissatisfaction with one's neighborhood is likely to influence one's perceptions of community conditions and services, which in turn determine their evaluations toward community conditions and services, as well as toward the community-at-large. There is also much evidence to demonstrate the effect of neighborhood satisfaction on satisfaction with community conditions and services and overall community satisfaction (e.g., Sirgy & Cornwell, 2001). Based on this discussion, we offer the following testable hypotheses:

- H<sub>4a</sub>*: The greater the resident's satisfaction with the neighborhood, the greater the resident's satisfaction with community conditions.
- H<sub>4b</sub>*: The greater the resident's satisfaction with the neighborhood, the greater the resident's satisfaction with community services.
- H<sub>4c</sub>*: The greater the resident's satisfaction with the neighborhood, the greater the resident's satisfaction with the community overall.



**Figure 4.** Determinants and Consequences of Satisfaction with Community Services. (STAGE 4)

When residents think of community conditions, one of those conditions may be their own neighborhood. *Satisfaction with neighborhood* is bound to affect satisfaction with community conditions. Similarly, it would be difficult not to account for feelings residents experience in relation to neighborhood conditions (e.g., neighbors, children in the neighborhood and their behavior, crime and safety, landscape, and traffic and congestion). These neighborhood conditions are also part of the community conditions we alluded to. Therefore, it would be very difficult to prevent residents' *feelings about their neighborhood conditions* spill over and influence their feelings about community conditions. Therefore we put forth the following hypothesis:

*H<sub>4d</sub>: The greater the resident's satisfaction with neighborhood conditions, the greater the resident's satisfaction with community conditions.*

We argue that neighborhood satisfaction is mostly determined by satisfaction with neighborhood conditions and housing satisfaction. *Satisfaction with neighborhood conditions* refers to satisfaction with physical, social, and economic aspects related to the neighborhood such as neighbors, children in the neighborhood, personal safety, racial mix, home break-ins, landscape, aesthetic appearance of homes, and amount of traffic through neighborhood.

There is much evidence in the literature that demonstrates that satisfaction with neighborhood conditions plays a major role in predicting overall feelings toward the neighborhood (i.e., neighborhood satisfaction). Here are the exact neighborhood conditions and the supporting evidence.

### ***Physical Neighborhood Conditions***

- Satisfaction with upkeep of homes and yards (e.g., Dahmann, 1983; Galster and Hesser, 1981; Lansing, Marans, and Zehner, 1970; Miller et al., 1980; Vrbka and Combs, 1993; Yockey 1976),
- Satisfaction with landscape in the neighborhood (e.g., Miller et al., 1980; Russ-Eft, 1979),
- Satisfaction with the street lighting in the neighborhood (e.g., Dahmann, 1983),
- Satisfaction with crowding and noise level (e.g., Bonnes, Bonaiuto and Ercolani, 1991; Cook, 1988; Lansing, Marans, and Zehner, 1970; Miller et al., 1980; Russ-Eft, 1979);
- Satisfaction with nearness of neighborhood to facilities needed (e.g., Andrews and Philips, 1970; Lansing et al., 1970; Russ-Eft, 1979; Vrbka and Combs, 1993; Yockey, 1976), and  
Satisfaction with quality of the environment in the community (e.g., Lee and Guest, 1983; Russ-Eft, 1979).

### ***Social Neighborhood Conditions***

- Satisfaction with social interactions with neighbors (e.g., Ahlbrandt and Cunningham, 1979; Bruin and Cook, 1997; Cooper and Sakissian, 1986; Francescato, Weidemann, Anderson, and Chenoweth, 1980; Fried and Gleicher, 1961; Galster, 1987; Galster and Hesser, 1981; Lansing, Marans, and Zehner, 1970; Miller et al., 1980; Russ-Eft, 1979; Sopher, 1979; Speare, 1974; Weidemann and Anderson, 1982; Western et al., 1974; Yockey, 1976),
- Satisfaction with the outdoor play space (e.g., Lansing, Marans, and Zehner, 1970; Yockey 1976);
- Satisfaction with people living in the neighborhood (e.g., Campbell, Converse, and Rodgers, 1976; Glaster and Hesser, 1981; Galster, 1987; Lansing et al., 1970; Miller et al., 1980; Russ-Eft, 1979; Vrbka and Combs, 1993; Yockey, 1976),
- Satisfaction with ties with people in the community (e.g., Glaster and Hesser, 1981; Galster, 1987; Kanter, 1972; Miller et al., 1980; Russ-Eft, 1979),
- Satisfaction with crime in the community (e.g., Bruin and Cook, 1997; Burby and Weiss, 1976; Cook, 1988; Dahmann, 1983; Droettboom, McAllister, Kaiser, and Butler, 1971; Galster and Hesser, 1981; Hartnagel, 1979; Kasl and Harberg, 1972; Lansing et al., 1970; Lee and Guest, 1983;

- Nathanson, 1974; Russ-Eft, 1979; Weidemann and Anderson, 1982; Yockey 1976),
- Satisfaction with race relations in the community (e.g., Glaster and Hesser, 1981; Galster, 1987), and
  - Satisfaction with sense of privacy at home (e.g., Lansing, Marans, and Zehner, 1970).

### ***Economic Neighborhood Conditions***

- Satisfaction with home value in the neighborhood (e.g., Ahlbrandt and Cunningham, 1979; Galster, 1987; Lansing, Marans, and Zehner, 1970; Lu, 1999; Russ-Eft, 1979),
- Satisfaction with cost of living in the community (e.g., Galster, 1987; Lansing et al., 1970; Lu, 1999; Russ-Eft, 1979),
- Satisfaction with socio-economic status of neighborhood (e.g., Drottboom, McAllister, Kaiser, and Butler, 1971; Galster, 1987; Kasl and Harberg, 1972; Lansing et al., 1970; Lee and Guest, 1983; Lu, 1999; Nathanson, 1974); and
- Satisfaction with neighborhood improvement (e.g., Miller et al., 1980).

Based on the supporting evidence and the compelling logic we propose the following hypothesis:

*H<sub>4e</sub>: The greater the resident's satisfaction with neighborhood conditions, the greater the resident's satisfaction with the neighborhood.*

Now let us focus on the role of *housing satisfaction* in neighborhood satisfaction. Housing satisfaction refers to residents' evaluation of the extent to which the house meets their personal and family needs. Since the home is part of the neighborhood, it is very likely that feelings toward the home would spill over to feelings toward the neighborhood, and vice versa. There is much evidence in the literature that also supports this relationship (e.g., Canter & Rees, 1982; Carp, 1986; Fried & Gleicher, 1961; Galster, 1987; Galster & Hesser, 1981; Gruber & Shelton, 1987; Ha & Weber, 1991; Hafstrom & Chung, 1990; Handal, Barling, & Morrissy, 1981; Johnson, Lovingood, & Goss, 1993; Lee & Guest, 1983; Lee & Weber, 1984; Lu, 1999; Miller, et al., 1980; Morris & Winter, 1975, 1978; Morris, Crull, & Winter, 1976; Rogers & Nikkel, 1979; Sirgy and Cornwell, 2001). Based on this evidence, we posit the following:

*H<sub>4f</sub>: The greater the resident's satisfaction with housing, the greater the resident's satisfaction with the neighborhood.*

What about *satisfaction with neighborhood conditions*? There are certain neighborhood conditions that may play an important role in housing satis-

faction. For example, the extent to which the neighbors maintain the exterior of their homes may affect the market value of one's home, and therefore the degree of satisfaction that one has toward one's home. Sirgy and Cornwell (2001) have empirically demonstrated that satisfaction with the economic features of one's neighborhood (e.g., home value in the neighborhood, socio-economic status of neighborhood, neighborhood improvements) does play an important role in predicting housing satisfaction (cf. Ahlbrandt & Cunningham, 1979; Droettboom, McAllister, Kaiser, & Butler, 1971; Galster, 1987; Kasl and Harberg, 1972; Lansing, Marans, & Zehner, 1970; Lee and Guest, 1983; Lu, 1999; Miller et al., 1980; Nathanson, 1974; Russ-Eft, 1979). Therefore, we advance the following hypothesis:

*H<sub>4g</sub>: The greater the resident's satisfaction with his/ her neighborhood conditions, the greater the resident's satisfaction with housing.*

### **Stage 5: Adding Satisfaction with Major Life Domains**

Figure 5 shows the model's fifth and final-step expansion. We added additional constructs related to satisfaction with major life domains such as financial life, family life, marital life, work life, and social life. These serve to account for additional variation in the model's key constructs--housing satisfaction, satisfaction with community services, and community satisfaction (see Figure 5).

Widgery (1982) found that satisfaction with family and friends in the community is a significant and an important predictor of community-wide satisfaction. Satisfaction with family and friends in the community is an important facet of residents' social life. Therefore, one can easily argue that residents' *satisfaction with their social life* plays a significant role in community satisfaction. Therefore, we offer the following hypothesis:

*H<sub>5a</sub>: The greater the resident's satisfaction with social life, the greater the resident's satisfaction with the community.*

Satisfaction with social life is likely to play a significant role in the perception of social ties. If residents are not happy with their social life, they may not feel that they have strong social ties within the community. Conversely, if they are happy with their social life, they may feel that they do have strong social ties. Similarly, one can argue that satisfaction with family life may result in similar perceptions related to social ties. That is, dissatisfaction with family life may result in the perception that one's social ties within the community are not strong. This may be due to the fact that one important element of one's social life is the social interactions with family

members and relatives. By the same token, we can argue that satisfaction with social life is influenced by satisfaction with family life. Therefore, we offer the following hypotheses:

- H<sub>5b</sub>: The greater the resident's satisfaction with social life, the greater the resident's perception of having social ties within the community.*
- H<sub>5c</sub>: The greater the resident's satisfaction with family life, the greater the resident's satisfaction with social life.*

Now let us focus on *satisfaction with family life*. One can argue that issues related to *financial* and *work* life are experiences segmented as part of family life. Financial and work problems are most likely to cause dissatisfaction with family life. Therefore, we can test the following hypotheses:

- H<sub>5d</sub>: The greater the resident's satisfaction with his/ her financial life, the greater the resident's satisfaction with family life.*
- H<sub>5e</sub>: The greater the resident's satisfaction with his/ her work life, the greater the resident's satisfaction with family life.*

We argue that housing satisfaction is mostly determined by satisfaction with financial life. Although much evidence suggests that housing satisfaction is mostly determined by the perceived quality of the interior and exterior conditions of the house (e.g., Galster, 1987; Galster & Hesser, 1981; Lee & Weber, 1984; Speare, 1974), we need to realize that the quality of the interior and exterior is directly affected by the financial situation of the homeowner. The more satisfactory the financial situation of the homeowner the more that he or she is likely to buy a house that has quality features (both interior and exterior). Therefore, one can argue that the financial situation of the community resident has a lot to do with housing satisfaction. Based on this discussion, we offer the following hypothesis:

- H<sub>5f</sub>: The greater the resident's satisfaction with his/ her financial life, the greater the resident's satisfaction with housing.*

Housing satisfaction plays a significant role in satisfaction with family life, in addition to satisfaction with financial life, marital life, and work life. If a person is not happy with the house, there may be strong reason that the house is deficient in the way it serves family needs. Hence, one can easily argue that housing satisfaction affect satisfaction with family life. Therefore, the hypothesis deduced from this discussion is as follows:

- H<sub>5g</sub>: The greater the resident's satisfaction with housing, the greater the resident's satisfaction with family life.*

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**Figure 5.** Determinants and Consequences of Satisfaction with Community Services. (STAGE 5)

We also have to recognize that satisfaction with social life may be influenced by a variety of factors dealing with the community (as in satisfaction with community conditions and services), the neighborhood (as in satisfaction with neighborhood), and housing (as in housing satisfaction). Therefore we offer the following hypotheses:

- H<sub>5h</sub>: The greater the resident's satisfaction with community services, the greater the resident's satisfaction with social life.*
- H<sub>5i</sub>: The greater the resident's satisfaction with neighborhood, the greater the resident's satisfaction with social life.*
- H<sub>5j</sub>: The greater the resident's satisfaction with housing, the greater the resident's satisfaction with social life.*
- H<sub>5k</sub>: The greater the resident's satisfaction with community conditions, the greater the resident's satisfaction with social life.*

### **3. Research Method**

As part of a longitudinal study covering nearly a quarter century, this survey examines the quality-of-life, as perceived by adults, in 8,412 randomly selected households within Genesee County, Michigan. Three surveys in 1978, 1990, and 2001 examined the same variables, using the same data collection method. General Motors Corporation employed better than 70,000 people at the time of the first survey. Throughout the 80s and 90s GM steadily reduced its head count until today, when only about 10,000 employees remain. The surveys were conducted to track how GM's disinvestment in the community had affected the quality of community-life for the 450,000 citizens of Flint and Genesee County.

#### ***Data Collection***

Data were collected by telephone, using experienced and carefully supervised interviewers. Calls were made seven days a week from 9 AM thru 9 PM. Telephone numbers were selected using the seed number technique, assuring an equal probability of selection for all households, even those not listed in the phone book. Calls were screened to include only those 18 years old or older. In order to insure a sufficient sample in the City of Flint, to allow for various tests, an over-sample was drawn, - raising the proportion for the City to 33 percent.

#### ***Measurement of Study Constructs***

At the core of the survey instrument were 57 items measuring *satisfaction* with various aspects of community life. Three of these are considered important dependent variables: satisfaction with (1) QOL in *neighborhood*, (2) QOL in the *community-at-large*, and (3) *commitment to the community*. Other vari-

ables included: *optimism/pessimism, empowerment, religious commitment, and demographic items.*

Satisfaction was measured, using a six-point scale with no mid-point. Because interviews were by phone, the protocol included the following explanation to respondents: "I am going to ask you the degree of your satisfaction or dissatisfaction with various features of life in the Flint area. After I mention each feature, would you please tell me if you are satisfied or dissatisfied? (After the interviewee responds to each feature, then ask: slightly, moderately, or strongly.)" The reason for this approach is to assist the respondent in visualizing the scale, thus improving the reliability of the responses.

### ***Demographic Characteristics of the Sample***

In examining the external validity of the three QOL surveys, the demographic data were compared to the most current published Census reports. Overall, the average difference of the sample from the population of Genesee County was 3.3 percent in 2000. (See the table below.) The in differences in 1990 averaged 3.6 percent, and 5.5 percent in 1980. This places the survey data within an acceptable range of external validity as being representative of the target population.

### ***Variables of the Model***

The complete model (as shown in Figure 5) contains the following constructs:

- Satisfaction with community overall (community satisfaction),
- Satisfaction with community services,
- Satisfaction with community conditions,
- Satisfaction with neighborhood overall (neighborhood satisfaction),
- Satisfaction with neighborhood conditions,
- Satisfaction with housing (housing satisfaction),
- Satisfaction with social life,
- Satisfaction with work life,
- Satisfaction with financial life,
- Resident commitment to the community (community commitment),
- Confidence in local institutions,
- Power in influencing local institutions, and
- Social ties within the community (social ties).

The measures of these constructs were developed by adhering as close as possible to the construct definitions as described in the conceptual development part of the paper. The exact measures and their scaling properties are further described in Appendix A.

**Table 1.** Demographic Percentage Differences Between Three Census Reports and Three QOL Surveys

Demographic Category	2000 Census	2001 QOL Survey	Differences	1990 Census	1990 QOL Survey	Differences	1980 Census*	1979 QOL Survey	Differences
18-34 years	27.2	33.1	+5.9	37.7	44.3	+6.6	40.1	31.9	-8.2
35-54 years	40.9	43.9	+3.0	36.0	39.2	+3.2	34.6	35.2	+0.6
55 or older	31.7	23.0	-8.7	26.2	16.5	-9.7	25.	32.9	+7.7
Married	53.2	57.5	+4.3	51.8	48.0	-3.8	60.1	68.4	+8.3
Single	28.2	24.4	-3.8	27.0	36.0	+9.0	23.9	9.5	-14.4
Divorced/Separated	14.0	10.8	-3.2	12.9	10.0	-2.9	9.3	836	-7
Widowed	6.5	7.3	+0.8	6.9	5.9	-1.0	6.5	13.5	+7.0
Own Home	73.0	69.3	-3.7	70.5	71.0	+0.5	75.1	81.1	+6.0
Rent	27.0	30.6	+3.6	29.4	28.7	-.7	24.8	18.9	-5.9
Less than High School	16.8	14.5	-2.3		NA			NA	
4-year degree	10.5	8.3	-2.2		NA			NA	
Higher education	5.7	3.5	-2.2		NA			NA	
White	75.3	73.9	-1.4	78.2	87.7	+9.6	80.5	78.0	-2.5
African-American	20.4	24.0	+3.6	19.5	10.0	-9.5	17.4	20.9	+3.5
Other	2.2	2.1	-.1	2.3	2.3	0.0	2.0	1.2	-.8
Sample Size		1,100			397			6,915	
Average Difference between categories		33%			3.6%			5.5%	

NOTE: \* The data reported for the three Census reports were collected in the previous or succeeding year. Some of the differences between the Census and the QOL surveys may be attributed to the natural changes that occur within the various categories between the times of the two research methods.

## 4. Results

### *Reliability Results*

Appendix A shows reliability statistics related to the model's constructs and measures using data from all three surveys. Not all the model's constructs had multiple indicators because some of them involved formative measures (i.e., the variables involved composite indices), whereas others involved single indicators. However, with respect to those reflective measures, the reliability results are considered adequate for the purpose of this study.

An examination of the items in the questionnaire, all dependent variables and several randomly selected independent variables, found that "between measures," differences were highly significant ( $F = 1954$ ;  $p = .000$ ). However, differences "between people" were not significant. The reliability coefficient for all tested items was high (Alpha = .801; Standard item Alpha = .804).

### *Testing the Model*

Table 2 shows the descriptive statistics and the correlation matrix for all the variables included in the model. The standard deviations for the variables range from .58 to 1.29 ( $M = .84$ ), indicating a substantial amount of variance in the responses. The correlation matrix provides an initial test of the proposed relationships. All correlations are significant due to the large sam-

ple size, and the proposed relationships show correlation coefficients ranging from .20 to .73 ( $M = .37$ ).

**Table 2.** Correlation Matrix, Means and Standard Deviations

Variable	SCS	CS	CLI	PO	SCC	ANC	SF	SS	SH	SW	SFI	SN	CC	ST
SCS	1.00													
CS	0.48	1.00												
CLI	0.50	0.43	1.00											
PO	0.21	0.26	0.27	1.00										
SCC	0.73	0.52	0.45	0.19	1.00									
SNC	0.53	0.35	0.33	0.15	0.51	1.00								
SF	0.33	0.24	0.23	0.10	0.27	0.33	1.00							
SS	0.39	.032	0.27	0.11	0.30	0.35	0.54	1.00						
SH	0.37	0.23	0.25	0.11	0.31	0.44	0.33	0.33	1.00					
SW	0.35	0.28	0.26	0.13	0.29	0.28	0.28	0.29	0.31	1.00				
SFI	0.28	0.22	0.23	0.13	0.26	0.28	0.29	0.21	0.30	0.44	1.00			
SN	0.47	0.44	0.35	0.18	0.40	0.60	0.28	0.33	0.39	0.27	0.26	1.00		
CC	0.35	0.43	0.31	0.18	0.36	0.31	0.18	0.23	0.24	0.24	0.18	0.41	1.00	
ST	0.16	0.16	0.17	0.12	0.11	0.17	0.12	0.23	0.16	0.16	0.11	0.21	0.26	1.00
Mean	4.17	2.92	3.02	2.11	4.13	4.71	5.35	5.41	5.06	5.05	4.53	4.96	2.65	3.28
SD	0.59	0.66	0.58	0.71	0.69	0.75	0.85	0.74	0.94	0.75	1.29	1.07	0.74	0.73

NOTE: All correlations are significant at the .001 level.

SCS = Satisfaction with community services

CS = Community satisfaction

CLI = Confidence in local institutions

PO = Power in influencing local institutions

SCC = Satisfaction with community conditions

SNC = Satisfaction with neighborhood conditions

SF = Satisfaction with family life

SS = Satisfaction with social life

SH = Housing satisfaction

SW = Satisfaction with work life

SFI = Satisfaction with financial life

SN = Neighborhood satisfaction

CC = Community commitment

ST = Social ties

Our model contains a large number of constructs and hypothesized relationships to be evaluated. The most appropriate analytic approach to test this kind of model is path analysis. Path analysis, using structural equation modeling methodology, enabled us to simultaneously test all the hypothesized relationships. Further, we were able to examine the potential mediating effects in the model.

We combined the items measuring each construct into a single indicator measure to avoid identification problems. The construct level correlation matrix used for the path analysis model is presented in Table 3. Figures one through five provide an overview of the relationships between the variables we examined in each stage of the analysis. We tested the model by stages, starting with the simple model shown in Figure 1 and leading up to the most comprehensive model shown in Figure 5. The results are organized accordingly.

**Table 3.** Proposed Structural Model Estimation Results

Hypothesis	Relationship	Stage 1	Stage 2	Stage 3	Stage 4	Stage 4a	Stage 5	Stage 5a	Stage 5b
H <sub>1a</sub>	SCC → CS	.35	.35	.31	.29	.29	.29	.29	.29
H <sub>1b</sub>	SCS → CS	.23	.23	.13	.06	.06	.03	.03	.03
H <sub>1c</sub>	SCC → SCS	<b>.63</b>	<b>.63</b>	<b>.54</b>	<b>.50</b>	<b>.50</b>	<b>.50</b>	<b>.50</b>	<b>.50</b>
H <sub>2</sub>	CS → CC		.49	.39	.39	.39	.39	.39	.39
H <sub>3a</sub>	CLI → SCS			<b>.21</b>	<b>.17</b>	<b>.17</b>	<b>.17</b>	<b>.17</b>	<b>.17</b>
H <sub>3b</sub>	CLI → SCS			.20	.17	.17	.17	.17	.17
H <sub>3c</sub>	CLI → CC			.16	.16	.16	.16	.16	.16
H <sub>3d</sub>	PO → SCS			<b>.03</b>	<b>.02</b>	<b>.02</b>	<b>.02</b>	<b>.02</b>	<b>.02</b>
H <sub>3e</sub>	PO → CS			<b>.11</b>	<b>.10</b>	<b>.10</b>	<b>.10</b>	<b>.10</b>	<b>.10</b>
H <sub>3f</sub>	PO → CC			0.4	.04	<b>.04</b>	<b>.04</b>	<b>.04</b>	<b>.04</b>
H <sub>3g</sub>	ST → CS			<b>.06</b>	<b>.03</b>	<b>.03</b>	<b>.02</b>	<b>.02</b>	<b>.02</b>
H <sub>3h</sub>	ST → CC			.18	<b>.18</b>	<b>.19</b>	<b>.18</b>	<b>.18</b>	<b>.18</b>
H <sub>4a</sub>	SN → SCC				<b>.10</b>	<b>.06</b>	<b>.10</b>	<b>.06</b>	<b>.06</b>
H <sub>4b</sub>	SN → SCS				<b>.09</b>	<b>.09</b>	<b>.09</b>	<b>.09</b>	<b>.09</b>
H <sub>4c</sub>	SN → CS				<b>.13</b>	<b>.13</b>	<b>.12</b>	<b>.12</b>	<b>.12</b>
H <sub>4d</sub>	SNC → SCC				.38	.33	.38	.33	.33
H <sub>4e</sub>	SNC → SN				.76	.76	.76	.76	.76
H <sub>4f</sub>	SH → SN				.18	.18	.18	.18	.18
H <sub>4g</sub>	SNC → SH				.55	.55	.48	.48	.48
-	CLI → SCC					.35	--	.35	.35
H <sub>5a</sub>	SS → CS						<b>.08</b>	<b>.08</b>	<b>.08</b>
H <sub>5b</sub>	SS → ST						.22	.22	.22
H <sub>5c</sub>	SF → SS						<b>.37</b>	<b>.37</b>	<b>.37</b>
H <sub>5d</sub>	SFI → SF						<b>.10</b>	<b>.10</b>	<b>.10</b>
H <sub>5e</sub>	SW → SF						.15	.15	.15
H <sub>5f</sub>	SFI → SH						<b>.15</b>	<b>.15</b>	<b>.15</b>
H <sub>5g</sub>	SH → SF						<b>.22</b>	<b>.22</b>	<b>.22</b>
H <sub>5h</sub>	SCS → SS						.24	.24	.21
H <sub>5i</sub>	SN → SS						<b>.07</b>	<b>.07</b>	<b>.07</b>
H <sub>5j</sub>	SH → SS						<b>.07</b>	<b>.07</b>	<b>.07</b>
H <sub>5k</sub>	SCC → SS						-.03	-.03	--
Fit Indices	Chi <sup>2</sup>		343	245	2848	1553	3673	2742	2746
	d.f.	0	2	3	20	19	51	50	51
	RMR		.03	.01	.05	.04	.05	.05	.05
	GFI		.98	.99	.95	.97	.95	.96	.96
	AGFI		.90	.92	.86	.90	.89	.91	.91
	CFI		.97	.99	.91	.94	.90	.93	.93
	RMSEA		.14	.10	.12	.10	.09	.08	.08
SMCs*	SCS	.54	.54	.57	.56	.58	.56	.58	.58
	CS	.29	.29	.34	.34	.36	.34	.36	.36
	CC		.19	.24	.22	.23	.21	.22	.22
	SCC				.27	.34	.27	.34	.34
	SN				.38	.38	.38	.38	.38
	SH				.19	.19	.23	.23	.23
	SS						.32	.32	.32
SF						.16	.16	.16	
ST						.05	.05	.05	

NOTE: **bold** coefficients are significant at the p < .01 level; all other coefficients are significant at the p < .05 level.

\* SMC = Squared multiple correlation (variance explained) for construct in the model.

**Stage 1 Results.** The path model in Figure 1 is a just-identified path model. We cannot use fit indices to assess the goodness of fit for this model. However, the hypothesized relationships, as shown in Table 3, are significant and in the predicted direction. The model accounts for 54% of the variance of resident’s satisfaction with community services and 29% of the variance in resident’s community satisfaction. As predicted, resident’s satisfaction with the community is positively influenced by the resident’s satisfaction with community conditions ( $\gamma = .35$ ) and by the resident’s satisfaction with community services ( $\gamma = .23$ ) [ $H_{1a,b}$ ]. Further, the results suggest that resident’s

satisfaction with community services is positively influenced by their satisfaction with community conditions ( $\gamma = .63$ ) [ $H_{1d}$ ].

**Stage 2 Results.** The path model shown Figure 2 demonstrated an acceptable fit ( $\chi^2_{(2)} = 343$ , *root mean square residual* [RMR] = .03, *goodness-of-fit index* [GFI] = .98, *adjusted goodness-of-fit index* [AGFI] = .90, *comparative fit index* [CFI] = .97, *root mean square error of approximation* [RMSEA] = .14). In comparison to Stage 1, we added community commitment as hypothesized in  $H_2$ . As predicted, a resident's community commitment is positively influenced by his/her overall satisfaction with the community ( $\gamma = .49$ ). The model shown in Figure 2 explains 19% of the variance in a resident's community commitment. All other results in Stage 2 were identical with Stage 1.

**Stage 3 Results.** In Stage 3 we added three constructs to the Stage 2 model – confidence in local institutions, perceived power in influencing local institutions, and social ties. The path model in Figure 3 fits the data well as demonstrated by the fit indices ( $\chi^2_{(3)} = 245$ , RMR = .01, GFI = .99, AGFI = .92, CFI = .99, RMSEA = .10). As predicted [ $H_{3a-c}$ ], resident's confidence in local institutions influences resident's satisfaction with community services ( $\gamma = .21$ ), resident's community satisfaction ( $\gamma = .20$ ), and resident's community commitment ( $\gamma = .16$ ). With respect to  $H_{3d-f}$ , our findings suggest that resident's perceived power affects resident's satisfaction with community services ( $\gamma = .03$ ), resident's community satisfaction ( $\gamma = .11$ ), and resident's community commitment ( $\gamma = .04$ ) positively. In regards to  $H_{3g,h}$ , social ties was found to have a positive influence on community satisfaction ( $\gamma = .06$ ) and community commitment ( $\gamma = .18$ ). The path coefficients of Stage 2 are still in the predicted direction and significant in Stage 3. In addition, by adding the three variables, the model in Figure 3 explains more variance in resident's satisfaction with community services (57%), community satisfaction (34%), and community commitment (24%) than the model in Figure 2.

**Stage 4 Results.** In Stage 4, we introduced three additional variables to help explain resident's satisfaction with community conditions -- housing satisfaction, neighborhood satisfaction, and satisfaction with neighborhood conditions. The path model demonstrated acceptable fit ( $\chi^2_{(20)} = 2484$ , RMR = .05, GFI = .95, AGFI = .86, CFI = .91, RMSEA = .12), especially for a model with such a large number of constructs. With respect to  $H_{4a-c}$ , as predicted, resident's satisfaction with the neighborhood influences resident's satisfaction with community conditions ( $\gamma = .10$ ), resident's satisfaction with community services ( $\gamma = .09$ ), and resident's satisfaction with the community overall ( $\gamma = .13$ ). As predicted [ $H_{4d,d}$ ], resident's satisfaction with neighborhood conditions was found to strongly influence their satisfaction with community conditions ( $\gamma = .38$ ) and neighborhood ( $\gamma = .76$ ). As hypothesized [ $H_{4f,g}$ ], a resident's satisfaction with housing on one hand spills over to satisfaction with neighborhood conditions ( $\gamma = .18$ ), and on the other hand it is affected by satisfaction with neighborhood conditions ( $\gamma = .55$ ).

Our goal in Stage 4 of the model was to further explain resident's satisfaction with community conditions. To this end, the analysis of our data shows that we can add significantly to the fit of the model by anticipating the effect of resident's confidence in local institutions on satisfaction with community conditions (see stage 4a). By adding this link ( $\gamma = .35$ ), we were able to increase the explained variance in resident's satisfaction with community commitment by seven percent (34% total). The fit-indices show that the new model fits the data quite well ( $\chi^2_{(19)} = 1553$ , RMR = .04, GFI = .97, AGFI = .90, CFI = .94, RMSEA = .10). The modified model explains similar amounts of variance in satisfaction with community services (58%), overall satisfaction with the community (36%), and community commitment (23%) as in the previous stage model. It also explains 38% of the variance in neighborhood satisfaction and 19% in housing satisfaction.

**Stage 5 Results.** In Stage 5 we added constructs related to satisfaction with major life domains such as financial life, family life, marital life, work life, and social life resulting in the most comprehensive model in this study. The path model in Figure 5 fits the data well ( $\chi^2_{(59)} = 3696$ , RMR = .06, GFI = .95, AGFI = .89, CFI = .91, RMSEA = .09). As predicted [ $H_{5a,b}$ ], resident's satisfaction with their social life affects their satisfaction with the community ( $\gamma = .08$ ) and their perception of having social ties within the community ( $\gamma = .22$ ). With respect to  $H_{5c}$ , we find that resident's satisfaction with social life is positively influenced by their satisfaction with family life ( $\gamma = .37$ ). Consistent with  $H_{5d,e}$ , satisfaction with family life was found to be influenced by satisfaction with financial life ( $\gamma = .10$ ) and work life ( $\gamma = .15$ ).

Furthermore, as hypothesized [ $H_{fg}$ ], resident's satisfaction with financial life was found to influence satisfaction with housing ( $\gamma = .15$ ) and satisfaction with housing influenced satisfaction with family life ( $\gamma = .22$ ). Finally, our findings support our hypotheses [ $H_{5h-j}$ ] that resident's satisfaction with social life is influenced by satisfaction with community services ( $\gamma = .24$ ), satisfaction with neighborhood ( $\gamma = .07$ ), and satisfaction with housing ( $\gamma = .07$ ). Contrary to our prediction [ $H_{5k}$ ], satisfaction with community conditions was found to be inversely related to satisfaction with social life ( $\gamma = -.03$ ).

In order to anticipate this finding and the relationship between confidence in local institutions and satisfaction with community conditions we tested two more models in Stage 5—Stage 5a and Stage 5b. With respect to Stage 5a, we added the link between confidence in local institutions and satisfaction with community conditions as we did in Stage 4a. Adding this link significantly improved the fit of the model ( $\chi^2_{(58)} = 2765$ , RMR = .05, GFI = .96, AGFI = .92, CFI = .93, RMSEA = .07). The amount of variance explained in resident's satisfaction with community conditions increased by seven percent due to this change.

In regards to Stage 5b, we further deleted the unsupported relationship we hypothesized in  $H_{5k}$ . This change did not affect the fit of the model or the

variance explained in any of the constructs. This final model explains substantial amount of variance in the key constructs of this study: resident's satisfaction with community services – 58%; community satisfaction – 36%; community commitment – 22%; and satisfaction with community conditions – 34%. We further account for large amounts of variance in the closely related domains of neighborhood satisfaction (38%) and housing satisfaction (23%). The final model also captures variance for the other life domains we included in the fifth stage: satisfaction with social life – 32%; satisfaction with family life – 16%; and resident's perceived social ties – 5%. The results of all stages are summarized in Table 3.

## 5. Discussion

We discuss the theoretical and managerial implications of the study findings. Furthermore, we conclude by addressing the study limitations and provide ideas for future research.

### ***Theoretical Implications***

The main objective of this study was to examine the psychological determinants and outcomes of satisfaction with community services. Through the development of a comprehensive model of satisfaction with community services we identified specific predictors and determinants. Based on previous research, we provided theoretical support for the mechanisms that drive the relationships among these variables. And, by testing the model on a large-scale survey we provided strong empirical support for our model.

Consistent with previous research on residential well-being, our results show that satisfaction with community services is directly influenced by residents' satisfaction with community conditions and residents' satisfaction with their neighborhood. Further, consistent with bottom-up-spill-over theory, we show that satisfaction in other, lower order residential life domains, such as housing satisfaction, indirectly influence satisfaction with community services.

Our model also links satisfaction in other life domains, such as social life, family life, work life, and financial life to satisfaction with community services. Our results show that social life, as the most proximate antecedent to community satisfaction, is most directly affected by satisfaction with community services and other areas of residential well-being. Other life domains are shown to affect community satisfaction through their influence on satisfaction with social life and social ties in the community.

Furthermore, our model includes two important antecedents to satisfaction with community services that are deduced from the relationship marketing and psychology literature. Consistent with theory on locus of control, our results show that residents' perceived power in influencing local institutions increases residents' satisfaction with community services, community satis-

faction, and community commitment with the strongest effect for community satisfaction.

In analogy with the literature in relationship marketing, we find that confidence in local institutions has strong influence on residents' satisfaction with community services, community satisfaction, and community commitment. In addition to our hypotheses, our data suggests that confidence in local institutions has a positive influence on satisfaction with community conditions.

### ***Managerial Implications***

Despite a general acknowledgment of important variables that influence residents' satisfaction with community services there is a lack of research on how these antecedents jointly influence residents' perception of community services. To this end our study provides important insights into the structural relationships among these antecedents and outcomes of satisfaction with community services. Based on our study there are at least three avenues through which community planners can effectively improve residents' satisfaction with community services.

First, community planners may direct their efforts on improvements related to residents' satisfaction with neighborhood conditions. Such efforts would enhance the residents' satisfaction with physical, social, and economic aspects related to the neighborhood. Typical interventions would involve residents' perceptions of personal safety, the racial or social mix in the neighborhood, the landscape surrounding the neighborhood, and the amount of traffic in the neighborhood.

Secondly, community planners may improve satisfaction at the community level by, for example, improving the appearance and condition of public places, availability of recreational and entertainment activities, community leadership, and the economic environment of the community.

Thirdly, community planners may also improve intangible aspects of the community. Such intangible aspects of the community are perceptions of citizen power and confidence in local institutions. Empowering residents in community and local government decision-making may influence these perceptions. Also, efforts to increase township or local government reliability, competence, and trustworthiness will enhance citizen confidence in local institutions.

In addition to these actual changes in the community, community planners may also choose to enter into communicative efforts to increase satisfaction with community services. Such communication may target the strength of residents' belief in aspects that constitute their power in influencing local institutions or confidence in local institutions. Further, communication efforts may highlight particular aspects of residents' power in influencing local institutions or confidence in local institutions that are particularly well im-

plemented in the community. Both, awareness and importance of these aspects will impact residents' satisfaction with community services, community satisfaction, and community commitment.

Finally, our study provides guidance for measuring efforts to improve residents' satisfaction with community services. We show that efforts to improve residents' satisfaction with community services may not be directly linked to residents' satisfaction with community services, but rather operate through other, mediating variables. Community planners have to anticipate these mediating effects in their selection of performance measures. Further, a closer look at these mediation effects may reveal that the mediator is responsible for unexpected or adverse changes in residents' satisfaction with community services.

### ***Limitations and Future Research***

Some limitations of the current study should be noted. First, for theory testing purposes we use a pooled longitudinal sample. Such a pooled sample strengthens the analysis, because the hypothesized relationships are tested across various conditions. Thus, the results are more robust against change than a single, cross-sectional sample. However, pooling data from different samples may also lead to spurious results if there exists heterogeneity between the sub-samples. In order to test for such misspecification, we analyzed our sub-samples individually and compared the results to the pooled sample. Table 4 provides a summary of these tests.

This analysis suggests that heterogeneity is not a major problem in our sample. However, a few exceptions warrant further attention. First, the 1990 sub-sample represents only one fifth of the full sample and may not have sufficient power to detect small effect-sizes in the sampling population reliably. Due to this lack of sensitivity in the 1990 sample, we find some insignificant relationships. The relationships that reach our desired significance levels are all in the hypothesized direction and of similar magnitude as in the other, larger sub-samples.

Secondly, due to the longitudinal nature of our sample and the previously described external changes in the community environment we expect trends in the data. Such trends may either change the magnitude of a relationship or, in extreme cases change the direction of the relationship. We do not observe the later, however we find two relationships that become insignificant over time.

These are the relationship between satisfaction with community services and community satisfaction [ $H_{1b}$ ], and the relationship between power in influencing local institutions and satisfaction with community services [ $H_{3d}$ ]. In addition, the inter-temporal analysis reveals that the effect of social ties on overall satisfaction with the community becomes significant in the later samples [ $H_{3g}$ ]. It is important to note for the analysis of these changes that the effect size of these relationships is relatively small (mean = .04).

**Table 4.** Sub-Sample Structural Model Estimation Results for Stage 5

Hypothesis	Relationships	Pooled Sample	2001 Subsample	1990 Subsample	1978 Subsample
H1a	SCC → CS	.29	.30	.41	.18
H1b	SCS → CS	.03	<b>-.02</b>	<b>-.02</b>	.09
H1c	SCC → SCS	.50	.45	.47	.52
H2	CS → CC	.39	.35	.52	.38
H3a	CLI → SCS	.17	.21	.34	.17
H3b	CLI → CS	.17	.20	.24	.11
H3c	CLI → CC	.16	.17	<b>.09</b>	.16
H3d	PO → SCS	.02	<b>-.02</b>	<b>-.00</b>	.03
H3e	PO → CS	.10	.08	.09	.10
H3f	PO → CC	.04	.19	<b>-.00</b>	.03
H3g	ST → CS	.02	.10	.07	<b>.01</b>
H3h	ST → CC	.18	.18	.10	.18
H4a	SN → SCC	.10	.07	.09	.06
H4b	SN → SCS	.09	.13	.09	.09
H4c	SN → SN	.12	.08	.07	.12
H4d	SNC → SN	.38	.25	.31	.40
H4e	SNC → SH	.76	.97	.82	.70
H4f	SH → CS	.18	.14	.17	.15
H4g	SNC → ST	.48	.69	.46	.43
H5a	SS → CS	.08	.05	.01	.03
H5b	SS → ST	.22	.28	.19	.21
H5c	SF → SS	.37	.43	.16	.37
H5d	SFI → SF	.10	.12	.09	.10
H5e	SW → SF	.15	.10	.17	.14
H5f	SFI → SH	.15	.13	.17	.14
H5g	SH → SF	.22	.29	.40	.19
H5h	SCS → SS	.24	.51	<b>.14</b>	.22
H5i	SN → SS	.07	.09	<b>.08</b>	.04
H5j	SH → SS	.07	.07	<b>.05</b>	.06
H5k	SCC → SS	-.03	-.17	<b>.09</b>	-.07
Fit Indices	Chi <sup>2</sup>	3673	628	271	2494
	d.f.	51	51	51	51
	RMR	.05	.04	.07	.05
	GFI	.95	.93	.92	.95
	AGFI	.89	.85	.83	.90
	CFI	.90	.90	.88	.90
	RMSEA	.09	.10	.10	.08
SMCs*	SCS	.56	.52	.54	.54
	CS	.34	.26	.38	.25
	CC	.21	.20	.26	.17
	SCC	.27	.22	.26	.25
	SN	.38	.52	.48	.32
	SH	.23	.35	.24	.19
	SS	.32	.38	.12	.32
	SF	.16	.26	.25	.13
	ST	.05	.11	.05	.04
Sample size		8412	1100	397	6915

NOTE: **italicized** coefficients are non-significant at the  $p < .01$  level; all other coefficients are significant at the  $p < .05$  level.

\*SMC – Squared multiple correlation (variance explained) for construct in the model.

These trends in the effect size of the relationships open opportunities for research on potential moderators. A promising direction for further research may be the extension of the current framework by including such socially or environmentally driven sources of moderation. For example, a changing role of the citizen in community decision-making may increase the importance of perceived power in influencing local institution. As such, an interesting research question is whether, and under what circumstances, such increased citizen involvement will lead to increased satisfaction with community services, community satisfaction, and community commitment.

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## Appendix A

### **The Measures of the Model's Constructs and Reliabilities Statistics (If Applicable)**

#### Satisfaction with the Community ( $\alpha = .67$ )

1. Overall, how satisfied are you with the quality of life in Genesee County? (6-point scale from 'strongly dissatisfied' to 'strongly satisfied')
2. When thinking about conditions in Genesee County, are conditions: (3-point scale from 'getting worse' to 'getting better')
3. In years to come do you believe that conditions in Genesee County will be: (3-point scale from 'worse than today' to 'better than today')
4. How would you rate Genesee County as a desirable place to live? (5-point scale from 'not very desirable' to 'one of the best communities in America')

#### Satisfaction with Community Conditions\*

*How satisfied are you with each of the following:* race relations in the Genesee County, your personal safety in public places, community leaders, entertainment activities, recreational activities, church-related activities (if applicable), the appearance of commercial and business areas, the appearance of public places generally, the appearance of residential areas, the appearance of the community area generally, the condition of streets in the community generally, traffic conditions generally in the community, the climate in the community, parks available in and near your community, job opportunities available in the area, property taxes in the area (6-point scale from 'strongly dissatisfied' to 'strongly satisfied')

#### Confidence in Local Institutions\*

*How much confidence or trust do you have in the following institutions:* local schools, General Motors, your local city or township government, local banks, county government, and county hospitals? (4-point scale from 'not any' to 'a great amount')

#### Community Commitment ( $\alpha=.58$ )

1. Generally speaking, to what extent do you enjoy living in Genesee County? (4-point scale from 'not at all' to 'to a great extent')
2. If you could, would you move away from Genesee County? ('yes' / 'no')

### Social Ties

To what extent have you made good friends with other community residents? (4-point scale from 'not at all' to 'to a great extent')

### Satisfaction with Housing\*

1. How satisfied are you with the interior of your home? (6-point scale from 'strongly dissatisfied' to 'strongly satisfied')?
2. How satisfied are you with the exterior of your home? (6-point scale from 'strongly dissatisfied' to 'strongly satisfied')?

### Satisfaction with the Neighborhood

Overall, how satisfied are you with the quality of life in your neighborhood? (6-point scale from 'strongly dissatisfied' to 'strongly satisfied')

### Satisfaction with Neighborhood Conditions\*

*How satisfied are you with each of the following:* your neighbors, the number of children in your neighborhood, behavior of children in your neighborhood, you personal safety in your neighborhood, the racial mix of your neighborhood, security against break-ins to our home, the number of trees in your neighborhood, the appearance of homes in your own neighborhood, the amount of traffic on your own street (6-point scale from 'strongly dissatisfied' to 'strongly satisfied')?

### Satisfaction with Social Life

How satisfied are you with your friends and acquaintances in Genesee County? (6-point scale from 'strongly dissatisfied' to 'strongly satisfied')

### Satisfaction with Family Life

How satisfied are you with your own family life? (6-point scale from 'strongly dissatisfied' to 'strongly satisfied')

### Satisfaction with Community Services\*

*How satisfied are you with each of the following:* entertainment facilities, recreational facilities, local colleges and universities, public schools serving your community, medical doctor services available in the community, your local township or city government, local government services generally, fire protection for your neighborhood, police protection for your neighborhood, crime prevention efforts in the community, garbage collection for your neighborhood, public transportation in the community, small animal control, hospitals in the community, shopping facilities in the area, grocery stores near

your neighborhood, local newspapers, local radio stations, local television stations (6-point scale from 'strongly dissatisfied' to 'strongly satisfied')?

Power in influencing local institutions\*

1. How much power do you feel that you have to influence the decisions made by your community school system? (4-point scale from 'no influence at all' to 'great influence')
2. How much power do you feel that you have to influence the decisions made by your local government? (4-point scale from 'no influence at all' to 'great influence')

Satisfaction with work life\*

1. How satisfied are you with your own job? (6-point scale from 'strongly dissatisfied' to 'strongly satisfied')
2. How satisfied are you with your husbands (wife's) job? (6-point scale from 'strongly dissatisfied' to 'strongly satisfied')

Satisfaction with financial life

How satisfied are you with your family's income (husband and wife)? (6-point scale from 'strongly dissatisfied' to 'strongly satisfied')

NOTES: \* formative measure;  $\alpha$ : Cronbach's alpha scale reliability.