Participation: A Model Of Individual Willingness To Participate In The Transportation Planning Process

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PARTICIPATION:
A MODEL OF INDIVIDUAL WILLINGNESS TO
PARTICIPATE IN THE TRANSPORTATION PLANNING PROCESS

by

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for the degree of Doctor of Philosophy
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ABSTRACT

This study sought to identify the key determinants that lead individuals to participate in the transportation planning process. Two models of participation, one for the short-term and another for the long-term, were developed to test whether the key internal and external determinants are responsible for influencing a person’s willingness to participate. The data for this study came from a mail-back survey that was administered to a random sample of 570 individuals throughout the State of Florida for a response rate of 37.37 percent.

The results indicate that the internal motivational determinants exert more influence on a person’s short-term willingness to participate as compared to a person’s long-term willingness to participate. In addition, the external social capital determinants exert more influence on a person’s long-term willingness to participate as compared to a person’s short-term willingness to participate. However, only one of the three external citizenship orientation variables, participatory citizenship orientation, was found to be influential in determining a person’s short-term willingness to participate.

Recommendations were made for public managers to work collaboratively with the public as a participative facilitator, thereby opening up the decision-making process to the general public. One suggested course of action is for public managers to use existing civic organizations as a base for widening an agency’s long-term planning outreach programs. In addition, suggestions for future research propose that qualitative studies
delve in-depth into the positive/negative feelings related to participation, as well as look at how different public participation techniques may affect a person’s willingness to participate, especially as it relates to different time frames.
DEDICATION

This dissertation is dedicated to my wife Diane Frotscher Neidhart. None of this would have been possible without her love and support.
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I want to thank my dissertation committee chairman, Dr. Wendell C. Lawther, who believed in me and my topic. I would also like to thank the other members of my dissertation committee – Drs. Montgomery VanWart, Naim Kapucu, and Elliot Vittes – for their guidance and patience throughout this process. I am also indebted to my cohorts Owen Beitch, Jorge Figueredo, Ken Stackpoole, Cindy Boyles, Charles Otto, Chuck Russo, Debbie Mandel, Allan Johnson, and everyone else in the first Public Affairs class. I will sorely miss hanging out together as a group after class to grab a burger or a slice of pizza.

I want to thank all of my family and friends who helped review early drafts of my survey. I also want to thank my wife Diane and my brother Greg who helped assemble all four of my survey packet mailings. In particular I would like to thank Jack Starling for printing all of my surveys. Your generosity ensured the completion of my project.

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CHAPTER 1: INTRODUCTION

Public participation has been part of the transportation planning process for decades. In the past fourteen years, since the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, public participation has played an even greater role in the overall development of major capital transportation improvement projects.

Much has been written on the normative value of the public participatory role of citizens in the transportation policy decision-making process. However, little detailed analysis has been performed regarding the determinants that cause individuals to become engaged in the public participation process, especially as it relates to the time-horizon of a particular project.

Background of the Study

Public involvement research related to transportation, to date, has typically looked at the effectiveness of different public involvement strategies (O’Connor, 1997; Keever, Frankoski, and Lynott, 1998; and Haruo, 1999). What sets this research apart from previous efforts is that this study does not accept public participation as a given. Past efforts have treated public participation as a subjective “black box,” irrespective of its motivational determinants and temporal design within the overall planning process. This research explores the reasons behind public participation, as well as the separation of public participation into two temporal perspectives—short-term and long-term.
Purpose of the Study

The ISTEA and TEA-21 legislation of the 1990’s (Title 23 U.S.C. § 134 Metropolitan Planning and Title 23 C.F.R. § 450 Planning Assistance and Standards), as well as Executive Order No. 12898 (Environmental Justice), included language that required state departments of transportation and metropolitan planning organizations (MPO)\(^1\) to be more proactive in their public involvement efforts. As a result, numerous public involvement techniques have been deployed by almost every transportation agency, with varying degrees of success. The success of these techniques may or may not be attributable to the technique, but to the willingness of the people that participated, as well as the timing of the project in question.

According to Szyliowicz (2002), there is no widely accepted method to measure the success or failure of an individual public participation process. Therefore, lacking sufficient research on why individuals do or do not participate in public involvement activities, many public agencies blindly pick and choose, trying to figure out which public involvement techniques are the most effective. Some of the following techniques are available in an agency’s *toolbox*, such as: public meetings, public hearings, open forum hearings, open houses, conferences, workshops, retreats, brainstorming sessions, charrettes, visioning, small group techniques, on-line services, hotlines, drop-in centers, focus groups, public opinion surveys, facilitation, negotiation and mediation, special

\(^1\) Metropolitan planning organizations (MPO’s) are quasi-governmental bodies that work cooperatively with the state department of transportation on the planning and funding of transportation projects in urbanized areas.
events, transportation fairs, games and contests, role playing, site visits, interactive television, interactive video displays and kiosks, computer presentations and simulations, teleconferencing (U.S. Department of Transportation, 1996c). In addition, some public involvement techniques may work for certain groups of individuals while not working for other groups.2

Each technique identified above is associated with a success story, but was it the technique, the quality of the individual implementing the technique, or some underlying factor such as people’s willingness to participate that led to its successful implementation? In addition, is participation also influenced by temporal factors? This research effort does not attempt to evaluate the multitude of public participation techniques, nor the quality of those techniques. What this research does focus on is the development of a model of participation in the transportation planning process by identifying the determinants of public involvement activities in the short-term versus the long-term time frame. And to develop a model of participation, a key issue to be addressed is the internal and external determinants of an individual’s willingness to participate.

2 While public meetings, public hearings, conferences, workshops, etc. have proven to be effective for middle and upper middle class neighborhoods, lower socioeconomic/minority neighborhoods such as Crest Street in Durham, North Carolina and Allied Drive in Madison, Wisconsin illustrated how important collaborative problem-solving approaches are in building trust between communities and its government (for further information refer to U.S. Department of Transportation, 2000).
Statement of Problem (Research Intent)

The focus of this research is to identify the key determinants that lead to participation in the transportation planning process. The intent is to develop a model that assesses the willingness of individuals to participate in a one-time civic event that is expected to affect an individual within the next year (to be operationalized by participation in a specific major transportation improvement project), compared to a long-term civic planning process that will not have any immediate impacts on the individual (to be operationalized by participation in a long-range visioning process). Specifically, this research examines the individual-level processes by which citizens are willing to engage in two different forms of participation related to the transportation planning process. These two forms of participation take the form of a project that is ready to begin construction within the next year, and projects that are more long-term and visionary/conceptual (i.e., project construction not expected for ten to twenty years).

By identifying the key determinants that lead to participation in the transportation planning process, this research explores the *internal* and *external* antecedents of both short-term and long-term participation. A key internal antecedent of participation is an individual’s intrinsic and extrinsic motivation. Intrinsic motivation is when an individual is motivated because a task is enjoyable or interesting, whereas extrinsic motivation is when an individual is motivated because of some external reward or punishment, rather than for the enjoyment of the activity (Frey, 1997; Ryan & Deci, 2000). Generally, participation in the transportation planning process is based on extrinsic motivation. As a result, motivational willingness to participate in the transportation planning process has
been conceptualized through a modified model of planned behavior (Ajzen, 1991), which posits that personal internal motivational beliefs are antecedents of civic participation.

To provide a broader context of motivation relevant to civic participation, external determinants of citizenship orientations and social capital are also shown to be antecedents in the transportation planning process. Conover and Feldman (1984a; 1984b), Conover, Crewe, and Searing (1991), Glover (2002), and Theiss-Morse (1993) provide insights into the way individuals conceptualize citizenship orientations. Individuals conceptualize democracy and citizenship differently. Based on how an individual views society and how government should function, differing levels of participation can be expected. In addition, Coleman (1988), Putnam (1993a; 1993b; 1993c; 1995), Brenton (1997), Norris (2002), and Fukuyama (1995; 2001) provide insights into the way that greater levels of involvement in voluntary associational organizations and greater levels of interpersonal trust can lead to increased levels of civic participation through the social capital construct. As a result, the external determinants of citizenship orientations and social capital, along with the internal motivational beliefs, are all antecedents of civic participation. Therefore, the determinates of participation have been divided into one internal source (i.e., personal motivation), and two external sources (i.e., citizenship orientations and social capital).

**Research Questions**

Conventional wisdom suggests that people are more likely to attend and participate in public meetings if the subject of the meeting could have an impact on the individual in
the near future. For example, if a road located near an individual’s home is going to be widened—this project could have an immediate impact on the individual. When public meetings are held regarding more long-term visionary projects, attendance is substantially less (U.S. Department of Transportation & Florida Department of Transportation, 2001). The reasoning is that long-term visionary projects will not affect anyone in the near future; and therefore the public doesn’t see the need to get involved. This research accepts the conventional wisdom that projects planned to begin construction in the near future will generally elicit greater participation. Conversely, it is accepted that projects that are not planned to begin construction in the near future will generally elicit less participation.

The question really isn’t whether people are more likely to participate in a short-term planning process versus a long-term planning process; the motivational literature is clear that individuals are more likely to respond to external stimuli that will have a more immediate impact versus stimuli that will not have an immediate impact (Jung, 2001; Karniol & Ross, 1996; Strathman, Gleicher, Boninger, & Edwards, 1994). The real questions are: what are the determinants that influence participation; and what are the determinants that cause the difference in participation between the short-term and long-term? The literature does point towards factors that may influence participation, but only tangentially address the issue of participation in different time frames. Alkadry (2000) notes that participation can be thought of as two intersecting continuums; one for the level an individual is affected and another for how willing a person is to be engaged in the participation process. Alkadry’s framework provides a starting point to integrate the
time frame issue into the participation construct. How a person is affected along with a person’s willingness can help frame how different time perspectives are important to the participation construct. Alkadry’s framework, consistent with conventional wisdom, would suggest that internal motivational determinants are important in the short-term, whereas external determinants are important in the long-term. Therefore, this dissertation has three key research questions:

1. Are the internal motivational and external civic and social orientation influences important in determining whether an individual will be willing to participate in the transportation planning process?

2. Are the internal motivational variables more important in determining whether an individual is willing to participate in a short-term transportation planning process than for a long-term transportation planning process?

3. Are the external civic and social orientation variables more important in determining whether an individual is willing to participate in a long-term transportation planning process than for a short-term transportation planning process?

Hypotheses

Drawing on the literature of motivation theory, citizenship orientation theory, and social capital theory, the overall hypothesis of this study is that the internal and external determinants of public participation in the transportation planning process will be different between the short-term and long-term time frames. Specifically, people’s willingness to participate in the transportation planning process will be affected by
individual motivational determinants, as well as by citizenship orientations and personal levels of social capital.

To accomplish this task, a model of participation has been developed in Chapter Four to assess the relative importance of internal and external processes between the short-term and long-term planning time frames. Below is a complete list of the hypotheses that have been developed to assess the internal and external determinants of an individual’s willingness to participate in the transportation planning process, which will be elaborated on in greater detail in Chapter Four.

\[ H_{1a} \]: The more an individual has a positive attitude towards participation, the more likely the individual is to be willing to participate in the transportation planning process.

\[ H_{1b} \]: The internal motivational variable attitude towards participation will have a greater influence in determining an individual’s willingness to participate in a short-term transportation planning process than for determining an individual’s willingness to participate in a long-term transportation planning process.

\[ H_{2a} \]: The more an individual has a positive feeling of conformity with important referents, the more likely the individual is to be willing to participate in the transportation planning process.
$H_{2b}$: The internal motivational variable conformity with important referents will have a greater influence in determining an individual’s willingness to participate in a short-term transportation planning process than for determining an individual’s willingness to participate in a long-term transportation planning process.

$H_{3a}$: The more an individual has a positive perceived level of control, the more likely the individual is to be willing to participate in the transportation planning process.

$H_{3b}$: The internal motivational variable perceived level of control will have a greater influence in determining an individual’s willingness to participate in a short-term transportation planning process than for determining an individual’s willingness to participate in a long-term transportation planning process.

$H_{4a}$: The more an individual has a positive participatory citizenship orientation, the more likely the individual is to be willing to participate in the transportation planning process.

$H_{4b}$: The external citizenship orientation variable participatory citizenship orientation will have a greater influence in determining an individual’s willingness to participate in a long-term transportation planning process than for determining an individual’s willingness to participate in a short-term transportation planning process.
$H_{5a}$: The more an individual has a positive modern citizenship orientation, the less likely the individual is to be willing to participate in the transportation planning process.

$H_{5b}$: The external citizenship orientation variable modern citizenship orientation will have a greater influence in determining an individual’s willingness to participate in a long-term transportation planning process than for determining an individual’s willingness to participate in a short-term transportation planning process.

$H_{6a}$: The more an individual has a positive neo-classical liberal/representative citizenship orientation, the more likely the individual is to be willing to participate in the transportation planning process.

$H_{6b}$: The external citizenship orientation variable neo-classical liberal/representative citizenship orientation will have a greater influence in determining an individual’s willingness to participate in a long-term transportation planning process than for determining an individual’s willingness to participate in a short-term transportation planning process.

$H_{7a}$: The more organizations an individual is involved with, the more likely the individual is to be willing to participate in the transportation planning process.
H_{7b}: The external social capital variable associational involvement will have a greater influence in determining an individual’s willingness to participate in a long-term transportation planning process than for determining an individual’s willingness to participate in a short-term transportation planning process.

H_{8a}: The more trusting an individual is, the more likely the individual is to be willing to participate in the transportation planning process.

H_{8b}: The external social capital variable interpersonal trust will have a greater influence in determining an individual’s willingness to participate in a long-term transportation planning process than for determining an individual’s willingness to participate in a short-term transportation planning process.

**Summary**

This dissertation looks at the fundamental aspects regarding the willingness of the public to be involved in both short-term and long-term planning processes for major transportation improvement projects. To assess the determinants of participation, a model of planned behavior has been modified from previous research (Ajzen, 1988; 1991) to evaluate the relative influence of the antecedents of participation related to both short-term and long-term participation. From the data that has been collected and analyzed, a better understanding of the factors that affect participation has been gained. In addition, recommendations for public agencies involved with the advancement of
transportation projects have been suggested for how agencies may be able to increase and/or stimulate public involvement.

To better understand the organization of this research, this dissertation is organized in the following manner. Chapter One provides an introduction and explanation regarding the need to develop a model of participation that explores the internal and external determinants of individual willingness to participate in both short-term and long-term planning processes. Chapter Two explores the basic relationship of democratic theory to the dependent participation construct. Chapter Three explores the internal and external determinants of civic participation in greater detail. Building on Chapter Three, Chapter Four develops a model of participation based upon a modified theory of planned behavior. Chapter Five discusses the methodology that has been used to assess the proposed model of participation. Chapter Six analyzes data from a self-administered mail-back survey, as well as explains the final model of participation. And Chapter Seven summarizes the research results, along with recommendations on how to stimulate participation in the transportation planning process.
CHAPTER 2: PARTICIPATION AS DEMOCRACY

Introduction

Chapter One established the value of assessing the willingness of individuals to participate in both the short-term and long-term planning processes, where the willingness of individuals to participate in the transportation planning process is the dependent concept under study. As part of this effort, this chapter explores the relationship of the dependent construct participation as a component of democratic thought.

Participation by its very nature suggests activity, and this activity is manifested through both political and non-political acts. However, participation was originally conceived by many of the earliest classical democratic theorists as participation in the political process, irrespective of whether they thought open participation by all citizens was necessary or not. As will be shown, participation has a much broader span of influence than just political participation, such as participation in the civic affairs of the community. The specific participatory process that is explored here is participation in the transportation planning process. However, before participation in the transportation planning process is discussed, a general conceptual framework of participation will be developed as it relates to democratic theory and civic engagement within the community.
Some of the most fundamental questions that societies have tried to answer relate to the level and type of involvement of its citizens in the making of decisions in the public affairs of the state. How citizen involvement is ultimately incorporated into the decision-making process depends on the philosophical ideology of each society. In the United States, the political democratic philosophies that shaped the founding of this country were first developed through the classical teaching and writings of Plato and Aristotle. These same works were also employed by many of Europe’s most gifted political philosophers of the 17th, 18th, and 19th centuries as the foundation of models of democratic thought. As the United States was being formed, its founding fathers relied heavily upon the theoretical teachings of these thinkers. However, political thought on the level of citizen involvement has not been completely addressed in the United States. Throughout the history of the United States, as well as most Western societies, questions related to citizen participation will never be completely answered, in part because civil society is constantly changing and evolving. This evolutionary process brings with it the conflicting notions of what exactly the appropriate level of citizen involvement should be. Therefore, the core of this discussion is primarily a philosophical assessment that addresses the capacity, potential, and limitation of human nature (Walker, 1979).

Citizen involvement in Western societies, such as the United States, is a function of the democratic philosophy that governs each society. As such, Western democratic thought is primarily a balancing of democratic freedoms that provide, on the one-hand, an entitlement for citizens to be involved in policy-making decisions of the State. On the other-hand, the decision-making ability of the State in many cases (but not all) is limited
to those decisions that do not infringe upon individual liberty (Holden, 1988). However, interpretations of democracy, and therefore the fine line between citizen involvement and the limitation of the State’s power, vary among many of the philosophers.

Just as macro level democratic thought differs between theorists, so does the philosophy of participation. What is participation and what does civil society mean when it speaks of participation? Participation is linked to a long history of democratic thought. As such, participation is many things: political participation, as in voting; civic participation, as in joining the Kiwanis Club; participation in the local school system, such as the Parent Teachers Association (PTA); participation in an environmental advocacy group, such as the Audubon Society; or participation in the legal system, such as serving on a jury. Even though each of these activities appears to be different, they all have a common bond. The common bond joining these seemingly disparate activities is that each one requires the individual to participate in a collective or individual decision-making process, whether that process is choosing a candidate in a national election, being involved in a local civic group, or deciding the innocence or guilt of a defendant.

Participation in the context of this research is not limited to decision-making in the traditional form of electoral political participation. Rather participation will encompass all forms of involvement within the civic realm. Consistent with the theoretical debates of Pateman (1970) and Lowndes and Wilson (2001), participation is defined as the activity of individuals being involved in the civic affairs of the community. Therefore,
participation in this context is not limited to a specific form of civic participation, but rather is inclusive of all forms of civic participation.

**Liberal Democratic Theory**

Multiple theories of democracy will be presented to illustrate just how diverse the meaning of the word *democracy* is, and by extension the meaning of participation. The foundation of the concept of participation has its roots in the concept of liberal democracy, although participation has not always enjoyed an equivalent status within liberal democracy as does liberty and equality (for a more detailed account refer to Holden, 1988, pp. 11-38). However, a definition of democracy given by Holden (1988) states that “to qualify as a democracy the people must *actually* make, as well as being entitled to make, the basic political decisions” (p. 6). Therefore, a key component of democracy is the decision-making capability of its citizens in the policy process.

From the neo-classical liberal theorists of John Locke (1632-1704), Jean-Jacques Rousseau (1712-1778), Adam Smith (1723-1790), Thomas Jefferson (1743-1826), James Madison (1751-1836), Jeremy Bentham (1748-1832), James Mill (1773-1836), Alexis de Tocqueville (1805-1859), and John Stuart Mill (1806-1873); to the early/mid twentieth century modern theorists of Max Weber (1864-1920), Joseph Schumpeter (1883-1950), Robert Dahl (1915-); to the participatory theorist of John Dewey (1859-1952), Carole Pateman (1946-), and others; each of these philosophers had their own conception of democracy, and therefore participation. Although each advocated for citizen involvement, just how much participation that entailed varied greatly.
John Locke was one of the first political theorists to put forth a convincing treatise of liberal democracy in his landmark *Second Treatise of Government*. Locke presents a convincing argument for a limited constitutional state based on the individual’s natural right to unlimited private property. Locke’s (1690/1980) argument stems from the assertion that mankind’s *state of nature* is based on men’s natural rights for “a desire of happiness, and an aversion to misery” (p. xi). Locke sees that individuals collectively agree to give up their natural rights to an all-powerful civil society, but that society has no authority without the express consent of the people. To protect life, liberty, and property the people agree to cede their natural rights to society, with the expectation that society will not abuse its power. As liberal ideology Locke asserts that individuals are free and equal, while acknowledging that people are self-interested. As such Locke sees that once society ceded its natural rights to the state, the state would then have absolute power. Locke tempers the potential abuse of power by his belief that the state will not stray from the natural law of inflicting harm on others, nor infringe upon individuals’ right to unlimited property.

Another of the early philosophical writers on democracy was Jean-Jacques Rousseau. Rousseau argued that there is a social contract between civil government and the citizens it purports to protect (Rousseau, 1950/1993). As such, Rousseau’s theory was based heavily on citizen involvement and centered on the decision-making process (Pateman, 1970). Rousseau espouses an egalitarian form of governance where all citizens should assemble as equals, but also as independent individuals so “the only policy that will be
acceptable to all is the one where any benefits and burdens are equally shared; [and that]
the participatory process ensures that political equality is made effective in the decision-
making assembly” (Pateman, 1970, p. 23). Rousseau’s egalitarianism proffers a sense of
equality between individuals as well as a commitment to participation in civic affairs.

Adam Smith (An Inquiry into the Nature and Causes of the Wealth of Nations), Jeremy
Bentham (An Introduction to the Principles of Morals and Legislation), and James Mill
(Essays on Government, Jurisprudence, Liberty of the Press and Law of Nations) each
expand on the liberal democratic tradition. Each used their writings to further the liberal
democratic agenda of a capitalist, free-market society. Smith, through the use of his
invisible hand market mechanism, and Bentham and Mill through the utilitarian principle
of greatest happiness, help provide the theoretical foundations of liberal democratic
philosophy.

As liberal democracy was beginning to make headway in colonial America Thomas
Jefferson’s and James Madison’s writings (i.e., the Declaration of Independence and the
United States Constitution) can be seen to respectively incorporate the ideas of both
Rousseau’s egalitarian principles and Locke’s utilitarian liberal democratic principles;
where Jefferson follows the egalitarian principles of Rousseau, Madison reflects the
qualities of Mill’s and Bentham’s utilitarianism (Walker, 1979). It is between these two
philosophical differences within liberal democracy, egalitarian participative principles
versus utilitarianism, that many of these issues are still being debated today.
Between these two seminal writers, Rousseau’s thoughts on freedom extended further than to the rights that Locke believed in. Locke’s liberalism cultivated the market system, which is founded upon free trade and private ownership of property. Conversely, Rousseau argued that the market system had built in inequalities to it. The market system breeds greed, ambition, and vanity, which according to Rousseau leads society on a never-ending path of inequality.

Richard Bellamy (1999) argued that liberal democratic philosophy has at its heart an affirmed commitment to four concepts: equality, liberty, individuality, and rationality. Equality is embodied in the notion that everyone should have an equal opportunity to prove themselves based on their talents and possessed merits. However, this does not mean that everyone is equal in merit, but that everyone has an equal opportunity. Liberty works in concert with equality in that the greatest amount of liberty is inherent with the ability to prove one’s self-worth through extensive individual liberty, to the extent that one person’s liberty does not infringe upon others liberty. The primacy of the individual is key to liberal philosophy. The individual is highly valued in relation to society, where personal liberty implicitly values the individual over many of society’s needs. And finally, Bellamy’s notion of rationality asserts that all policy discussions should be open to public debate so public discourse can determine the strengths/weaknesses of those policies.

Even though most theorists generally agree upon these four concepts, their exact interpretation has been contested. As Bellamy (1999) points out, “philosophically the
liberal canon includes methodological individualist and holists, materialists and idealists, and determinist and voluntarists, utilitarians and adherents of natural rights, whilst politically it extends from libertarian upholders of the free market to defenders of the welfare state” (pp. 24-25). What Bellamy illustrates is the value laden nature of the four democratic concepts.

Just as liberalism has wildly different interpretations, so does democracy and participation—where participation is embodied in democracy just as democracy is embodied in liberalism. Participation for this research effort has been defined as the individual’s participation in the decision-making process. The decision-making process is a function of the political process, and therefore democracy (Pateman, 1970). However, democracy itself is not a unidimensional concept. The writings of both Overdevest (2000) and Morse (1993) reveal that there are multiple conceptions of democracy. As Morse (1993) comments on the writings of Weissberg (1974), people tend to view democracy and civic responsibility in three general ways: electoral competitive democracy, representative democracy, and participatory democracy. In addition, Green (1993) states that “democracy in the late twentieth century is not only a contested concept but also a remarkably ambiguous one” (p. 2).

The electoral competitive model of democracy states that citizens have the responsibility to elect their political leadership. After the political leadership has been elected, the responsibility of the citizen has been met. If special interests overshadow the public interests, so be it once the votes are cast. The only civic requirement, or for that matter
expectation, is for each citizen to vote (Morse, 1993). The role of the citizen to participate is relegated to voicing their concerns only through voting.

The representative model of democracy supports a republican form of representative government, but goes further in spelling out the rights and roles of its citizens as compared to the electoral competitive model. Under this form of government, citizens are to stay informed regarding their elected officials actions and be knowledgeable of public policy issues, especially the policies that affect them. However, it is not the citizen that actually keeps abreast of the issues. Citizens keep tabs on their elected officials by joining interest groups. In their aggregate form, interest groups provide a watchdog role over the elected official for the citizenry. This model values special interest politics for obtaining policy objectives (Morse, 1993). The representative model of democracy is based on the idea that individual citizens do not have the time, knowledge, or interest to participate in the decision-making process; therefore, they enlist the help of interest groups to watch their elected officials for them (Overdevest, 2000). According to Morse, the representative model closely resembles the existing American form of representative democracy. Since the electoral competitive and representative models of democracy are relatively similar, further discussion will combine these two models together under the representative model construct.

The participatory model of democracy takes a different approach. The participatory model of democracy looks for broad participation of its citizens in the public policy decision-making process (Overdevest, 2000; Weeks, 2000). The primary objective is to
involve all citizens in the public decision-making process (Overdevest, 2000). Although this model is supportive of a representative form of government, it views citizens as the nexus of the political system. This system of governing encourages citizens to become directly involved in the community civic decision-making process by interacting with others on issues of common concern. In order for this model to work, citizens must take responsibility for talking and listening, exercising public judgment, and then acting on those issues of public concern (Morse, 1993).

From these differing definitions of democracy it can be seen that there is not an all-encompassing concept of democracy, as can also be said of liberalism. Therefore, when public participation is viewed as a necessary good by federal and state transportation agencies, as codified in ISTEA and TEA-21, in the development of public input on major transportation projects (or any public issue), the assumption is that the participatory model of democracy inherently espoused by classical democratic theory is not present in the American representative model of governing. The failure of the American representative model can be seen by the lack of citizen participation in almost every public meeting held regarding transportation policy and implementation.

Just as the term democracy does not have a unified definition, neither does participation. Since participation is a function of democracy, if democracy is a contested concept, so too must participation be contested. Not all political theorists view participation in the same light. As will be seen, some view participation as a necessary evil, while some see it as an anathema, while others see the positive benefits of participation. Although this
research is not focused on the theoretical or normative aspects of democratic thought, the initial stages of this research are built on the foundation of Western liberal democratic philosophy.

To illustrate the contested notion of democracy, the philosophical views of democracy will be used to show how the modern theories of Schumpeter, Berelson, Dahl, Weber, and others compare with the participatory/classical theories of Rousseau, John Stuart Mill (versus James Mill), Cole, Dewey, and others. This contrast will be used for two purposes; first, to show that participation is about the activity of decision-making and that the decision-making process is therefore a function of the democratic process. And second, that a person’s view of society (i.e., conception of citizenship and the democratic process) can affect their views and actions on participation.

**Classical Democratic Theory**

Although classical democratic thought pre-dates liberalism, a brief discussion is included here since modern democratic thought, which will be discussed in the next section, is heavily based on refuting many of the core assumptions of classical democratic thought. Classical democratic theory focused on the *ideal citizen*. This ideal citizen, “which goes back to the Athenian city-state, is now known as the classical democratic ideal. It received a famous justification from Aristotle in the course of his discussion of citizenship in various polities” (Green, 1993, pp. 2). The classical ideal also was influenced by Plato in his discussion of the virtuous philosopher kings in the *Republic*. But what is the ideal citizen? Pateman sees the ideal citizen as “an active, rational, and
informed citizen” (Walker, 1979, p. 27). This was to be achieved by the participation of all citizens through a “basic democratic method of government that involves institutional arrangements for making policy decisions for the common will by allowing the people to decide issues” (Walker, 1979, p. 27) on their own accord.

However, this ideal was not popular with political elites. The ideal citizen was thought to have too much power, since it meant an active role played by the citizenry. According to Green (1993) “that is because it [i.e., an active citizenry] was historically taken to mean direct rule by the people meeting in assembly—or, as its opponents thought of it, in a mob” (p. 2). Pateman also commented on how the democratic ideal was not seen by many as a positive influence for society. Although democracy was still the ideal that society should strive for, its emphasis on participation had become suspect, and therefore the notion of classical democratic theory had also become suspect (Pateman, 1970).

By the early/mid twentieth century, the classical ideal gave way to a realist approach to democratic theory. The lack of participation in traditional democratic societies was seen as a rebuttal to the classical ideal. This lack of participation, especially by lower socio-economic classes, invited the conclusion that “the ‘classical’ picture of democratic man is hopelessly unrealistic, and moreover, that in view of the facts about political attitudes, an increase in political participation by present non-participants could upset the stability of the democratic system” (Pateman, 1970, p. 3). Therefore, classical theory was seen as beyond the scope of practicality outside the small town or community (Green, 1993).
In addition to this more realist approach to democratic theory, another source of attack on the classical theory of democracy was beginning to take hold. This attack was based on the issue of values, the normative values associated with classical democratic theory. As social science went through its debate on how values affect science, classical democratic theory too became scrutinized, and the “familiar argument that those theories were normative and ‘value-laden,’ whereas modern political theory should be scientific and empirical, grounded firmly in the facts of political life” (Pateman, 1970, p. 3) began to take precedence over the classical formulation of democratic theory. The notion that classical theory is normative was vigorously supported by Robert Dahl (1989/1993).

What Pateman illustrates in her seminal work, *Participation and Democratic Theory* (1970), is that there is not a unified classical notion of democracy. The writers/philosophers that developed many of the core theories of democracy contradict each other. The writings of James Mill and Jeremy Bentham view participation of the citizenry completely differently than did John Stuart Mill and Jean-Jacque Rousseau. Where James Mill and Bentham looked to utilitarian principles, John Stuart Mill and Rousseau saw a more participatory nature of democracy. Even though there is disagreement over many of the principles associated with the classical ideal, Pateman does point out where many of the philosophical discussions do merge, which is that the classical notion embodies an active, rational, and informed citizenry. Therefore, the classical ideal constitutes a democratic method for making policy decisions for the public to carry out their will (Pateman, 1970; Walker, 1979).
Modern Democratic Theory

Beginning in the 20th century, political theorists noticed that the classical model of democracy seemed to be inextricably missing as an applied form of governance. There were not any countries, many of which call themselves democracies, which seemed to conform to the classical model. As such, these theorists began to develop new theories of what constitutes a democracy. Some of the modern theorists were Joseph Schumpeter; Bernard Berelson, Paul Lazarsfeld, and William McPhee; Robert Dahl; and Max Weber. These theorists were determined to define democracy in a more realistic manner.

Classical democratic theory, according to modern theorists, has two weaknesses: (1) it does not describe reality or any democratic system that is in place today. It ascribes a high level of knowledge/education and participation on the part of the citizenry; and (2) classical democratic theory is based on moral normative values, whereas the modern theories are objective descriptive theories that make democracy workable, and therefore meaningful.

An early attack on the classical notion came during the founding of the United States. James Madison, in *The Federalist #10*, illustrates his point that a direct democracy (i.e., classical democracy) was an unworkable arrangement in governing the day-to-day operations of a national government, and therefore rejected the participatory elements of the classical model (Green, 1993). Madison’s argument looks at the practical side of the classical ideal—direct involvement of the masses was impractical and could not work. Madison (n.d./1993) also looked at the more theoretical side of the ideal citizenry—one
which espoused “equality in their political rights, they would, at the same time, be perfectly equalized and assimilated in their possessions, their opinions, and their passions” (p. 47). From a practical standpoint Madison thought that citizens in the real world did not possess equal amounts of intelligence, responsibility, civic mindedness, and rationality to have a working national government function under a direct democratic system. As a result, a direct democracy could not manage the affairs of an entire nation. Therefore, for Madison, a representative form of democracy was seen as a better alternative.

From the time of the United States’ founding, the conception of democracy was more of a liberal representative model than a full participatory model. According to Pateman (1970) the notion of democracy where participation has more than just a minimal role is difficult to find. Supporting the view of minimal participation in civic affairs was Joseph Schumpeter, who believed that the citizenry was only capable of choosing its elected leaders (Schumpeter, 1950/1993).

Schumpeter had two criticisms of the classical theory of democracy: (1) that it set too high and unrealistic level of rationality from the citizenry; and (2) that the classical theory ignored the issue of choosing leaders and the role they play (Pateman, 1970). Schumpeter’s (1950/1993) first criticism is based on the notion that the classical theory, which included the idealized citizen participating in the affairs of the state, “was that the central participatory and decision[-]-making role of the people rested on empirically unrealistic foundations” (p. 84; see also Pateman, 1970). Schumpeter sees the classical
model, and thereby the citizenry, as incapable of properly participating in the political decision-making system. As a result of the classical model idolizing the citizen, the classical model did not conform to reality, which also led to his rejection of the classical model in favor of an empirical approach that lacked a normative base (Schumpeter, 1950/1993).

Schumpeter’s criticism was that the classical model required individuals to act in a rational manner. Therefore, each individual’s participation was bound by rational actions (Schumpeter, 1950/1993). Rationality, which Schumpeter implies, requires a level of sophistication that did not appear in any of the empirical evidence on citizen participation. Therefore, the rationality implied in the classical model suggests that decisions are based on having sufficient knowledge to achieve specific objectives (Holden, 1988). However, Schumpeter noted that the data did not appear to confirm this level of rationality in the classical model.

Schumpeter’s (1950/1993) second criticism is based on the idea that the classical model required a lot of effort to be expended by the individual citizen, and therefore did not allow the voices of the collective to be represented by a single voice. In contrast, the classical model focused heavily on the individual while Schumpeter focuses on the leader, albeit elected leadership. For Schumpeter, leadership is of primary importance to democracy. Schumpeter states that the classical model ignores the issue of leadership; the ability of the electorate to choose its leaders. The act of choosing leaders through a “competition for leadership which is to define democracy, to free competition for a free
vote” (p. 89) is of the utmost importance. Schumpeter’s theory of democracy is based on the notion that competition between those vying for elected office is key.

For Schumpeter, competition for elected leadership positions is what makes democracy unique (Schumpeter, 1950/1993). Therefore, in Schumpeter’s theory participation by citizens is relegated to voting for leaders and nothing else (Pateman, 1970). Schumpeter also sees the citizenry as being incapable of the responsibilities of participation, “thus the typical citizen drops down to a lower level of mental performance as soon as he enters the political field” (p. 85). In essence, Schumpeter’s theory of democracy is a model of elites, consistent with the representative model advocated by Madison (and others), but inconsistent with the classical model, where participation of the citizenry in the public affairs of the community is a vital component of being a citizen within society.

Schumpeter argues that the classical model, which follows a rational choice model, requires that choosing a representative should be secondary to the decision regarding policy. However, Schumpeter hypothesizes that the opposite was actually occurring. It was the choosing of the representative (i.e., the personality and ideology of the elected official) that is critical to the public, not necessarily the policy. Schumpeter argued that policy was in fact less important than the choosing of the representative (Schumpeter, 1950/1993).

Schumpeter was not the only critic of the classical theory of democracy. Pateman in her book, Participation and Democratic Theory (1970), discusses how two other influential
democratic theorists (Berelson and Dahl) derived critiques of the classical theory similar to Schumpeter’s original critique.

Berelson, Lazarsfeld & McPhee (1954/1993) saw that the classical model could not be lived up to; it just required too much from its citizens. Berelson et al. argued that the classical model assumed too much of the citizenry; a level of behavior (i.e., participation) that was not evident through observation. From this Berelson et al. saw that the classical model concentrated on the individual and ignored the political system that the citizenry had to participate in.

Berelson et al. (1954/1993) also asserted that the lack of participation is an essential component to a better understanding of a more realistic theory of democracy. They argue that it is important to have individuals fall across the participation continuum from apathetic to somewhat interested to extremely interested and active. Each segment of the participation continuum plays a vital role in a democracy. According to Berelson et al., the more actively that individuals participate in the civic affairs of the state, the less likely they are to be swayed to change their policy perspective. Individuals that participate the least may not be very active throughout their community, but they are more likely to be open to opposing policy viewpoints. In contrast, highly active participants will be the least likely to be open to change. Therefore, Berelson et al. feel that societies need this group of non-participants to help cushion policy shifts and/or changes. That is, “they may be the least partisan and the least interested voters, but they [non-participatory individuals] perform a valuable function for the entire system” (p. 96). If decisions were
decided on by a large participatory group of citizens, the system could be too rigid to handle change (Berelson, et al. 1954/1993), since these individuals in Berelson’s theory would be the least likely to change their opinions.

The classical model according to Berelson et al. (1954/1993) is incorrect in its key component of individual civic participation. What Berelson et al. saw was that participation and apathy are preferred and have a positive role in the functioning of a democratic system (Pateman, 1970). In their final analysis, Berelson et al. (1954/1993) did not feel that the classical democratic model needed to be discarded, but did need revision to account for all levels of participation. The classical model just expected too much from its citizens.

Under this more modern theory of democracy, the classical ideal or true democracy was seen as normative, and therefore could not be wholly supported (Dahl, 1989/1993; Schumpeter, 1950/1993). Classical democracy’s normative aspects, in a sense, were that civic duties are held in high esteem. Therefore, the citizen is expected to behave in a certain manner, and as a result classical democratic theory highly values this type of civic behavior. Empirical evidence showed that the ideal was unachievable, so empirical reality as evidenced by low voter turnout and declining participation became seen as the reality of a true democratic theory.

Dahl’s theory of democracy introduces the concept of polyarchy, the rule of multiple minorities (i.e., interest groups), “as a minimal necessary precondition for the democratic
process, through various limited, attainable levels of the democratic process, to the ideal and unattainable democratic process, and finally to the myth of classical democracy” (Green, 1993, p. 7). Polyarchy was Dahl’s replacement for the classical democratic model (Pateman, 1970). Dahl sees a progression, or a continuum, that a society takes on its path to achieving a fully democratic state, from authoritarian regimes to polyarchy to a higher state of democracy. This higher state can be interpreted as being the classical ideal. However, Dahl (1989/1993) has not found a single instance where a polyarchy has transcended to a higher state of democracy.

Dahl’s theory, similar to Schumpeter’s (1950/1993) and Berelson et al. (1954/1993), argues that full participation by a vast majority of citizens is not necessary. “Dahl puts forward an argument about the possible dangers inherent in an increase in participation on the part of the ordinary man” (Pateman, 1970, p. 10); and as a result he hypothesizes “that a relatively small proportion of individuals in any form of social organization will take up decision-making opportunities” (Pateman, 1970, p. 8). In essence, Dahl’s theory is also a theory of elitism where participation in resolving issues are taken care of by professionals, “but [with] little or no involvement by most citizens” (Dahl, 1961/1993, p. 117). Dahl’s elitism is embodied through competition in the polyarchical system (Pateman, 1970). Participation of the masses only occurs if the debate becomes intense and is of great enough interest to the general public (Dahl, 1961/1993).

Dahl (1989/1993) developed a list of criteria/standards that provide the distinguishing features of a democratic process. One of those criterions was effective participation.
However, effective participation is not the participation as in the classical model. Dahl’s concept of effective participation did not include the citizenry in anything more than a typical representative form of government (i.e., electing leaders). Although Dahl recognizes that full citizen participation was not incorporated into his conception of a democratic system, he did believe that under his proposed system of polyarchy that it was “unlikely in the extreme that a government will long pursue policies that deeply offend a majority of citizens” (p.66). Implicitly Dahl’s check on elite rule/power is curbed by regular elections where the citizenry elects its leaders.

Green (1993) commenting on Dahl’s theory of democracy notes that “the element of equal participation in political decision[-]making, fundamental to the classical or Rousseauistic notion, slips away, or is reduced solely to the act of voting” (p. 5). Dahl (1989/1993) felt that his theory presented more latitude in the participatory decision-making process, than that of Rousseau’s classical model.

Pateman, in explaining Dahl’s theory, illustrated how Dahl observed that socio-economically disadvantaged groups participate the least, and that authoritarian personalities are frequently found within these groups of people. Dahl’s hypothesis is that an increase in participation of the socio-economically disadvantaged with their authoritarian views could bring about a decline of accepted democratic norms, which in turn could lead to instability (Pateman, 1970). Dahl’s writings illustrate his distrust of the average citizen by stereotyping economically disadvantaged groups as leaning toward authoritarian personalities. Dahl’s conclusion that increased participation is harmful is
consistent with Schumpeter and Berelson et al. But the reason for their disdain of participation is not similar. Dahl foresaw that increased participation would lead to a decline in polyarchy, while Schumpeter and Berelson et al. saw that full participation could make policy changes difficult to accept if actively engaged citizens were unsuccessful during a policy debate.

An interesting concept that Dahl (1961/1993) proposed, and was later used by Theiss-Moore (1993), was that democratic beliefs are not static, inflexibly held beliefs. Factors such as how individuals conceptualize citizenship, avoid conflict, civic mindedness/social altruism, and confidence in public institutions can affect a person’s set of democratic beliefs (Brehm & Rahn, 1997; Funk, 1998; Theiss-Moore, 1993; Ulbig & Funk, 1999). And it is these democratic beliefs that in turn can affect the level of people’s participation. Therefore, consensus on policy issues are flexible and may change due to society’s view of democratic beliefs.

Political philosophers were not the only ones to theorize about democratic theory. Max Weber had insights into the workings of government and its organization. Weber saw the benefits of bureaucratic specialization in carrying out the administrative functions of government. Weber (1964/1993) saw that as society became ever more complicated that government needed the expertise of detached professionals. Weber thought that mass participation by the citizenry would lead to subjective policy making where irrational policy would be made by the whims of the masses, such that “under the conditions of mass democracy, public opinion is communal conduct born of irrational ‘sentiments’” (p.
77). Weber’s main theme is that government needed the expert advice of the specialist bureaucrat. What Weber means is that political and bureaucratic elites should govern society, where input from the citizenry should be minimized similar to all of the other modern democratic theorists.

However, Weber does recognize that bureaucratic specialization (i.e., elite rule) is anti-democratic. The educational attainment and specialization needed to become an expert bureaucrat required extensive training, and that this training could lead to a new social strata where rule by nobility could be replaced by rule by an educated elite or “privileged ‘caste’” (Weber, 1964/1993, pp. 80-81).

All of the above theorists have a commonality to their theories on democracy, and that is their theories all center around empirical or descriptive factors that are observable phenomena (Pateman, 1970). In addition, they all seem to imply a democratic theory based on elite rule. Theorists that have this philosophical view that a theory of democracy should be based on observable fact will here after be referred to as the modern theorists.

The modern theory of democracy has the following three factors that denote its divergence from classical theory: (1) the level of participation of the citizenry should stay at only the minimum level necessary to sustain the system, and therefore elite rule is preferred; (2) the modern theory is a descriptive value free theory (while the classical theory is not); and (3) the modern theory not only is descriptive, but also implies what
type of system society should value and includes criteria by which to judge democratic systems; and that western Europeans and Americans live in the ideal democratic system (Pateman, 1970). Pateman’s first point illustrates how the modern theory of democracy does not put much faith in the hands of the citizenry, and leans heavily on a democratic elitist model. Pateman’s second and third points illustrate that the modern theorists’ theory of democracy is no less normative than the classical theory, which holds citizens to a high standard of conduct. By developing theories of democracy that count on the lack of participation to sustain a democratic society, it is in effect valuing a non-participative society over a participative one.

**Participatory Democratic Theory**

Participative democratic theory can find its origins in classical democratic theory, although not all of the classical philosophers thought that full inclusion of the polity was a positive attribute of democratic governance. John Locke, James Madison, Jeremy Bentham, and James Mill saw democracy from more of a utilitarian/libertarian version of liberalism; while Jean-Jacques Rousseau, Thomas Jefferson, and John Stuart Mill saw liberalism from more of an egalitarian viewpoint. These classical writers had completely different theories regarding democracy. However, what is evident is that both the classical and modern theories still have their proponents.

The classical theory of democracy, even with its utilitarian/libertarian and egalitarian tendencies, requires an active, rational, and knowledgeable citizenry. The classical model was the dominant theory of democracy during the founding of the United States up
until the middle of the twentieth century. Conversely, the modern theory of democracy, with minimal participation, became the dominant theory of democracy through the later half of the twentieth century (Pateman, 1970). But in the eighteenth century, Rousseau’s political theory, as described by Pateman (1970) and Walker (1979) centered around the idea of participation by the citizenry. Although Rousseau’s democratic theory was based on the small pre-modern town model (Green, 1993), the modern theorists recognized the complexity of modern civil society.

Rousseau’s political theory is based on inclusive participation of the citizenry. What Rousseau states is that the “participatory process ensures that political equality is made effective in the decision-making assembly” (Pateman, 1970, p. 23). Pateman notes that Rousseau’s theory of democracy has two components: first, participation is the participation of individuals in the decision-making process; and second, that participation ensures good government by looking out for people’s interests.

Also, Rousseau saw participation serving an educative function where doing what is good for society over one’s personal self-interest would lead to increased civic participation. Therefore, learning to value what is good for civil society over individual personal wants and desires should increase feelings of belonging to the community (Pateman, 1970). However, if people begin to value their own self-interest over the welfare of the community, the downfall of that community is not far away (Rousseau, 1950/1993).
In the United States, Thomas Jefferson’s doctrine of natural rights, which are based on libertarian and egalitarian precepts, form the key principles he espoused as the prime author of the *Declaration of Independence* (Walker, 1979). Many of Jefferson’s egalitarian ideals can be traced to Rousseau, as evidenced by his support of “such participatory techniques as rotation in office, equal suffrage and representation in the decision[-]making process of higher local governments, and direct representation and input at the local level” (Walker, 1979, p. 26). For Jefferson, citizen involvement in the political decision-making process is key to a free democratic system.

However, Pateman describes how the modern theorists, those critical of the classical theory, argue that participation is not really all that important to the functioning of a democratic society. The modern theorists feel that not everyone in society needs to participate, but they could if they wanted to. The ability of the citizenry to participate, not the actual participation itself per se, is what is important in modern democratic theory (Pateman, 1970).

John Stuart Mill (1951/1993) was an early proponent of participation through *popular government*. A key component of Mill’s theory, similar to Rousseau, is that people learn their part in determining democracy through participation; whether that means participating in elections or participating in associational organizations. Participating at the local level fosters increased participation at the larger regional/national level. Participation at the local level is where the individual learns to participate, and it is here that participation has the potential for its greatest effect (Pateman, 1970; Barber,
1984/1993). Even though Mill advocated complete participation, he recognized that even small amounts were incredibly important to civil society (Pateman, 1970).

For Mill, participation at the local level helps prepare citizens to be active at the regional/national level, where participation includes all areas of policy debates. This is in contrast to the modern/contemporary democratic theories where the political stage is limited to participation in national political affairs. In this case, participation is limited to merely voting for elected representatives. However, for Mill participation is not just being involved in the process of selecting representatives, but it is the process of being engaged in the decision-making process. Under this definition participation is more inclusive and covers all public policy areas, not just voting (Pateman, 1970). Therefore, participation even in traditionally non-political activities falls under the umbrella of participation in that it involves the entire decision-making process continuum. For example, being involved in a home-owners association or a public workshop on a transportation improvement project all fall under the realm of participation.

In addition, Mill saw that participation enhanced the character of the individual. Participation in public affairs builds and establishes a stronger bond between civil society and the individual (Pateman, 1970). Again, this is where the active involvement of the citizenry in public and private affairs helps to foster a sense of belonging to the community. Mill was highlighting that being involved through participation brings about an increased level of civic awareness, which in turn leads to a greater likelihood of participation in the future. In effect, participation is an educative process. However, Mill
saw the potential downside of this. If participation is an educative process, then unless everyone is involved, an educated elite could come to control the decision-making process (Pateman, 1970). Mill saw this as a liability, while Weber saw it as a benefit. Weber saw the beneficial side of an educated elite. For Weber, the educated elite are exactly the people society should have as its technical experts, those with the knowledge to properly run the government.

Pateman (1970) also highlights the work of George Douglas Howard Cole (1889-1959) to illustrate that participation does not have to be confined only to the public realm. Cole developed a participatory theory based on Rousseau and Mill’s theories, but expanded them to include the workplace. Since participation plays an important educative function, Cole showed how participation in the workplace can benefit society. What Cole did was to expand the concept of what participation includes. Participation was not exclusive to public affairs, but was widened to include private affairs such as the workplace.

Cole argues in his theory of Guild Socialism that individuals must participate in and associate with others in the workplace, and through workplace participation individuals will develop the capacity to participate in the broader community (Pateman, 1970). In essence Cole’s theory is a theory of associational involvement where participating in the decision-making process in the workplace environment will translate into participation in the community.
The central assertion of Cole is that individuals and their associations/institutions cannot be considered in isolation from one another, they must be considered as parts of the whole (i.e., the community). Individuals learn participation not only in the community, but also in the workforce. And the educative function of participation, whether at work or in the community, plays an important function in civil society (Pateman, 1970).

The modern theorists argue that participation by a minority elite is crucial to the functioning of government. But, Mill, Rousseau, and Cole illustrate that participation plays an important educative function. In addition, the concept of participation cannot be limited to only the political sphere, for participation has been shown to exist in all areas of community life that involves decision-making.

John Dewey also has a philosophy that espouses a more participatory tone. Dewey sees that classical theory, which includes participatory rhetoric, has some elitist overtones associated with it. Going back to the Platonic notion of the philosopher king, which is very much in keeping with the modern theory (especially Weber) of democracy, where instead of noble philosophers ruling with a benevolent hand there would be the scientific expert/bureaucrat to conduct the affairs of the state (Dewey, 1927/1993). Dewey sees the rise in stature of the technical expert, where “it is assumed that the policies of the experts are in the main both wise and benevolent” (p. 122) as a detriment to participatory involvement. Dewey argues that the technical experts become removed from the common interest and as such would become a class unto themselves, not truly able to understand the issues important to the general public.
Dewey (1927/1993) thought that an open dialogue with the public was the only means for the elected leadership to truly understand the needs of the citizenry; thereby opening up the decision-making process (i.e., participation) to include the voices of the public to fully incorporate their ideas. Democracy by a minority elite where decisions are made by a few key individuals, and where expert knowledge is used as a means to control the decision-making process is not a true democratic process, and therefore cannot be a truly participative process.

Peter Bachrach (1967/1993), like Dewey, sees that the modern theory of democracy is rooted in a deep mistrust of the general public where elite rule is used to maintain the proper functioning of government and civil society. Bachrach notes that the modern theory of democracy is just as normative as the classical theory is; whereas classical theory values citizen involvement and education to become a good citizen, modern theory values minority elite rule and interest group politics to bridge the gap between the people and their elected representatives.

Bachrach (1967/1993) goes on to state that the modern theorists do not judge how democratic a society is based on the centralization or devolution of the decision-making process, but rather on how well that society conforms to the basic tenants of democratic theory, which is: “political equality (universal suffrage), freedom of discussion, majority rule, free periodic elections, and the like” (p. 127). Bachrach states that the modern theorists see an important aspect of democracy being its outputs, not its inputs. The
outputs of democracy are security and services, while the inputs are the amount of effort (i.e., participation) that individuals must expend. The more time people have to engage in the input side of the equation the better off the citizenry is.

Bachrach (1967/1993) sees that the modern theorists conceived their theories of democracy in a very narrow way where the “principle of equality of power, long identified as an ideal of democracy, must give way to the more realistic principle of equality of opportunity to obtain a position of power” (p. 129). This modern version of democracy is in conflict with the classical model. The classical model “is dependent upon an opportunity to participate actively in decisions that significantly affect” (p. 129) society, whereas the modern model is based on an opportunity to achieve power.

Therefore, Bachrach (1967/1993) espouses that there are two assumptions of a democratic theory: first, that people stand to gain by actively participating in the decision-making process; and second, that people have an interest in both the end results and in the process of how decisions are made (i.e., in the participation of the decision-making process). To accomplish this Bachrach sets out two necessary conditions for his democratic theory: first, is that the participants be roughly equal in power; and second, is that diverse interests are represented within the decision-making process. These conditions would prevent manipulation by more powerful persons/groups and prevent an overbearing need of individuals to conform during the decision-making process. “Democratic theory must therefore include among its principles equality of power and pluralism” (p. 130).
Kenneth Prewitt and Alan Stone (1973/1993), like Dewey and Bachrach, also see how the philosopher king, rule by elite, is a central notion of the Platonic concept of democracy. That is, society’s natural tendency is to fall into decay unless guided by the values of a responsible ruling class. Prewitt and Stone’s critique of the Platonic notion shows that the classical Platonic theory of democracy has influenced the thoughts and interpretation of representative democracy found in the United States. What they see in these interpretations, which they disagree with, follows along the following four factors: first, the general public holds a low degree of regard for democratic rights and procedures; second, that the political leadership has a stronger grasp of the democratic creed than does the general public; third, the values of the elite bear little resemblance to the philosopher kings in Plato’s *Republic*; and fourth, the democratic system is saved by the elite, not through mass participation. In the end, what the Platonic notion of democracy rests upon is that “representative democracy depends on the values of the elite more than the actions of the nonelite” (p. 133).

Prewitt and Stone (1973/1993) refute the previous interpretations by exploring three popular conceptions of democracy as voiced by the modern theorists: the Platonic notion, the theory of electoral accountability, and association/interest group theory. First, is the Platonic notion that elites are necessary for the successful operation of government. The Platonic society was to be ruled by a philosopher king, where in modern society the philosopher king has been replaced by elected representatives. The concept behind elite rule is that the values, virtues, and sense of commitment to the democratic ideal of the
elite will protect the public. What Prewitt and Stone see is that the Platonic notion of “democracy depends on the values of the elite more than the actions of the nonelite” (p. 133). But, Prewitt and Stone show that the elite rarely live up to the ideal as conceived by Plato. In addition, the standards that the elite are judged by are measures that the elite generate themselves. Therefore, the notion of a benevolent philosopher king (i.e., the elite) providing protection for the public is inconsistent with the actions of elite rule.

Second, the theory of electoral accountability is that the elite will be held in check by the periodic election of leaders. Elections do not require much effort on the part of the citizenry, thereby requiring little participation by the public in the decision-making process. This conclusion is used by the modern theorists as a justification for the current representative system where participation is kept to a minimum. “In short, the theory of electoral accountability replaces a commitment to participatory democracy (considered unworkable and unrealistic) with a faith in elite competition” (Prewitt & Stone, 1973/1993, p. 137). This is similar to what Schumpeter and the other modern theorists said about the classical model’s notion of citizen participation. However, Prewitt and Stone show that the decision-making process is dominated by members of the economic elite. “Thus, the election system is far removed from the rational model of an informed electorate choosing among candidates who present rationally held positions” (p. 139). Therefore, accountability of the elite to the public is non-existent.

Third, the theory of associational involvement states that interest group organizations exert pressure on the elite during the decision-making process; thereby mediating the
power of the elite to act in their own self-interest without considering the view-points of associational interest groups (Prewitt & Stone, 1973/1993). The central thesis behind this theory is that associational involvement in “an active life connects citizen and elite,” however, “it does so more effectively for the middle and upper-middle classes than it does for the lower strata” (p. 141). This has been confirmed through the data that Verba, Schlozman, and Brady (1995) documented in their book *Voice and Equality: Civic Volunteerism in American Politics*. Prewitt and Stone note that organizational membership and social status go hand-in-hand where the more participative people also tend to be of a higher social strata.

Prewitt and Stone show that these three popular conceptions of democracy as voiced by the modern theorists: the Platonic notion, the theory of electoral accountability, and association/interest group theory are all flawed.

**Summary**

What is evident from democratic theory, and therefore civic participation theory, is that there are widely differing viewpoints from the classical to the modern to the participatory, with both modern and participatory conceptualizations incorporating elements of classical theory. Each of these democratic theories has a core set of beliefs that have their roots embedded in liberal democracy. Traditional liberal democratic theory shows a propensity for individuals being involved, “as voter, community participant, worker, activist, [and] political party member” (Frideres, 1997, p. 1 of 14). Civil democratic society is based on these networks of associations. And as Alexis de
Tocqueville (1835/2000) notes, associations are “established to promote public order, commerce, industry, morality, and religion” (p. 219).

Participation was defined as the activity of individuals being involved in the civic affairs of the community. As such, participation is not limited to the traditional role of political participation, although political participation is an important aspect of civil society. Political participation is only part of the participation debate. To fully account for all forms of participation, citizen involvement in non-political affairs must also be considered. Therefore, the scope of participation as part of this research effort has cast a wider umbrella to include participation in the more immediate aspects of civic life. Although the outcome of the research from this study is concerned with the individual’s involvement in the transportation planning process, participation of this type can be seen as involvement in a wider span of civic life.
CHAPTER 3: DETERMINANTS OF PARTICIPATION

Introduction

Chapter Two laid the theoretical groundwork of the dependent participation construct. What was shown is that participation is a function of democratic thought. As a function of democratic thought civic participation can take many forms, such as being involved in electoral voting, attending community functions, or joining civic organizations. However, what has not been discussed yet are the root causes, or antecedents, of participation. That is, what cognitive thought process leads an individual to either participate, or not to participate, in a civic function? In the case of this research effort, civic participation is being operationalized as participation in the transportation planning process. Therefore, the intent of this chapter is to explore the antecedents of an individual’s willingness to participate in the transportation planning process.

Motivation – Intrinsic vs. Extrinsic

What does willingness to participate mean? For individuals to be willing to participate in any given activity, such as participation in the transportation planning process, motivational drive is necessary. But what process fosters motivational drive? Classic economic theory suggests that behavior is motivated based upon the notion that individuals react to incentives that are thrust upon them. “People change their actions because they are induced to do so by an external intervention” (Frey, p. 13, 1997). This external force has been labeled extrinsic motivation in the classic motivation literature.
Economic theory is based on this rational actor type of model where people are motivated through extrinsic motivational forces. Conversely, classical social psychology theory, while acknowledging external forces as an influential factor on behavior, has also recognized the importance that internal satisfaction plays in influencing behavior (Frey, 1997; Ryan & Deci, 2000). This internal force of personal satisfaction has been labeled *intrinsic* motivation in the classic motivation literature.

The earliest theories of motivation date back to the early 1900’s (e.g., see Thorndike, 1911) when extrinsic motivational theory was developed as part of behavioral theory. The behaviorist tradition looked to modify or change behavior by “manipulating extrinsic contingencies” (Bateman & Crant, p. 4, 2003). Extrinsic motivation is said to occur when an individual is motivated to action for some external goal, rather than for the sake of performing the action itself (Ryan & Deci, 2000). In contrast to extrinsic motivation, intrinsic motivation theory was developed in the 1940’s and 1950’s in response to behavioral theory. Intrinsic motivation occurs when an individual is motivated to action for its own sake, because the action or behavior is itself interesting, enjoyable, or positively challenging (Ryan & Deci, 2000; McCormick & Ilgen, 1985). Therefore, intrinsic motivation is considered to be a stronger influence on individuals, since the behavior *itself* is personally satisfying on its own merits, as opposed to behavior that is controlled via extrinsic rewards or punishments (i.e., pay, rules, or social norms). When participating in an activity that is personally satisfying, individuals come to identify with the activity, and as a result gain pleasure from participation. Conversely, extrinsic forces
apply external pressure to participate and therefore cause resentment, to some level of
degree, regarding participation in the activity (McCormick & Ilgen, 1985).

Intrinsic motivation, by definition, covers behavior that is personally rewarding to an
individual. In the transportation planning context, individuals that are intrinsically
motivated will be more likely to participate in the transportation planning process.
However, conventional wisdom asserts that participating in the transportation planning
process is most likely not an intrinsically motivated behavior, but rather is motivated by
extrinsic factors (e.g., see U.S. Department of Transportation & Florida Department of
Transportation, 2001). That is not to say that participating in the transportation planning
process cannot be intrinsically motivating—for some it may be intrinsically motivating.
But, typically it is expected that participation occurs mainly through extrinsic forces.
Therefore, extrinsic motivation needs to be examined in greater detail to assess the range
of extrinsic motivational behavior. As will be shown below, extrinsic motivational
behavior can be conceptualized as a continuum, where different external forces can range
from amotivated (i.e., a lack of motivation) all the way to near intrinsically motivated.

Ryan and Deci (2000) suggest that extrinsic motivation is not a one-dimensional concept;
extrinsic motivation varies not only in its level (i.e., how much motivation), but also in its
orientation or type of motivation (i.e., the why of actions). In the context of
transportation planning an individual may be highly motivated to participate in a
transportation planning workshop out of curiosity and interest or, alternatively, because
the individual wants to obtain the approval of society through expected normative social
behavior. Conversely, an individual may be motivated to participate because he/she sees the potential utility or value that participation affords those that are engaged in the decision-making process. The above examples illustrate that the amount of motivation may not vary, but the type of motivation is clearly different.

For example, an individual is extrinsically motivated if the individual participates out of fear that a proposed roadway construction project will ruin his/her quality of life. The reason that the individual is extrinsically motivated is because they are participating only to attain the separable outcome of avoiding the new roadway being built. Similarly, an individual who participates in a transportation planning workshop because he/she personally believes that participation is expected normative behavior (i.e., to be involved in community affairs) is also extrinsically motivated, because the individual is participating for its instrumental value rather than because he/she finds it interesting. Both examples involve extrinsic motivation, yet the latter case entails personal endorsement and a feeling of choice, whereas the former involves mere compliance with an external control. Both represent intentional behavior, but the two types of extrinsic motivation vary in their relative autonomy, or internalized control over the situation (Ryan & Deci, 2000).

Ryan and Deci (2000) discuss different types of motivation in terms of “fostering the internalization and integration of values and behavioral regulations” (p.60). Internalization and integration occurs when an individual begins to make the behavior their own, “so that it will emanate from their sense of self” (p. 60). When internalization
and integration are thought of as operating along a continuum, motivated behavior is seen to range from amotivation (i.e., unwillingness to participate), to passive compliance, to active personal commitment. “With increasing internalization (and its associated sense of personal commitment) comes greater persistence, more positive self-perceptions, and better quality of engagement” (Ryan & Deci, 2000, p. 61). The greater the level of internalization, the greater the individual will feel in control of the situation. As control over the situation increases, so does the individual’s commitment to the behavior.

Ryan and Deci (2000) developed a taxonomy of the different types of motivation that fall along this continuum, which can range from amotivation to intrinsic motivation. In between the two extremes of amotivation and intrinsic motivation are four levels of extrinsically motivated behavior (see Figure 3-1 below).
Figure 3-1: Motivation Continuum

According to Ryan and Deci (2000) the lowest level on the motivation continuum is amotivation, which is a lack of intention to act. A person is amotivated when they feel disengaged, feel incompetent, or the action will result in an undesirable outcome. The next level on the continuum is labeled external regulation. External regulation is the lowest level of extrinsic motivation and deals with behavior that is externally imposed through reward or punishment. This type of behavior has been used as the classical distinction between intrinsic and extrinsic motivation; but Ryan and Deci discuss three additional levels of extrinsically motivated behavior before intrinsic motivation is attained. The second type of extrinsic motivation is introjected regulation, which describes a form of internal regulation “that is still quite controlling because people
perform such actions with the feeling of pressure in order to avoid guilt or anxiety or to attain ego-enhancements or pride” (Ryan & Deci, p. 62, 2000).

The third type of extrinsic motivation is identification, which is when the individual begins to personally identify with the behavior. At this point the behavior is becoming more internalized within the individual. The fourth, and final, type of extrinsic motivation is integrated regulation, which is when the behavior becomes fully assimilated into the self. This form of extrinsic motivation is very close to intrinsic motivation, but the behavior is still extrinsically motivated, i.e., the behavior has not become interesting for its own sake, but instead has become valued for what the behavior can do for the individual.

Since extrinsically motivated behavior is typically not very interesting, Ryan and Deci (2000) have put forth two possible scenarios that might encourage individuals to engage in these behaviors. First, individuals may be willing to engage in extrinsically motivated behavior if an individual feels the behavior is “valued by significant others to whom they feel (or would like to feel) connected, whether that be a family, a peer group, or a society” (p. 64). Second, individuals may be willing to engage in extrinsically motivated behavior if an individual feels that they have the requisite skills necessary to perform the behavior. This allows the behavior to become internalized within the individual and supports feelings of competence and self-efficacy. Ryan and Deci’s (2000) two scenarios for why individuals may be motivated to engage in certain behaviors will be shown later to coincide with Ajzen’s (1991) theory of planned behavior, which includes what others
think of the behavior as well as the perceived level of control an individual has over a specific situation, as important determinants in assessing motivation.

Based on this discussion of the motivation continuum (i.e., amotivation to intrinsic motivation), the goal of an agency is to develop tasks and or procedures that will make participating in the transportation planning process for individuals fall near the intrinsic motivation end of the continuum. Absent participation being internalized as intrinsically interesting, the objective is to have participation be internalized as positively integrated regulated extrinsic behavior. That is, to make the behavior come as close as possible to being intrinsically motivated.

**Motivation – Expectancy Value Models**

If, in general, participating in the transportation planning process involves more extrinsic than intrinsic motivated behavior, then a means to assess the level of extrinsic motivation is needed. Expectancy-value theory provides an excellent framework to assess how individuals value a given behavior, especially extrinsically motivated behavior. Similar to the rational actor model, expectancy-value theory views individuals as rationally based. However, expectancy-value theory delves into the motivational reasons of why individuals act in the manner they do, thereby enriching the traditional rational actor model. Expectancy-value theory views individual intentions to act as being based on the likelihood that a specific behavioral action will produce a specific outcome (i.e., expectancy), as well as the likelihood of a desirable/undesirable outcome (i.e., value) (Gollwitzer, P. M., Delius, J. D. & Oettingen, G., 2000; Hankins, French, Horne, 2000).
Expectancy-value theory is a sub-unit of decision theory. Decision theory models were advanced by Edwards (1955; 1961) as a means to describe individual behavior in terms of risk-taking behavior. Edwards (1961) developed a model which states “that a quantity can be obtained by taking for each possible outcome of a given course of action a number representing the value of the payoff and a number representing the probability of obtaining that payoff, multiplying the two, and then adding across all possible outcomes of the courses of action” (p. 474). Edwards labeled his model the subjective expected utility (SEU) model, which states that “people maximize the product of [their] utility and subjective probability” (p. 474). Utility is the value an individual places on an object of interest, whereas the subjective probability represents the extent an individual believes a given outcome is likely to occur. Edwards’ SEU model is the foundation of most expectancy-value models. As a result, expectancy-value models have a common theme in their composition, which is that individuals will maximize, or choose alternatives, based on a subjective valuing of the probability that a specific outcome will occur.

But, prior to Edwards’ SEU model, Tolman and Lewin began to develop some of the fundamental concepts, which were later used by decision theory, as a basis for their psychological theories of behavior. Tolman (1932) was one of the first to recognize “organisms [i.e., people] as being capable of anticipating behavioral consequences and of adjusting subsequent actions based upon perceived expectancies” (Madden, p. 2, n.d.). Lewin’s (1936) field theory (i.e., people categorize their life into regions or fields as a means to organize their world) included the concept that people associate positive or
negative valences regarding an object’s attractiveness to the individual. In addition, Lewin also incorporated the concept of subjective probability, which describes the behavior an individual faces under uncertainty. “When this subjective probability is multiplied by the valence a field has for a person, the result is a force or weighted valence which influences a person to move away from a negatively valenced field towards one more positively charged” (Madden, pp. 2-3, n.d.). As Madden notes, Lewin’s ideas were central to the development in later expectancy-value theories.

Borrowing elements from Tolman’s (1932) theory of purposive behavior where individuals are seen to cognitively recognize that there are consequences of behavioral action, Lewin’s (1936) field theory which introduced the concept of subjective probability and valence, and Edward’s (1961) behavioral subjective expected utility (SEU) model—Vroom (1964/1995) constructed an expectancy-value model built around three constructs: expectancies, instrumentalities, and valences. Similar to Edwards’ SEU model, Vroom’s model is an additive model of the products of expectancies, instrumentalities, and valences. In Vroom’s model expectancy is the effort an individual puts into a behavior, which then leads to a given performance level. Instrumentality is where a given performance level leads to a specific outcome. And finally, valence is the value an individual places on a specific outcome. Therefore, effort leads to performance (i.e., expectancy), and performance leads to an outcome (i.e., instrumentality), where the outcome is evaluated as to its perceived value (i.e., valence) (Ilgen & Nebeker, 1981). For Vroom, expectancy is measured as a “subjective probability held by the individual that an act (a behavior) would lead to the outcome” (McCormick & Ilgen, p. 285, 1985),
and instrumentality is measured as a subjective correlation between two outcomes. However, some researchers have also measured instrumentality as a subjective probability of the outcome, effectively combining expectancy and instrumentality into one variable. Valence, then, is a utility measure of the perceived value of the outcome (i.e., an evaluation of the outcome).

Vroom (1964/1995) used his expectancy-value model to predict motivation levels in individuals within organizations. But, Vroom’s model is seen not only to have applications to behavior within organizations, but also has broad applications across all forms of social behavior. Therefore, Vroom’s model suggests that individuals will choose an alternative (one from among many) that has the highest expectancy-value product score, or the greatest return to the individual (Herriot & Ecob, 1979). However, “as researchers attempted to operationalize and evaluate the three basic expectancy variables originally proposed by Vroom (1964/1995), it quickly became apparent that many researchers disagreed on what the concepts meant and how to operationalize them” (Ilgen & Nebeker, p. 191, 1981).

A source of confusion lay in the formulation of the model itself. Vroom’s model is basically a two level model: effort leads to performance, performance leads to an outcome, with a factor to account for the subjective value of the outcome. The first level of Vroom’s model is that effort leads to a given performance level. Different levels of effort therefore lead to different performance levels. The second level of the model is that each performance level can potentially lead to a different outcome. Van Eerde and
Thierry (1996) have labeled Vroom’s model a two level outcome-outcome model, since it requires two levels of decisions to apply. This model can become quite complex to apply.

However, a simplified expectancy-value model called the theory of reasoned action/the theory of planned behavior (originally developed by Fishbein and Ajzen (1975), Ajzen and Fishbein (1980), and later refined by Ajzen (1991)), was developed based upon Edwards’ (1961) SEU model. Fishbein and Ajzen’s model is conceptually a one level model, similar to Edwards’ (1961) model, where the subjective expected utility (i.e., SEU) of an individual’s beliefs associated with a specific behavior is equal to the subjective probability that a specific behavior will lead to a specific outcome, in direct proportion to the subjective utility of the beliefs regarding the behavior. According to Fishbein and Ajzen (1975), and consistent with Edwards’ (1961) SEU model, generalized expectancy-value theory can be mathematically expressed as:

$$SEU_b = \sum SP_i U_i$$  \hspace{1cm} (1).

Where $SEU_b$ is the subjective expected utility associated with a specific behavior, $SP_i$ is the subjective probability (i.e., expectancy) that the behavior will lead to some outcome, and $U_i$ is the subjective utility (i.e., value) of the behavior. Not only is this model consistent with Edwards’ (1961) model, but is also conceptually very similar to Vroom’s (1964/1995) model; albeit that Vroom’s expectancy and instrumentality variables (i.e., effort→performance and performance→outcome) have been combined into a single subjective probability. What Fishbein and Ajzen (1975) did was use Edwards’ (1961) basic model of behavior, but instead of looking at the subjective probability and utility of
behavior, they use the model to assess the subjective utility of individuals’ beliefs regarding the behavior. To accomplish this, the theory of reasoned action/the theory of planned behavior models use multiple SEU models to disaggregate different belief-sets into: attitudes toward the behavior, what other’s think of the behavior (i.e., social pressure), as well as how individuals’ perceive their level of control over the behavior (Ajzen, 1991).

**Motivation – Theory of Planned Behavior**

According to Armitage and Conner (2001), the theory of reasoned action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) and its more recent extension, the theory of planned behavior (Ajzen, 1991, 2001) are the latest, and most widely employed versions of expectancy-value theory models. As evidence of their acceptance, both theories have been explored and applied in over four hundred studies just since 1985 (e.g., see Aizen3, 2003). In addition, the theory of reasoned action and the theory of planned behavior have been used in multiple disciplines ranging from health care, commercial behavior (Chitamun & Finchilescu, 2003), volunteering (Warburton & Terry, 2000), physical education (Kudlaeek, Valkova, Sherill, Myers & French, 2002), and recreation and leisure research (Verderber, Rizzo & Sherrill, 2003) to explain motivational intentions to participate in a specific activity. The applicability of these models appears to transcend any particular discipline.

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3 Icek Ajzen changed his last name to Aizen.
One of the key components of the theory of reasoned action/the theory of planned behavior is that these models use individual beliefs regarding a specific behavior to determine an individual’s intention to act, as well as the behavioral action itself. The theory of reasoned action and the theory of planned behavior function as nearly identical models. Both models assume that a person’s salient behavioral and normative beliefs influence attitudes and subjective norms regarding a specific behavior. From this, both attitudes and subjective norms (i.e., what others think of the behavior) lead to motivational intentions. And then, finally motivational intentions lead to actual behavior (Ajzen & Fishbein, 1980; Ajzen, 1991).

The theory of planned behavior adds an additional salient belief regarding the control an individual perceives that he/she has in a given situation (Ajzen, 1991; Ajzen, 2002b). Control beliefs also extend to the perceived control that an individual believes they have to either engage or not engage in a specific behavior based on external constraints, such as the level of ease or difficulty an individual may encounter in trying to perform a given behavior. For example, if the behavior in question is participating in a transportation planning workshop, control beliefs related to how easy/difficult it is to participate in a workshop will affect an individual’s willingness to participate. “With the exception of control beliefs, the two theories are identical” (Verderber, Rizzo & Sherrill, 2003, p. 29).

Since individual participation in the transportation planning process is not under the complete volitional control of the individual (i.e., meeting dates, times, and location are not controlled by the individual), the proposed model will incorporate perceived control beliefs as theorized by the theory of planned behavior.
Essentially, the theory of planned behavior illustrates that intention (i.e., willingness to participate in the transportation planning process) is dependent on three variables, attitude toward the behavior, the subjective norm, and the perceived behavioral control, where these three variables are themselves three separate SEU models. These three variables are defined as:

- **Attitude** = how favorable or unfavorable an individual views a particular behavior;
- **Subjective norm** = the perception of whether people important to the individual think that the individual should engage in a particular behavior (i.e., social pressure); and
- **Perceived behavioral control** = the extent an individual believes he/she is able to affect the intended behavior, as well as the perceived ease or difficulty of engaging in the behavior (Verderber, Rizzo, & Sherrill, 2003; Chitamun & Finchilescu, 2003; Ajzen, 1991).

Intention is assumed to reflect both intrinsically and extrinsically motivational behavior, i.e., how hard people are willing to try, or how much of an effort they are willing to expend to engage in a specific behavior (Ajzen, 1991). A theoretical diagram of the theory of planned behavior can be seen in Figure 3-2 below.
As can be seen in Figure 3-2, the theory of planned behavior applied to participation in transportation planning, states that an individual’s salient behavioral, normative, and control beliefs regarding participation will determine that individual’s attitude, subjective norm, and perceived behavioral control toward participation. Attitudes, along with subjective norms and perceived behavioral control will lead to intentions to participate. And finally, an individual’s intentions and perceived behavioral control lead to actual civic participatory behavior in the transportation planning process. Since the proposed model is looking at willingness to participate, and not actual participatory behavior, the proposed model will only draw on the portion of the theory of planned behavior (i.e., attitudes, subjective norms, and perceived behavioral control) that influences an individual’s intention to act. The dashed lines in Figure 3-2 represent the motivational
links between perceived behavioral control and actual participatory action. And again, since this research will not be assessing actual behavior, only the portion of the model that includes intentions to participate will be assessed. Therefore, behavioral, normative, and control beliefs are theorized to be the antecedents of attitude, subjective norm, and perceived behavioral control; which in turn are antecedents of an individual’s intended willingness to participate.

**Citizenship Orientations**

The above discussion might lead someone to conclude that attitude, subjective norm, and perceived behavioral control are the only antecedents of an individual’s intended willingness to participate. Ajzen (1991), Sparks and Shepherd (2002), and Verderber, Rizzo and Sherrill (2003) have recognized that variables other than attitude, subjective norm, and perceived behavioral control can have an effect on an individual’s willingness to participate. For example, Sparks and Shepherd (2002) showed that moral obligation was a useful inclusion to the theory of planned behavior when applied to civic behavior. In addition, Ryan and Deci (2000) note that individuals may be willing to engage in extrinsically motivated behavior under two conditions: (1) the behavior is valued by others significant to the individual, and (2) if the individual feels capable of performing the behavior. Consistent with this approach, this research effort will look to augment the theory of planned behavior by including democratic and civic orientations of individuals as necessary ingredients for a complete theory of individual intentions to participate in civic affairs.
Chapter Two illustrated the importance of democratic theory to participation theory. Different philosophical conceptualizations of democracy correspond to different conceptualizations of participation. Under liberal democratic philosophy, there are three conceptual orientations: classical, modern, and participatory. Both modern and participatory conceptualizations incorporate elements of classical theory. If there are varying viewpoints as to what constitutes democracy, the question becomes: Does a person’s conception or orientation of society and government affect his/her view on how society and government should function, i.e., classical, liberal, modern, or participatory democracy? In other words, where along this continuum of democratic citizenship do people feel government is best suited, and how does this affect their willingness to participate?

In an effort to better understand belief systems, Conover and Feldman (1984a; 1984b) developed a model of how individuals organize their beliefs about society. They used a Q methodology\(^4\) to develop schemas that individuals could use to bring cognitive consistency to civic belief systems. Schemas are structured prior knowledge that individuals use in accessing stored knowledge while also allowing individuals to process new information. The structure of cognitive knowledge is often referred to as a core belief system (1984a). Conover and Feldman (1984a) note that there are five functions that schemas provide for individuals. First, they provide a structure to individual lived experiences. Second, they influence the knowledge that will be stored and processed for

\(^4\) “Q methodology is a general approach to the study of attitudes, beliefs, and preferences that is based on an examination of relationships among people rather than among variables” (Conover & Feldman, 1984a).
later use. Third, schemas allow individuals to fill in gaps of missing knowledge by allowing individuals to make inferences based on past experience. Fourth, they provide the means to simplify problem solving. And fifth, schemas provide the basis to evaluate experiences based on expectations about reality. What a schema does is to “define the domain of relevant information and provide a means of organizing that information in some consistent fashion” (p. 97).

Schemas allow researchers to explore how organized beliefs can influence the values people have based on group identification. Conover (1984) uses data from the 1980 National Election Study to test whether group identification affects the perceptual orientation that individuals take toward civic political issues. The results of Conover’s (1984) study suggest that by defining self-schemas group identifications provide insight into how individuals view the political world. This conception of self-schemas can be used as a basis in understanding how individuals perceive themselves within society, and therefore how willing they may be to participate in the transportation planning process.

Once Conover (1984) illustrates how group identification is important in understanding individual perceptual orientations toward political affairs, Conover, Crewe, and Searing (1991) examine how individuals from the United States and Great Britain (i.e., different groups) conceptualize citizenship: liberal or communitarian. They looked qualitatively at the meaning of citizenship in terms of rights, duties, and civic identities, from the perspective of the citizen. Their main contention was that much has been written on political philosophy of democracy from the theorist viewpoint, but little has been
researched regarding how individuals themselves perceive democracy. “An essential part of understanding what citizens think about their rights, duties, and identities is understanding how they think about these matters” (Conover, Crewe, & Searing, 1991, p. 804).

Conover, Crewe, and Searing (1991) find that there is significant differences between these two groups (British and Americans) of citizens. The Americans tend to view citizenship from a classical liberal perspective, while many British view citizenship from more of a communitarian viewpoint. This is not to say that all American’s view citizenship through the classical liberal lens or that all British view citizenship in a communitarian way. It is just that on average American’s and Britain’s tend to view citizenship differently. Of the individuals that were more liberal, they view citizenship from the perspective of legalized rights. These individuals do not see public involvement or community service as obligatory, but rather as virtuous qualities, not as expected normative behavior. Individuals that hold a liberal conception of democracy, similar to Locke, James Mill, and Bentham, view citizenship duties as legalistic and utilitarian.

Of the individuals that are more communitarian, they view citizenship from the perspective of citizen duties, “particularly on public involvement and community service” (Conover, Crewe, & Searing, 1991, p. 825). Communitarian citizenship is seen to encompass “moral obligations that are grounded in membership in the community and

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5 Communitarian thought and philosophy is generally associated with communal societies. In their study Conover, Crewe, and Searing used communitarian philosophy to approximate British conceptualizations of citizenship, while liberal philosophy was ascribed to an American view of citizenship.
are positive, pleasurable experiences” (Conover, Crewe, & Searing, 1991, p. 825). This study shows the way that different groups conceptualize self-schemas on citizenship and can provide insight into the way individuals view the political world via their conceptualization of citizenship in terms of rights, duties, and civic identities.

Glover (2002) also examines citizenship orientations regarding how people view themselves within their community, and how different conceptualizations can affect individual willingness to participate in the accepting of governmental services. Glover reviews T. H. Marshall’s theory of citizenship, examining its strong and weak points. Glover states that there are three dimensions of citizenship: civil, political, and social. Civil citizenship refers to the liberal view, where legal rights pervade the debate. Political citizenship refers to being involved in the democratic electoral process, where the electoral process is presumed to be of a representative nature. However, political citizenship also includes “civic participation in the development of local public policy and rights to association” (Glover, 2002, p. 208). Social citizenship consists of access to resources from the State, such as social entitlements like unemployment benefits and public education. Glover notes that Marshall’s contribution to democratic citizenship theory is the dynamic interplay between these three dimensions to form the modern conception of citizenship.

Glover (2002) notes, however, that Marshall’s theory of citizenship fails to address the cultural, gender, and lived experiences of citizenship. To account for these weaknesses Glover argues that pluralist and poststructuralist theories of citizenship do not force
individuals into rigid groups based on civil, political, or social views. Therefore, citizenship is contextually based. Citizenship “resides in the minds of individuals so that citizenship becomes an identity that is socially constructed” (Glover, 2002, p. 210). What this means is that citizenship is not self-contained within the three dimensions, but spans all three. “Individuals hold a variety of attitudes or beliefs that span the ideological spectrum” (Glover, 2002, p. 211). Therefore, each of the three dimensions of citizenship operates along a continuum. Civil citizenship operates from strong opposition to strong support of governmental intervention. Political citizenship operates from purely representative (with little or no citizen involvement) to fully participatory (with complete citizen involvement). Social citizenship orientation toward social welfare services operates from welfare liberalism that favors such services to classical liberalism that does not favor such services (that is, the expectation that citizenship should entail taxes to pay for society’s social services).

Glover (2002) developed a citizenship orientations scale based on an eighteen item survey instrument, which was based on Marshall’s original conception of citizenship. Consistent with Marshall’s original conception, a factor analysis revealed that the eighteen items reduced to three dimensions: political citizenship, civil citizenship, and social citizenship democratic orientations. The correlations between these three dimensions showed that there is a positive relationship between social citizenship and political citizenship orientations. Glover’s analysis also shows that there is a negative relationship between social citizenship and civil citizenship. Finally, there is a positive relationship between political citizenship and civil citizenship; however, this relationship
is not significant. These results are consistent with Glover’s expectations. Glover’s analysis shows that individuals do conceive their citizenship responsibilities in different ways, and that these conceptualizations can determine individual willingness to accept governmental services. Therefore, it is reasonable to assume that different citizenship orientations could affect an individual’s willingness to participate in the transportation planning process.

Theiss-Morse (1993) looks at what good citizenship means from the perspective of the citizen, and how these perspectives are related to participatory behavior. How do citizens’ own conception of their responsibilities and views on democracy affect their willingness to participate in civic affairs? Good citizenship can be thought of as a dimension of how people commit to their community. Theiss-Morse (1993), similar to Funk (1998), Knack and Kropf (1998), Dagger (1981), Conover (1984), Conover and Feldman (1984a), Conover and Feldman (1984b), Conover, Crewe, and Searing (1991), look at citizenship through the lens of active political participation. Theiss-Morse examines four democratic theories: elitist, pluralist, citizenship, and participatory. The democratic theories were analyzed using a Q methodology to see if the four democratic philosophies influence people’s perspectives on citizenship responsibilities. Elite democratic theory is concerned with the ability to vote elites into and out of office, along with being concerned about the stability of the democratic system. Elite theory is based on the democratic model described in chapter two that was labeled modern. Pluralist theory, on the other hand, is less interested in electoral voting and more interested in participating in groups to have issues heard. Pluralist’s will participate “when an issue
that directly affects them reaches the public agenda” (Theiss-Morse, 1993, p. 360). Pluralism incorporates interest group politics to influence agenda setting, again similar to the modern theorists. Elitist and pluralist theorists share the same philosophy, that in general, participatory behavior is not essential to democracy. That is, “it is better to leave politics to the professional, who for the elitist are government officials and for the pluralist are group leaders” (Theiss-Morse, 1993, p. 360).

Citizenship theory is similar to the classical democratic model where citizens are the best judges as to what is in their best interest. For citizens to realize their best interests they must participate in the electoral process. On the other hand, participatory theory is more concerned with citizens being involved in the decision-making process where all civically-minded decisions that affect the community, not just political decisions, are dealt within the community. Both citizenship and participatory theorists argue that a system is more democratic when citizens have the ability to voice their concerns on policy matters. However, citizenship and participatory theorists disagree over what constitutes participation. Citizenship theory is more concerned with political participation, whereas participatory theory is concerned more with participation in all civic community affairs. Therefore, Theiss-Morse’s participatory theory of inclusive citizenship involvement in all aspects of community decision-making would be consistent with participation in the transportation planning process.

Based on her analysis Theiss-Morse (1993) finds that individuals, consistent with the four democratic philosophies, define citizenship perspectives in either one of four ways:
representative democracy, political enthusiast, pursued interests, or indifferent. Individuals that conceive citizenship through the representative democracy construct place a strong emphasis on participating in the political process, especially by voting. Individuals that conceive citizenship through the political enthusiast perspective believe that citizens should be involved in civic affairs. This perspective feels that political civic affairs are pervasive and that citizens should be involved in the community decision-making process. Individuals that conceive citizenship through the pursued interests perspective conceptualize citizenship in two ways. First, interest or involvement in political affairs is not a necessary precondition to be a good citizen. Juxtaposed to this is the second concept that strongly emphasizes involvement in associational groups. “Citizens should be involved in decision-making in the family, on the job, in the community, and in organizations” (Theiss-Morse, 1993, p. 364). And finally, individuals that conceive citizenship through the indifferent perspective believe that voting and being informed about civic affairs are important, but reject other forms of participatory behavior.

Theiss-Morse (1993) has shown that individuals conceive democracy/citizenship in different ways. The question is: Do the way individuals conceive citizenship affect willingness to participate? Sparks and Shepherd (2002) showed that moral obligation was a useful inclusion to the theory of planned behavior when applied to civic behavior. Since democracy is a function of the civic participation construct, it is reasonable to assume that the way individuals conceive democratic citizenship will affect willingness to participate. Consistent with this approach, it is theorized that an individual’s
citizenship orientation is an antecedent of an individual’s intended willingness to participate in the transportation planning process.

**Social Capital**

Implicit in the discussion of democracy in chapter two, larger societal issues frame peoples perception of how a democratic society should function. Just as participation is a function of democracy, so too is civic involvement a function of participation. Alexis de Tocqueville’s (1835/2000) *Democracy in America* illustrates that a strong associational civic life in the community helps to bond its citizens together to affect positive community change. This in turn affects how he sees the benefits of these associations and the influence they can have on the democratic ideal and practical form of democracy. However, during his travels in the United States, Tocqueville saw that modern democracy tended to promote excessive individualism (Valley, 1996). But this was tempered in America by its citizens’ propensity for civil association (Fukuyama, 2001). And it is through Americans’ propensity for associations that Tocqueville thought citizens would “learn not only the skills required for effective political participation, but also the social control he perceived as necessary if democracy was to function under citizen control” (Cohen, 1991, p. 1). Civic involvement in voluntary associations and the political system are necessary components of a stable and well functioning democratic society. Without the full active participation of citizens in their institutions, there will be no way to maintain the democratic character or political culture of those institutions (Frideres, 1997). Frideres also argues that modern liberal democratic civil society is based upon
egalitarian principles of universal inclusion, and that the active participation by all in the decision-making process is crucial to sustaining a truly democratic society.

When Tocqueville wrote *Democracy in America*, he described more than just the political system he observed, he wrote about democracy at the community level. Tocqueville saw how civil society was important to forming and sustaining democratic institutions, where a lack of civil society could threaten the liberty of those democratic institutions (Valley, 1996). What Tocqueville (1835/2000) was describing was a deep level of commitment that American citizens have toward their involvement in the community, through town meetings, attending church, and especially their involvement in voluntary associations.

Brenton (1997) notes that Tocqueville did not believe that non-involvement in public affairs within the community is the antithesis of civic participation. The antithesis of civic participation is a high level of involvement in personal private affairs separated away from civil society. Involvement in public affairs brings individuals together for the interest of the community, whereby private affairs tends to isolate individuals from the community.

Many of the ideas and concepts that Tocqueville discussed have been reinvigorated and incorporated into a theoretical framework labeled social capital, mainly through associations and organizations within civic culture (Cohen, 1991). Social capital refers to the stock of “social trust, norms and networks that people can draw upon to solve

In Tocqueville’s writing, social capital is captured through citizen participation in town meetings and/or volunteering for community events. Each of these activities involves a level of social trust that has been established based on normative values sustained through formal and informal networks throughout the community. The success of communities in a modern global economy will depend upon the character of its civil society and civic organizations. According to Fukuyama (1995), citizen involvement in cultural events, religious organizations, and other types of voluntary associations will be key to the success of modern societies. In addition, social capital helps anchor democratic institutions through an invigorated civil society sustained by associational involvement (Cohen, 1991).

Two key concepts encompassed by social capital are trust and voluntary associational networks. On a more limited basis norms and obligations, such as reciprocity, have also been associated with social capital, “but these concepts are so general, and their use so often rhetorical, that their development and application in social theory and research cannot properly be encompassed” (Schuller, Baron, & Field, 2000, p. 14). Highlighting this view, Lin (2001) argues that social capital should be examined through the processes

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6 Social trust is embodied in the “cultural values and attitudes that predispose citizens to cooperate, trust, understand, and empathize with each other – to treat each other as fellow citizens, rather than as strangers, competitors, or potential enemies” (Newton, 1997, p. 576); while voluntary network associations are embodied by citizen involvement in organizations where cooperative behavior is necessary to accomplish collective ends.
in “which embedded resources in social networks are captured as investments” (p. 3).
Social capital, embodied in “trust, norms, and networks, tends to be self-reinforcing and cumulative” (Putnam, 1993b, p. 3 of 8). However, unlike other forms of capital, social capital tends to increase through usage, while it can become depleted if not used (Putnam, 1993b).

Two key authors have helped bring the idea of social capital into mainstream social science research: James Coleman and Robert Putnam. Coleman’s key contributions lay in his development of social capital as a coherent social framework by integrating sociology (action governed by social norms, rules, and obligations) and economic (rational actors maximizing utility) theories to study social relations (Schuller, Baron, & Field, 2000). Coleman was the first to operationalize social capital and to successfully put forth the social capital framework in a rather uncomplicated fashion, which helped it gain a widespread audience (Schuller, Baron, & Field, 2000). Putnam’s key contribution was taking Coleman’s theory and refining it. Putnam used individual involvement in associations and interpersonal social trust as the key dimensions of social capital.

Coleman (1988) defines social capital as a means of introducing “social structure into the rational action paradigm” (p. S95; see also Lin, 2001; Jackman & Miller, 1998), where he sees social capital as a productive force “making possible the achievement of certain ends that in its absence would not be possible” (p. S98). Coleman was also the first to develop the concept in relation to physical and human capital (Jackman & Miller, 1998).
Just as physical capital is created by changes in materials to form tools that facilitate production, human capital is created by changes in persons that bring about skills and capabilities that make them able to act in new ways. Social capital, however, comes about through changes in the relations among persons that facilitate action. If physical capital is wholly tangible, being embodied in observable material form, and human capital is less tangible, being embodied in the skills and knowledge acquired by an individual, social capital is less tangible yet, for it exists in the relations among persons (Coleman, 1988, p. S100).

Coleman (1988) sees that social capital is made up primarily of obligations, expectations, and norms; where obligations and expectations are based upon trustworthiness, while norms are rooted in community values.

Putnam (1993a) defines social capital as past successful collaborations leading to increased civic engagement, which causes increased norms of generalized reciprocity. Increased norms of generalized reciprocity then leads to increased social trust, which in turn helps to reinforce future collaborations. For Putnam, civic engagement in associations is the catalyst to increased social trust and therefore future civic engagement. For Putnam, there are two dimensions of social capital: associational networks and interpersonal trust. When these two dimensions are combined together the data reveal that social capital does affect a myriad of social participation issues.
Putnam (1993c), along with two other colleagues, was studying why there were differences in institutional performance between various regional governments in Italy. The outcome of their study argues that the level of civic community, analogous to Tocqueville’s thoughts on civil society, plays an important role as an explanatory variable. “The correlation between civic engagement and effective government is virtually perfect” (p. 103). Putnam (1995) also sees that social trust and civic engagement are strongly correlated.

Putnam (1993b) sees that civic heritage is composed of “social capital embodied in norms and networks of civic engagement [which] seems to be a precondition for economic development, as well as for effective government” (p. 3 of 8; see also Tocqueville, 1835/2000). In addition, Putnam (1993a) found during his twenty year analysis of Italian governments that “the norms and networks of civic engagement also powerfully affect the performance of representative government” (p. 2 of 9). What Putnam found is that the quality of governance is rooted in traditions of civic engagement.

Social capital is essential to a prosperous government and economic development through three forms of civic engagement: general reciprocity, communication, and collaboration (Putnam, 1993b). General reciprocity works to foster civic engagement through the expectations of others—I’ll do something for you with the expectation that you or someone else will do the same for me when I need help. Communication works to increase the available amount of information to show people’s trustworthiness, while
collaboration works to show how past civic engagement can serve as a template for future collaboration. Conceptually, Putnam’s (1993a) model of social capital can be encapsulated by the following flow diagram, in Figure 3-3, where past successful collaborations lead to increased civic engagement, which causes increased norms of generalized reciprocity. Increased norms of generalized reciprocity lead to increased social trust, which in turn helps to reinforce future collaboration.

![Flow Diagram](image_url)

Figure 3-3: Putnam’s Conception of Social Capital

Putnam stresses the importance of community life as being key to social capital. It is this active participation in civic affairs that affirms the importance of social capital in the general participation debate. Even the word *participant*, as seen by Putnam, suggests activity (see also Brenton, 1997). And it is the active engagement of citizens in community life, and thereby active participation in the decision-making process, which shows how social capital is a key component of participation.

Putnam (1995) sees social capital as being closely related to conventional political participation, but they are not the same. Political participation is the connection of the individual to political institutions, while social capital refers to the connection of the individual to civil society. Donating money to a political cause, such as through a
political action committee, is participation in political affairs, but does not create nor does it sustain social capital. However, volunteering to work on a political campaign or with a civic organization will create a sense of reciprocal trust through civic engagement, and therefore will create social capital.

Brenton (1997), similar to Putnam, states that “activity is at the core of participation” (p. 2 of 6). However, the form of social capital that Brenton supports is significantly different from Putnam’s conception. Where Putnam sees participation resulting in the building of social capital through associational membership, Brenton sees these types of formal memberships as being secondary to the type of activity that is being engaged in. For Brenton participation occurs through “networks of personal contacts not through organizations or associations” (p. 3 of 6). Although similar, there is a subtle difference between Brenton’s and Putnam’s view on how social capital is created. For Putnam, social capital is created through and by the organization, whereas for Brenton social capital is created through the interpersonal contacts made as a result of being engaged in an organization. This subtle difference also highlights the divergent conception of where social capital resides. For Putnam, social capital is a product of the organization, while for Brenton social capital resides at the level of the individual.

Norris (2002), like Brenton, also argues that Putnam is incorrect in his assessment that the formation of social capital occurs mainly via organizational networks and organizations. Norris analyzed the bivariate relationships of social capital against economic development, tolerance of divergent lifestyles, institutional confidence, interest
in politics and public affairs, and democratization and good government. Out of these items, Norris found that economic development, institutional confidence, interest in politics and public affairs, and democratization and good government are statistically related to social capital, but the main cause occurs through individual level social trust not associational membership.

The debate on social capital is now being narrowed to two conceptual philosophies, one that views the creation of social capital through voluntary organizational associations and the other through interpersonal relationships that are formed through voluntary organizational associations. For Putnam, there are two dimensions of social capital: associational networks and interpersonal trust. When these two dimensions are combined together the data reveal that social capital does affect a myriad of social participation issues. However, when these two dimensions are disentangled, Norris (2002) shows that individual trust is the overriding component of the social capital concept. According to Norris, it is interpersonal trust that really matters.

Consistent with Norris (2002), Fukuyama (1995; 2001) views social capital as consisting of informal norms that helps to promote cooperation. In the economic sphere, it helps to reduce transaction costs through the promotion of an increased associational life which is necessary for limited government in a modern democracy. Fukuyama uses social capital to illustrate/explain why some national economies have prospered while others have not (see also Portes & Landolt, 1996). What he finds is that nations that have high levels of interpersonal trust internalized within their societies’ tend to be successful, while those
that are not trusting tend to be non-productive. Factors that affect the success of a community are based on a set of ethical habits of reciprocal obligations within the community, not on its level of explicit rules, contracts, litigation, and regulations (Fukuyama, 1995; Schuller, Baron, & Field, 2000). It is this level of interpersonal trust which is inherent in social capital that is a leading indicator of economic health and success.

Although Fukuyama sees civic norms as one of the most important aspects to social capital, not all normative values lead to positive outcomes. Social capital can also have negative impacts. Portes & Landolt (1996) and Brenton (1997) discuss some of the negative impacts associated with social capital. For Brenton, it is the quality, not quantity, of participation that matters. Participation can have either a positive, neutral, or negative effect on a community’s social capital. For all of the positive benefits that accrue to group membership and cultural cohesiveness, strong group membership can be used as a mechanism for the exclusion of outsiders. Group membership can come at the cost of group conformity, where conformity may limit the full range of the policy debate. Therefore, only those aspects of social capital that lead to positive community benefits are being considered in this research.

Fukuyama connects civil society with democratic governance via social capital created through dense network of associations, which in turn is seen as a necessary condition for a liberal democratic state. Fukuyama argues that if a state is in fact a liberal democracy, then it must protect individual liberty. For Fukuyama, social capital is the result of
individual liberty, where social capital plays an important function by helping sustain civil society through dense interpersonal networks and associations (Fukuyama, 2001). Fukuyama’s model of democracy is conceptualized by increased trust leading to increased levels of social capital, which in turn will lead to a more dense civil society that will help sustain a modern liberal democracy.

Putnam (1993a; 1993b; 1993c; 1995) and Schudson (1996) view the importance of associational involvement in social capital, whereas Brenton (1997), Norris (2002), and Fukuyama (1995; 2001) view the importance of social trust in creating social capital. However, Sirianni and Friedland (1995) argue that civic participation is key to social capital.

Analyzing environmental policies, Sirianni and Friedland (1995), note that social capital developed through public participation had the following impacts. First, social capital gives citizens the ability to impose financial cost (via litigation) on managers through its organizing power and capacity building mechanisms. Through interpersonal networks developed as a result of public participation meetings, citizens develop organized lobbying efforts to support their position. Without the initial public participation forums, citizens would not have had the opportunity to meet each other, collectively participate, and finally organize themselves into a unified lobbying group. Second, public involvement and citizens’ right to information led to reputation building among private citizen association groups. And thirdly, without federal mandates for public participation these associational networks and social ties would not have been possible. The beneficial
impacts that Sirianni and Friedland note are the result of interpersonal trust built through close associational involvement of citizens becoming actively engaged in the decision-making process. What Sirianni and Friedland found in the environmental struggles should be transferable to an analysis of the potential impacts of the transportation planning process.

It is through this increased public participation process that administrators have begun to mobilize the citizenry to become active participants in soliciting their opinions. This is exactly what participation is, the active involvement of citizens in helping set policy in coordination with their elected and appointed administrators. If administrators forge cooperative links with its citizens, norms for cooperative relationships will be built to form networks of voluntary associations that will in turn lead to trusting relationships (Sirianni & Friedland, 1995).

Sirianni and Friedland (1995) observe that active participation must be sincere, on both the citizens’ side and the administrator’s side. From the citizen perspective they must become actively involved in order to generate the necessary social capital to become effective partners. Therefore, individuals need to become personally involved. Donations to a cause (i.e., tertiary associations, as Putnam discussed) will not build trust, and therefore, will not help sustain interpersonal ties necessary to increase social capital. At the same time, administrators must allow for input from affected parties to build trust between themselves and the citizenry so they can become full participants in the
decision-making process. That is, administrators need to forge links between themselves and citizen groups to build trust, and therefore increase the stock of social capital.

One of social capital’s strong points is that there is relatively unanimous consent as to what its conceptual dimensions are. For all of the research on social capital, a consensus has formed around the conception that Coleman (1988; 1990) first proffered where social obligations, expectations, and trustworthiness embody the social capital construct. Putnam (1993a; 1993b; 1995a; 1995b; 1996) building on Coleman’s work slightly redefined the concept to encompass social norms, networks, and trust, where voluntary associational networks teach social norms and obligations to the community. For Putnam trust is an outgrowth of voluntary associations. However, one of social capital’s weak points is the absence of a consensus on how it can be objectively measured (Fukuyama, 2001; MacGillivray & Walker, 2000). Even so, Putnam (1993, 1995a, 1995b), Norris (2002), Coleman (1988), Knack and Kropf (1998), Sobel (1993), Lake and Huckfeldt (1998), and Brehm and Rahn (1997) have all developed measures of social capital that have been empirically tested and validated. Therefore, consistent with the work of the above authors social capital is being defined as embodying involvement in voluntary associational networks and interpersonal social trust.
Ulzurrun (2202) stress the importance of the associational involvement aspect of social capital. The greater level of involvement in voluntary associations will lead to increased levels of social capital. Fukuyama (1995; 2001), Hemingway (1999), Sullivan and Transue (1999), Schuller, Baron, and Field (2000), and Norris (2000; 2002) stress the importance of interpersonal trust dimension of social capital. Greater levels of interpersonal trust between individuals and organizations will lead to increased levels of social capital. What Brehm and Rahn (1997) find is that there is a close reciprocal relationship between participation (as measured by civic engagement) and trust. “The more that citizens participate in their communities, the more that they learn to trust others; the greater trust that citizens hold for others, the more likely they are to participate” (pp. 1001-1002). The greater the number of memberships in voluntary associations and the greater level of interpersonal trust that individuals have, the more likely individuals will be to participate in the transportation planning process. In addition, as individuals are more willing to participate in the transportation planning process, so too will they join voluntary associations in greater numbers, as well as an increase in interpersonal trust should be seen.

Just as citizenship was shown to be an influence on civic participation, social capital has also been shown to influence participation. Therefore, consistent with Ajzen (1991), Sparks and Shepherd (2002), and Verderber, Rizzo, and Sherrill’s (2003) notion that additional variables can be added to the theory of planned behavior to model willingness

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7 Each of these researchers has validated their version of the social capital construct, but in slightly different ways.
to participate, an individual’s level of social capital is theorized to be an antecedent of an individual’s intended willingness to participate in the transportation planning process.

**Summary**

Participation was defined as the activity of individuals being involved in civic affairs of the community, whether through choosing a candidate in a national election or being involved in a local civic group. Therefore, participation was shown to have a much broader span of influence than just political participation. Political participation is a necessary condition, but by itself is not sufficient to sustain a comprehensive theory of civic participation.

The intent of this chapter is to highlight the three antecedents of participation: personal motivating factors, personal citizenship orientations, and an individual’s level of social capital. These three factors are part of the cognitive thought process that individuals undertake when deciding whether or not to participate.

A key antecedent of participation was shown to be an individual’s motivation regarding participation, both intrinsically and extrinsically motivated behavior. However, since conventional wisdom asserts that participation in the transportation planning process is more extrinsically motivated, a generalized model was discussed in an attempt to highlight the antecedents of extrinsic motivational factors. The generalized model is Ajzen’s (1991) theory of planned behavior, which posits that behavioral, normative, and control belief-sets are antecedents of attitudes, subjective norms, and perceived
behavioral control regarding civic participation. In addition, citizenship orientations and social capital were also shown to be antecedents of participation. However, as behavioral, normative, and control belief-sets relate specifically to the behavior in question, individual citizenship orientations and social capital are independent of the behavior, and therefore should provide a broader social context from which participation in the transportation planning process works within. The following chapter, Chapter Four “A Model of Participation” will build on this foundation to develop a model specific to participation in the transportation planning process.
CHAPTER 4: A MODEL OF PARTICIPATION

Introduction

As noted in Chapter One, the goal of this study is to identify the key determinants that lead individuals to participate in the transportation planning process. That is: What groups of people are amenable to public participation/involvement activities, and why? Since participation is contextually based, the time frame in which participation occurs may also influence participation (see Alkady, 2000). The empirical literature on participation does not fully account for this distinction. Therefore, the intent is to show what affects the willingness of individuals to participate in a one-time civic event that is expected to affect a local community within the next year compared to the willingness of individuals to participate in a long-term continuous on-going civic planning process. To accomplish this task, a model of participation has been developed that will illuminate the various determinants of the willingness of individuals to participate in the transportation planning process.

In developing a model of participation, Chapter Three identified the determinants of participation. It was shown that an individual’s internal motivation regarding participation includes multiple forms of behavior, i.e., both intrinsic and extrinsic motivated behavior. Although, it was also shown that participation in the transportation planning process is mainly a function of extrinsically motivated behavior. As a result, a generalized expectancy-value model based on the theory of planned behavior (Ajzen,
1991) was introduced, which posits that civic participation is a function of behavioral, normative, and control belief-sets, which in turn are antecedents of attitudes, subjective norms, and perceived behavioral control. In addition, external citizenship orientations and social capital were also shown to be determinants of participation. This chapter will propose to explain participation in the transportation planning process through this modified model of planned behavior. But first, a brief discussion of previous models of civic/political participation will be presented.

**Previous Models of Participation**

One of the most robust models on participatory behavior was developed by Verba and Nie (1972) when they developed a model to account for individual variations in rates of political participation. The model they developed established a strong correlation between participation and socioeconomic status (SES), “with [the] main causal linkages existing between socioeconomic status, civic attitudes, and political participation. Their theory has been called the SES model” (Jankowski & Strate, 1995, p. 90). The model works whether SES is measured by “education, occupational status, income, or some composite measure involving several of these components” (Pettersen & Rose, 1996, p. 56). The accepted explanation of this model is that “participation generally requires resources and that those with higher socioeconomic status can more readily afford such an investment” (Pettersen & Rose, 1996, p. 56). However, Verba, Schlozman, and Brady (1995) realized that there is a lack of theoretical backing for the SES model. The SES model is a good predictor of participation, but lacks a theoretical foundation. The SES model has been shown in study after study of American political behavior to accurately
predict political participation. But, this predictive power does not help explain what mechanisms link socioeconomic status and participation (Verba, Schlozman & Brady, 1995).

In competition with the SES model of participation is the rational actor model, which has a good theoretical foundation (Mueller, 1989), but has proven to be less accurate in its predictive power (Verba, Schlozman & Brady, 1995). The rational actor model suggests that individuals will not participate in helping solve community problems, since the community as a whole will not notice an individual’s lack of participation. Therefore, the rational actor model predicts that the normative behavior will be to “free ride on the activity of others and, thus, will reap the benefits of the preferred policy without expending resources on its attainment” (Verba, Schlozman & Brady, p. 99, 1995). However, empirical research on political participation does not support the rational actor model. The rational actor model would suggest that nearly no one would vote, but that is not the case. “The puzzle of participation, thus, becomes: how are we to explain the fact that millions of citizens, in apparent defiance of this elegant logic, vote or take part in various kinds of voluntary activity on behalf of collective ends?” (Verba, Schlozman & Brady, 1995, pp. 99-100). Verba, Schlozman, and Brady therefore note that the participation puzzle can be described as the failure of the rational actor model.

To bridge the theoretical and predictive abilities between the SES and rational actor models, Verba, Schlozman & Brady (1995) developed a model of political participation predicated on civic volunteerism. The civic volunteerism model attempted to explain
why socioeconomic status is able to predict individual participation in political affairs, but also looked to explain why this occurs. To understand this phenomenon Verba, Schlozman & Brady (1995) focused on the benefits attributable only to those who participate in collective-action problem solving. What they found was that the activity of participation is comprised of three dimensions: resources, psychological engagement, and recruitment networks. Verba, Schlozman & Brady (1995) note that resources are the primary factor of participation, where resources are sub-divided into three components: time, money, and civic skills. “When inputs of time and money are coupled to civic skills, citizens become not only more likely to participate but also more likely to be effective when they do” (p. 272). What Verba, Schlozman & Brady (1995) find is that when various forms of participation are considered, different socioeconomic characteristics take precedence.

Verba, Schlozman, and Brady’s (1995) model of political participation, based on civic volunteerism, is able to bridge the divide between the purely predictive SES model and the purely theoretical rational actor model. However, their model is predicated on civic volunteerism, which may be more applicable to political participation than participation in the context of participating in the transportation planning process. The determinants of participation in the transportation planning process may be similar, but is not exactly like political participation. Whereas political participation embodied through voting requires minimal effort, participation in the transportation planning process can require substantially more effort. Participation in the transportation planning process is by definition a type of social action formed through civic behavior. In addition, Verba,
Schlozman, and Brady’s (1995) civic volunteerism model is based on individuals that actually participated (i.e., people that were already predisposed to actively participate in civic affairs); they did not assess the willingness of individuals to participate. Therefore, a model of participation is needed to assess why individuals are, or are not, motivated to participate in civic affairs, such as transportation planning.

**Willingness to Participate**

How is the participation construct conceptualized? Ryan and Deci’s (2000) motivation continuum suggests that participation is a function of how well an individual has internalized and integrated the values of a specific behavior. As a behavior becomes increasingly internalized and integrated, the closer the individual’s motivation moves towards the intrinsic end of the continuum. Consistent with this approach, Alkadry (2000) suggests that participation can also be thought of as a continuum. But Alkadry’s sees participation functioning along two intersecting continuums: from affected to not affected, and from willing to unwilling. When these two continuums are combined they form four quadrants, similar to a Cartesian coordinate system, where the x-axis indicates the degree to which an individual is affected or not affected by a proposed project. Conversely, the y-axis indicates the degree to which an individual is willing or unwilling to participate (see Figure 4-1 below).
Individual willingness to participate in civic affairs can be assessed using both Ryan and Deci’s (2000) motivation continuum, as well as Alkadry’ (2000) willingness-affectedness framework. Both view motivation similarly, but from slightly different vantage points. Ryan and Deci’s motivation continuum suggests that quadrant II in Figure 4-1 is
consistent with two levels of extrinsically motivated behavior (i.e., identification and integrated regulation), as well as intrinsically motivated behavior. Quadrant I is consistent with three levels of extrinsically motivated behavior (i.e., integrated regulation, introjected regulation, and external regulation). Notice the overlap of extrinsic forces between quadrants I and II. Whereas quadrants I and II illustrate participative behavior, quadrants III and IV illustrate non-participative behavior. Even though quadrants III and IV differ in the time frame in which an impact would be felt by individuals, all of the examples in quadrants III and IV will cause individuals to fall at the amotivated end of the motivation continuum.

Using Alkadry’s (2000) willingness-affectedness framework, an issue affects an individual’s motivation based on two factors: (1) the time frame and (2) the proximity of a proposed project. Projects that will have an affect on an individual’s willingness to participate in the near future will cause an individual to fall in either quadrant I or quadrant IV. Long-term projects will not have the same immediacy (in time and proximity), and therefore will cause an individual to fall in either quadrant II or quadrant III. For short-term participation, what determines whether an individual falls in quadrant I or quadrant IV depends on the willingness of the individual. As can be seen in the examples in Figure 4-1, individual willingness to participate in a short-term planning process is based on how an agency, such as an MPO, interacts with the individual, as well as how the individual perceives the impact that a proposed project will affect him/her.
Similarly, for long-term participation, what determines whether an individual falls in quadrant II or quadrant III also depends on the willingness of the individual. But, willingness in this context is different than the willingness in the short-term. As can be seen in the examples in Figure 4-1, willingness to participate in a long-term planning process is based more on civic duty, social responsibility, and expected civic norms. Therefore, it is posited that participation in a short-term planning process is affected more by immediate personal concerns; whereas societal level issues affect participation in a long-term planning process more.

When considering public participation, public managers have both short-term and long-term goals. An agency’s short-term goal is to move citizens from quadrant IV to quadrant I (i.e., such as roadway widening project in their community). An agency’s long-term goal is to move citizens from quadrant III to quadrant II (i.e., such as an MPO’s 20-year Long Range Transportation Plan). Alkadry’s (2000) framework suggests that there are distinct differences in individual motivations that lead to different levels of public involvement based on willingness and affectedness. And these differences are captured in both short-term and long-term planning processes. In addition, Ryan and Deci’s (2000) motivation continuum suggests that public managers should also consider the need to develop strategies to make participation an internalized behavior. The more an agency can help individuals internalize and integrate participative behavior, the greater an agency’s ability to increase participation of the citizenry.
In terms of an Ajzen (1991) expectancy-value model, each of the four quadrants in Figure 4-1 is a reflection of how beliefs can affect individual willingness to participate in both short-term and long-term planning processes. Quadrants I and II indicate individuals that have positive beliefs towards participation (i.e., intrinsic and extrinsic motivated behavior), while quadrants III and IV indicate individuals that have negative beliefs towards participation (i.e., amotivated behavior). These typologies represent potential belief-sets that individuals may have regarding involvement in the transportation planning process, and can be carried forward in assessing individuals belief-sets regarding participation.

**Model of Willingness to Participate**

The theory of planned behavior, first discussed in Chapter Three, posits that an individual’s intention (i.e., willingness) to participate is a function of three key variables: attitudes, subjective norm, and perceived behavioral control. In addition, it was shown that participation may also be influenced by citizenship orientations and social capital. While the variable attitudes is relatively recognizable as to its meaning, the terms subjective norm and perceived behavioral control are not quite as accessible as to their meaning. In an attempt to alleviate this dilemma, subjective norm is being relabeled “conformity with important referents” and perceived behavioral control is being relabeled “perceived level of control.” The remaining variable names sufficiently describe their intended meaning. Therefore, the three variables specific to participation based on the theory of planned behavior, as well as the two additional social variables not specific to participatory behavior, will be referenced from this point forward as follows:
• Attitude Towards Participation (i.e., attitudes);
• Conformity with Important Referents (i.e., subjective norm);
• Perceived Level of Control (i.e., perceived behavioral control);
• Citizenship Orientations; and
• Social Capital.

The theory of planned behavior (Ajzen, 1991, 2001) applied to public participation establishes the need to determine participation’s key sets of beliefs as well as larger social factors. However, where the theory of planned behavior views beliefs in the aggregate, in terms of intention to participate, this research attempts to disaggregate beliefs into two constituent parts: beliefs that the organization (i.e., the MPO) can influence (i.e., attitudes toward participation and perceived level of control), and those that the organization cannot influence (i.e., conformity with important referents). However, out of the three belief-sets that individual’s have regarding participation, only attitudes toward participation and perceived level of control are subject to beliefs that can be influenced by an agency’s actions. Conformity with important referents’ beliefs are related to how an individual perceives others important to him/her view of participating in the transportation planning process. Therefore, conformity with important referents is not applicable to attitudes about an agency.

This research will use an expectancy-value model of beliefs related to attitude towards participation, conformity with important referents, and perceived level of control as the salient features of individual intention to participate. By incorporating a temporal
distinction between short-term and long-term planning processes, different weights may show how attitudes toward participation, conformity with important referents, and perceived level of control issues are key determinants in evaluating individual willingness to participate in the transportation planning process in both short-term and long-term planning processes. In addition, consistent with Sparks and Shepherd (2002) and Verderber, Rizzo, and Sherrill (2003) regarding additional variables being incorporated into the theory of planned behavior, the following theoretical diagram of the model of participation is being proposed (see Figure 4-2 below).

The two additional variables: citizenship orientations and social capital are constructs that are theoretically independent of attitudes toward participation, conformity with important referents, and perceived level of control. However, the citizenship orientations and social capital typologies are consistent with the literature discussed in Chapter Three, as well as the willingness-affectedness framework exhibited in Figure 4-1, and have therefore been included within a modified planned behavior model. The modified model is being labeled the Willingness to Participate model (see Figure 4-2 below). And consistent with the discussion on intrinsic and extrinsic motivation, the Willingness to Participate model allows both intrinsic and extrinsic motivation, as well as amotivated behavior.
Figure 4-2: Willingness to Participate Model

The Willingness to Participate model illustrated in Figure 4-2 examines the inter-relationships between attitude towards participation, conformity with important referents, and perceived level of control in evaluating individual willingness to participate in both short-term and long-term transportation planning processes. In addition, citizenship orientations and social capital are also being assessed as to their influence on participation. Specifically, this research examines the individual-level processes by which citizens are willing to engage in two different forms of participation related to the transportation planning process. These two forms of participation take the form of a project that is ready to begin construction within the next year, and a project that is more
long-term and visionary/conceptual (i.e., project construction not expected for ten to twenty years).

The conceptual framework presented in Chapter Two concludes that participation is the process in which individuals are involved and engaged in the decision-making process that will affect the broader community. Therefore, participation is not being confined to participation in the political electoral process, which has been its traditional domain. Participation occurs at all levels of civil society from being involved in a local civic club, to participating in a public hearing, to voting for an elected official, or as in the case of this research, participating in the transportation planning process.

The Willingness to Participate model developed in this study views the concepts embodied within the attitude towards participation (ATP), conformity with important referents (CWIR), perceived level of control (PLC), citizenship orientations (CO), and social capital (SC) as the main predictors of an individual’s willingness to participate in the transportation planning process. Therefore, the Willingness to Participate model can be conceptualized in the following functional form:

\[
\text{Participation} = f(\text{ATP, CWIR, PLC, CO, SC}).
\]

Each of these concepts, and their relationship to short-term and long-term participation in the transportation planning process, will be explored in greater detail.
Willingness to Participate (WTP) Index

The concept of participation has only been discussed in the abstract so far (as a function of beliefs), where its definition has been discussed in terms of citizen involvement in the decision-making process. But, what leads to participation in the decision-making process and how does it occur? There are two aspects of participation: definitional and temporal. Definitional issues deal not only with citizens being involved in the decision-making process, but also include the social context of the issue that citizens will be engaged in.

How does participation occur and how does an individual participate? Both of these questions are extremely broad. To narrow the focus of this research, participation is further defined as the activity of individuals being involved in the transportation planning decision-making process. In addition, the transportation planning process is defined as individuals indicating their willingness to participate in two hypothetical public involvement meetings. Participation in this context, although hypothetical, would entail purely verbal communication, versus written communication such as letter writing. The first participation activity is related to a short-term transportation improvement project, while the second participation activity is related to the development of a twenty-year long range transportation plan.

The temporal aspect of participation relates to timing of not only the process of involvement, but also of how and when the information gathered from citizen input will be used, especially when the focus is on individual willingness. This research is looking to describe an individual’s willingness to participate in the transportation planning
process. However, the willingness of individuals to participate may depend upon the
time period in which the participation is being requested of the individual.

There are two aspects to temporal timing: (1) when individual involvement in the
participation process occurs, and (2) when the information gathered through participation
will be used in the decision-making process. Therefore, if an individual is asked to
participate in a transportation planning workshop to help policy makers decide on the
alignment of a new roadway versus participation in a workshop to set the future
transportation vision for the community over the next 20 years, the likely level of
participation will be expected to differ between these two scenarios. The key question is
not whether individuals are more likely to participate in a short-term project versus a
long-term project, but whether the differences in participation are due to attitudes toward
participation, conformity with important referents, perceived level of control, citizenship
orientations, and past/existing participation embodied in social capital.

This research looks to measuring two dependent variables concerning the willingness of
people to engage in public involvement activities. Both variables focus on potential
future participatory behavior, as measured by a willingness to participate index. These
two dependent variables have been measured using indices created from a series of
questions. Respondents were asked the likelihood of participating in two hypothetical
public meetings concerning transportation planning. The first public meeting is for a
roadway widening project that is expected to be built within the next year within their
community. The second hypothetical public meeting is to gather public input regarding a conceptual twenty-year long range transportation plan for the entire community.

Each succeeding question in the willingness to participate index ratchets-up the level of participatory behavior. The questions used to measure the two forms of participation are relatively similar. Whereas the first public meeting is to measure the willingness of individuals to participate in the planning process for a roadway widening project (i.e., short-term planning process), the second meeting is to measure the willingness of individuals to participate in the long range planning process for the community.

**Motivational Belief Variables**

Motivational intentions to perform a specific behavior, according to the theory of planned behavior, are based on a set of three conceptually distinct beliefs: behavioral, normative, and control. Each of these belief-sets encompasses a wide range of salient beliefs that an individual may have regarding participatory behavior. Consistent with Ajzen’s (1991) model, the behavioral, normative, and control belief-sets are antecedents of attitude towards participation, conformity with important referents, and perceived level of control.

The three belief-sets are each formed by two distinct components within a SEU expectancy-value formulation, which states that the subjective expected utility of a specific behavior is equal to the subjective probability that the behavior will lead to a
specific outcome in proportion to the subjective utility of the behavior. According to Ajzen (1991),

[i]t can reasonably be argued that all beliefs associate the behavior of interest with an attribute of some kind, be it an outcome, a normative expectation, or a resource needed to perform the behavior. It should thus be possible to integrate all beliefs about a given behavior under a single summation to obtain a measure of the overall behavioral disposition (pp. 198-199).

Therefore, each of the three belief-sets function as independent SEU models as part of an overall expectancy-value formulation. For behavioral beliefs, the belief-set is composed of a multiplicative index of questions that assess both the behavioral belief strengths and outcome evaluations. For normative beliefs, the belief-set is composed of a multiplicative index of questions that assess both the normative belief strengths, along with an individual’s motivation to comply. For control beliefs, the belief-set is composed of a multiplicative index of questions that assess both the control belief strengths, as well as an individual’s belief power. According to Ajzen’s (1991) model, these belief indices should provide an approximation of attitudes toward participation, conformity with important referents, and perceived level of control regarding an individual’s intention to participate in the transportation planning process.

As a result, hypotheses will be employed to test the efficacy of the theory of planned behavior variables. Three index variables will be created for each measure: attitude towards participation, conformity with important referents, and perceived level of
control. These indices will be proxies of the behavioral, normative and control belief-sets, and will be used to measure attitude towards participation, conformity with important referents, and perceived level of control to assess their effect on an individual’s willingness to participate in the transportation planning process.

**Attitude Towards Participation (ATP) Index**

The behavioral belief-set regarding participation is an antecedent of an individual’s attitude towards participation.

Generally speaking, we form beliefs about an object by associating it with certain attributes, i.e., with other objects, characteristics, or events. In the case of attitudes toward a behavior, each belief links the behavior to a certain outcome, or to some other attribute such as the cost incurred by performing the behavior. Since the attributes that come to be linked to the behavior are already valued positively or negatively, we automatically and simultaneously acquire an attitude toward the behavior. In this fashion, we learn to favor behaviors we believe have largely desirable consequences and we form unfavorable attitudes toward behaviors we associate with mostly undesirable consequences (Ajzen, 1991, p. 191).

In the expectancy-value terminology of a SEU model (i.e., \( SEU_b = \sum SP_i U_i \)), the theory of planned behavior deals with beliefs about the *outcome evaluations* (\( oe_i \sim \) expectancy) associated with participation, as well as the positive/negative *behavioral belief strengths* (\( bbs_i \sim \) value) of engaging in participatory behavior. Therefore, according to Fishbein
and Ajzen (1975) and Ajzen (1991), SEU from Eq. (1) can be reinterpreted as an attitude towards participation (ATP\(_b\)), and can be rewritten as:

\[
\text{ATP}_b = \sum (oe_i)(bbs_i)
\]  

(2).

According to Eq. (2), using an SEU expectancy-value model, a person’s attitude towards participation (ATP\(_b\)) is equal to the probability that participation will lead to a positive or negative outcome (oe\(_i\)) in direct proportion to the strength that an individual holds those beliefs about participation (bbs\(_i\)). Therefore, an attitude towards participation index will be created by the summation of questions related to an individual’s outcome evaluations of participation multiplied by questions related to the behavioral belief strengths regarding participation. By following the logic in Eq. (2), this index should be a belief-based measure of attitude regarding an individual’s willingness to participate in the transportation planning process (Ajzen, 1991).

The behavioral belief-set of participation of an individual’s attitude will be operationalized by an attitude towards participation (ATP) index. According to Ajzen’s (1991) theory of planned behavior, if the ATP index is phrased in a positive context, people will be more likely to be willing to participate in the transportation planning process. Therefore, the following hypothesis is being advanced to illuminate the effect that the internal motivational variable attitude towards participation (ATP) will have on an individual’s willingness to participate in the transportation planning process.
H₁ₐ: The more an individual has a positive attitude towards participation (ATP), the more likely the individual is to be willing to participate in the transportation planning process.

The basic framework developed by Alkadry (2000) suggests that different factors account for people’s participation in short-term and long-term planning processes. Alkadry’s (2000) Willingness-Affectedness Framework in Figure 4-1 suggests that people will choose to participate in a short-term planning process based on personal motivational factors, whereas people will choose to participate in a long-term planning process based more on external factors. All of the hypotheses that look to assess which determinants of participation exert more influence between the short-term and long-term time frames are based upon this framework. Therefore, the following hypothesis is being advanced to shed light on the influence that the internal motivational variable attitude towards participation (ATP) will have between the short-term and long-term planning processes.

H₁₅: The internal motivational variable attitude towards participation (ATP) will have a greater influence in determining an individual’s willingness to participate in a short-term transportation planning process than for determining an individual’s willingness to participate in a long-term transportation planning process.
Conformity with Important Referents (CWIR) Index

The normative belief-set regarding participation is an antecedent of an individual’s conformity with important referents regarding participation. Normative beliefs deal with the perceived belief that individuals have of significant others regarding their involvement in participatory behavior (i.e., whether or not others will approve or disapprove). Conformity with important referents utilizes this, as well as an individual’s motivation to comply with behavior that important others deem appropriate (Verderber, Rizzo, & Sherrill, 2003).

Similar to the SEU expectancy-value model related to attitudes toward participation, the theory of planned behavior also deals with beliefs about motivations to comply (mc_i ~ expectancy) with important referents, as well as the normative belief strength (nbs_i ~ value) of engaging in participatory activities. Therefore, according to Fishbein and Ajzen (1975) and Ajzen (1991), SEU_b from Eq. (1) can be reinterpreted as conformity with important referents (CWIR_b) towards participation, and can be rewritten as:

\[ CWIR_b = \sum (mc_i)(nbs_i) \]  

(3).

According to Eq. (3), using an SEU expectancy-value model, a person’s conformity with important referents towards participatory behavior (CWIR_b) is equal to the probability that participation in a transportation planning workshop will lead an individual to be motivated to comply with important referents regarding participation (mc_i) in direct proportion to the strength that an individual holds cultural normative beliefs about participation (nbs_i). Therefore, a conformity with important referents index will be
created by a summation of questions related to an individual’s motivation to comply in participatory activities multiplied by questions related to the normative belief strengths regarding participation. By following the logic in Eq. (3), this index should be a belief-based measure of a conformity with important referents regarding an individual’s willingness to participate in the transportation planning process (Ajzen, 1991).

The normative belief-set (i.e., feelings of what other’s think—social pressure) of participation is the antecedent of an individual’s conformity with important referents regarding participation, where the perceived belief of what other’s think of participation will be operationalized by a conformity with important referents (CWIR) index. According to Ajzen’s (1991) theory of planned behavior, if the CWIR index is phrased in a positive context, people will be more likely to be willing to participate in the transportation planning process. Therefore, the following hypothesis is being advanced to illuminate the effect that the internal motivational variable conformity with important referents (CWIR) will have on an individual’s willingness to participate in the transportation planning process.

\[ H_{2a}: \quad \text{The more an individual has a positive feeling of conformity with important referents (CWIR), the more likely the individual is to be willing to participate in the transportation planning process.} \]

The basic framework developed by Alkadry (2000) suggests that different factors account for people’s participation in short-term and long-term planning processes. Alkadry’s
(2000) Willingness-Affectedness Framework in Figure 4-1 suggests that people will choose to participate in a short-term planning process based on personal motivational factors, whereas people will choose to participate in a long-term planning process based more on external factors. Therefore, the following hypothesis is being advanced to shed light on the influence that the internal motivational variable conformity with important referents (CWIR) will have between the short-term and long-term planning processes.

\[ H_{2b} : \text{The internal motivational variable conformity with important referents (CWIR) will have a greater influence in determining an individual’s willingness to participate in a short-term transportation planning process than for determining an individual’s willingness to participate in a long-term transportation planning process.} \]

**Perceived Level of Control (PLC) Index**

The control belief-set regarding participation is an antecedent of an individual’s perceived level of control regarding participatory behavior. The perceived level of control is useful in examining actual and perceived constraints on action by the individual. Individuals are more likely to engage in participatory behaviors that they believe are achievable (Armitage & Conner, 2001). In addition, the perceived level of control should tap perceived perceptions that either facilitates or inhibits participation. And finally, perceived level of control should also assess perceptions related to “the amount of control that individuals have over their behavior, resources, and environment (Kudlaeek, Valkova, Sherrill, Myers, & French, 2002, p. 281).” According to Ajzen
“[t]he more resources and opportunities individuals believe they possess, and fewer obstacles or impediments they anticipate, the greater should be their perceived control over the behavior (p. 196).”

Similar to the SEU expectancy-value model related to attitude towards participation and conformity with important referents, the theory of planned behavior also deals with the perceived control belief power (cbp) - expectancy of the situation, as well as the control belief strength (cbs) about the perceived power that individuals believe they have in a given situation. Therefore, according to Fishbein and Ajzen (1975) and Ajzen (1991), SEU from Eq. (1) can be reinterpreted as a perceived level of control (PLC) towards participation, and can be rewritten as:

\[ PLC_b = \sum (cbp_i)(cbs_i) \]

According to Eq. (4), using an SEU expectancy-value model, a person’s perceived level of control (PLC) is equal to the probability that participation in a transportation planning workshop will lead an individual to perceive his/her power over participating (cbp) in direct proportion to the strength that an individual holds control beliefs about participation (cbs). Therefore, a perceived level of control index will be created by a summation of questions related to an individual’s control belief power regarding participation multiplied by questions related to the control belief strengths regarding participation. By following the logic in Eq. (4), this index should be a belief-based measure of the perceived level of control regarding an individual’s willingness to participate in the transportation planning process (Ajzen, 1991).
The control belief-set (i.e., how individuals perceive their level of control over a situation) of participation is the antecedent of an individual’s perceived level of control regarding participation; where the perceived level of control that people have will be operationalized by a perceived level of control (PLC) index. According to Ajzen’s (1991) theory of planned behavior, if the PLC index is phrased in a positive context, people will be more likely to be willing to participate in the transportation planning process. Therefore, the following hypothesis is being advanced to illuminate the effect that the internal motivational variable perceived level of control (PLC) will have on an individual’s willingness to participate in the transportation planning process.

\[ H_{3a}: \text{The more an individual has a positive perceived level of control (PLC), the more likely the individual is to be willing to participate in the transportation planning process.} \]

The basic framework developed by Alkadry (2000) suggests that different factors account for people’s participation in short-term and long-term planning processes. Alkadry’s (2000) Willingness-Affectedness Framework in Figure 4-1 suggests that people will choose to participate in a short-term planning process based on personal motivational factors, whereas people will choose to participate in a long-term planning process based more on external factors. Therefore, the following hypothesis is being advanced to shed light on the influence that the internal motivational variable perceived level of control (PLC) will have between the short-term and long-term planning processes.
The internal motivational variable perceived level of control (PLC) will have a greater influence in determining an individual’s willingness to participate in a short-term transportation planning process than for determining an individual’s willingness to participate in a long-term transportation planning process.

Citizenship Orientation Variables

So far, the proposed model has only been discussed in terms of factors that are directly related to an individual’s belief-sets, beliefs related specifically to the behavior in question, that is participation in the transportation planning process. However, consistent with the research of Ajzen (1991), Sparks and Shepherd (2002), Verderber, Rizzo, and Sherrill (2003), it has been shown that outside influences that are not directly related to a specific behavior can also influence an individual’s intention to act. Therefore, two additional variables that are consistent with individual beliefs regarding democracy and civic behavior are also being considered. These two variables: citizenship orientations and social capital are independent of an individual’s belief regarding participation, but can influence an individual’s intention to participate in the transportation planning process. Figure 4-1 (Willingness-Affectedness Framework) clearly demonstrates that citizenship orientations and social capital can affect an individual’s willingness to participate.

The belief-sets discussed so far have been related to the specific behavior of participation in the transportation planning process; this enabled the variables to be theoretically linked...
under an expectancy-value framework using the theory of planned behavior. Since citizenship orientations and social capital are independent of the behavior of participation, these two variables will not function in an expectancy-value formulation. Both citizenship orientations and social capital have their own theoretical bases, and have been included to broaden the scope of the theory of planned behavior regarding civic behavior.

Citizenship orientations are an integral part of the willingness to participate model, where citizenship orientations function within a liberal democratic framework. Within liberal democratic thought, and consistent with the literature discussed in Chapter Two and Chapter Three, three general conceptual orientations have been identified: participatory, modern, and neo-classical liberal/representative.

*Citizenship Orientation-Participative (CO-P) Index*

Individuals conceptualize democracy and citizenship differently. Conover and Feldman (1984a; 1984b), Conover, Crewe, and Searing (1991), Glover (2002), and Theiss-Morse (1993) have shown that democratic and citizenship conceptualizations do matter to participation and to the level at which participation will occur. Based on how an individual views society and how government should function, differing levels of participation can be expected. Participatory citizenship focuses on the ideal citizen, where being involved in civic affairs is seen as a normative good. Therefore, the participatory citizenship orientation should have good predictive power in determining the willingness of individuals to participate in the transportation planning process.
Glover (2002) suggests a set of questions to identify the participatory citizenship orientation, and will be operationalized by a person’s attitudes on questions regarding their conceptualization of democratic citizenship. These questions will be summed to form a participatory citizenship orientation (CO-P) index where each respondent’s score will indicate an individual’s level of participatory democratic-citizenship beliefs.

The more an individual has a positive participatory citizenship orientation (CO-P), the more likely the individual is to be willing to participate in the transportation planning process. Therefore, consistent with the work of Conover and Feldman (1984a; 1984b), Conover, Crewe, and Searing (1991), Glover (2002), and Theiss-Morse (1993) concerning the nature of participatory citizenship orientation, the following hypothesis is being advanced.

H₄₆: The more an individual has a positive participatory citizenship orientation (CO-P), the more likely the individual is to be willing to participate in the transportation planning process.

The basic framework developed by Alkadry (2000) suggests that different factors account for people’s participation in short-term and long-term planning processes. Alkadry’s (2000) Willingness-Affectedness Framework in Figure 4-1 suggests that people will choose to participate in a short-term planning process based on personal motivational factors, whereas people will choose to participate in a long-term planning process based
more on external factors. Therefore, the following hypothesis is being advanced to shed light on the influence that the external participatory citizenship orientation variable (CO-P) will have between the short-term and long-term planning processes.

H₄₆: The external citizenship orientation variable participatory citizenship orientation (CO-P) will have a greater influence in determining an individual’s willingness to participate in a long-term transportation planning process than for determining an individual’s willingness to participate in a short-term transportation planning process.

Citizenship Orientation-Modern (CO-M) Index

Whereas the participatory citizenship orientation focuses on the ideal citizen, the modern citizenship orientation focuses on minimal participation of citizens, with an emphasis on elective leadership. The modern citizenship perspective exhibits traits that are similar to both elitist and pluralist democratic philosophies. Complete citizen involvement is not a necessary requirement of good citizenship within the modern democratic philosophy. The opportunity to participate is there if citizens want to participate, but participation is not needed for democracy to work. Therefore, the more an individual has a positive modern citizenship orientation, the less likely the individual is to be willing to participate in the transportation planning process.

Theiss-Morse (1993) suggests a set of questions to identify the modern citizenship orientation, and will be operationalized by a person’s attitudes on questions regarding
their conceptualization of democratic citizenship. These questions will be summed to form a modern citizenship orientation (CO-M) index where each respondent’s score will indicate an individual’s level of modern democratic-citizenship beliefs.

The modern citizenship orientation is virtually the complete opposite of the participatory orientation. Therefore, the more an individual has a positive modern citizenship orientation (CO-M), the less likely the individual is to be willing to participate in the transportation planning process. Consistent with the work of Conover and Feldman (1984a; 1984b), Conover, Crewe, and Searing (1991), Glover (2002), and Theiss-Morse (1993) concerning the nature of modern citizenship orientation, the following hypothesis is being advanced.

H_{5a}: The more an individual has a positive modern citizenship orientation (CO-M), the less likely the individual is to be willing to participate in the transportation planning process.

The basic framework developed by Alkadry (2000) suggests that different factors account for people’s participation in short-term and long-term planning processes. Alkadry’s (2000) Willingness-Affectedness Framework in Figure 4-1 suggests that people will choose to participate in a short-term planning process based on personal motivational factors, whereas people will choose to participate in a long-term planning process based more on external factors. Therefore, the following hypothesis is being advanced to shed
light on the influence that the external modern citizenship orientation variable (CO-M) will have between the short-term and long-term planning processes.

H5b: The external citizenship orientation variable modern citizenship orientation (CO-M) will have a greater influence in determining an individual’s willingness to participate in a long-term transportation planning process than for determining an individual’s willingness to participate in a short-term transportation planning process.

Citizenship Orientation-Neo-Classical (CO-NC) Index

Whereas the participatory and modern citizenship orientations are near opposites of each other, the neo-classical liberal/representative orientation lies somewhere in between the two. The neo-classical liberal/representative citizenship orientation focuses on the efforts, talents, and equality of opportunity of the individual. While the neo-classical liberal/representative democracy view of citizenship holds that individuals will be more likely to vote, this perspective also shows a propensity for participation that is relatively less burdensome on the individual (Theiss-Morse, 1993). “The Representative Democracy perspective emphasizes relatively easy means of participating in politics, especially electoral politics. This widely shared perspective can be interpreted to fall between the elitist [i.e., modern] and citizenship [i.e., participatory] theories: elitist theory emphasizes voting and being informed, but ultimately demands too little of citizens, whereas citizenship theory demands perhaps too much” (p. 370). Even though Theiss-Morse finds that individuals that hold the representative democracy view of citizenship
are more likely to participate in the political voting process, they will be less likely to participate in other civic processes, such as transportation planning, than the participatory perspective. Therefore, the more an individual has a positive neo-classical liberal/republican citizenship orientation, the more likely the individual is to be willing to participate in the transportation planning process, albeit less than the participatory citizenship orientation.

Glover (2002) suggests a set of questions to identify the neo-classical liberal/republican citizenship orientation, and will be operationalized by a person’s attitudes on questions regarding their conceptualization of democratic citizenship. These questions will be summed to form a neo-classical liberal/republican citizenship orientation (CO-NC) index where each respondent’s score will indicate an individual’s level of neo-classical liberal/republican democratic-citizenship beliefs.

The more an individual has a positive neo-classical liberal/republican citizenship orientation (CO-NC), the more likely the individual is to be willing to participate in the transportation planning process. Therefore, consistent with the work of Conover and Feldman (1984a; 1984b), Conover, Crewe, and Searing (1991), Glover (2002), and Theiss-Morse (1993) concerning the nature of neo-classical liberal/republican citizenship orientation, the following hypothesis is being advanced.
H₆ₐ: The more an individual has a positive neo-classical liberal/representative citizenship orientation (CO-NC), the more likely the individual is to be willing to participate in the transportation planning process.

The basic framework developed by Alkadry (2000) suggests that different factors account for people’s participation in short-term and long-term planning processes. Alkadry’s (2000) Willingness-Affectedness Framework in Figure 4-1 suggests that people will choose to participate in a short-term planning process based on personal motivational factors, whereas people will choose to participate in a long-term planning process based more on external factors. Therefore, the following hypothesis is being advanced to shed light on the influence that the external neo-classical liberal/representative citizenship orientation variable (CO-NC) will have between the short-term and long-term planning processes.

H₆₇: The external citizenship orientation variable neo-classical liberal/representative citizenship orientation (CO-NC) will have a greater influence in determining an individual’s willingness to participate in a long-term transportation planning process than for determining an individual’s willingness to participate in a short-term transportation planning process.

Social Capital Variables

Just as citizenship was shown to be an influence on civic participation, social capital has also been shown to influence participation. The conceptual framework presented in the
previous chapter concludes that participation is the process in which individuals are involved and engaged in the decision-making process that will affect the broader community. Participation occurs at all levels of civil society from being involved in a local civic club, to participating in a public hearing, to voting for an elected official, or as in the case of this research, participating in the transportation planning process.

Chapter Three lays out the fundamental groundwork concerning the theoretical basis of social capital, where social capital has been used to explain multitudes of positive collective outcomes (Brehm and Rahn, 1997). “The more that citizens participate in their communities, the more that they learn to trust others; the greater trust that citizens hold for others, the more likely they are to participate” (pp. 1001-1002). The greater the number of memberships in voluntary associations and the greater level of interpersonal trust that individuals have, the more likely individuals will be to participate in the transportation planning process. In addition, as individuals are more willing to participate in the transportation planning process, so too will they join voluntary associations in greater numbers, as well as an increase in interpersonal trust should be seen. Therefore, this section will focus on the definitional aspect of what social capital is and how it will be incorporated into the willingness to participate model.

Social Capital-Associational Networks (SC-AN) Index

and de Ulzurrun (2202) stress the importance of the associational involvement aspect of social capital. The greater level of involvement in voluntary associations will lead to increased levels of social capital.

Social capital has been defined as two conceptually distinct concepts: involvement in associational networks and interpersonal social trust. Associational networks will be measured by involvement in voluntary organizational activities, and will be operationalized by respondent’s answers to questions regarding their involvement in various voluntary associations. These questions will be summed to form an associational networks index where each respondent’s score will indicate an individual’s level of civic participation. Therefore, consistent with the work of Brehm and Rahn (1997), Jackman and Miller (1998), and Schuller, Baron, and Field (2000) concerning the nature of social capital the following hypothesis is being advanced.

H₇ₖ: The more organizations an individual is involved with (SC-AN), the more likely the individual is to be willing to participate in the transportation planning process.

The basic framework developed by Alkadry (2000) suggests that different factors account for people’s participation in short-term and long-term planning processes. Alkadry’s (2000) Willingness-Affectedness Framework in Figure 4-1 suggests that people will choose to participate in a short-term planning process based on personal motivational factors, whereas people will choose to participate in a long-term planning process based
more on external factors. Therefore, the following hypothesis is being advanced to shed light on the influence that the external social capital variable associational networks (SC-AN) will have between the short-term and long-term planning processes.

H7b: The external social capital variable associational involvement (SC-AN) will have a greater influence in determining an individual’s willingness to participate in a long-term transportation planning process than for determining an individual’s willingness to participate in a short-term transportation planning process.

Social Capital-Interpersonal Trust (SC-IT) Index

Fukuyama (1995; 2001), Hemingway (1999), Sullivan and Transue (1999), Schuller, Baron, and Field (2000), and Norris (2000; 2002) stress the importance of interpersonal trust dimension of social capital. Greater levels of interpersonal trust between individuals and organizations will lead to increased levels of social capital. What Brehm and Rahn (1997) find is that there is a close reciprocal relationship between participation (as measured by civic engagement) and trust. The effect of participation on trust was greater than from trust to participation.

Social capital has been defined as two conceptually distinct concepts: involvement in associational networks and interpersonal social trust. Interpersonal trust will be measured as trust in one’s neighborhood, co-workers, and community, which will be operationalized by respondent’s attitudes on questions regarding their general trust in
others, as well as trust in specific groups. These questions will be summed to form an interpersonal trust index where each respondent’s score will indicate an individual’s level of interpersonal trust. Therefore, consistent with the work of Brehm and Rahn (1997), Jackman and Miller (1998), and Schuller, Baron, and Field (2000) concerning the nature of social capital the following hypothesis is being advanced.

H₈ₐ: The more trusting an individual is (SC-IT), the more likely the individual is to be willing to participate in the transportation planning process.

The basic framework developed by Alkadry (2000) suggests that different factors account for people’s participation in short-term and long-term planning processes. Alkadry’s (2000) Willingness-Affectedness Framework in Figure 4-1 suggests that people will choose to participate in a short-term planning process based on personal motivational factors, whereas people will choose to participate in a long-term planning process based more on external factors. Therefore, the following hypothesis is being advanced to shed light on the influence that the external social capital variable interpersonal trust (SC-IT) will have between the short-term and long-term planning processes.

H₈₉: The external social capital variable interpersonal trust (SC-IT) will have a greater influence in determining an individual’s willingness to participate in a long-term transportation planning process than for determining an individual’s willingness to participate in a short-term transportation planning process.
Control Variables

In addition to the above concepts, socioeconomic variables will be used to assess whether the effects of the primary independent variables are still significantly related to participation. Five socioeconomic variables will be controlled for to further assess whether the independent variables of concern are significantly related with the two dependent variables on participation. These variables are:

- Age,
- Gender,
- Race,
- Education, and
- Income.

Verba and Nie (1972) developed one of the first models of participatory behavior based on socioeconomic indicators called the SES model. Their model found that political participation was primarily predicated on socioeconomic factors of education, occupational status, and income. The SES model has been tested repeatedly, and has been found to be extremely robust (Pettersen & Rose, 1996). The explanation for these findings generally states that participation requires greater resources, which usually are associated with higher levels of socioeconomic status. “According to this model, the social status of an individual—his job, education, and income—determines to a large extent how much he participates. […] A good deal of the variance in how much and in what ways people participate is explained by their social-status characteristics, mediated by the intervening effect of their civic attitudes” (Verba & Nie, pp. 13-14, 1972).
Of the various “exogenous causes of civic participation” (Brehm & Rahn, 1997, p. 1015), education has repeatedly been shown to have the greatest effect on participation (Brehm & Rahn, 1997; Lake & Huckfeldt, 1998). However, Pettersen and Rose (1996) find that once civic attitudes are controlled, the effect of education on participation is substantially reduced. What Pettersen and Rose find is that “even if some direct influence remains, education seems to have its greatest impact by contributing to the development of a set of attitudes or dispositions […] which in turn appears to promote various forms of participation” (p. 82). Lake and Huckfeldt (1998), Petersen and Rose (1996), Brehm and Rahn (1997), Funk (1998), Knack and Kropf (1998), Ulbig and Funk (1999), and Theiss-Morse (1993) all find education to be significantly related to participation.

Age has been found to be positively related to participation. Older persons tend to participate in politics more than younger people (Verba & Nie, 1972; Lake & Huckfeldt, 1998; Petersen & Rose, 1996; Kanck & Kropf, 1998; Ulbig & Funk, 1999; Theiss-Morse, 1993; Jankowski & Strate, 1995; and Oliver, 1997). The independent variable, race, is also related to participation. Minority populations participate at lower rates than non-minority populations (Verba & Nie, 1972; Ulbig & Funk, 1999). Also, the independent variable, gender, is related to participation. Males have been shown to participate at higher rates than females (Verba & Nie, 1972). And finally, income has also been shown to be related to participation. Individuals with higher incomes tend to participate more than do individuals with lower incomes (Verba & Nie, 1972; Brehm & Rahn, 1997;
Verba and Nie (1972), Lake and Huckfeldt (1998), Petersen and Rose (1996), Brehm and Rahn (1997), Funk (1998), Knack and Kropf (1998), Ulbig and Funk (1999), Theiss-Morse (1993), and Oliver (1997) have established that the socioeconomic variables listed above are correlated with political civic participation. Therefore, it is reasonable to conclude that these same variables will be correlated with other forms of civic participation, namely participation in the transportation planning process. Even though the independent socioeconomic variables may be related to participation, the question becomes: Are the main independent variables still significantly related to participation once the socioeconomic variables are accounted for? Therefore, the goal of this study is to identify the key determinants that lead to participation in the transportation planning process. And in doing so, this study will test whether these relationships are significantly related once the above socioeconomic variables have been controlled.

**Summary**

The goal of this study is to identify the key determinants that lead to participation in the transportation planning process. The intent is to show what affects an individual’s willingness to participate in a long-term continuous on-going civic planning process compared to an individual’s willingness to participate in a one-time civic event that is expected to affect a local community within the next year. Specifically, this research examines the individual-level processes by which citizens are willing to engage in two
different forms of participation related to the transportation planning process. These two forms of participation take the form of a project that is ready to begin construction within the next year, and a project that is more long-term and visionary/conceptual (i.e., project construction not expected for ten to twenty years).

To accomplish this task, a willingness to participate model has been advanced to test the hypothesized relationships discussed throughout this chapter. The model suggests that participation is a function of five variables. Three of the five variables (attitude towards participation, conformity with important referents, and perceived level of control) are related to beliefs an individual has about participation, while the other two variables (citizenship orientations and social capital) are concerned with larger social issues important to individuals. In addition, the two models will assess the relative weights of these variables to see if they are significantly different for an individual’s participation in short-term and long-term participation. And finally, attention will be applied to assess if variables that an agency has influence over can facilitate or hinder an individual’s willingness to participate. Chapter Five will detail the methodological approach to collect and analyze the data necessary in developing the willingness to participate model.
CHAPTER 5: METHODOLOGY

Introduction

The data for this study came from a random self-administered mail-back survey of 750 residents throughout the entire State of Florida. Survey Sampling, Inc.\(^8\) was contracted to draw the sample. Participants in this study were adult individuals (i.e., 18 years old or older). Of the 750 mailed surveys, 112 were returned by the postal service for various reasons (e.g., forwarding order had expired, insufficient address, wrong address, individual was deceased, etc.), while 68 participants returned the survey but refused to complete it. The final number of possible respondents in the sample therefore was 570. Two hundred and thirteen surveys were completed for a response rate of 37.37 percent (n=213).

The response rate was not as high as initially expected, although was within the accepted range of 30 to 45 percent. A reasonable explanation for this may be due to the timing of the survey administration. The survey was administered after Florida had experienced a series of four hurricanes within a six-week period. The level of attention that many citizens might have given the survey could well have been lessened due to “hurricane fatigue.” In addition, some of the surveys that were undeliverable might also have been due to persons’ homes being damaged by the hurricanes.

\(^8\) Founded in 1977, Survey Sampling, Inc. provides randomly selected samples for a fee based on criteria defined by the researcher.
The goal of this study is to identify the determinants that lead to participation in the transportation planning process. To accomplish this task, a model of participation has been developed to illuminate the various components of the willingness of individuals to participate in the transportation planning process. The model examines the inter-relationships between individual motivating factors, citizenship orientations, and social capital’s influence on participation. Figure 4-2, in Chapter Four, graphically illustrates the general model. Each of the following sections describes the survey questions used to illuminate the dimensions of each concept. Chapter Six, “Data and Analysis,” discusses these inter-relationships in greater detail. Please refer to Appendix A for the exact wording of each survey question.

The Questionnaire

Questions selected for the survey address the concepts identified for this study. Specifically, the study examined the relationships between individual willingness to participate in the transportation planning process \( \text{WTP}_{ST} \) and \( \text{WTP}_{LT} \), attitudes towards participation (ATP), conformity with important referents (CWIR), perceived level of control (PLC), participatory citizenship orientation (CO-P), modern citizenship orientation (CO-M), neo-classical liberal/representative citizenship orientation (CO-NC), social capital – associational networks (SC-AN), social capital – interpersonal trust (SC-IT), age, gender, race, education, and income (see Table 5-1).
Table 5-1: Variable Summaries

<table>
<thead>
<tr>
<th>Variable</th>
<th>Operational Definition</th>
<th>Scale</th>
<th>Range</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
</table>
| WTP<sub>ST</sub> | 5-item additive index measuring short-term willingness to participate in the transportation planning process. | 7=Strongly Agree  
6=Agree  
5=Somewhat Agree  
4=Uncertain  
3=Agree  
2=Disagree  
1=Strongly Disagree | 5 to 35 | 21.74 | 7.297 |
| WTP<sub>LT</sub> | 5-item additive index measuring long-term willingness to participate in the transportation planning process. | 7=Strongly Agree  
6=Agree  
5=Somewhat Agree  
4=Uncertain  
3=Agree  
2=Disagree  
1=Strongly Disagree | 5 to 35 | 20.91 | 7.513 |
| ATP | 10-item multiplicative index measuring outcome evaluations, as well as the behavioral belief strength of attitudes towards participating in the transportation planning process. | Index created by multiplying 5 question-pairs and then summing | 5 to 245 | 152.26 | 62.659 |
| CWIR | 8-item multiplicative index measuring motivation to comply, as well as the normative belief strength towards participating in the transportation planning process. | Index created by multiplying 4 question-pairs and then summing | 4 to 196 | 82.02 | 48.562 |
| PLC | 14-item multiplicative index measuring control belief power, as well as the control belief strength towards participating in the transportation planning process. | Index created by multiplying 7 question-pairs and then summing | 7 to 343 | 209.38 | 86.308 |

9 The data in Table 5-1 is in a raw format (non-standardized). Standardized regression coefficients for each independent variable are reported in Tables 6-27 and 6-28 in Chapter Six.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Operational Definition</th>
<th>Scale</th>
<th>Range</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
</table>
| CO-P     | 5-item additive index measuring participatory citizenship orientation attitudes. | 7=Strongly Agree  
6=Agree  
5=Somewhat Agree  
4=Uncertain  
3=Agree  
2=Disagree  
1=Strongly Disagree | 5 to 35  | 27.30 | 5.553 |
| CO-M     | 4-item additive index measuring modern citizenship orientation attitudes. | 7=Strongly Agree  
6=Agree  
5=Somewhat Agree  
4=Uncertain  
3=Agree  
2=Disagree  
1=Strongly Disagree | 4 to 28  | 14.80 | 5.220 |
| CO-NC    | 5-item additive index measuring liberal/representative citizenship orientation attitudes. | 7=Strongly Agree  
6=Agree  
5=Somewhat Agree  
4=Uncertain  
3=Agree  
2=Disagree  
1=Strongly Disagree | 5 to 35  | 28.22 | 5.846 |
| SC-AN    | Number of organizations that an individual has participated in. |                                                                       | 0 to 9  | 3.99  | 2.065 |
| SC-IT    | 5-item additive index measuring the level of interpersonal trust. | 7=Strongly Agree  
6=Agree  
5=Somewhat Agree  
4=Uncertain  
3=Agree  
2=Disagree  
1=Strongly Disagree | 1 to 7   | 5.10  | 0.984 |
| Age      | The age of the survey respondent at the time of survey completion. |                                                                       | 22 to 96 | 56.97 | 15.332 |
| Gender   | The sex of the survey respondent. | 0=Female  
1=Male | 0 to 1 | 0.55 | .498 |
| Race     | Categorized as white and non-white. | 0=Non-White  
1=White | 0 to 1 | 0.86 | .345 |
A self-administered mail-back questionnaire was developed, which included measures of all dependent and independent variables. Before the questionnaire was used to collect data for this study, it was pre-tested in two ways. First, approximately sixty non-interested third parties examined and completed an initial draft version of the survey to determine if participants would be able to understand the survey questions as intended by the researcher, as well as to examine the survey for obvious flaws and omissions (e.g., spelling errors).

In addition, a pre-test of 50 surveys were mailed to a randomly selected sample of adult individuals throughout the State of Florida between August and September 2004. The procedures used during the pre-test were the same procedures that were employed for the final survey. Based on feedback received from the non-interested third parties and the pre-test administration of the survey, the questionnaire was modified to enhance the validity and reliability of respondents’ answers on the final survey.
Measures

Willingness to Participate (WTP) Indices

This research measures two dependent concepts concerning the willingness of people to engage in public involvement activities. Both concepts focus on potential future participatory behavior, as measured by a willingness to participate (WTP) index. These two dependent concepts are measured using indices created from two sets of five questions.

A review of the literature revealed that there were no questions or indices that could satisfactorily be used or modified to fit this research problem. Therefore, the willingness to participate index was constructed specifically for this research effort. Respondents were asked the likelihood of participating in two hypothetical public meetings concerning transportation planning. The first public meeting is for a roadway widening project that is expected to be built within one mile of the respondent’s home. The second hypothetical public meeting is to gather public input regarding the development of a twenty-year vision plan for long-term transportation improvements needed for the entire community. Whereas the first public meeting is to measure the willingness of individuals to participate in the planning process for a roadway widening project (i.e., short-term planning process), the second meeting is to measure the willingness of individuals to participate in the long range planning process for the community.

Each succeeding question in the willingness to participate index *ratchets-up* the level of participatory behavior. The questions used to measure the two forms of participation are
relatively similar. Short-term willingness to participate is measured by the respondent’s attitudes on the following five questions regarding their willingness to engage in various forms of participatory behavior of a proposed roadway widening project that will be built within the next year: 1) attend a meeting to listen to public officials discuss their plan, 2) attend a meeting to meet and talk with public officials about their plan, 3) write or call public officials to make sure their concerns are heard, 4) volunteer their time to join a neighborhood committee to make sure their concerns are heard, and 5) organize a neighborhood committee to make sure their concerns are heard.

For short-term participation, respondents were asked five Likert-scale questions that have a seven-point range with 1 = “strongly agree” to 7 = “strongly disagree.” These five questions have been summed to form a short-term willingness to participate index where each respondent’s score can range between five (5) and thirty-five (35). These questions were reverse coded so that a lower score indicates an individual’s lack of willingness to participate in a short-term transportation planning process. Conversely, a higher score indicates a greater willingness to participate.

Long-term willingness to participate is being measured by the respondent’s attitudes on the following five questions regarding their willingness to engage in various forms of participatory behavior of a proposed twenty-year conceptual long range transportation plan for the community: 1) attend a meeting to listen to public officials discuss the development of the twenty-year plan, 2) attend a meeting to meet and talk with public officials about the development of the twenty-year plan, 3) write or call public officials to
make sure their concerns are heard, 4) volunteer their time to join a neighborhood committee to make sure their concerns are heard, and 5) organize a neighborhood committee to make sure their concerns are heard.

For long-term participation, respondents were asked five Likert-scale questions that have a seven-point range with 1 = “strongly agree” to 7 = “strongly disagree.” These five questions have been summed to form a long-term willingness to participate index where each respondent’s score can range between five (5) and thirty-five (35). These questions were reverse coded so that a lower score indicates an individual’s lack of willingness to participate in a long-term transportation planning process. Conversely, a higher score indicates a greater willingness to participate.

**Attitude Towards Participation (ATP) Index**

The behavioral belief-set regarding participation in the transportation planning process is the antecedent of an individual’s attitude towards participation. The attitude of an individual towards participation in the transportation planning process is composed of two components: a measure of attitude related to the outcome evaluation (i.e., expectancy), and a measure of attitude related to the behavioral belief strength (i.e., value). The questions used to form the attitude towards participation (ATP) index were developed consistent with Ajzen’s (2002) index regarding the construction of a theory of planned behavior questionnaire.
The measure of an individual’s attitude towards participation is being measured by an attitude (ATP) index, which is created by a multiplicative process that is summed over five questions. These five questions are actually paired questions, one for each outcome evaluation and one for each behavioral belief strength. Each of the five question-pairs are multiplied, and then summed to create the index. Therefore, there are a total of ten questions that comprise the index.

These ten questions have been assessed by ten Likert-scale questions that have a seven-point range, which are anchored by “extremely likely –to– extremely unlikely” for the five questions that measure outcome evaluations, and “strongly agree –to– strongly disagree” for the five questions that measure behavioral belief strength. These ten questions were reversed coded so that higher scores equate to a positive attitude, while lower scores equate to a negative attitude. Therefore, an attitude index has been created by the summation of questions related to an individual’s outcome evaluations of the behavior multiplied by questions related to the behavioral belief strength regarding the behavior.

These five question-pairs have been summed to form an attitude towards participation (ATP) index where each respondent’s score can range between five (5) and two hundred forty-five (245). A lower score indicates an individual’s negative outlook regarding participation in the transportation planning process. Conversely, a higher score indicates a positive attitude regarding participation.
Conformity with Important Referents (CWIR) Index

The normative belief-set regarding participation in the transportation planning process is the antecedent of an individual’s conformity with important referents regarding participation. Conformity with important referents of an individual towards participation in the transportation planning process is composed of two components: a measure of conformity with important referents related to the motivation to comply with persons important to the individual (i.e., expectancy), and a measure of the conformity with important referents related to the normative belief strength (i.e., value). The questions used to form the conformity with important referents (CWIR) index were developed consistent with Ajzen’s (2002) paper regarding the construction of a theory of planned behavior questionnaire.

The measure of an individual’s normative belief of how others perceive the individual’s engagement in participatory behavior is being measured by a conformity with important referents (CWIR) index, which is created by a multiplicative process that is summed over four questions. These four questions are actually paired questions, one for each motivation to comply and one for each normative belief strength. Each of the four question-pairs are multiplied, and then summed to create the index. Therefore, there are a total of eight questions that comprise the index.

These eight questions have been assessed by eight Likert-scale questions that have a seven-point range, which are anchored by “definitely care –to– definitely don’t care” for the four questions that measure motivation to comply, and “strongly agree –to– strongly
disagree” for the four questions that measure normative belief strength. These eight questions were reversed coded so that higher scores equate to positive feelings toward conformity, while lower scores equate to negative feelings toward conformity. Therefore, a conformity with important referents index has been created by the summation of questions related to an individual’s motivation to comply multiplied by questions related to the normative belief strength regarding participation.

These four question-pairs have been summed to form a conformity with important referents (CWIR) index where each respondent’s score can range between four (4) and one hundred ninety-six (196). A lower score indicates an individual’s negative feeling towards conformity with important referents regarding participation in the transportation planning process. Conversely, a higher score indicates an individual’s positive feeling towards conformity with important referents towards participation.

Perceived Level of Control (PLC) Index

The control belief-set regarding participation in the transportation planning process is the antecedent of an individual’s perceived level of control regarding participation. The perceived level of control of an individual towards participation in the transportation planning process is composed of two components: a measure of the perceived level of control related to the control belief power (i.e., expectancy) that an individual perceives, and a measure of the perceived level of control related to the individual’s control belief strength (i.e., value). The questions used to form the perceived level of control (PLC)
index were developed consistent with Ajzen’s (2002) paper regarding the construction of a theory of planned behavior questionnaire.

The measure of an individual’s perceived level of control attitude is being measured by a perceived level of control (PLC) index, which is created by a multiplicative process that is summed over seven questions. These seven questions are actually paired questions, one for each control belief power and one for each control belief strength. Each of the seven question-pairs are multiplied, and then summed to create the index. Therefore, there are a total of fourteen questions that comprise the index.

These fourteen questions have been assessed by fourteen Likert-scale questions that have a seven-point range, which are anchored by “extremely likely —to— extremely unlikely” for the seven questions that measure control belief power, and “strongly agree —to— strongly disagree” for the seven questions that measure control belief strength. These fourteen questions were reversed coded so that higher scores equate to positive feelings of individual control, while lower scores equate to negative feelings of individual control. Therefore, a perceived level of control index has been created by the summation of questions related to an individual’s control belief power of the behavior multiplied by questions related to the control belief strength regarding participation.

These seven question-pairs have been summed to form a perceived level of control (PLC) index where each respondent’s score can range between seven (7) and three hundred forty-three (343). A lower score indicates an individual’s negative perceived level of
control regarding participation in the transportation planning process. Conversely, a higher score indicates a positive perceived level of control regarding participation.

**Citizenship Orientation (CO) Indices**

Individuals conceive their rights and responsibilities within society under differing conceptions. Glover (2002) developed a series of questions to assess political, social, and civil citizenship orientations. In addition, Theiss-Morse (1993) also developed a series of questions that assess differing citizenship orientations. Consistent with the discussion of democratic theory in Chapter Two and citizenship orientations in Chapter Three, fourteen questions were borrowed from Glover (2002) and Theiss-Morse (1993), and modified to develop three citizenship orientation indices of: participatory citizenship, modern citizenship, and neo-classical liberal/representative citizenship.

Questions on citizenship orientations are being measured using a seven-point Likert-scale question ranging from 1 = “strongly agree” to 7 = “strongly disagree.” These fourteen questions have been reverse coded and summed to form the three citizenship indices. The three citizenship orientations are being operationalized by respondent’s attitudes on the following fourteen questions regarding citizenship beliefs.

The questions used to assess the participatory citizenship orientation were based on modified questions from Glover (2002) on political citizenship, which is very similar to participatory citizenship. The participatory citizenship index was formed by the following five questions regarding the respondent’s feeling that they: 1) should have a
say in local government services in their community, 2) have a responsibility to participate in their community in ways other than voting, 3) should attend public meetings to discuss issues of importance to the community, 4) have a responsibility to be involved in discussions about government services provided within their community, and 5) have a responsibility to talk with their fellow citizens about community issues. These five participatory citizenship orientation questions have been summed to form an additive index.

The questions used to assess the modern citizenship orientation were based on modified questions from Theiss-Morse (1993). The modern citizenship index was formed by the following four questions regarding the respondent’s feeling that they: 1) should just try to choose good political leaders, then let those leaders do their job, 2) should leave government officials alone after they have been elected so they can make good decisions for the community, 3) individuals do not need to be involved in community issues because their leaders are doing a good job, and 4) individuals can be involved in community issues if they want, but being involved is not necessary to being a good citizen. These four modern citizenship orientation questions have been summed to form an additive index.

The questions used to assess the neo-classical liberal/representative citizenship orientation were based on modified questions from Glover (2002) on civil citizenship, which is very similar to a liberal/representative citizenship framework. The neo-classical liberal/representative citizenship index was formed by the following five questions
regarding the respondent’s feeling that they: 1) have a responsibility to be in control of their own life, without intrusion from government, 2) believe government should not interfere with individual rights, 3) should be able to use the money they earn as they see fit, without government intervention, 4) have the right to make moral choices as they see fit, and 5) have the right to take advantage of their economic success without having to support others. These five neo-classical liberal/representative citizenship orientation questions have been summed to form an additive index.

**Social Capital (SC) Indices**

Social capital has been defined as two conceptually distinct concepts of involvement in associational networks and interpersonal social trust. Associational networks is being measured by involvement in nine potential voluntary organizational activities. Interpersonal trust is being operationalized as trust in one’s neighborhood, co-workers, and community. The questions used to assess associational networks were based on modified questions from the 1995 World Values Survey. The questions used to assess interpersonal trust were based on modified questions from the Saguaro Seminar’s Social Capital Benchmark Survey (2000), which was a project of the John F. Kennedy School of Government at Harvard University.

Associational networks is being operationalized by respondent’s involvement in the following voluntary associations: 1) church or religious organization; 2) sports league or recreational club; 3) art, music, or cultural organization; 4) neighborhood or homeowners association; 5) public interest group, political club, or political party; 6) parent-teacher
association, like the PTA or PTO; 7) professional, trade, or business association; 8) charitable organization, service club, or fraternal organization; and 9) any other kinds of clubs or organizations.

The questions on associational networks are being measured using a dichotomous question where 0 = “No” and 1 = “Yes” to the question of “In the past 12 months, have you” participated in various organizations. From these nine questions an additive index has been computed that can range from zero (0) to nine (9). A low score indicates an individual’s lack of involvement in voluntary organizations. Conversely, a higher score indicates a greater level of involvement in voluntary organizations.

Interpersonal trust is being measured by general trust in others, as well as trust in specific groups. Five questions on trust are being used to measure individuals’ trust of specific groups, and are measured using a seven-point Likert-scale question that can range from 1 = “strongly agree” to 7 = “strongly disagree” to form an interpersonal social trust index. These five questions have been reverse coded, summed, and divided by the number of answered questions to form an interpersonal trust index where each respondent’s score can range between one and seven. A lower score indicates an individual’s lack of interpersonal trust. Conversely, a higher score indicates a higher level of trust.

**Demographic Control Variables**

The standard demographic data has been collected to determine whether the hypothesized relationships exist after the demographic variables have been controlled. The
demographic variables of interest are: age, gender, race, education, and income. Age was measured by asking “What year were you born?” Gender was measured by the following question, “Are you male or female?” Respondent’s race was identified with the question, “What race do you consider yourself?” Possible responses were: White, not Hispanic; Black, not Hispanic; Hispanic; Asian/Pacific Islander; Alaskan Native or Native American, not Hispanic; or Other. The level of educational attainment of respondent’s was determined by the question, “What is the highest grade of school or year of college you have completed?” Possible responses were: less then high school (grade 11 or less), high school diploma (including GED), some college, associate degree (2 year) or specialized technical training, bachelor’s degree, some graduate training, or graduate or professional degree. And finally, income was measured by the following question, “If you added together the yearly incomes of all the members of your family living at home last year, what would be the total income of your household in 2003?” Possible responses were: less than $15,000; $15,000 to $24,999; $25,000 to $34,999; $35,000 to $49,999; $50,000 to $74,999; $75,000 to $99,999; or $100,000 or more.

**Questionnaire Administration**

The final version of the questionnaire was administered between October and December of 2004 by mail. Dillman’s (2000) recommendations were followed regarding the implementation of a mail survey of the public. Dillman’s method involves multiple contacts to increase the response rate. Multiple contacts include a pre-survey letter, a survey letter and the survey, a thank you postcard, and a follow-up letter and survey.
Implementation of the questionnaire followed Dillman’s (2000) methodology for conducting a self-administered mail-back survey, with two noted exceptions regarding prepaid incentives and the use of registered mail for the final non-response follow-up contact (see Appendix B). The procedures were:

1. October 26, 2004 - mailed out a pre-notice letter notifying the respondent that a survey will be sent to them within a few days;
2. October 29, 2004 - mailed out a questionnaire with a cover letter explaining the importance of completing and returning the survey;
3. November 9, 2004 - mailed out a thank-you post card; and
4. November 16, 2004 - mailed out a replacement questionnaire for those that have not responded.

Summary

As part of this research, a self-administered mail survey was administered to a random sample of 570 (of the original 750) individuals throughout the State of Florida. Of the 570 surveys that were potentially received, 213 were completed and mailed back for a response rate of 37.37 percent.

The data from the survey has been used to construct two multivariate models to explain the willingness of individuals to participate in the transportation planning process—one to explain short-term participation and another to explain long-term participation. Chapter Six, “Data and Analysis,” will discuss the results in greater detail.
CHAPTER 6: DATA AND ANALYSIS

Introduction

This chapter provides an analysis of individual willingness to participate in the transportation planning process. The data from the survey questionnaire have been used to construct two multivariate models to explain the willingness of individuals to participate in the transportation planning process—one to explain short-term participation and another to explain long-term participation.

Data analysis for this study proceeded in three steps. First, univariate analysis was used as a tool to determine the distributional characteristics of each variable. Second, bivariate analyses of each independent variable against each dependent variable using bivariate plots, as well as Pearson’s Correlation Statistic were reviewed. And finally, two multiple regression models were analyzed to test whether the bivariate relationships identified in the bivariate analysis still hold when controlled for the independent variables.

Profile of Respondents

Two hundred and thirteen people completed the survey, with ages ranging from 22 to 96 (mean age of 55.97 years and a median age of 55 years). The gender of the respondents is 55.4% male and 44.6% female. The majority of respondents are white (86.3%), with non-whites consisting of nearly fourteen percent (13.7%) of the participants. Approximately five percent (5.5%) of the respondents did not complete high school, with
nearly twelve percent (11.9%) completing high school. Approximately thirty-four percent (34.3%) either attended some college, or completed a two-year associate’s degree. Nearly eighteen percent (17.9%) graduated from college with a four-year bachelor’s degree. And more than thirty percent (30.4%) either attended graduate school, or completed a graduate or professional degree. More than twenty-two percent (22.2%) of the respondent’s have a household income of less than $35,000. Thirty-three percent (33.0%) of households have an income between $35,000 to $74,999, whereas forty-five percent (44.9%) of households have incomes greater than $75,000.

Even though this study attempted to obtain a sample representative of residents throughout the State of Florida, none of the demographic characteristics approximated the population of Florida (see Table 6-1 on the following page). In general, the survey population was older, more likely to be male, more likely to be a non-minority (i.e., Caucasian), more educated, and earned a higher income than the typical Floridian. Even though the survey respondents, as a whole, are not representative of the population of Florida, the results and conclusions drawn from the multivariate analysis are still valid. What may be of concern, however, is that conclusions drawn from any stratification at the lower demographic levels (i.e., age, gender, race, education, or income) may not be valid. Therefore, none of the conclusions will be based on stratifications at the lower demographic levels.
Table 6-1: Comparison of Survey Respondents to U.S. Census Data for Florida

<table>
<thead>
<tr>
<th>Variable</th>
<th>Operational Definition</th>
<th>Percent 2000 Census for Florida*</th>
<th>Percent from 2004 Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>&lt; 20 years old</td>
<td>25.30</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>20 to 24 years old</td>
<td>5.80</td>
<td>2.06</td>
</tr>
<tr>
<td></td>
<td>25 to 34 years old</td>
<td>13.00</td>
<td>5.15</td>
</tr>
<tr>
<td></td>
<td>35 to 44 years old</td>
<td>15.50</td>
<td>17.01</td>
</tr>
<tr>
<td></td>
<td>45 to 54 years old</td>
<td>12.90</td>
<td>23.71</td>
</tr>
<tr>
<td></td>
<td>55 to 59 years old</td>
<td>5.10</td>
<td>12.37</td>
</tr>
<tr>
<td></td>
<td>60 to 64 years old</td>
<td>4.60</td>
<td>10.31</td>
</tr>
<tr>
<td></td>
<td>65 to 74 years old</td>
<td>9.10</td>
<td>17.53</td>
</tr>
<tr>
<td></td>
<td>75 to 84 years old</td>
<td>6.40</td>
<td>10.31</td>
</tr>
<tr>
<td></td>
<td>≥ 85 years old</td>
<td>2.10</td>
<td>1.55</td>
</tr>
<tr>
<td>Gender</td>
<td>Female</td>
<td>48.80</td>
<td>64.65</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>51.20</td>
<td>35.35</td>
</tr>
<tr>
<td>Race</td>
<td>Non-White</td>
<td>22.00</td>
<td>13.33</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>78.00</td>
<td>86.67</td>
</tr>
<tr>
<td>Education</td>
<td>Some HS or less</td>
<td>20.10</td>
<td>5.58</td>
</tr>
<tr>
<td></td>
<td>Grad HS</td>
<td>28.70</td>
<td>12.18</td>
</tr>
<tr>
<td></td>
<td>Some college</td>
<td>21.80</td>
<td>20.81</td>
</tr>
<tr>
<td></td>
<td>AA Degree</td>
<td>7.00</td>
<td>13.71</td>
</tr>
<tr>
<td></td>
<td>BA/BS Degree</td>
<td>14.30</td>
<td>24.87</td>
</tr>
<tr>
<td></td>
<td>Grad/Prof. Degree</td>
<td>8.10</td>
<td>22.84</td>
</tr>
<tr>
<td>Income</td>
<td>&lt; $15K</td>
<td>16.30</td>
<td>4.37</td>
</tr>
<tr>
<td></td>
<td>$15K to $24.9</td>
<td>14.50</td>
<td>7.10</td>
</tr>
<tr>
<td></td>
<td>$25K to $34.9</td>
<td>14.20</td>
<td>10.38</td>
</tr>
<tr>
<td></td>
<td>$35K to $49.9</td>
<td>17.40</td>
<td>14.75</td>
</tr>
<tr>
<td></td>
<td>$50K to $74.9</td>
<td>18.50</td>
<td>18.03</td>
</tr>
<tr>
<td></td>
<td>$75K to $99.9</td>
<td>8.70</td>
<td>20.22</td>
</tr>
<tr>
<td></td>
<td>&gt; $100K</td>
<td>10.40</td>
<td>25.14</td>
</tr>
</tbody>
</table>


**Univariate Analyses**

In addition to the socio-economic characteristics of the survey respondents in the preceding section, each of the key dependent and independent variables were analyzed to determine their distributional characteristics. Figure 6-1 (on the following page) shows
the frequency distributions of each variable. From the frequency distribution graphs it is evident that some of the variables are skewed to the left (negative), in comparison to the normal distribution. The skewness and kurtosis values are mainly negative, and can be seen in Table 6-2\(^{10}\). As a result, hypothesis testing at the bivariate level may be invalid.

\(^{10}\) The data in Table 6-2 is in a raw format (non-standardized). Standardized regression coefficients for each independent variable are reported in Tables 6-27 and 6-28.
Figure 6-1: Univariate Frequency Distributions
To further test whether the variables are normally distributed, Table 6-3 shows the results of the Kolmogorov-Smirnov test statistic for each variable. The null hypothesis is that the data are normally distributed (Berman, 1998; Weisstein, 2005). The alternative hypothesis is that the residuals are not normally distributed. Therefore, if the test statistic is statistically significant, it would suggest that the residuals are not normally distributed. The results of the test statistics in Table 6-3 shows that many of the variables are not normally distributed, which is consistent with the frequency distribution graphs in Figure 6-1 as well as the skewness and kurtosis values in Table 6-2. When variables are non-normally distributed, an accepted practice is to perform a transformation of the variables, either by taking the logarithm or square root of the data values. As a test, transformations

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>WTP&lt;sub&gt;ST&lt;/sub&gt;</td>
<td>209</td>
<td>5</td>
<td>35</td>
<td>21.74</td>
<td>7.297</td>
<td>-0.359</td>
<td>-0.347</td>
</tr>
<tr>
<td>WTP&lt;sub&gt;LT&lt;/sub&gt;</td>
<td>211</td>
<td>5</td>
<td>35</td>
<td>20.91</td>
<td>7.513</td>
<td>-0.284</td>
<td>-0.520</td>
</tr>
<tr>
<td>ATP</td>
<td>209</td>
<td>5</td>
<td>245</td>
<td>152.26</td>
<td>62.659</td>
<td>-0.580</td>
<td>-0.178</td>
</tr>
<tr>
<td>CWIR</td>
<td>210</td>
<td>4</td>
<td>196</td>
<td>82.02</td>
<td>48.562</td>
<td>0.478</td>
<td>-0.379</td>
</tr>
<tr>
<td>PLC</td>
<td>210</td>
<td>7</td>
<td>343</td>
<td>209.38</td>
<td>86.308</td>
<td>-0.565</td>
<td>-0.196</td>
</tr>
<tr>
<td>CO-P</td>
<td>208</td>
<td>5</td>
<td>35</td>
<td>27.30</td>
<td>5.553</td>
<td>-1.283</td>
<td>3.040</td>
</tr>
<tr>
<td>CO-M</td>
<td>208</td>
<td>4</td>
<td>28</td>
<td>14.80</td>
<td>5.220</td>
<td>-0.254</td>
<td>-0.409</td>
</tr>
<tr>
<td>CO-NC</td>
<td>208</td>
<td>5</td>
<td>35</td>
<td>28.22</td>
<td>5.846</td>
<td>-1.209</td>
<td>1.850</td>
</tr>
<tr>
<td>SC-AN</td>
<td>209</td>
<td>0</td>
<td>9</td>
<td>3.99</td>
<td>2.065</td>
<td>0.092</td>
<td>-0.560</td>
</tr>
<tr>
<td>SC-IT</td>
<td>209</td>
<td>1</td>
<td>7</td>
<td>5.10</td>
<td>0.984</td>
<td>-0.815</td>
<td>1.558</td>
</tr>
<tr>
<td>Age</td>
<td>194</td>
<td>22</td>
<td>96</td>
<td>55.97</td>
<td>15.332</td>
<td>0.040</td>
<td>-0.510</td>
</tr>
<tr>
<td>Gender</td>
<td>202</td>
<td>0</td>
<td>1</td>
<td>0.55</td>
<td>0.498</td>
<td>-0.221</td>
<td>-1.971</td>
</tr>
<tr>
<td>Race</td>
<td>197</td>
<td>0</td>
<td>1</td>
<td>0.86</td>
<td>0.345</td>
<td>-2.127</td>
<td>2.550</td>
</tr>
<tr>
<td>Education</td>
<td>201</td>
<td>1</td>
<td>7</td>
<td>4.41</td>
<td>1.888</td>
<td>-0.013</td>
<td>-1.166</td>
</tr>
<tr>
<td>Income</td>
<td>185</td>
<td>1</td>
<td>7</td>
<td>4.94</td>
<td>1.782</td>
<td>-0.579</td>
<td>-0.652</td>
</tr>
</tbody>
</table>
were performed on all of the variables. In every case, the data transformations made the variables even more non-normally distributed. However, the variables under study will ultimately be used to develop two multiple regression models later in this chapter. One of the key assumptions of multiple regression is that the residuals must be normally distributed (Gujarati, 1988). The variables themselves do not need to be normally distributed, only the residuals need to be normally distributed. It will be shown later in this chapter that even though some of the variables are not normally distributed, the residuals of both models are normally distributed.

Table 6-3: Normality Test of Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Kolmogorov-Smirnov Test Statistic</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>WTP_{sT}</td>
<td>1.138</td>
<td>.150</td>
</tr>
<tr>
<td>WTP_{LT}</td>
<td>1.403*</td>
<td>.039</td>
</tr>
<tr>
<td>ATP</td>
<td>1.390*</td>
<td>.042</td>
</tr>
<tr>
<td>CWIR</td>
<td>1.032</td>
<td>.237</td>
</tr>
<tr>
<td>PLC</td>
<td>1.388*</td>
<td>.042</td>
</tr>
<tr>
<td>CO-P</td>
<td>1.425*</td>
<td>.035</td>
</tr>
<tr>
<td>CO-M</td>
<td>1.060</td>
<td>.211</td>
</tr>
<tr>
<td>CO-NC</td>
<td>1.788**</td>
<td>.003</td>
</tr>
<tr>
<td>SC-AN</td>
<td>1.527*</td>
<td>.019</td>
</tr>
<tr>
<td>SC-IT</td>
<td>1.644**</td>
<td>.009</td>
</tr>
<tr>
<td>Age</td>
<td>0.798</td>
<td>.547</td>
</tr>
<tr>
<td>Gender</td>
<td>5.242***</td>
<td>.000</td>
</tr>
<tr>
<td>Race</td>
<td>7.263***</td>
<td>.000</td>
</tr>
<tr>
<td>Education</td>
<td>2.130***</td>
<td>.000</td>
</tr>
<tr>
<td>Income</td>
<td>2.347***</td>
<td>.000</td>
</tr>
</tbody>
</table>

* p < .05, ** p < .01, ***p < .001

---

11 A full review of the assumptions necessary to satisfy the requirements of multiple regression will be discussed in a later section of this chapter.
Short-Term Willingness to Participate ($WTP_{ST}$) Index

Five questions were developed to measure respondents’ willingness to participate in a short-term planning process (see Table 6-4). Possible responses to the questions ranged from strongly disagree to strongly agree. Each succeeding question ratchets-up the level of participatory behavior. Nearly seventy percent (69.9%) of the respondents answered “somewhat agree,” “agree,” or “strongly agree” to the first question regarding the hypothetical scenario of attending a meeting to listen to public officials explain their plans for widening a road near the respondent’s home. As participants are asked questions that require more participatory involvement, the respondent’s level of agreement decreases. This can be seen in the percentage of respondents that answered “somewhat agree,” “agree,” or “strongly agree” to subsequent questions (i.e., 65.1%, 49.7%, 39.7%, and 24.4% respectively).
Table 6-4: Short-Term Willingness to Participate

<table>
<thead>
<tr>
<th>Description of Item</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SD</th>
<th>D</th>
<th>SWD</th>
<th>U</th>
<th>SWA</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would be willing to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>attend meeting to listen to public officials</td>
<td>209</td>
<td>5.09</td>
<td>1.727</td>
<td>4.8%</td>
<td>8.1%</td>
<td>4.8%</td>
<td>12.4%</td>
<td>16.7%</td>
<td>32.1%</td>
<td>21.1%</td>
</tr>
<tr>
<td>attend meeting to meet and talk with public officials</td>
<td>209</td>
<td>4.97</td>
<td>1.743</td>
<td>3.8%</td>
<td>10.5%</td>
<td>4.8%</td>
<td>15.8%</td>
<td>16.7%</td>
<td>27.3%</td>
<td>21.1%</td>
</tr>
<tr>
<td>write or call public officials</td>
<td>209</td>
<td>4.34</td>
<td>1.717</td>
<td>6.2%</td>
<td>14.4%</td>
<td>6.7%</td>
<td>23.0%</td>
<td>21.5%</td>
<td>18.2%</td>
<td>10.0%</td>
</tr>
<tr>
<td>volunteer to join a neighborhood committee</td>
<td>209</td>
<td>4.02</td>
<td>1.785</td>
<td>11.5%</td>
<td>12.9%</td>
<td>9.1%</td>
<td>26.8%</td>
<td>16.3%</td>
<td>14.8%</td>
<td>8.6%</td>
</tr>
<tr>
<td>volunteer to organize a neighborhood committee</td>
<td>209</td>
<td>3.32</td>
<td>1.764</td>
<td>18.2%</td>
<td>22.5%</td>
<td>11.5%</td>
<td>23.4%</td>
<td>11.0%</td>
<td>8.1%</td>
<td>5.3%</td>
</tr>
</tbody>
</table>

N=Number of Respondents, Mean= Numerical Average, SD= Standard Deviation, SD=Strongly Disagree, D=Disagree, SWD=Somewhat Disagree, U=Uncertain, SWA=Somewhat Agree, A=Agree, SA=Strongly Agree

The five questions discussed above were used to create an index to measure an individual’s willingness to participate in a short-term transportation planning process, and has an internal reliability coefficient $\alpha = .892$. The internal reliability coefficient, also known as Cronbach’s alpha, denoted by the lowercase Greek letter $\alpha$, is an estimate of the proportional variance of the test items that are consistent across the index’s questions (Brown, 2002). The internal reliability coefficient of Cronbach’s alpha can range
between 0.00 and 1.00, where 0.00 is interpreted to mean that none of the variation in the index is consistent, while a 1.0 is interpreted to mean that the variation within the index is completely consistent. The interpretation of $\alpha = .892$ is that 89 percent (89.2%) of the variation is consistent across the five questions that comprise the index, and therefore is 89 percent reliable as a measure of a person’s willingness to participate in the short-term transportation planning process.

The index measure was created by first assigning a numerical value to each response (strongly agree = 1, agree = 2, somewhat agree = 3, uncertain = 4, somewhat disagree = 5, disagree = 6, and strongly disagree = 7). The numerical values for each participant’s responses were reverse coded and then summed. Higher index scores indicate a greater willingness to participate in a short-term transportation planning process. Overall, a majority of the respondents agreed to some degree that they would attend a public meeting to listen to, as well as meet and talk with officials about the widening of a road that is near their home. However, a majority of respondents were either uncertain or disagreed to some degree about writing or calling public officials, or volunteering to join or organize a neighborhood committee to make sure that their concerns are known.

**Long-Term Willingness to Participate (WTP\text{LT}) Index**

Five questions were developed to measure respondents’ willingness to participate in a long-term planning process (see Table 6-5). Possible responses to the questions ranged from strongly disagree to strongly agree. Similar to the preceding set of questions, each of the following questions ratchets-up the level of participatory behavior. Nearly sixty-
six percent (65.9%) of the respondents answered “somewhat agree,” “agree,” or “strongly agree” to the first question regarding the hypothetical scenario about attending a meeting to listen to public officials discuss the development of a twenty-year plan for long-term transportation improvements needed for the respondent’s community. Again, similar to the first set of questions, as participants are asked questions that require more participatory involvement, the respondent’s level of agreement decreases. This can be seen in the percentage of respondents that answered “somewhat agree,” “agree,” or “strongly agree” to subsequent questions (i.e., 61.6%, 43.6%, 36.9%, and 23.8% respectively). Consistent with expected behavior, respondents’ level of agreement for each similar question-pair between participatory involvement in the short-term planning process was slightly greater than for respondents’ level of agreement to be involved in a long-term planning process.
Table 6-5: Long-Term Willingness to Participate

<table>
<thead>
<tr>
<th>Description of Item</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SD</th>
<th>D</th>
<th>SWD</th>
<th>U</th>
<th>SWA</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would be willing to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>attend meeting to listen to public officials discuss 20-year plan</td>
<td>211</td>
<td>4.89</td>
<td>1.752</td>
<td>6.6%</td>
<td>7.6%</td>
<td>4.7%</td>
<td>15.2%</td>
<td>20.4%</td>
<td>28.0%</td>
<td>17.5%</td>
</tr>
<tr>
<td>attend meeting to meet and talk with public officials about 20-year plan</td>
<td>211</td>
<td>4.81</td>
<td>1.731</td>
<td>5.7%</td>
<td>8.5%</td>
<td>5.7%</td>
<td>18.5%</td>
<td>19.9%</td>
<td>24.6%</td>
<td>17.1%</td>
</tr>
<tr>
<td>write or call public officials</td>
<td>211</td>
<td>4.11</td>
<td>1.813</td>
<td>11.4%</td>
<td>13.7%</td>
<td>5.2%</td>
<td>26.1%</td>
<td>19.4%</td>
<td>14.2%</td>
<td>10.0%</td>
</tr>
<tr>
<td>volunteer to join a neighborhood committee</td>
<td>211</td>
<td>3.82</td>
<td>1.813</td>
<td>14.7%</td>
<td>14.7%</td>
<td>7.1%</td>
<td>27.0%</td>
<td>18.0%</td>
<td>10.4%</td>
<td>8.5%</td>
</tr>
<tr>
<td>volunteer to organize a neighborhood committee</td>
<td>211</td>
<td>3.27</td>
<td>1.685</td>
<td>19.4%</td>
<td>19.4%</td>
<td>13.3%</td>
<td>23.2%</td>
<td>15.2%</td>
<td>4.3%</td>
<td>4.3%</td>
</tr>
</tbody>
</table>

N=Number of Respondents, Mean= Numerical Average, SD= Standard Deviation, SD=Strongly Disagree, D=Disagree, SWD=Somewhat Disagree, U=Uncertain, SWA=Somewhat Agree, A=Agree, SA=Strongly Agree

The five questions discussed above were used to create an index to measure an individual’s willingness to participate in a long-term transportation planning process (internal reliability coefficient $\alpha = .907$). The index measure was created by first assigning a numerical value to each response (strongly agree = 1, agree = 2, somewhat
agree = 3, uncertain = 4, somewhat disagree = 5, disagree = 6, and strongly disagree = 7). The numerical values for each participant’s responses were reverse coded and then summed. Higher index scores indicate a greater willingness to participate in a long-term transportation planning process. Overall, a majority of the respondents agreed to some degree that they would attend a public meeting to listen to, as well as meet and talk with officials about the development of a twenty-year plan for long-term transportation improvements needed for the respondent’s community. However, a majority of respondents were either uncertain or disagreed to some degree about writing or calling public officials, or volunteering to join or organize a neighborhood committee to make sure that their concerns are known.

**Attitude Towards Participation - Expectancy**

An individual’s attitude towards participation in the transportation planning process is composed of two components: a measure of attitude related to the outcome evaluation (i.e., expectancy), and a measure of attitude related to the behavioral belief strength (i.e., value). Five question-pairs (ten questions in total) were developed to assess an individual’s attitude towards participation.

The five questions developed to measure the respondent’s expected outcome evaluation of participating in the transportation planning process are listed below in Table 6-6. Possible responses to the questions ranged from extremely unlikely to extremely likely. A clear majority of respondents answered “somewhat likely,” “likely,” or “extremely likely” to all five questions (i.e., 81.5%, 78.7%, 74.4%, 76.3%, and 69.7% respectively),
indicating a positive likelihood of attending a public meeting regarding needed transportation improvements.

Table 6-6: Attitude Towards Participation-Expectancy

<table>
<thead>
<tr>
<th>Description of Item</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>EU</th>
<th>U</th>
<th>SU</th>
<th>U</th>
<th>SL</th>
<th>L</th>
<th>EL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>How likely would you be to attend a public meeting next week if …</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I could learn how I may be affected</td>
<td>211</td>
<td>5.44</td>
<td>1.53</td>
<td>3.8%</td>
<td>4.3%</td>
<td>3.3%</td>
<td>7.1%</td>
<td>19.4%</td>
<td>38.4%</td>
<td>23.7%</td>
</tr>
<tr>
<td>I could help influence the decisions that would be made</td>
<td>211</td>
<td>5.38</td>
<td>1.55</td>
<td>3.8%</td>
<td>4.3%</td>
<td>3.8%</td>
<td>9.5%</td>
<td>19.0%</td>
<td>36.0%</td>
<td>23.7%</td>
</tr>
<tr>
<td>I could let public officials know what I think</td>
<td>211</td>
<td>5.23</td>
<td>1.59</td>
<td>5.2%</td>
<td>2.8%</td>
<td>4.7%</td>
<td>12.8%</td>
<td>19.9%</td>
<td>34.1%</td>
<td>20.4%</td>
</tr>
<tr>
<td>I could voice my concerns</td>
<td>211</td>
<td>5.25</td>
<td>1.53</td>
<td>4.3%</td>
<td>3.8%</td>
<td>4.3%</td>
<td>11.4%</td>
<td>20.9%</td>
<td>37.4%</td>
<td>18.0%</td>
</tr>
<tr>
<td>attending would allow me to be involved in the decision-making process</td>
<td>211</td>
<td>5.04</td>
<td>1.74</td>
<td>5.7%</td>
<td>7.1%</td>
<td>6.2%</td>
<td>11.4%</td>
<td>18.0%</td>
<td>31.3%</td>
<td>20.4%</td>
</tr>
</tbody>
</table>

N=Number of Respondents, Mean= Numerical Average, SD= Standard Deviation, EU=Extremely Unlikely, U=Unlikely, SU=Somewhat Unlikely, U=Uncertain, SL=Somewhat Likely, L=Likely, EL=Extremely Likely

The five questions discussed above were used in coordination with the behavioral belief strength questions to create an index to measure a respondent’s attitude towards participation. As a check on the reliability of these five questions to be an overall
measure of the expected outcome evaluation, the internal reliability coefficient was quite high (α = .960).

Attitudes Towards Participation - Value
The five questions developed to measure the respondent’s behavioral belief strength towards participating in the transportation planning process are listed below in Table 6-7. Possible responses to the questions ranged from strongly disagree to strongly agree. Similar to the expectancy questions, a clear majority of respondents answered “somewhat agree,” “agree,” or “strongly agree” to all five questions (i.e., 84.4%, 81.1%, 80.6%, 80.2%, and 66.8% respectively), indicating a positive attitude towards attending a public meeting regarding needed transportation improvements. A comparison of the question-pairs between the expectancy and value questions reveals that for every question-pair respondents answered slightly more favorably toward the value of participation versus the expectation of actually participating (except for the last question-pair).
Table 6-7: Attitude Towards Participation-Value

<table>
<thead>
<tr>
<th>Description of Item</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SD</th>
<th>D</th>
<th>SWD</th>
<th>U</th>
<th>SWA</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would attend a public meeting next week if:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I could learn how I may be affected</td>
<td>211</td>
<td>5.58</td>
<td>1.49</td>
<td>2.8%</td>
<td>5.2%</td>
<td>2.4%</td>
<td>5.2%</td>
<td>16.6%</td>
<td>40.3%</td>
<td>27.5%</td>
</tr>
<tr>
<td>I could help influence the decisions that would be made</td>
<td>211</td>
<td>5.52</td>
<td>1.58</td>
<td>3.8%</td>
<td>5.2%</td>
<td>2.4%</td>
<td>7.6%</td>
<td>13.3%</td>
<td>40.3%</td>
<td>27.5%</td>
</tr>
<tr>
<td>I could let public officials know what I think</td>
<td>211</td>
<td>5.40</td>
<td>1.49</td>
<td>2.8%</td>
<td>5.2%</td>
<td>3.8%</td>
<td>7.6%</td>
<td>19.0%</td>
<td>41.2%</td>
<td>20.4%</td>
</tr>
<tr>
<td>I could voice my concerns</td>
<td>211</td>
<td>5.40</td>
<td>1.50</td>
<td>2.8%</td>
<td>5.2%</td>
<td>3.8%</td>
<td>8.1%</td>
<td>18.5%</td>
<td>40.8%</td>
<td>20.9%</td>
</tr>
<tr>
<td>I could be involved in the decision-making process</td>
<td>211</td>
<td>5.06</td>
<td>1.76</td>
<td>4.3%</td>
<td>9.0%</td>
<td>5.2%</td>
<td>14.7%</td>
<td>15.6%</td>
<td>27.0%</td>
<td>24.2%</td>
</tr>
</tbody>
</table>

N=Number of Respondents, Mean= Numerical Average, SD= Standard Deviation, SD=Strongly Disagree, D=Disagree, SWD=Somewhat Disagree, U=Uncertain, SWA=Somewhat Agree, A=Agree, SA=Strongly Agree

The five questions discussed above were used in coordination with the outcome evaluation questions to create an index to measure a respondent’s attitude towards participation. As a check on the reliability of these five questions to be an overall measure of the behavioral belief strength towards participation, the internal reliability coefficient was quite high ($\alpha = .945$).
**Attitude Towards Participation (ATP) Index**

The attitude towards participation (ATP) index was created by first assigning a numerical value to each response for the outcome evaluations (extremely likely = 1, likely = 2, somewhat likely = 3, uncertain = 4, somewhat unlikely = 5, unlikely = 6, and extremely unlikely = 7), and also for the behavioral belief strengths (strongly agree = 1, agree = 2, somewhat agree = 3, uncertain = 4, somewhat disagree = 5, disagree = 6, and strongly disagree = 7). The numerical values for each participant’s responses were reverse coded, multiplied for each question-pair, and summed. Higher index scores indicate a positive attitude towards participating in the transportation planning process.

**Conformity with Important Referents - Expectancy**

An individual’s conformity with important referents towards participation in the transportation planning process is composed of two components: a measure of conformity with important referents related to the motivation to comply with persons important to the individual (i.e., expectancy), and a measure of the conformity with important referents related to normative belief strengths (i.e., value). Four question-pairs (eight questions in total) were developed to assess an individual’s normative belief of how others perceive the individual’s engagement in participatory behavior.

The four questions developed to measure the respondent’s motivation to comply with expected behavior of persons that are important to the respondent are listed below (see Table 6-8). Possible responses to the questions ranged from definitely don’t care to definitely care. Nearly eighty-four percent (83.8%) of the respondents answered
“somewhat care,” “care,” or “definitely care” to the first question regarding “do you care what your family thinks you should do?” As the questions progress from whether individuals care what their: close friends, neighbors, and co-workers “think you [should] do,” agreement declines. This can be seen in the percentage of respondent’s that answered “somewhat care,” “care,” or “definitely care” to subsequent questions (i.e., 66.2%, 54.7%, and 44.8% respectively).

Table 6-8: Conformity with Important Referents-Expectancy

<table>
<thead>
<tr>
<th>Description of Item</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>DDC</th>
<th>DC</th>
<th>SDC</th>
<th>U</th>
<th>SC</th>
<th>C</th>
<th>DC</th>
</tr>
</thead>
<tbody>
<tr>
<td>In general, how much do you care what your family thinks you should do?</td>
<td>210</td>
<td>5.50</td>
<td>1.689</td>
<td>5.7%</td>
<td>3.8%</td>
<td>4.3%</td>
<td>2.4%</td>
<td>22.4%</td>
<td>27.1%</td>
<td>34.3%</td>
</tr>
<tr>
<td>close friends think you should do?</td>
<td>210</td>
<td>4.66</td>
<td>1.730</td>
<td>5.7%</td>
<td>10.5%</td>
<td>11.0%</td>
<td>6.7%</td>
<td>30.0%</td>
<td>23.8%</td>
<td>12.4%</td>
</tr>
<tr>
<td>neighbors think you should do?</td>
<td>210</td>
<td>4.09</td>
<td>1.795</td>
<td>10.5%</td>
<td>15.2%</td>
<td>11.9%</td>
<td>8.1%</td>
<td>32.9%</td>
<td>14.7%</td>
<td>7.1%</td>
</tr>
<tr>
<td>co-workers think you should do?</td>
<td>210</td>
<td>3.84</td>
<td>1.825</td>
<td>12.4%</td>
<td>18.1%</td>
<td>12.9%</td>
<td>11.9%</td>
<td>26.7%</td>
<td>10.5%</td>
<td>7.6%</td>
</tr>
</tbody>
</table>

N=Number of Respondents, Mean= Numerical Average, SD= Standard Deviation, DDC=Definitely Care, DC=Don’t Care, SDC=Somewhat Don’t Care, U=Uncertain, SC=Somewhat Care, C=Care, DC=Definitely Care

The four questions discussed above were used in coordination with questions that measure the value that people place on conformity (i.e., value), to create an index to
measure a respondent’s conformity with persons that are important to the respondent towards participation in the transportation planning process. As a check on the reliability of these five questions to be an overall measure of the motivation to comply with expected behavior of persons that are important to the respondent, the internal reliability coefficient was quite high ($\alpha = .897$).

Conformity with Important Referents - Value

The four questions developed to measure the respondent’s normative belief strength towards participating in the transportation planning process (see Table 6-9). Possible responses to the questions ranged from strongly disagree to strongly agree. Nearly fifty-nine percent (58.5%) of the respondents answered “somewhat agree,” “agree,” or “strongly agree” to the first question regarding whether the respondent believes that their family feels they should attend a public meeting to participate. As the questions progress from what other persons important to the respondent think as to whether they should attend a public meeting (i.e., close friends, neighbors, and co-workers), agreement declines. This can be seen in the percentage of respondent’s that answered “somewhat agree,” “agree,” or “strongly agree” to subsequent questions (i.e., 44.4%, 47.8%, and 31.6% respectively). A comparison of the question-pairs between the expectancy and value questions reveals that every question-pair respondents answered less favorably toward the value of participation versus the expectation of actually participating.
Table 6-9: Conformity with Important Referents-Value

<table>
<thead>
<tr>
<th>Description of Item</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SD</th>
<th>D</th>
<th>SWD</th>
<th>U</th>
<th>SWA</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>If a public meeting were held next week...</td>
<td>212</td>
<td>4.58</td>
<td>1.781</td>
<td>7.1%</td>
<td>9.9%</td>
<td>9.4%</td>
<td>15.1%</td>
<td>22.6%</td>
<td>21.7%</td>
<td>14.2%</td>
</tr>
<tr>
<td>my family would think that I should attend</td>
<td>212</td>
<td>4.17</td>
<td>1.723</td>
<td>8.0%</td>
<td>13.2%</td>
<td>10.4%</td>
<td>24.1%</td>
<td>18.9%</td>
<td>17.0%</td>
<td>8.5%</td>
</tr>
<tr>
<td>my close friends would think that I should attend</td>
<td>213</td>
<td>4.23</td>
<td>1.691</td>
<td>8.9%</td>
<td>10.3%</td>
<td>9.4%</td>
<td>23.5%</td>
<td>22.5%</td>
<td>18.3%</td>
<td>7.0%</td>
</tr>
<tr>
<td>my neighbors would think that I should attend</td>
<td>212</td>
<td>3.75</td>
<td>1.689</td>
<td>13.2%</td>
<td>13.2%</td>
<td>11.8%</td>
<td>30.2%</td>
<td>16.0%</td>
<td>9.9%</td>
<td>5.7%</td>
</tr>
</tbody>
</table>

N=Number of Respondents, Mean= Numerical Average, SD= Standard Deviation, SD=Strongly Disagree, D=Disagree, SWD=Somewhat Disagree, U=Uncertain, SWA=Somewhat Agree, A=Agree, SA=Strongly Agree

The four questions discussed above were used in coordination with the motivation to comply questions to create an index to measure a respondent’s feeling towards conforming to expected behavior (i.e., participation) from persons important to the individual. As a check on the reliability of these five questions to be an overall measure
of the normative belief strength towards participating in the transportation planning process, the internal reliability coefficient was quite high ($\alpha = .940$).

**Conformity with Important Referents (CWIR) Index**

The conformity with important referents (CWIR) index was created by first assigning a numerical value to each response for complying with expected behavior of persons that are important to the respondent (definitely care = 1, care = 2, somewhat care = 3, uncertain = 4, somewhat don’t care = 5, don’t care = 6, and definitely don’t care = 7), and also for the normative belief strength towards participating in the transportation planning process (strongly agree = 1, agree = 2, somewhat agree = 3, uncertain = 4, somewhat disagree = 5, disagree = 6, and strongly disagree = 7). The numerical values for each participant’s responses were reverse coded, multiplied for each question-pair, and summed. Higher index scores indicates a positive feeling towards conforming to expected behavior from persons important to the individual.

**Perceived Level of Control - Expectancy**

An individual’s perceived level of control towards participation in the transportation planning process is composed of two components: a measure of the perceived level of control related to the control belief power (i.e., expectancy) that an individual perceives, and a measure of the perceived level of control related to the individual’s control belief strength (i.e., value). Seven question-pairs (fourteen questions in total) were developed to assess an individual’s perceived level of control towards participation.
The seven questions developed to measure the respondent’s control belief power towards participating in the transportation planning process are listed below in Table 6-10. Possible responses to the questions ranged from extremely unlikely to extremely likely. A clear majority of respondents answered “somewhat likely,” “likely,” or “extremely likely” to all seven questions (i.e., 79.1%, 70.5%, 81.9%, 82.9%, 83.3%, 74.8%, and 64.8% respectively), indicating a positive likelihood of attending a public meeting regarding needed transportation improvements.
Table 6-10: Perceived Level of Control-Expectancy

<table>
<thead>
<tr>
<th>Description of Item</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>EU%</th>
<th>U%</th>
<th>SU%</th>
<th>U%</th>
<th>SL%</th>
<th>L%</th>
<th>EL%</th>
</tr>
</thead>
<tbody>
<tr>
<td>How likely would you be to attend a public meeting next week if…</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I thought my opinion would be listened to</td>
<td>210</td>
<td>5.32</td>
<td>1.556</td>
<td>2.9%</td>
<td>6.7%</td>
<td>3.3%</td>
<td>8.1%</td>
<td>23.3%</td>
<td>32.9%</td>
<td>22.9%</td>
</tr>
<tr>
<td>my work schedule was more flexible</td>
<td>210</td>
<td>5.00</td>
<td>1.687</td>
<td>5.2%</td>
<td>8.6%</td>
<td>2.9%</td>
<td>12.9%</td>
<td>21.0%</td>
<td>33.3%</td>
<td>16.2%</td>
</tr>
<tr>
<td>I was asked to attend</td>
<td>210</td>
<td>5.58</td>
<td>1.466</td>
<td>3.3%</td>
<td>3.3%</td>
<td>1.9%</td>
<td>9.5%</td>
<td>13.8%</td>
<td>41.9%</td>
<td>26.2%</td>
</tr>
<tr>
<td>the meeting location is near my home</td>
<td>210</td>
<td>5.50</td>
<td>1.468</td>
<td>2.9%</td>
<td>4.8%</td>
<td>1.9%</td>
<td>7.6%</td>
<td>20.0%</td>
<td>38.6%</td>
<td>24.3%</td>
</tr>
<tr>
<td>the meeting time is convenient</td>
<td>210</td>
<td>5.51</td>
<td>1.448</td>
<td>2.9%</td>
<td>4.3%</td>
<td>2.9%</td>
<td>6.7%</td>
<td>17.6%</td>
<td>43.3%</td>
<td>22.4%</td>
</tr>
<tr>
<td>I thought public officials would treat me with respect</td>
<td>210</td>
<td>5.31</td>
<td>1.632</td>
<td>4.8%</td>
<td>4.3%</td>
<td>3.8%</td>
<td>12.4%</td>
<td>16.7%</td>
<td>33.3%</td>
<td>24.8%</td>
</tr>
<tr>
<td>my responsibilities at home and/or care for children were not so difficult</td>
<td>210</td>
<td>4.81</td>
<td>1.783</td>
<td>8.1%</td>
<td>7.6%</td>
<td>4.8%</td>
<td>14.8%</td>
<td>18.1%</td>
<td>32.9%</td>
<td>13.8%</td>
</tr>
</tbody>
</table>

N=Number of Respondents, Mean= Numerical Average, SD= Standard Deviation, EU=Extremely Unlikely, U=Unlikely, SU=Somewhat Unlikely, U=Uncertain, SL=Somewhat Likely, L= Likely, EL=Extremely Likely

The seven questions discussed above were used in coordination with the individual’s control belief strength questions to create an index to measure a respondent’s control
belief power towards participating in the transportation planning process. As a check on the reliability of these seven questions to be an overall measure of an individual’s level of control to participate in the transportation planning process, the internal reliability coefficient was quite high ($\alpha = .943$).

*Perceived Level of Control - Value*

The seven questions developed to measure the respondent’s control belief strength towards participating in the transportation planning process are listed below in Table 6-11. Possible responses to the questions ranged from strongly disagree to strongly agree. Similar to the expectancy questions, a clear majority of respondents answered “somewhat agree,” “agree,” or “strongly agree” to all seven questions (i.e., 78.6%, 67.7%, 76.8%, 79.2%, 79.7%, 72.0%, and 61.2% respectively), which indicates a positive attitude towards an individual’s level of control to participate in the transportation planning process. A comparison of the question-pairs between the expectancy and value questions reveals that for every question-pair respondents answered slightly more favorably toward the expectation of control the individual perceives in participation versus the value of perceived control.
Table 6-11: Perceived Level of Control-Value

<table>
<thead>
<tr>
<th>Description of Item</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SD</th>
<th>D</th>
<th>SWD</th>
<th>U</th>
<th>SWA</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would attend a public meeting next week if:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I thought my opinion would be listened to</td>
<td>211</td>
<td>5.42</td>
<td>1.545</td>
<td>2.8%</td>
<td>5.2%</td>
<td>4.3%</td>
<td>9.0%</td>
<td>17.5%</td>
<td>36.0%</td>
<td>25.1%</td>
</tr>
<tr>
<td>my work schedule was more flexible</td>
<td>211</td>
<td>5.01</td>
<td>1.696</td>
<td>6.2%</td>
<td>5.2%</td>
<td>5.7%</td>
<td>15.2%</td>
<td>17.5%</td>
<td>32.7%</td>
<td>17.5%</td>
</tr>
<tr>
<td>I was asked to attend the meeting</td>
<td>211</td>
<td>5.40</td>
<td>1.584</td>
<td>4.3%</td>
<td>3.8%</td>
<td>2.4%</td>
<td>12.8%</td>
<td>18.0%</td>
<td>31.3%</td>
<td>27.5%</td>
</tr>
<tr>
<td>the meeting location is near my home</td>
<td>211</td>
<td>5.32</td>
<td>1.565</td>
<td>4.3%</td>
<td>4.7%</td>
<td>3.8%</td>
<td>8.1%</td>
<td>20.4%</td>
<td>38.4%</td>
<td>20.4%</td>
</tr>
<tr>
<td>the meeting time is convenient</td>
<td>211</td>
<td>5.36</td>
<td>1.568</td>
<td>4.7%</td>
<td>4.3%</td>
<td>3.3%</td>
<td>8.1%</td>
<td>17.1%</td>
<td>42.7%</td>
<td>19.9%</td>
</tr>
<tr>
<td>I thought public officials would treat me with respect</td>
<td>211</td>
<td>5.21</td>
<td>1.609</td>
<td>4.3%</td>
<td>4.7%</td>
<td>4.3%</td>
<td>14.7%</td>
<td>18.0%</td>
<td>32.2%</td>
<td>21.8%</td>
</tr>
<tr>
<td>my responsibilities at home and/or care for children</td>
<td>211</td>
<td>4.76</td>
<td>1.860</td>
<td>8.5%</td>
<td>9.5%</td>
<td>3.3%</td>
<td>17.5%</td>
<td>15.2%</td>
<td>28.9%</td>
<td>17.1%</td>
</tr>
</tbody>
</table>

N=Number of Respondents, Mean= Numerical Average, SD= Standard Deviation, SD=Strongly Disagree, D=Disagree, SWD=Somewhat Disagree, U=Uncertain, SWA=Somewhat Agree, A=Agree, SA=Strongly Agree

The seven questions discussed above were used in coordination with the control belief power questions to create an index to measure a respondent’s attitude towards an individual’s level of control to participate in the transportation planning process. As a
check on the reliability of these seven questions to be an overall measure of the control belief strength towards participating in the transportation planning process, the internal reliability coefficient was quite high ($\alpha = .957$).

**Perceived Level of Control (PLC) Index**

The perceived level of control (PLC) index was created by first assigning a numerical value to each response for the respondent’s control belief power towards participating (extremely likely = 1, likely = 2, somewhat likely = 3, uncertain = 4, somewhat unlikely = 5, unlikely = 6, and extremely unlikely = 7), and also for the respondent’s control belief strength towards participating (strongly agree = 1, agree = 2, somewhat agree = 3, uncertain = 4, somewhat disagree = 5, disagree = 6, and strongly disagree = 7). The numerical values for each participant’s responses were reverse coded, multiplied for each question-pair, and summed. Higher index scores indicate a positive attitude towards an individual’s perceived level of control to participate in the transportation planning process.

**Participatory Citizenship Orientation (CO-P) Index**

Five questions were developed to measure the respondent’s level of participatory citizenship attitudes (see Table 6-12). Possible responses to the questions ranged from strongly disagree to strongly agree. A clear majority of respondents answered “somewhat agree,” “agree,” or “strongly agree” to all five questions (i.e., 93.2%, 88.0%, 80.3%, 72.1%, and 74.6% respectively), indicating a strong tendency of the respondents to have a high participatory citizenship orientation.
Table 6-12: Participatory Citizenship Orientation

<table>
<thead>
<tr>
<th>Description of Item</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SD</th>
<th>D</th>
<th>SWD</th>
<th>U</th>
<th>SWA</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel that …</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I should have a say in the local services provided in my community</td>
<td>208</td>
<td>6.03</td>
<td>1.094</td>
<td>1.4%</td>
<td>0.5%</td>
<td>1.0%</td>
<td>3.8%</td>
<td>14.4%</td>
<td>41.8%</td>
<td>37.0%</td>
</tr>
<tr>
<td>I have a responsibility to participate in my community in ways other than electing political leaders</td>
<td>208</td>
<td>5.67</td>
<td>1.211</td>
<td>1.4%</td>
<td>1.9%</td>
<td>1.0%</td>
<td>7.7%</td>
<td>25.0%</td>
<td>37.5%</td>
<td>25.5%</td>
</tr>
<tr>
<td>I should attend public meetings to discuss issues of importance</td>
<td>208</td>
<td>5.33</td>
<td>1.369</td>
<td>2.9%</td>
<td>2.9%</td>
<td>2.4%</td>
<td>11.5%</td>
<td>28.4%</td>
<td>34.6%</td>
<td>17.3%</td>
</tr>
<tr>
<td>I have a responsibility to be involved in discussions about services provided in community</td>
<td>206</td>
<td>5.18</td>
<td>1.367</td>
<td>1.9%</td>
<td>1.9%</td>
<td>6.7%</td>
<td>17.3%</td>
<td>26.9%</td>
<td>27.9%</td>
<td>17.3%</td>
</tr>
<tr>
<td>I have a responsibility to talk with my fellow citizens about community issues</td>
<td>208</td>
<td>5.09</td>
<td>1.394</td>
<td>3.4%</td>
<td>1.4%</td>
<td>8.7%</td>
<td>12.0%</td>
<td>31.3%</td>
<td>30.8%</td>
<td>12.5%</td>
</tr>
</tbody>
</table>

N=Number of Respondents, Mean= Numerical Average, SD= Standard Deviation, SD=Strongly Disagree, D=Disagree, SWD=Somewhat Disagree, U=Uncertain, SWA=Somewhat Agree, A=Agree, SA=Strongly Agree
The five questions discussed above were used to create an index to measure a respondent’s participatory citizenship orientation. As a check on the reliability of these five questions to be an overall measure of the concept, an internal reliability coefficient was calculated at \( \alpha = .911 \), which demonstrates the indexes internal consistency to be used as a measure of participatory citizenship.

*Modern Citizenship Orientation (CO-M) Index*

Four questions were developed to measure the respondent’s level of modern citizenship attitudes (see Table 6-13). Possible responses to the questions ranged from strongly disagree to strongly agree. More than sixty percent (60.8%) of respondents answered “somewhat agree,” “agree,” or “strongly agree” to the first question, which asked the respondent’s opinion that “I should try to choose good leaders, then let those leaders do their job.” Fifty-six percent (55.8%) of respondents answered “somewhat agree,” “agree,” or “strongly agree” to the fourth question, which asked the respondent’s opinion that “I can be involved in community issues if I want, but being involved is not necessary for me to be a good citizen.” Both the second and third questions received substantially less support by respondents answering “somewhat agree,” “agree,” or “strongly agree” when asked: “I should leave officials alone after they are elected so they can make good decisions for me” (24.0%), and “I do not need to be involved in community issues because our leaders are doing a good job” (16.9%).
Table 6-13: Modern Citizenship Orientation

<table>
<thead>
<tr>
<th>Description of Item</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SD</th>
<th>D</th>
<th>SWD</th>
<th>U</th>
<th>SWA</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel that …</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I should try to choose good leaders, then let those leaders do their job</td>
<td>208</td>
<td>4.53</td>
<td>1.818</td>
<td>8.2%</td>
<td>9.1%</td>
<td>13.5%</td>
<td>9.1%</td>
<td>24.0%</td>
<td>23.8%</td>
<td>13.0%</td>
</tr>
<tr>
<td>I should leave officials alone after they are elected so they can make good decisions for me</td>
<td>208</td>
<td>3.07</td>
<td>1.568</td>
<td>17.8%</td>
<td>24.0%</td>
<td>24.0%</td>
<td>10.1%</td>
<td>17.3%</td>
<td>5.3%</td>
<td>1.4%</td>
</tr>
<tr>
<td>I do not need to be involved in community issues because our leaders are doing a good job</td>
<td>208</td>
<td>2.93</td>
<td>1.443</td>
<td>18.3%</td>
<td>25.0%</td>
<td>23.6%</td>
<td>16.3%</td>
<td>13.0%</td>
<td>2.9%</td>
<td>1.0%</td>
</tr>
<tr>
<td>I can be involved in community issues if I want, but being involved is not necessary for me to be a good citizen</td>
<td>208</td>
<td>4.27</td>
<td>1.841</td>
<td>8.2%</td>
<td>16.3%</td>
<td>12.0%</td>
<td>7.7%</td>
<td>22.6%</td>
<td>25.5%</td>
<td>7.7%</td>
</tr>
</tbody>
</table>

N=Number of Respondents, Mean= Numerical Average, SD= Standard Deviation, SD=Strongly Disagree, D=Disagree, SWD=Somewhat Disagree, U=Uncertain, SWA=Somewhat Agree, A=Agree, SA=Strongly Agree

The four questions discussed above were used to create an index to measure a respondent’s modern citizenship orientation. As a check on the reliability of these four
questions to be an overall measure of the concept, an internal reliability coefficient was calculated at $\alpha = .784$. Of the three citizenship indices, this one had the lowest internal consistency. Although, the internal reliability coefficient for this index still is greater than the accepted minimum score of .70 (Berman, 1998). Overall, respondents did not favor many of the modern citizenship attitudes.

**Neo-Classical Liberal/Representative Citizenship Orientation (CO-NC) Index**

Five questions were developed to measure the respondent’s level of liberal/representative citizenship attitudes (see Table 6-14). Possible responses to the questions ranged from strongly disagree to strongly agree. A clear majority of respondents answered “somewhat agree,” “agree,” or “strongly agree” to all five questions (i.e., 78.4%, 88.0%, 85.2%, 88.5%, and 67.8% respectively), indicating a strong tendency of the respondents to have a high liberal/representative citizenship orientation.
Table 6-14: Liberal/Representative Citizenship Orientation

<table>
<thead>
<tr>
<th>Description of Item</th>
<th>N</th>
<th>Mean</th>
<th>Std</th>
<th>SD</th>
<th>D</th>
<th>SWD</th>
<th>U</th>
<th>SWA</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel that I have a responsibility to be in control of my life, without intrusion from gov’t</td>
<td>208</td>
<td>5.44</td>
<td>1.590</td>
<td>3.4%</td>
<td>3.8%</td>
<td>5.8%</td>
<td>8.7%</td>
<td>19.7%</td>
<td>27.9%</td>
<td>30.8%</td>
</tr>
<tr>
<td>I believe gov’t should not interfere with my individual rights</td>
<td>208</td>
<td>5.84</td>
<td>1.377</td>
<td>1.4%</td>
<td>3.4%</td>
<td>2.4%</td>
<td>4.8%</td>
<td>19.7%</td>
<td>27.4%</td>
<td>40.9%</td>
</tr>
<tr>
<td>I should be able to use the money I earn, without gov’t intervention</td>
<td>208</td>
<td>5.86</td>
<td>1.424</td>
<td>1.4%</td>
<td>3.4%</td>
<td>3.4%</td>
<td>6.7%</td>
<td>13.5%</td>
<td>28.4%</td>
<td>43.3%</td>
</tr>
<tr>
<td>I have the right to make moral choices as I see them, not how the gov’t sees them</td>
<td>208</td>
<td>6.04</td>
<td>1.298</td>
<td>0.5%</td>
<td>2.4%</td>
<td>4.8%</td>
<td>3.8%</td>
<td>10.6%</td>
<td>29.8%</td>
<td>48.1%</td>
</tr>
<tr>
<td>I have a right to take advantage of my success without having to support others</td>
<td>208</td>
<td>5.06</td>
<td>1.821</td>
<td>4.8%</td>
<td>6.3%</td>
<td>13.9%</td>
<td>7.2%</td>
<td>17.3%</td>
<td>22.6%</td>
<td>27.9%</td>
</tr>
</tbody>
</table>

N=Number of Respondents, Mean= Numerical Average, SD= Standard Deviation, SD=Strongly Disagree, D=Disagree, SWD=Somewhat Disagree, U=Uncertain, SWA=Somewhat Agree, A=Agree, SA=Strongly Agree
The five questions discussed above were used to create an index to measure a respondent’s liberal/representative citizenship orientation. As a check on the reliability of these five questions to be an overall measure of the concept, an internal reliability coefficient was calculated at $\alpha = .831$. The liberal/representative index has a lower internal reliability coefficient than does the participatory citizenship index. However, the lowest citizenship index was calculated for the modern citizenship orientation.

**Social Capital-Associational Networks (SC-AN) Index**

Five questions were developed to measure the respondent’s level of participation in voluntary civic associations (see Table 6-15). Possible responses to the questions were either “yes or no”. When asked if in the past twelve months whether the respondent has participated in a one of nine voluntary civic associations, sixty-eight percent (67.9%) answered “yes” to church or religious organizations, and fifty-one percent (51.2%) answered “yes” to neighborhood or homeowners associations. The remaining seven categories were answered “no” by the majority of respondents.
Table 6-15: Social Capital-Associational Networks

<table>
<thead>
<tr>
<th>Description of Item</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the past 12 months, have you attended, been a member of, or participated in any of the following organizations?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>church or religious organization</td>
<td>209</td>
<td>.68</td>
<td>0.468</td>
<td>67.9%</td>
<td>32.1%</td>
</tr>
<tr>
<td>sports league or recreational club (for adults or children)</td>
<td>209</td>
<td>.38</td>
<td>0.486</td>
<td>37.8%</td>
<td>62.2%</td>
</tr>
<tr>
<td>art, music, or cultural organization</td>
<td>209</td>
<td>.41</td>
<td>0.492</td>
<td>40.7%</td>
<td>59.3%</td>
</tr>
<tr>
<td>neighborhood or homeowners association</td>
<td>209</td>
<td>.51</td>
<td>0.501</td>
<td>51.2%</td>
<td>48.8%</td>
</tr>
<tr>
<td>public interest group, political club, or political party</td>
<td>209</td>
<td>.36</td>
<td>0.481</td>
<td>35.9%</td>
<td>64.1%</td>
</tr>
<tr>
<td>parent-teacher association (such as the PTA or PTO)</td>
<td>209</td>
<td>.23</td>
<td>0.425</td>
<td>23.4%</td>
<td>76.6%</td>
</tr>
<tr>
<td>Professional, trade, or business association</td>
<td>209</td>
<td>.48</td>
<td>0.501</td>
<td>48.3%</td>
<td>51.7%</td>
</tr>
<tr>
<td>charitable organization, service club, or fraternal organization</td>
<td>209</td>
<td>.45</td>
<td>0.499</td>
<td>45.0%</td>
<td>55.0%</td>
</tr>
<tr>
<td>any other kinds of clubs or organizations</td>
<td>209</td>
<td>.48</td>
<td>0.501</td>
<td>48.3%</td>
<td>51.7%</td>
</tr>
</tbody>
</table>

N=Number of Respondents, Mean= Numerical Average, SD= Standard Deviation

The nine questions discussed above were used to create an index to measure a respondent’s level of social capital through participatory involvement in voluntary civic associations (overall M = 3.99, overall SD = 2.07). The overall average number of organizations that respondents have participated in the past twelve months is four.

**Social Capital-Interpersonal Trust (SC-IT) Index**

Five questions were developed to measure the respondent’s level of trust for others (see Table 6-16). Possible responses to the questions ranged from strongly disagree to
strongly agree. A clear majority of respondents answered “somewhat agree,” “agree,” or “strongly agree” to all five questions (i.e., 77.0%, 79.0%, 58.4%, 78.1%, and 65.4% respectively), indicating a strong tendency of the respondents to have a high level of interpersonal trust.

Table 6-16: Social Capital-Interpersonal Trust

<table>
<thead>
<tr>
<th>Description of Item</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SD</th>
<th>D</th>
<th>SWD</th>
<th>U</th>
<th>SWA</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>In general, I can trust ...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>the people in my neighborhood</td>
<td>209</td>
<td>5.25</td>
<td>1.250</td>
<td>1.0%</td>
<td>3.3%</td>
<td>5.3%</td>
<td>13.4%</td>
<td>23.9%</td>
<td>43.5%</td>
<td>9.6%</td>
</tr>
<tr>
<td>the people I work with</td>
<td>195</td>
<td>5.23</td>
<td>1.309</td>
<td>2.1%</td>
<td>3.1%</td>
<td>5.1%</td>
<td>10.8%</td>
<td>28.7%</td>
<td>39.0%</td>
<td>11.3%</td>
</tr>
<tr>
<td>the people who work in the stores where I shop</td>
<td>207</td>
<td>4.71</td>
<td>1.236</td>
<td>1.4%</td>
<td>3.4%</td>
<td>9.2%</td>
<td>27.5%</td>
<td>30.4%</td>
<td>23.2%</td>
<td>4.8%</td>
</tr>
<tr>
<td>the people at my church or place of worship</td>
<td>187</td>
<td>5.46</td>
<td>1.345</td>
<td>2.1%</td>
<td>2.1%</td>
<td>3.2%</td>
<td>14.4%</td>
<td>15.5%</td>
<td>43.3%</td>
<td>19.3%</td>
</tr>
<tr>
<td>most people</td>
<td>207</td>
<td>4.87</td>
<td>1.222</td>
<td>1.5%</td>
<td>2.9%</td>
<td>9.3%</td>
<td>21.0%</td>
<td>36.6%</td>
<td>21.5%</td>
<td>7.3%</td>
</tr>
</tbody>
</table>

N=Number of Respondents, Mean= Numerical Average, SD= Standard Deviation, SD=Strongly Disagree, D=Disagree, SWD=Somewhat Disagree, U=Uncertain, SWA=Somewhat Agree, A=Agree, SA=Strongly Agree

The five questions discussed above were used to create an index to measure a respondent’s level of social capital through trust for others. As a check on the reliability of these five questions to be an overall measure of the concept, an internal reliability coefficient was calculated at \( \alpha = .838 \). Overall, respondents are trusting of others.
**Bivariate Analyses**

Bivariate testing was conducted on the dependent variables (i.e., short-term and long-term willingness to participate) and each independent variable. The bivariate analyses presented in Tables 6-17 and 6-18 provide an initial test of the hypotheses that the independent variables are related to the two dependent variables.

In reviewing the short-term participation bivariate correlation table (Table 6-17), nearly all of the key independent variables (except for CO-M) are significantly related to short-term participation. In addition, nearly all of the variables (both key and control) exhibit the expected signs, except for the race and income control variables. Even though these variables are not statistically significantly related with short-term participation, the expected sign for these relationships should be positive. That is, as income rises, so should one’s expected level of participatory behavior (Verba & Nie, 1972; Brehm & Rahn, 1997; Funk, 1998; Knack & Kropf, 1998; Ulbig & Funk, 1999; Theiss-Morse, 1993; and Oliver, 1997). Also, minority populations participate at lower rates than non-minority populations (Verba & Nie, 1972; and Ulbig & Funk, 1999). However, the sign for both of these variables indicates the opposite.
Table 6-17: Bivariate Correlation Matrix (Short-Term Willingness to Participate)

<table>
<thead>
<tr>
<th>Variable</th>
<th>WTP&lt;sub&gt;ST&lt;/sub&gt;</th>
<th>ATP</th>
<th>CWIR</th>
<th>PLC</th>
<th>CO-P</th>
<th>CO-M</th>
<th>CO-NC</th>
</tr>
</thead>
<tbody>
<tr>
<td>WTP&lt;sub&gt;ST&lt;/sub&gt;</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATP</td>
<td>.683****</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CWIR</td>
<td>.634****</td>
<td>.541****</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLC</td>
<td>.724****</td>
<td>.841****</td>
<td>.605****</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO-P</td>
<td>.645****</td>
<td>.731****</td>
<td>.532****</td>
<td>.734****</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO-M</td>
<td>-.003</td>
<td>-.043</td>
<td>.137**</td>
<td>.042</td>
<td>-.094</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>CO-NC</td>
<td>.165**</td>
<td>.248****</td>
<td>.118</td>
<td>.246****</td>
<td>.146**</td>
<td>.284****</td>
<td>1.00</td>
</tr>
<tr>
<td>SC-AN</td>
<td>.401****</td>
<td>.374****</td>
<td>.295****</td>
<td>.371****</td>
<td>.396****</td>
<td>-.109</td>
<td>.036</td>
</tr>
<tr>
<td>SC-IT</td>
<td>.533****</td>
<td>.458****</td>
<td>.508****</td>
<td>.516****</td>
<td>.552****</td>
<td>.050</td>
<td>.093</td>
</tr>
<tr>
<td>Age</td>
<td>.244****</td>
<td>.103</td>
<td>.195***</td>
<td>.189***</td>
<td>.153**</td>
<td>.038</td>
<td>.004</td>
</tr>
<tr>
<td>Gender&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.107</td>
<td>-.054</td>
<td>.019</td>
<td>-.106</td>
<td>-.056</td>
<td>.003</td>
<td>.093</td>
</tr>
<tr>
<td>Race&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-.074</td>
<td>.005</td>
<td>-.044</td>
<td>.001</td>
<td>.005</td>
<td>-.170**</td>
<td>.039</td>
</tr>
<tr>
<td>Education</td>
<td>.028</td>
<td>.051</td>
<td>-.031</td>
<td>-.014</td>
<td>.053</td>
<td>-.116</td>
<td>-.145**</td>
</tr>
<tr>
<td>Income</td>
<td>-.045</td>
<td>.033</td>
<td>-.083</td>
<td>.008</td>
<td>.099</td>
<td>-.119</td>
<td>-.011</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>SC-AN</th>
<th>SC-IT</th>
<th>Age</th>
<th>Gender</th>
<th>Race</th>
<th>Education</th>
<th>Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC-AN</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC-IT</td>
<td>.354****</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.054</td>
<td>.251****</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.073</td>
<td>-.025</td>
<td>.054</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.048</td>
<td>.102</td>
<td>.076</td>
<td>.181**</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>.301****</td>
<td>.071</td>
<td>-.179**</td>
<td>.044</td>
<td>.001</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>.308****</td>
<td>.108</td>
<td>-.147**</td>
<td>.099</td>
<td>.107</td>
<td>.480****</td>
<td>1.00</td>
</tr>
</tbody>
</table>

<sup>a</sup>Gender was coded 0 = female and 1 = male. <sup>b</sup>Race was coded 0 = non-white and 1 = white.

*p < .10 (two-tailed), **p < .05 (two-tailed), ***p < .01 (two-tailed), ****p < .001 (two-tailed)

Similar to Table 6-17, the bivariate correlation table for long-term participation (Table 6-18) also exhibited nearly identical tendencies. The key variable of CO-M is the only variable not significantly related to long-term participation. In addition, nearly all of the
variables (both key and control) exhibit the expected signs, except for the control variable race.

Table 6-18: Bivariate Correlation Matrix (Long-Term Willingness to Participate)

<table>
<thead>
<tr>
<th>Variable</th>
<th>WTP&lt;sub&gt;LT&lt;/sub&gt;</th>
<th>ATP</th>
<th>CWIR</th>
<th>PLC</th>
<th>CO-P</th>
<th>CO-M</th>
<th>CO-NC</th>
</tr>
</thead>
<tbody>
<tr>
<td>WTP&lt;sub&gt;LT&lt;/sub&gt;</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATP</td>
<td>.641****</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CWIR</td>
<td>.595****</td>
<td>.541****</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLC</td>
<td>.681****</td>
<td>.841****</td>
<td>.605****</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO-P</td>
<td>.618****</td>
<td>.731****</td>
<td>.532****</td>
<td>.734****</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO-M</td>
<td>-.001</td>
<td>-.043</td>
<td>.137**</td>
<td>.042</td>
<td>-.094</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>CO-NC</td>
<td>.142**</td>
<td>.248****</td>
<td>.118</td>
<td>.246****</td>
<td>.146**</td>
<td>.284****</td>
<td>1.00</td>
</tr>
<tr>
<td>SC-AN</td>
<td>.445****</td>
<td>.374****</td>
<td>.295****</td>
<td>.371****</td>
<td>.396****</td>
<td>-.109</td>
<td>.036</td>
</tr>
<tr>
<td>SC-IT</td>
<td>.560****</td>
<td>.458****</td>
<td>.508****</td>
<td>.516****</td>
<td>.552****</td>
<td>.050</td>
<td>.093</td>
</tr>
<tr>
<td>Age</td>
<td>.181***</td>
<td>.103</td>
<td>.195***</td>
<td>.189**</td>
<td>.153**</td>
<td>.038</td>
<td>.004</td>
</tr>
<tr>
<td>Gender&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.052</td>
<td>-.054</td>
<td>.019</td>
<td>-.106</td>
<td>-.056</td>
<td>.003</td>
<td>.093</td>
</tr>
<tr>
<td>Race&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-.093</td>
<td>.005</td>
<td>-.044</td>
<td>.001</td>
<td>-.005</td>
<td>-.170**</td>
<td>.039</td>
</tr>
<tr>
<td>Education</td>
<td>.022</td>
<td>.051</td>
<td>-.031</td>
<td>-.014</td>
<td>.053</td>
<td>-.116</td>
<td>-.145**</td>
</tr>
<tr>
<td>Income</td>
<td>.007</td>
<td>.033</td>
<td>-.083</td>
<td>.008</td>
<td>.099</td>
<td>-.119</td>
<td>-.011</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>SC-AN</th>
<th>SC-IT</th>
<th>Age</th>
<th>Gender</th>
<th>Race</th>
<th>Education</th>
<th>Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC-AN</td>
<td>1.00</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC-IT</td>
<td>.354****</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.054</td>
<td>.251****</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.073</td>
<td>-.025</td>
<td>.054</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.048</td>
<td>.102</td>
<td>.076</td>
<td>.181**</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>.301****</td>
<td>.071</td>
<td>-.179**</td>
<td>.044</td>
<td>.001</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>.308****</td>
<td>.108</td>
<td>-.147**</td>
<td>.099</td>
<td>.107</td>
<td>.480****</td>
<td>1.00</td>
</tr>
</tbody>
</table>

<sup>a</sup>Gender was coded 0 = female and 1 = male.  
<sup>b</sup>Race was coded 0 = non-white and 1 = white.

*p < .10 (two-tailed), **p < .05 (two-tailed), ***p < .01 (two-tailed), ****p < .001 (two-tailed)
An issue of concern in both bivariate correlation tables is the high correlation between the two independent variables ATP and PLC. The statistically significant correlation of .841 between ATP and PLC may be of concern when these two variables are used in the multiple regression models. Even though Hair, Anderson, Tatham, & Black (1998) suggest that correlations need to be greater than .90 to be of concern, the variance inflation factor (VIF) scores discussed in a later section note that these two variables come close to the accepted range of independent variables being collinear.

**Multivariate Analyses**

The primary purpose of this research is to identify the key determinants that lead individuals to participate in the transportation planning process. Through a review of the literature, three key concepts were explored as potential determinants of participation: motivational behavior, citizenship orientations, and social capital. These three concepts were further explored and defined as the following variables: attitude towards participation (ATP), conformity with important referents (CWIR), perceived level of control (PLC), participatory citizenship orientations (CO-P), modern citizenship orientations (CO-M), neo-classical liberal/representative citizenship orientations (CO-NC), social capital-associational networks (SC-AN), and social capital-interpersonal trust (SC-IT).

The bivariate analysis suggests that ATP, CWIR, PLC, CO-P, CO-NC, SC-AN, and SC-IT are significantly related to both short-term (WTP$_{ST}$) and long-term (WTP$_{LT}$) willingness to participate indices. In addition, one of the control variables, age, was also
found to be significantly related to both $\text{WTP}_{ST}$ and $\text{WTP}_{LT}$. However, will these same relationships hold once all of the variables have been entered into a multivariate regression analysis that controls for the influence of all other variables?

To test whether these relationships are still valid once all of the independent variables are controlled for, two ordinary least squares regression models were constructed using all of the independent variables. The only difference between the two models is the dependent variable. The first model uses the short-term willingness to participate index ($\text{WTP}_{ST}$), while the second model uses the long-term willingness to participate index ($\text{WTP}_{LT}$).

Table 6-19 shows the results for the short-term participation model. The regression analysis reveals that the model significantly predicts a person’s willingness to participate in a short-term transportation planning process ($F$ statistic = 21.11, $p < .000$). The $\text{WTP}_{ST}$ model has an adjusted $R^2$ of .613, which means that all of the independent variables explain approximately sixty-one percent (61.3%) of the variation in an individual’s willing to participate in a short-term transportation planning process. Of the eight key independent variables, five are statistically significant (ATP, CWIR, CO-P, SC-AN, and SC-IT), with the interpersonal trust index (SC-IT) being only marginally significant. Of the five control independent variables, only income is significantly related, albeit marginally.
### Table 6-19: Initial Regression Model (Short-Term Willingness to Participate)

<table>
<thead>
<tr>
<th>Variable</th>
<th>OLS Estimate</th>
<th>Standard Error</th>
<th>Beta</th>
<th>t-Statistic</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-.455</td>
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</tbody>
</table>

**Motivation Variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>OLS Estimate</th>
<th>Standard Error</th>
<th>Beta</th>
<th>t-Statistic</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATP</td>
<td>0.24**</td>
<td>.012</td>
<td>.207**</td>
<td>2.027</td>
<td>.044</td>
</tr>
<tr>
<td>CWIR</td>
<td>.030***</td>
<td>.010</td>
<td>.196***</td>
<td>2.955</td>
<td>.004</td>
</tr>
<tr>
<td>PLC</td>
<td>.014</td>
<td>.009</td>
<td>.160</td>
<td>1.530</td>
<td>.128</td>
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</table>

**Citizenship Variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>OLS Estimate</th>
<th>Standard Error</th>
<th>Beta</th>
<th>t-Statistic</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO-P</td>
<td>.206**</td>
<td>.104</td>
<td>.162**</td>
<td>1.986</td>
<td>.049</td>
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<tr>
<td>CO-M</td>
<td>-.069</td>
<td>.077</td>
<td>-.050</td>
<td>-.897</td>
<td>.371</td>
</tr>
<tr>
<td>CO-NC</td>
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<td>.068</td>
<td>.067</td>
<td>1.212</td>
<td>.227</td>
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</table>

**Social Capital Variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>OLS Estimate</th>
<th>Standard Error</th>
<th>Beta</th>
<th>t-Statistic</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC-AN</td>
<td>.419**</td>
<td>.205</td>
<td>.117**</td>
<td>2.048</td>
<td>.042</td>
</tr>
<tr>
<td>SC-IT</td>
<td>.807*</td>
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<td>1.718</td>
<td>.088</td>
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</table>

**Control Variables**

<table>
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<th>Variable</th>
<th>OLS Estimate</th>
<th>Standard Error</th>
<th>Beta</th>
<th>t-Statistic</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
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<td>.025</td>
<td>.125</td>
<td>2.388</td>
<td>.018</td>
</tr>
<tr>
<td>Gender</td>
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<td>.747</td>
<td>-.069</td>
<td>-1.333</td>
<td>.185</td>
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<tr>
<td>Race</td>
<td>-1.326</td>
<td>1.041</td>
<td>-.066</td>
<td>-1.274</td>
<td>.205</td>
</tr>
<tr>
<td>Education</td>
<td>.250</td>
<td>.222</td>
<td>.066</td>
<td>1.123</td>
<td>.263</td>
</tr>
<tr>
<td>Income</td>
<td>-.443*</td>
<td>.230</td>
<td>-.111*</td>
<td>-1.929</td>
<td>.056</td>
</tr>
</tbody>
</table>

N = 166     R² = .644     Adjusted R² = .613     F = 21.109
* p < .10, ** p < .05, *** p < .01, ****p < .001

A review of the standardized regression coefficients reveals that the motivational variables of ATP and CWIR provide the most influence in the model (Beta = .207 and Beta = .196 respectively), while the citizenship orientation variable of CO-P had the next highest level of influence (Beta = .162). The two social capital variables of SC-AN and SC-IT had the lowest affect (Beta = .117 and Beta = .110 respectively). The standardized regression coefficients show that the motivational variable of ATP is 1.28 times as important as the citizenship orientation variable of CO-P, and 1.77 and 1.88 times as
important as the two social capital variables of SC-AN and SC-IT in explaining the willingness of an individual to participate in a short-term transportation planning process.

Table 6-20 shows the results for the long-term participation model. The regression analysis reveals that the model significantly predicts a person’s willingness to participate in a long-term transportation planning process (F statistic = 15.97, p < .000). The WTP\textsubscript{LT} model has an adjusted R\textsuperscript{2} of .535, which means that all of the independent variables explain approximately fifty-four percent (53.5%) of the variation in an individual’s willingness to participate in a long-term transportation planning process. Of the eight key independent variables, only three are statistically significant (CWIR, SC-AN, and SC-IT). However, in the long-term participation model the two social capital variables of SC-AN and SC-IT are highly significant. In the short-term model the control variable of income is marginally significant. In the long-term model income is not statistically significant, but race is statistically significant.
Table 6-20: Initial Regression Model (Long-Term Willingness to Participate)

<table>
<thead>
<tr>
<th>Variable</th>
<th>OLS Estimate</th>
<th>Standard Error</th>
<th>Beta</th>
<th>t-Statistic</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
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<td>.403</td>
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</tr>
<tr>
<td>ATP</td>
<td>.020</td>
<td>.013</td>
<td>.171</td>
<td>1.536</td>
<td>.126</td>
</tr>
<tr>
<td>CWIR</td>
<td>.023**</td>
<td>.011</td>
<td>.146**</td>
<td>2.057</td>
<td>.041</td>
</tr>
<tr>
<td>PLC</td>
<td>.015</td>
<td>.010</td>
<td>.166</td>
<td>1.465</td>
<td>.145</td>
</tr>
<tr>
<td><strong>Citizenship Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO-P</td>
<td>.126</td>
<td>.115</td>
<td>.097</td>
<td>1.090</td>
<td>.277</td>
</tr>
<tr>
<td>CO-M</td>
<td>-.054</td>
<td>.084</td>
<td>-.039</td>
<td>-.638</td>
<td>.524</td>
</tr>
<tr>
<td>CO-NC</td>
<td>.035</td>
<td>.075</td>
<td>.028</td>
<td>.463</td>
<td>.644</td>
</tr>
<tr>
<td><strong>Social Capital Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC-AN</td>
<td>.749****</td>
<td>.225</td>
<td>.206****</td>
<td>3.321</td>
<td>.001</td>
</tr>
<tr>
<td>SC-IT</td>
<td>1.517***</td>
<td>.518</td>
<td>.204***</td>
<td>2.929</td>
<td>.004</td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.011</td>
<td>.027</td>
<td>.024</td>
<td>.416</td>
<td>.678</td>
</tr>
<tr>
<td>Gender</td>
<td>.112</td>
<td>.824</td>
<td>.008</td>
<td>.136</td>
<td>.892</td>
</tr>
<tr>
<td>Race</td>
<td>-.2350**</td>
<td>1.156</td>
<td>-.114**</td>
<td>-2.033</td>
<td>.044</td>
</tr>
<tr>
<td>Education</td>
<td>-.076</td>
<td>.246</td>
<td>-.020</td>
<td>-.309</td>
<td>.758</td>
</tr>
<tr>
<td>Income</td>
<td>-.240</td>
<td>.253</td>
<td>-.059</td>
<td>-.950</td>
<td>.343</td>
</tr>
</tbody>
</table>

N = 170  R² = .571  Adjusted R² = .535  F = 15.965  
* p < .10, ** p < .05, *** p < .01, ****p < .001

A review of the standardized regression coefficients reveals that the two social capital variables of SC-AN and SC-IT provide the most influence in the model (Beta = .206 and Beta = .204 respectively), while the motivational variable of CWIR provides the least influence in the model (Beta = .146). The standardized regression coefficients show that the social capital variables of SC-AN and SC-IT are 1.411 times as important as the motivational variable of ATP in explaining the willingness of an individual to participate in a long-term transportation planning process. In the short-term model the motivational
variables are key to explaining participation, whereas in the long-term model the social
capital variables are key to explaining participation

Testing Multivariate Assumptions

Multiple regression requires that certain assumptions of the data be met before the results
can be accepted. The assumptions inherent in the data to use multivariate techniques are:
1) linearity of the regression parameters, 2) constant variance of the error term, 3)
independence of the error term, 4) normality of the error term, and 5) an absence of
multicollinearity among the independent variables (Gujarati, 1988; Hair, Anderson,
Tatham, & Black, 1998).

Linearity: This assumption requires that the regression equation be linear in the
parameters. An examination of the deviation of linearity test shows the relationship
between the dependent variable and each independent variable. The null hypothesis is
that the relationship between the dependent and independent variables are linear. If the F
statistic is statistically significant, it would suggest that the relationship between the
dependent and independent variables are non-linear.

The results of the deviation from linearity tests in Table 6-21, shows that for the short-
term willingness to participate model, the control variable education is slightly non-
linear. For the long-term willingness to participate model two control variables: age and
education show slight deviations from linearity. These two variables could be considered
for data transformations. However, since the data transformations mentioned earlier made the data less normally distributed, these variables will not be transformed.

Table 6-21: Linearity Test of Independent Variables Against Dependent Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Deviations from Linearity F Statistic (for WTP_{ST})</th>
<th>Significance</th>
<th>Deviations from Linearity F Statistic (for WTP_{LT})</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATP</td>
<td>1.167</td>
<td>.218</td>
<td>1.043</td>
<td>.413</td>
</tr>
<tr>
<td>CWIR</td>
<td>0.760</td>
<td>.916</td>
<td>0.897</td>
<td>.709</td>
</tr>
<tr>
<td>PLC</td>
<td>1.191</td>
<td>.194</td>
<td>1.016</td>
<td>.471</td>
</tr>
<tr>
<td>CO-P</td>
<td>0.810</td>
<td>.705</td>
<td>0.640</td>
<td>.885</td>
</tr>
<tr>
<td>CO-M</td>
<td>0.951</td>
<td>.527</td>
<td>0.744</td>
<td>.783</td>
</tr>
<tr>
<td>CO-NC</td>
<td>0.783</td>
<td>.755</td>
<td>1.023</td>
<td>.439</td>
</tr>
<tr>
<td>SC-AN</td>
<td>1.280</td>
<td>.256</td>
<td>0.959</td>
<td>.470</td>
</tr>
<tr>
<td>SC-IT</td>
<td>0.526</td>
<td>.983</td>
<td>1.236</td>
<td>.195</td>
</tr>
<tr>
<td>Age</td>
<td>0.996</td>
<td>.495</td>
<td>1.455*</td>
<td>.041</td>
</tr>
<tr>
<td>Gender</td>
<td>2.254</td>
<td>.135</td>
<td>0.539</td>
<td>.464</td>
</tr>
<tr>
<td>Race</td>
<td>1.051</td>
<td>.307</td>
<td>1.689</td>
<td>.195</td>
</tr>
<tr>
<td>Education</td>
<td>2.417*</td>
<td>.038</td>
<td>2.327*</td>
<td>.044</td>
</tr>
<tr>
<td>Income</td>
<td>1.921</td>
<td>.093</td>
<td>1.387</td>
<td>.231</td>
</tr>
</tbody>
</table>

* p < .05, ** p < .01, ***p < .001

Constant Variance of the Error Term: This assumption states that the error term (i.e., the residuals) associated with a regression equation must have equal/constant variance over the range of the independent variables. Unequal variances indicate the problem of heteroscedasticity. Two separate tests for heteroscedasticity, one suggested by Park and another by Glejser (Gujarati, 1988), were performed on the independent variables in both regression models.
The Park Test is a two-stage process. First, run an ordinary least squares (OLS) regression model of the form:

\[ Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_i X_i + e_i \]  

(5).

disregarding the heteroscedasticity issue. Second, save the residuals from the regression model and run a new regression using Eq. (2) below for each independent variable,

\[ \ln e_i^2 = \alpha + \beta_i \ln X_i + v_i. \]  

(6).

The null hypothesis is that the relationship between the natural log of the squared residuals and independent variable is heteroscedastic. If the \( \beta_i \) coefficient is statistically significant, it would suggest that heteroscedasticity is present for that independent variable.

The Glejser test is similar to the Park test, but instead of using the natural log of the squared error term, the absolute value is used as shown in Eq. (7),

\[ |e_i| = \alpha + \beta \ln X_i + v_i \]  

(7).

Tables 6-22 and 6-23 show the results of the Park and Glejser tests. Variables that exhibit heteroscedastic tendencies under both tests will be considered for potential variable transformations. For the short-term willingness to participate model, Table 6-22 shows that only one variable (CWIR) failed the Glejser test, but passed the Park test. For the long-term willingness to participate model, Table 6-23 shows that one variable (CO-NC) failed both the Park and Glejser tests. Therefore, CO-NC may need to be considered for a data transformation under the long-term willingness to participate model.
Table 6-22: Heteroscedasticity Test (Short-Term Willingness to Participate)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Park t-Statistic</th>
<th>Sig.</th>
<th>Glejser t-Statistic</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATP</td>
<td>-.638</td>
<td>.524</td>
<td>-.230</td>
<td>.818</td>
</tr>
<tr>
<td>CWIR</td>
<td>-1.827</td>
<td>.070</td>
<td>-2.318*</td>
<td>.022</td>
</tr>
<tr>
<td>PLC</td>
<td>.151</td>
<td>.880</td>
<td>.074</td>
<td>.941</td>
</tr>
<tr>
<td>CO-P</td>
<td>.902</td>
<td>.369</td>
<td>.031</td>
<td>.975</td>
</tr>
<tr>
<td>CO-M</td>
<td>-.591</td>
<td>.556</td>
<td>.846</td>
<td>.399</td>
</tr>
<tr>
<td>CO-NC</td>
<td>-.065</td>
<td>.949</td>
<td>.575</td>
<td>.566</td>
</tr>
<tr>
<td>SC-AN</td>
<td>.062</td>
<td>.951</td>
<td>-.179</td>
<td>.858</td>
</tr>
<tr>
<td>SC-IT</td>
<td>.073</td>
<td>.942</td>
<td>-1.381</td>
<td>.169</td>
</tr>
<tr>
<td>Age</td>
<td>-.760</td>
<td>.449</td>
<td>-.678</td>
<td>.498</td>
</tr>
<tr>
<td>Gender</td>
<td>-.345</td>
<td>.731</td>
<td>.013</td>
<td>.989</td>
</tr>
<tr>
<td>Race</td>
<td>-.267</td>
<td>.790</td>
<td>-1.072</td>
<td>.285</td>
</tr>
<tr>
<td>Education</td>
<td>-.335</td>
<td>.738</td>
<td>-.469</td>
<td>.640</td>
</tr>
<tr>
<td>Income</td>
<td>-.015</td>
<td>.988</td>
<td>.071</td>
<td>.944</td>
</tr>
</tbody>
</table>

* p < .05, ** p < .01, ***p < .001
Table 6-23: Heteroscedasticity Test (Long-Term Willingness to Participate)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Park t-Statistic</th>
<th>Sig.</th>
<th>Glezser t-Statistic</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATP</td>
<td>1.266</td>
<td>.207</td>
<td>1.510</td>
<td>.133</td>
</tr>
<tr>
<td>CWIR</td>
<td>-1.050</td>
<td>.295</td>
<td>-.823</td>
<td>.412</td>
</tr>
<tr>
<td>PLC</td>
<td>1.916</td>
<td>.057</td>
<td>1.640</td>
<td>.103</td>
</tr>
<tr>
<td>CO-P</td>
<td>.564</td>
<td>.573</td>
<td>.368</td>
<td>.713</td>
</tr>
<tr>
<td>CO-M</td>
<td>1.613</td>
<td>.197</td>
<td>1.296</td>
<td>.197</td>
</tr>
<tr>
<td>CO-NC</td>
<td>3.291***</td>
<td>.001</td>
<td>2.693**</td>
<td>.008</td>
</tr>
<tr>
<td>SC-AN</td>
<td>-1.872</td>
<td>.063</td>
<td>-1.514</td>
<td>.132</td>
</tr>
<tr>
<td>SC-IT</td>
<td>-1.492</td>
<td>.138</td>
<td>-1.717</td>
<td>.088</td>
</tr>
<tr>
<td>Age</td>
<td>-.305</td>
<td>.761</td>
<td>-.949</td>
<td>.344</td>
</tr>
<tr>
<td>Gender</td>
<td>-.548</td>
<td>.585</td>
<td>-.841</td>
<td>.402</td>
</tr>
<tr>
<td>Race</td>
<td>-.732</td>
<td>.465</td>
<td>-.363</td>
<td>.717</td>
</tr>
<tr>
<td>Education</td>
<td>.419</td>
<td>.676</td>
<td>.726</td>
<td>.469</td>
</tr>
<tr>
<td>Income</td>
<td>.198</td>
<td>.844</td>
<td>-.710</td>
<td>.479</td>
</tr>
</tbody>
</table>

* p < .05, ** p < .01, ***p < .001

Independence of the Error Term (i.e., autocorrelation): This assumption requires that the error terms not be serially correlated with past error terms. Autocorrelation occurs when the error terms in the regression model are related to previous observation error terms. This problem usually occurs in time-series data, but sometimes has been found in cross-sectional data. First-order autocorrelation can be detected by using the Durbin-Watson test. The data collected as part of this research effort is cross-sectional, not time-series. Therefore, it is not very likely that autocorrelation is an issue.

However, a Durbin-Watson $d$ statistic has been calculated for both the short-term and long-term willingness to participate regression models (Table 6-24). Both $d$ statistics are above the upper $d$ value, suggesting that autocorrelation is not present in either model.
Table 6-24: Test of Independence of the Error Term

<table>
<thead>
<tr>
<th>Variable</th>
<th>Durbin-Watson $d$ Statistic</th>
<th>$d_u$</th>
</tr>
</thead>
<tbody>
<tr>
<td>WTP$_{ST}$ Model Residuals</td>
<td>1.949</td>
<td>≈ 1.919</td>
</tr>
<tr>
<td>WTP$_{LT}$ Model Residuals</td>
<td>2.178</td>
<td>≈ 1.918</td>
</tr>
</tbody>
</table>

Normally Distributed Error Term: This assumption requires that the errors be normally distributed with a mean equal to zero. The variables themselves do not need to be normally distributed, only the errors need to be normally distributed. The diagnosis of this problem centers on examining the plot of the error terms against the dependent variable. When there are no violations of the error term being normally distributed the plot of the error terms will appear randomly scattered around zero. As seen in Figure 6-2, the error plots appear to be consistent with the normal distribution.

Figure 6-2: Error Term Plots (WTP$_{ST}$ and WTP$_{LT}$)
In addition to reviewing the error plots, a Kolmogorov-Smirnov test for normality was computed for the residuals of each regression model. Table 6-25 shows the Kolmogorov-Smirnov test for normality for both the short-term and long-term willingness to participate regression models.

Table 6-25: Test of Normality of Regression Residuals

<table>
<thead>
<tr>
<th>Variable</th>
<th>Kolmogorov-Smirnov Test Statistic</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>WTP&lt;sub&gt;ST&lt;/sub&gt; Model Residuals</td>
<td>0.981</td>
<td>.290</td>
</tr>
<tr>
<td>WTP&lt;sub&gt;LT&lt;/sub&gt; Model Residuals</td>
<td>1.050</td>
<td>.220</td>
</tr>
</tbody>
</table>

Kolmogorov-Smirnov 1-Sample Test

The null hypothesis is that the residuals are normally distributed (Berman, 1998; Weisstein, 2005). The alternative hypothesis is that the residuals are not normally distributed. If the test statistic is statistically significant, it would suggest that the residuals are not normally distributed. The test results indicate that the residuals for both models are normally distributed, even though many of the individual variables were shown earlier to be non-normally distributed.

Multicollinearity: This assumption requires that two or more independent variables in a regression model should not be highly correlated with each other. When this occurs the ability to determine the effect of the independent variables on the dependent variable will be obscured. There will always be some degree of multicollinearity between independent variables. However, as the level of multicollinearity increases, the ability to determine
each independent variable’s effect on the dependent variable is diminished (Hair, Anderson, Tatham, & Black, 1998).

Two methods have been employed to detect whether multicollinearity exists in the two regression models. The variance inflation factor (VIF) scores have been computed, as well as a coefficient variance-decomposition matrix.

Table 6-26 shows the VIF scores for the independent variables in both regression models. The independent variables ATP (4.46 for the WTP_{ST} model and 4.48 for the WTP_{LT} model) and PLC (4.65 for the WTP_{ST} model and 4.65 for the WTP_{LT} model) have the highest VIF values. However, the threshold value for the VIF is 5.0 (Hair, Anderson, Tatham, & Black, 1998). A VIF score greater than 5.0 is considered the threshold for when collinearity between independent variables is substantial enough to affect the results. Consistent with the VIF scores, a coefficient variance-decomposition analysis was performed (analysis not shown since the conclusions are the same as the VIF’s shown in Table 6-26), which shows that the independent variables of ATP and PLC have proportion variance coefficients within the accepted ranges, and therefore are not collinear.
Table 6-26: Variance Inflation Factor (VIF)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Short-Term</th>
<th>Long-Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATP</td>
<td>4.455</td>
<td>4.478</td>
</tr>
<tr>
<td>CWIR</td>
<td>1.875</td>
<td>1.839</td>
</tr>
<tr>
<td>PLC</td>
<td>4.647</td>
<td>4.646</td>
</tr>
<tr>
<td>CO-P</td>
<td>2.834</td>
<td>2.878</td>
</tr>
<tr>
<td>CO-M</td>
<td>1.345</td>
<td>1.346</td>
</tr>
<tr>
<td>CO-NC</td>
<td>1.305</td>
<td>1.313</td>
</tr>
<tr>
<td>SC-AN</td>
<td>1.394</td>
<td>1.398</td>
</tr>
<tr>
<td>SC-IT</td>
<td>1.733</td>
<td>1.756</td>
</tr>
<tr>
<td>Age</td>
<td>1.165</td>
<td>1.168</td>
</tr>
<tr>
<td>Gender</td>
<td>1.132</td>
<td>1.139</td>
</tr>
<tr>
<td>Race</td>
<td>1.146</td>
<td>1.142</td>
</tr>
<tr>
<td>Education</td>
<td>1.488</td>
<td>1.476</td>
</tr>
<tr>
<td>Income</td>
<td>1.417</td>
<td>1.400</td>
</tr>
</tbody>
</table>

**Outlier Analysis**

In addition to satisfying the assumptions for multiple regression, an analysis of outliers and influential observations was undertaken. Four measures have been calculated: standardized residuals, studentized residuals, studentized deleted residuals, and Cook’s D. Residuals and influential observations that surpass the specified thresholds for both the short-term and long-term regression models will be considered for removal (i.e., +/- 1.96 std. dev. for standardized residuals, studentized residuals, studentized deleted residuals, and for Cook’s D the threshold is .0263 for WTP_{ST} and .0256 for WTP_{LT}). As a result of the outlier/influential analysis, three observations have been identified for removal. A review of these outlier cases revealed that the survey questions were answered inconsistently when compared to all other cases.
Revised Regression Models

Based on the results of the previous section, the data used to generate the initial regression models were modified in order to satisfy the assumptions necessary for multiple regression analysis. As a result the following data changes were made:

- For the WTP<sub>LT</sub> regression model, the variable CO-NC was transformed (via the natural log) to correct for heteroscedasticity; and
- Three outlier observations have been deleted from both regression models.

The revised regression models perform slightly better than the original models do. The adjusted $R^2$ for the short-term model increased from .613 to .663; while adjusted $R^2$ for the long-term model increased from .535 to .580.

Table 6-27 shows the results for the revised short-term participation model. The regression analysis reveals that the model significantly predicts a person’s willingness to participate in a short-term transportation planning process (F statistic = 25.51, p < .000). The revised WTP<sub>ST</sub> model has an adjusted $R^2$ of .663, which means that all of the independent variables explain approximately sixty-six percent (66.3%) of the variation in an individual’s willing to participate in a short-term transportation planning process. Of the eight key independent variables, five are statistically significant (ATP, CWIR, PLC, CO-P, and SC-AN). Of the five control independent variables, two variables are significantly related: age and income. In the initial regression model for WTP<sub>ST</sub>, the interpersonal trust index (SC-IT) was only marginally significant. In the revised model SC-IT is not significant at all. In addition, income is the only control variable in the initial model that is statistically relevant, albeit only marginally significantly. In the
revised model, age and income are significantly related to individual willingness to participate in a short-term transportation planning process.

Table 6-27: Revised Regression Model (Short-Term Willingness to Participate)

<table>
<thead>
<tr>
<th>Variable</th>
<th>OLS Estimate</th>
<th>Standard Error</th>
<th>Beta</th>
<th>t-Statistic</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>2.111</td>
<td>3.041</td>
<td>.694</td>
<td>.489</td>
<td></td>
</tr>
<tr>
<td><strong>Motivation Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATP</td>
<td>2.700E-02**</td>
<td>.011</td>
<td>.240**</td>
<td>2.402</td>
<td>.018</td>
</tr>
<tr>
<td>CWIR</td>
<td>3.139E-02***</td>
<td>.009</td>
<td>.213***</td>
<td>3.407</td>
<td>.001</td>
</tr>
<tr>
<td>PLC</td>
<td>1.486E-02*</td>
<td>.008</td>
<td>.174*</td>
<td>1.753</td>
<td>.082</td>
</tr>
<tr>
<td><strong>Citizenship Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO-P</td>
<td>.215**</td>
<td>.097</td>
<td>.171**</td>
<td>2.213</td>
<td>.028</td>
</tr>
<tr>
<td>CO-M</td>
<td>-5.248E-02</td>
<td>.071</td>
<td>-.039</td>
<td>-.741</td>
<td>.460</td>
</tr>
<tr>
<td>CO-NC</td>
<td>5.581E-02</td>
<td>.063</td>
<td>.046</td>
<td>.889</td>
<td>.375</td>
</tr>
<tr>
<td><strong>Social Capital Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC-AN</td>
<td>.417**</td>
<td>.189</td>
<td>.119**</td>
<td>2.203</td>
<td>.029</td>
</tr>
<tr>
<td>SC-IT</td>
<td>.475</td>
<td>.437</td>
<td>.066</td>
<td>1.087</td>
<td>.279</td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>4.730E-02**</td>
<td>.023</td>
<td>.100**</td>
<td>2.015</td>
<td>.046</td>
</tr>
<tr>
<td>Gender</td>
<td>-.738</td>
<td>.689</td>
<td>-.052</td>
<td>-1.071</td>
<td>.286</td>
</tr>
<tr>
<td>Race</td>
<td>-1.515</td>
<td>.966</td>
<td>-.076</td>
<td>-1.569</td>
<td>.119</td>
</tr>
<tr>
<td>Education</td>
<td>.285</td>
<td>.205</td>
<td>.078</td>
<td>1.393</td>
<td>.166</td>
</tr>
<tr>
<td>Income</td>
<td>-.569***</td>
<td>.212</td>
<td>-.146***</td>
<td>-2.687</td>
<td>.008</td>
</tr>
</tbody>
</table>

N = 162    \( R^2 = .690 \)    Adjusted \( R^2 = .663 \)    F = 25.510
* p < .10, ** p < .05, *** p < .01, **** p < .001

A review of the standardized regression coefficients for the revised model reveals that the motivational variable ATP provides the most influence in the model (Beta = .240), while the other two motivational variables conformity with important referents (CWIR) and perceived level of control (PLC) had the next highest level of influence (Beta = .213 and
The participatory citizenship orientation (CO-P) variable exhibits less influence in the model (Beta = .171). The social capital-associational networks variable (SC-AN) exhibits relatively less influence in the model (Beta = .119). The standardized regression coefficients show that the motivational variable ATP is 1.13 times as important as the motivational variable CWIR, 1.38 times as important as the motivational variable PLC, 1.40 times as important as the citizenship orientation variable of CO-P, and 2.02 times as important as the social capital variable of SC-AN in explaining the willingness of an individual to participate in a short-term transportation planning process. In addition, ATP is 3.64 times as important as the social capital variable of SC-IT, but again this relationship is not statistically significant.

Table 6-28 shows the results for the revised long-term participation model. The regression analysis reveals that the model significantly predicts a person’s willingness to participate in a long-term transportation planning process (F statistic = 18.66, p < .000). The WTP\textsubscript{LT} model has an adjusted \( R^2 \) of .580, which means that all of the independent variables explain approximately fifty-eight percent (58.0%) of the variation in an individual’s willing to participate in a long-term transportation planning process. Of the eight key independent variables, only four are statistically significant (ATP, CWIR, SC-AN, and SC-IT). In the revised short-term participation model the only social capital variable that is significant is associational networks (SC-AN). However, in the revised long-term participation model both of the social capital variables (SC-AN and SC-IT) are highly significant. In the revised short-term model the control variables of age and
income are significant. In the revised long-term model age and income are not statistically significant, but race is statistically significant.

Table 6-28: Revised Regression Model (Long-Term Willingness to Participate)

<table>
<thead>
<tr>
<th>Variable</th>
<th>OLS Estimate</th>
<th>Standard Error</th>
<th>Beta</th>
<th>t-Statistic</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>4.813</td>
<td>5.235</td>
<td>.919</td>
<td>.359</td>
<td></td>
</tr>
<tr>
<td><strong>Motivational Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATP</td>
<td>2.250E-02*</td>
<td>.013</td>
<td>.196*</td>
<td>1.776</td>
<td>.078</td>
</tr>
<tr>
<td>CWIR</td>
<td>2.427E-02**</td>
<td>.010</td>
<td>.162**</td>
<td>2.370</td>
<td>.019</td>
</tr>
<tr>
<td>PLC</td>
<td>1.500E-02</td>
<td>.010</td>
<td>.172</td>
<td>1.577</td>
<td>.117</td>
</tr>
<tr>
<td><strong>Citizenship Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO-P</td>
<td>.151</td>
<td>.109</td>
<td>.119</td>
<td>1.384</td>
<td>.168</td>
</tr>
<tr>
<td>CO-M</td>
<td>-3.523E-02</td>
<td>.079</td>
<td>-.026</td>
<td>-.449</td>
<td>.654</td>
</tr>
<tr>
<td>Ln CO-NC</td>
<td>-.242</td>
<td>1.485</td>
<td>-.009</td>
<td>-.163</td>
<td>.871</td>
</tr>
<tr>
<td><strong>Social Capital Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC-AN</td>
<td>.760****</td>
<td>.212</td>
<td>.213****</td>
<td>3.587</td>
<td>.000</td>
</tr>
<tr>
<td>SC-IT</td>
<td>1.247**</td>
<td>.490</td>
<td>.171**</td>
<td>2.546</td>
<td>.012</td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-1.584E-03</td>
<td>.026</td>
<td>-.003</td>
<td>-.061</td>
<td>.951</td>
</tr>
<tr>
<td>Gender</td>
<td>.288</td>
<td>.770</td>
<td>.020</td>
<td>.374</td>
<td>.709</td>
</tr>
<tr>
<td>Race</td>
<td>-2.749**</td>
<td>1.087</td>
<td>-.135**</td>
<td>-2.529</td>
<td>.012</td>
</tr>
<tr>
<td>Education</td>
<td>-4.296E-02</td>
<td>.228</td>
<td>-.011</td>
<td>-.188</td>
<td>.851</td>
</tr>
<tr>
<td>Income</td>
<td>-.382</td>
<td>.237</td>
<td>-.096</td>
<td>-1.616</td>
<td>.108</td>
</tr>
</tbody>
</table>

N = 166     R² = .613     Adjusted R² = .580     F = 18.662
* p < .10, ** p < .05, *** p < .01, ****p < .001

A review of the standardized regression coefficients for the revised model reveals that the social capital variable SC-AN provides the most influence in the model (Beta = .213), while the motivational variable ATP provides the next highest level of influence (Beta = .196). The social capital variable SC-IT and the motivational variable CWIR provide
somewhat less influence (Beta = .171 and Beta = .162 respectively). The standardized regression coefficients show that the social capital variable SC-AN is 1.09 times as important as the motivational variable ATP, 1.25 times as important as the social capital variable SC-IT, and 1.31 times as important as the motivational variable CWIR in explaining the willingness of an individual to participate in a short-term transportation planning process.

As a summary of both the short-term and long-term models Table-29 shows the standardized regression coefficients (i.e., Beta), along with their relative ranking within each model. As can be seen, the motivational variables are more influential in the short-term model, while the social capital variables are more influential in the long-term model. The citizenship orientation variables were not as useful in determining a person’s willingness to participate in the transportation planning process.
Table 6-29: Short-Term and Long-Term Model Comparison

<table>
<thead>
<tr>
<th>Variable</th>
<th>Short-term Model Beta</th>
<th>Long-term Model Beta</th>
<th>Short-term Model Ordinal Rank</th>
<th>Long-term Model Ordinal Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adjusted $R^2 = .663$</td>
<td>Adjusted $R^2 = .580$</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Motivational Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATP</td>
<td>.240**</td>
<td>.196*</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>CWIR</td>
<td>.213***</td>
<td>.162**</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>PLC</td>
<td>.174*</td>
<td>.172</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Citizenship Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO-P</td>
<td>.174**</td>
<td>.119</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>CO-M</td>
<td>-.039</td>
<td>-.026</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>CO-NC</td>
<td>.046</td>
<td>-.009</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td><strong>Social Capital Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC-AN</td>
<td>.119**</td>
<td>.213****</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>SC-IT</td>
<td>.066</td>
<td>.171**</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.100**</td>
<td>-.003</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td>Gender</td>
<td>-.052</td>
<td>.020</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>Race</td>
<td>-.076</td>
<td>-.135**</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Education</td>
<td>.078</td>
<td>-.011</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>Income</td>
<td>-.146***</td>
<td>-.096</td>
<td>5</td>
<td>8</td>
</tr>
</tbody>
</table>

* $p < .10$, ** $p < .05$, *** $p < .01$, **** $p < .001$

**Hypothesis Results**

The model framework developed in Chapter Four is consistent with the two models that have been tested in this chapter. The only changes that were made were based on the results necessary to satisfy the statistical requirements of multiple regression hypothesis testing. In the previous sections the results of the short-term and long-term willingness to participate models have been discussed within the overall framework of each model. What this section will do is to test each of the hypotheses, as well as discuss the results.
Two types of hypotheses were formulated to answer the research questions posed in Chapter One. The first type of hypothesis relates to whether a specific variable is a determinant in an individual’s willingness to participate in the transportation planning process (i.e., significantly related), irrespective of the time frame. Therefore, all of these hypotheses look at how a variable performs within each model individually. The second type of hypothesis asks whether a specific variable is more influential in the short-term or long-term model. Therefore, all of these hypotheses look at how a variable performs across the two different time frames (i.e., short-term versus long-term).

**Hypothesis 1a**

It is hypothesized that:

\[ H_{1a}: \text{The more an individual has a positive attitude towards participation (ATP), the more likely the individual is to be willing to participate in the transportation planning process.} \]

Hypotheses 1a through 3b were developed to test the efficacy of Ajzen’s (1991) theory of planned behavior as a component of the willingness to participate model. The theory of planned behavior is based on the idea that an individual’s beliefs can be disaggregated into three separate belief-sets: *behavioral* (i.e., attitude towards a behavior), *normative* (i.e., feelings of what other’s think of the behavior—social pressure), and *control* (i.e., how individuals perceive their level of control over the behavior). Disaggregating beliefs into three belief-sets through the theory of planned behavior has been useful in assessing
behavioral intentions in hundreds of studies (Chitamun & Finchilescu, 2003; Warburton & Terry, 2000; Kudlaeek, Valkova, Sherill, Myers & French, 2002; Verderber, Rizzo & Sherrill, 2003; and Aizen, 2003).

The *behavioral* belief-set of participation is the antecedent of an individual’s attitude towards participation, where an individual’s attitude has been operationalized by the attitude towards participation (ATP) index. The questions that comprise the ATP index have been phrased in a positive context. Therefore, according to Ajzen’s (1991) theory of planned behavior, the more an individual has a positive attitude towards participation, the more likely the individual will be willing to participate in the transportation planning process.

The regression coefficients for ATP in both the short-term and long-term participation models (Table 6-27 and Table 6-28) indicate a positive relationship with an individual’s willingness to participate. In addition, both coefficients are statistically significant ($p < .05$ and $p < .10$ respectively) as well as having the highest and second highest standardized regression coefficients ($\text{Beta} = .240$ and $\text{Beta} = .196$ respectively). Although statistically significant in both models, ATP is only marginally significant in the long-term model (where $p < .10$). This finding is consistent with the hypothesized relationship that the more an individual has a positive attitude towards participation, the more likely an individual will be willing to participate in the transportation planning process. Therefore, as a person’s attitude towards participation becomes more intrinsically motivated, versus being extrinsically motivated, an individual’s willingness
to participate in the transportation planning process will increase (McCormick & Ilgen, 1985).

**Hypothesis 1b**

It is hypothesized that:

\[ H_{1b}: \quad \text{The internal motivational variable attitude towards participation (ATP) will have a greater influence in determining an individual’s willingness to participate in a short-term transportation planning process than for determining an individual’s willingness to participate in a long-term transportation planning process.} \]

Utilizing the basic framework developed by Alkadry (2000), Figure 4-1 in Chapter Four suggests that different factors account for people’s participation in short-term and long-term planning processes. The Willingness-Affectedness Framework (as adapted from Alkadry, 2000) suggests that people will choose to participate in a short-term planning process based on personal motivational factors, whereas people will choose to participate in a long-term planning process based more on external factors. All of the hypotheses that look to assess which determinants of participation exert more influence between the short-term and long-term time frames are based upon this framework. The Willingness-Affectedness Framework was adapted by this researcher, and consequently there are no existing research findings to compare to. Therefore, the results of these hypotheses expand upon this framework.
The standardized regression coefficients are a guide to examining which variables are the most and least influential in a regression model. A review of the standardized regression coefficients for the short-term participation (Table 6-27) and long-term participation (Table 6-28) models indicate that the standardized coefficient for ATP in the short-term model is 1.40 times more influential as compared to the next highest influential non-motivation variable (ATP versus CO-P), while the standardized regression coefficient for ATP in the long-term model is 1.09 times less influential as compared to the highest influential non-motivation variable (ATP versus SC-AN).

Of the thirteen variables in both models (8 key variables and 5 control variables), the internal motivational variable ATP is the most (1st) influential variable in the short-term model, whereas ATP is the second (2nd) most influential variable in the long-term model. Kudlaeek, Valkova, Sherill, Myers, and French (2002) suggested that a person’s attitude would be the most influential variable of the three theory of planned behavior variables. Within both the short-term and long-term model’s ATP is very influential.

Overall, the results indicate that ATP is nearly equally important in both the short-term and long-term models; although, ATP does appear to be slightly more influential in the short-term model. This finding is consistent with the hypothesized relationship that an individual’s attitude towards participation will be more influential in determining a person’s short-term willingness to participate versus being influential in determining a person’s long-term willingness.
Hypothesis 2a

It is hypothesized that:

H2a: The more an individual has a positive feeling of conformity with important referents (CWIR), the more likely the individual is to be willing to participate in the transportation planning process.

The normative belief-set (i.e., feelings of what other’s think—social pressure) of participation is the antecedent of an individual’s conformity with important referents regarding participation, where the perceived belief of what other’s think of participation has been operationalized by the conformity with important referents (CWIR) index. The questions that comprise the CWIR index have been phrased in a positive context. Therefore, according to Ajzen’s (1991) theory of planned behavior, the more an individual believes that persons important to the individual view civic participation as positive, the more likely the individual will be willing to participate in the transportation planning process.

The regression coefficients for CWIR in both the short-term and long-term participation models (Table 6-27 and Table 6-28) indicate a positive relationship with an individual’s willingness to participate. In addition, both coefficients are statistically significant (p ≤ .001 and p < .05) as well as having strong standardized regression coefficients (Beta = .213 and Beta = .162 respectively). This finding is consistent with the hypothesized relationship that the more an individual perceives that persons important to the individual view participation positively, the more likely the individual will be willing to participate.
in the transportation planning process. Therefore, as a person’s perception of what other’s think of participation becomes more important to an individual, the greater the likelihood that the individual will be willing to participate. This conclusion is also consistent with Ryan and Deci’s (2000) theory of extrinsically motivated behavior. As the behavior becomes increasingly internalized the importance of what other’s think becomes increasingly important.

**Hypothesis 2b**

It is hypothesized that:

\[ H_{2b}: \text{The internal motivational variable conformity with important referents (CWIR) will have a greater influence in determining an individual’s willingness to participate in a short-term transportation planning process than for determining an individual’s willingness to participate in a long-term transportation planning process.} \]

The Willingness-Affectedness Framework (as adapted from Alkadry, 2000) suggests that people will choose to participate in a short-term planning process based on personal motivational factors, whereas people will choose to participate in a long-term planning process based more on external factors. Therefore, the internal motivational variable CWIR should be more influential in determining a person’s willingness to participate in a short-term planning process versus being more influential in determining a person’s willingness to participate in a long-term planning process.
A review of the standardized regression coefficients for the short-term participation (Table 6-27) and long-term participation (Table 6-28) models indicate that the internal motivational variable CWIR is the second (2nd) most influential variable in the short-term model, whereas CWIR is the fifth (5th) most influential variable in the long-term model. Therefore, the results indicate that CWIR is relatively more important in the short-term model compared to the long-term model. This finding is consistent with the hypothesized relationship that an individual’s conformity with important referents will be more influential in determining a person’s short-term willingness to participate versus being influential in determining a person’s long-term willingness.

Hypothesis 3a

It is hypothesized that:

\[ H_{3a} : \text{The more an individual has a positive perceived level of control (PLC), the more likely the individual is to be willing to participate in the transportation planning process.} \]

The control belief-set (i.e., how individuals perceive their level of control over a situation) of participation is the antecedent of an individual’s perceived level of control regarding participation; where the perceived level of control that people have has been operationalized by the perceived level of control (PLC) index. The questions that comprise the PLC index have been phrased in a positive context. Therefore, according to Ajzen’s (1991) theory of planned behavior, the more an individual believes that they have
control over a situation (in this case a positive-achievable situation), the more likely the individual will be willing to participate in the transportation planning process.

The regression coefficients for PLC in both the short-term and long-term participation models (Table 6-27 and Table 6-28) indicate a positive relationship with an individual’s willingness to participate. Although, the coefficient for PLC is only marginally statistically significant in the short-term model (p < .10), the coefficient for PLC in the long-term model is not significant at all. However, PLC in both models exhibit relatively strong standardized regression coefficients (Beta = .174 and Beta = .172 respectively), which indicates PLC influence within both models. This finding is consistent with the directionality of the hypothesized relationship (i.e., positive) that the more an individual has a positive feeling of control, the more likely the individual will be willing to participate in the transportation planning process (Armitage & Conner, 2001). However, this finding is also inconsistent with the hypothesized expectation that PLC in both the short-term and long-term models would be statistically significant.

An explanation for this unexpected finding may be found in the bivariate correlation Tables of 6.17 and 6.18. The bivariate correlation between the internal motivational variables ATP and PLC is .841, and is statistically significant at p < .001. With ATP and PLC being highly correlated, once all of the other variables are entered into the regression model ATP has slightly more influence than PLC, thereby negating the association of PLC within the model. This is consistent with the findings that both standardized regression coefficients for PLC are equally important in both the short-term
and long-term models (3\textsuperscript{rd}), even though PLC is only statistically significant in the short-term model.

\textit{Hypothesis 3b}

It is hypothesized that:

\[ H_{3b}: \text{The internal motivational variable perceived level of control (PLC) will have a greater influence in determining an individual’s willingness to participate in a short-term transportation planning process than for determining an individual’s willingness to participate in a long-term transportation planning process.} \]

The Willingness-Affectedness Framework (as adapted from Alkadry, 2000) suggests that people will choose to participate in a short-term planning process based on personal motivational factors, whereas people will choose to participate in a long-term planning process based more on external factors. Therefore, the internal motivational variable PLC should be more influential in determining a person’s willingness to participate in a short-term planning process versus being more influential in determining a person’s willingness to participate in a long-term planning process.

A review of the standardized regression coefficients for the short-term participation (Table 6-27) and long-term participation (Table 6-28) models indicate that the internal motivational variable PLC is the third (3\textsuperscript{rd}) most influential variable in both the short-term and long-term models. Therefore, the results indicate that PLC is equally important
in both the short-term and long-term models. This finding is contrary to the hypothesized relationship that an individual’s perceived level of control will be more influential in determining a person’s short-term willingness to participate versus being influential in determining a person’s long-term willingness to participate. Even though PLC is the third most influential variable in both models, PLC is only statistically significant in the short-term model.

An explanation for this finding has been discussed in the previous Hypothesis 3a, where the internal motivational variables ATP and PLC have a high bivariate correlation. Once all of the other independent variables are entered into the regression model ATP has slightly more influence than PLC, thereby negating the association of PLC within the model. This is consistent with the finding that both standardized regression coefficients for PLC are equally important in both the short-term and long-term models.

**Hypothesis 4a**

It is hypothesized that:

\[ H_{4a}: \text{The more an individual has a positive participatory citizenship orientation (CO-P), the more likely the individual is to be willing to participate in the transportation planning process.} \]

Hypotheses 4a through 6b were developed to test the efficacy of citizenship orientations as an integral part of the willingness to participate model, where citizenship orientations function within a liberal democratic framework. Within liberal democratic thought three
general conceptual orientations have been identified: participatory, modern, and neo-classical liberal/representative. Conover and Feldman (1984a; 1984b), Conover, Crewe, and Searing (1991), Glover (2002), and Theiss-Morse (1993) have shown that individuals conceptualize democracy and citizenship differently. Based on how an individual views society and how government should function, differing levels of participation can be expected. Participatory citizenship focuses on the ideal citizen, where being involved in civic affairs is seen as a normative good. Therefore, the more an individual has a positive participatory citizenship orientation (CO-P), the more likely the individual is to be willing to participate in the transportation planning process.

The regression coefficients for CO-P in both the short-term and long-term participation models (Table 6-27 and Table 6-28) indicate a positive relationship with an individual’s willingness to participate, but only the short-term model’s CO-P’s coefficient is statistically significant. CO-P in the short-term participation model is statistically significant (p < .05), as well as having a relatively strong influence within the model (Beta = .171). CO-P in the long-term participation model is not statistically significant, but still has a relatively strong influence within the model (Beta = .119). This finding is consistent with the directionality of the hypothesized relationship (i.e., positive) that the more an individual has a positive participatory citizenship orientation, the more likely the individual will be willing to participate in the transportation planning process (Glover, 2000). However, this finding is also inconsistent with the hypothesized expectation that CO-P in both the short-term and long-term models would be statistically significant.
An explanation for this unexpected finding may be found in the bivariate correlation Tables of 6.17 and 6.18. The bivariate correlation between the internal motivational variable ATP and the external citizenship variable CO-P is .731, and is statistically significant at p < .001. With ATP and CO-P being highly correlated, once all of the other variables are entered into the regression model ATP has more influence than CO-P, thereby negating the association of CO-P within the model. This is consistent with the findings that both standardized regression coefficients for CO-P are important in both the short-term and long-term models, even though CO-P is only statistically significant in the short-term model.

**Hypothesis 4b**

It is hypothesized that:

\[ H_{4b}: \text{The external citizenship orientation variable participatory citizenship orientation (CO-P) will have a greater influence in determining an individual’s willingness to participate in a long-term transportation planning process than for determining an individual’s willingness to participate in a short-term transportation planning process.} \]

The Willingness-Affectedness Framework (as adapted from Alkadry, 2000) suggests that people will choose to participate in a short-term planning process based on personal motivational factors, whereas people will choose to participate in a long-term planning process based more on external factors. Therefore, the external citizenship orientation variable CO-P should be more influential in determining a person’s willingness to
participate in a long-term planning process versus being more influential in determining a person’s willingness to participate in a short-term planning process.

A review of the standardized regression coefficients for the short-term participation (Table 6-27) and long-term participation (Table 6-28) models indicate that the external citizenship variable CO-P is the fourth (4th) most influential variable in the short-term model, whereas CO-P is the seventh (7th) most influential variable in the long-term model. Therefore, the results indicate that CO-P is relatively more important in the short-term model compared to the long-term model. This finding is contrary to the hypothesized relationship that an individual’s participatory citizenship orientation will be more influential in determining a person’s long-term willingness to participate versus being influential in determining a person’s short-term willingness. In addition, CO-P is not even statistically significantly related to an individual’s willingness to participate in the long-term transportation planning process.

An explanation for this finding has been discussed in the previous Hypothesis 4a, where the internal motivational variable ATP and the external citizenship variable CO-P have a high bivariate correlation. Once all of the other independent variables are entered into the regression model ATP has slightly more influence than CO-P, thereby negating the association of CO-P within the model. This is consistent with the finding that both standardized regression coefficients for CO-P are important in both the short-term and long-term models.
**Hypothesis 5a**

It is hypothesized that:

\[ H_{5a} : \text{The more an individual has a positive modern citizenship orientation (CO-M), the less likely the individual is to be willing to participate in the transportation planning process.} \]

Conover and Feldman (1984a; 1984b), Conover, Crewe, and Searing (1991), Glover (2002), and Theiss-Morse (1993) have shown that individuals conceptualize democracy and citizenship differently. Based on how an individual views society and how government should function, differing levels of participation can be expected. A modern citizenship orientation focuses on minimal participation of citizens, with an emphasis on elective leadership. Therefore, the more an individual has a positive modern citizenship orientation (CO-M), the less likely the individual is to be willing to participate in the transportation planning process.

The regression coefficients for CO-M in both the short-term and long-term participation models (Table 6-27 and Table 6-28) indicate a negative relationship with an individual’s willingness to participate. However, neither the short-term nor long-term participation models CO-M coefficients are statistically significant. In addition, CO-M exhibits very weak influence within both models (Beta = -.039 and Beta = -.026 respectively). This finding is consistent with the directionality of the hypothesized relationship (i.e., negative) that the more an individual has a positive modern citizenship orientation
(CO-M), the less likely the individual is to be willing to participate in the transportation planning process (Theiss-Morse, 1993). However, this finding is also inconsistent with the hypothesized expectation that CO-M in both the short-term and long-term models would be statistically significant.

An explanation for this unexpected finding may be found in the bivariate correlation Tables of 6.17 and 6.18. The bivariate correlations of CO-M with the dependent variables WTP_{ST} and WTP_{LT} are nearly zero, as well as not being statistically significant. Even though the questions that comprise the CO-M index has a fairly good internal reliability coefficient (α = .784), half of the questions were answered positively by most people, while the other half were answered negatively. However, the overall results indicate that the relationship between CO-M and participation is negative.

The survey respondents negative view of the modern citizenship orientation does not appear to influence a person’s willingness to participate in either a short-term or long-term planning process, which is inconsistent with Theiss-Morse’s (1993) findings that suggest different democratic/citizenship orientations do matter. What this may suggest is that the modern citizenship orientation is not seen as a normative good, at least from the standpoint of the survey respondents. And as a result, most respondents answered in the negative regardless of their position on participation. Therefore, the modern citizenship orientation has no influence on whether a person will be willing to participate in the transportation planning process.
Hypothesis 5b

It is hypothesized that:

H₅b: The external citizenship orientation variable modern citizenship orientation (CO-M) will have a greater influence in determining an individual’s willingness to participate in a long-term transportation planning process than for determining an individual’s willingness to participate in a short-term transportation planning process.

The Willingness-Affectedness Framework (as adapted from Alkadry, 2000) suggests that people will choose to participate in a short-term planning process based on personal motivational factors, whereas people will choose to participate in a long-term planning process based more on external factors. Therefore, the external citizenship orientation variable CO-M should be more influential in determining a person’s willingness to participate in a long-term planning process versus being more influential in determining a person’s willingness to participate in a short-term planning process.

A review of the standardized regression coefficients for the short-term participation (Table 6-27) and long-term participation (Table 6-28) models indicate that the external citizenship variable CO-M is the least (13th) influential variable in the short-term model, whereas CO-M is the ninth (9th) most influential variable in the long-term model. Therefore, the results indicate that CO-M is not important in either the short-term or long-term models; although, CO-M does appear to be more important in the long-term model. This finding is consistent with the hypothesized relationship that an individual’s
modern citizenship orientation will be more influential in determining a person’s long-term willingness to participate versus being influential in determining a person’s short-term willingness. However, neither of the coefficients for CO-M is statistically significant in either the short-term or long-term models, and the influence in both models is negligible.

An explanation for this finding has been discussed in the previous Hypothesis 5a, where the bivariate correlations of the external citizenship orientation variable CO-M with the dependent variables WTP\textsubscript{ST} and WTP\textsubscript{LT} are nearly zero, as well as not being statistically significant. The survey respondents negative view of the modern citizenship orientation does not appear to influence a person’s willingness to participate in either a short-term or long-term planning process. Therefore, the results do not confirm the hypothesis that the external citizenship orientation variable CO-M should be more influential in determining a person’s willingness to participate in a long-term planning process versus a person’s willingness to participate in a short-term planning process.

\textit{Hypothesis 6a}

It is hypothesized that:

H\textsubscript{6a}: The more an individual has a positive neo-classical liberal/representative citizenship orientation (CO-NC), the more likely the individual is to be willing to participate in the transportation planning process.
Conover and Feldman (1984a; 1984b), Conover, Crewe, and Searing (1991), Glover (2002), and Theiss-Morse (1993) have shown that individuals conceptualize democracy and citizenship differently. Based on how an individual views society and how government should function, differing levels of participation can be expected. A neo-classical liberal/representative citizenship orientation focuses on the efforts, talents, and equality of opportunity of the individual. Therefore, the more an individual has a positive neo-classical liberal/representative citizenship orientation (CO-NC), the more likely the individual is to be willing to participate in the transportation planning process.

The regression coefficients for CO-NC in the participation models (Table 6-27 and Table 6-28) indicate a positive relationship in the short-term participation model and a negative relationship in the long-term participation model. Neither the short-term or long-term participation models CO-NC coefficients are statistically significant. In addition, CO-NC in both models exhibits very weak influence (Beta = .046 short-term and Beta = -.009 long-term). This finding is inconsistent with the directionality of the hypothesized relationship (i.e., positive) that the more an individual has a positive neo-classical liberal/representative citizenship orientation (CO-NC), the more likely the individual is to be willing to participate in the transportation planning process (Glover, 2002). The bivariate correlations in Tables 6.17 and 6.18 indicate that CO-NC is positively related to both WTP_{ST} and WTP_{LT}. Therefore, the negative coefficient for CO-NC in the long-term regression model is unexpected.
An explanation for this unexpected finding may be due to the variable transformation that was performed on CO-NC for the long-term model. When the data was analyzed to determine if it met the standards set forth for multiple regression, it was found that CO-NC exhibited a heteroscedastic tendency with respect to WTP\textsubscript{LT}. As a result, CO-NC was transformed via the natural logarithm to lessen this tendency. The directionality of CO-NC in the initial regression models (Tables 6.19 and 6.20) indicate that the coefficients for CO-NC are both positive. Therefore, the data transformation of CO-NC for the revised long-term model may be the cause of the negative relationship.

**Hypothesis 6b**

It is hypothesized that:

\[ H_{6b}: \text{The external citizenship orientation variable neo-classical liberal/representative citizenship orientation (CO-NC) will have a greater influence in determining an individual’s willingness to participate in a long-term transportation planning process than for determining an individual’s willingness to participate in a short-term transportation planning process.} \]

The Willingness-Affectedness Framework (as adapted from Alkadry, 2000) suggests that people will choose to participate in a short-term planning process based on personal motivational factors, whereas people will choose to participate in a long-term planning process based more on external factors. Therefore, the external citizenship orientation variable CO-NC should be more influential in determining a person’s willingness to
participate in a long-term planning process versus being more influential in determining a person’s willingness to participate in a short-term planning process.

A review of the standardized regression coefficients for the short-term participation (Table 6-27) and long-term participation (Table 6-28) models indicate that the external citizenship variable CO-NC is the second (2nd) least influential variable in both the short-term and long-term models. Therefore, the results indicate that CO-NC is not very important in either the short-term or long-term models. This finding is contrary to the hypothesized relationship that an individual’s neo-classical liberal/representative citizenship orientation will be more influential in determining a person’s long-term willingness to participate versus being influential in determining a person’s short-term willingness.

An explanation for this has been discussed in the previous Hypothesis 6a, where the variable transformation that was performed on CO-NC for the long-term model to correct for heteroscedasticity may be the cause for this unexpected finding. Therefore, the results do not confirm the hypothesis that the external citizenship orientation variable CO-NC is more influential in determining a person’s willingness to participate in a long-term planning process versus a person’s willingness to participate in a short-term planning process.
Hypothesis 7a

It is hypothesized that:

Hypothesis 7a: The more organizations an individual is involved with (SC-AN), the more likely the individual is to be willing to participate in the transportation planning process.

Hypotheses 7a through 8b were developed to test the efficacy of the theory of social capital as a component of the willingness to participate model. The social capital concept has been defined by involvement in voluntary associational organizations, as well as interpersonal social trust. Coleman (1988), Putnam (1993a; 1993b; 1993c; 1995), Brenton (1997), Norris (2002), and Fukuyama (1995; 2001) provide insights into the way that greater levels of involvement in voluntary associational organizations can lead to increased levels of civic participation through the social capital construct. Therefore, the more voluntary organizations that individuals are involved in, the more likely an individual is to be willing to participate in the transportation planning process.

The regression coefficients for SC-AN in both the short-term and long-term participation models (Table 6-27 and Table 6-28) indicate a positive relationship with an individual’s willingness to participate. In addition, both coefficients are statistically significant ($p < .05$ and $p < .000$ respectively) as well as having strong standardized regression coefficients (Beta = .119 for short-term participation and Beta = .213 for long-term participation). This finding is consistent with the hypothesized relationship that the more
voluntary organizations that individuals are involved in, the more likely an individual is to be willing to participate in the transportation planning process.

**Hypothesis 7b**

It is hypothesized that:

\[ H_{7b}: \text{The external social capital variable associational involvement (SC-AN) will have a greater influence in determining an individual’s willingness to participate in a long-term transportation planning process than for determining an individual’s willingness to participate in a short-term transportation planning process.} \]

The Willingness-Affectedness Framework (as adapted from Alkadry, 2000) suggests that people will choose to participate in a short-term planning process based upon personal motivational factors, whereas people will choose to participate in a long-term planning process based more on external factors. Therefore, the external social capital variable SC-AN should be more influential in determining a person’s willingness to participate in a long-term planning process versus being more influential in determining a person’s willingness to participate in a short-term planning process.

A review of the standardized regression coefficients for the short-term participation (Table 6-27) and long-term participation (Table 6-28) models indicate that the external social capital variable SC-AN is the sixth (6\textsuperscript{th}) most influential variable in the short-term model, whereas SC-AN is the most (1\textsuperscript{st}) influential variable in the long-term model.
Therefore, the results indicate that the standardized regression coefficient for SC-AN is relatively more important in the long-term model compared to the short-term model. This finding is consistent with the hypothesized relationship that higher levels of associational involvement is more influential in determining a person’s long-term willingness to participate versus being influential in determining a person’s short-term willingness. SC-AN is statistically significant in both the short-term and long-term participation models (p < .05 and p < .000 respectively). In addition, SC-AN’s influence in both the short-term and long-term participation models is relatively strong, with Beta = .119 for short-term participation and Beta = .213 for long-term participation.

**Hypothesis 8a**

It is hypothesized that:

\[ H_{8a}: \text{The more trusting an individual is (SC-IT), the more likely the individual is to be willing to participate in the transportation planning process.} \]

Coleman (1988), Putnam (1993a; 1993b; 1993c; 1995), Brenton (1997), Norris (2002), and Fukuyama (1995; 2001) also provide insights into the way that greater levels of interpersonal trust can lead to increased levels of civic participation through the social capital construct. Therefore, the more trusting an individual is, the more likely an individual is to be willing to participate in the transportation planning process.

The regression coefficients for SC-IT in both the short-term and long-term participation models (Table 6-27 and Table 6-28) indicate a positive relationship with an individual’s
willingness to participate, but only the long-term model’s SC-IT coefficient is statistically significant (p < .05). In addition, the coefficient for SC-IT in the long-term participation model is statistically significant, as well as having a relatively strong influence within the model (Beta = .171). This finding is consistent with the directionality of the hypothesized relationship (i.e., positive) that the more trusting an individual is, the more likely an individual is to be willing to participate in the transportation planning process. However, this finding is also inconsistent with the hypothesized expectation that SC-IT in both the short-term and long-term models would be statistically significant.

An explanation for this unexpected finding may be due to the deletion of three cases that were flagged as outliers. The coefficients for SC-IT in both of the initial regression models indicate that SC-IT is both positively related to WTP_{ST} and WTP_{LT}, as well as being statistically significant. Therefore, this issue may be the cause for the non-statistically significant coefficient for SC-IT in the short-term model.

**Hypothesis 8b**

It is hypothesized that:

H_{8b}: The external social capital variable interpersonal trust (SC-IT) will have a greater influence in determining an individual’s willingness to participate in a long-term transportation planning process than for determining an individual’s willingness to participate in a short-term transportation planning process.
The Willingness-Affectedness Framework (as adapted from Alkadry, 2000) suggests that people will choose to participate in a short-term planning process based upon personal motivational factors, whereas people will choose to participate in a long-term planning process based more on external factors. Therefore, the external social capital variable SC-IT should be more influential in determining a person’s willingness to participate in a long-term planning process versus being more influential in determining a person’s willingness to participate in a short-term planning process.

A review of the standardized regression coefficients for the short-term participation (Table 6-27) and long-term participation (Table 6-28) models indicate that the external social capital variable SC-IT is the tenth (10th) most influential variable in the short-term model, whereas SC-IT is the fourth (4th) most influential variable in the long-term model. Therefore, the results indicate that SC-IT is relatively more important in the long-term model compared to the short-term model. This finding is consistent with the hypothesized relationship that an individual’s level of interpersonal trust will be more influential in determining a person’s long-term willingness to participate versus being influential in determining a person’s short-term willingness. SC-IT is only statistically significant in the long-term participation model (p < .05). In addition, SC-IT is relatively weak in influence in the short-term model (Beta = .066), but has a strong influence in the long-term model (Beta = .171).
Summary

An analysis of the survey data has been undertaken to build and test a model of an individual’s willingness to participate in both the short-term and long-term transportation planning process. The data have been subjected to univariate, bivariate, and multivariate analyses. The final step in the analysis has been the development of two multiple regression models, one to examine the determinants of an individual’s willingness to participate in a short-term transportation planning process, and a second model to examine the determinants of an individual’s willingness to participate in a long-term transportation planning process.

The independent variables in both models provide a fair amount of explanatory power in determining the willingness of an individual to participate in both the short-term (adjusted $R^2 = .663$) and long-term (adjusted $R^2 = .580$) transportation planning process. However, not all of the hypothesized relationships have been proven. Of note in this regard is the lack of the external citizenship orientation variables as a predictor for individual willingness to participate. Other than the participatory citizenship (CO-P) variable for short-term participation, none of the remaining citizenship orientation variables are significantly related to individual willingness to participate. But, the internal motivational and external social capital variables do provide good predictors for individual willingness to participate—where the internal motivational variables play a more prominent role in short-term willingness, while the external social capital variables play a more prominent role in long-term willingness.
CHAPTER 7: CONCLUSIONS

Introduction
This dissertation sought to identify the key determinants that lead individuals to participate in the transportation planning process. Two models of participation, one for the short-term and another for the long-term, were developed to test whether the key internal and external determinants identified by the literature are responsible for influencing a person’s willingness to participate. The key research question focused on whether there is a difference in which determinants are more important in influencing a person’s willingness to participate in a short-term planning process versus influencing a person’s willingness to participate in a long-term planning process. Based on conventional wisdom, as well as a suggested framework developed by Alkadry (2000), internal motivational determinants were expected to have more influence on a person’s short-term willingness to participate, whereas the external citizenship orientations and social capital determinants were expected to have more influence on a person’s long-term willingness to participate.

Summary of Main Findings
A key finding is that Ajzen’s (1991) motivational theory of planned behavior and Putnam’s (1993a; 1993b; 1993c; 1995) civic activity theory of social capital are key components in determining the willingness of an individual to participate in the transportation planning process. However, the citizenship orientation construct did not
significantly contribute to being an important determinant of a person’s willingness to participate. The theory of planned behavior was operationalized by three measures: attitudes towards participation, feelings of social pressure of what others think about participation, and how people perceive their level of control over being able to participate. Social capital was operationalized through two social measures of: involvement in civic activity, and interpersonal trust.

The results indicate that the internal motivational determinants exert more influence on a person’s short-term willingness to participate as compared to a person’s long-term willingness to participate. In addition, the external social capital determinants exert more influence on a person’s long-term willingness to participate as compared to a person’s short-term willingness to participate. However, only one of the three external citizenship orientation variables, participatory citizenship orientation, was found to be influential in determining a person’s short-term willingness to participate. Overall though, the external citizenship orientations determinant was not important in influencing a person’s willingness to participate in the transportation planning process.

Of the internal motivational variables, attitude towards participation (ATP) is the most influential variable in the short-term model, whereas ATP is the second most influential variable in the long-term model. The internal motivational variable conformity with important referents (CWIR) is the second most influential variable in the short-term model, whereas CWIR is the fifth most influential variable in the long-term model. The internal motivational variable perceived level of control (PLC) is the third most
influential variable in both the short-term and long-term models. Overall, the internal motivational variables are more influential in determining a person’s willingness to participate in a short-term planning process than determining a person’s willingness to participate in a long-term planning process.

Of the external social capital variables associational networks (SC-AN) is the sixth most influential variable in the short-term model, whereas SC-AN is the most influential variable in the long-term model. The external social capital variable interpersonal trust (SC-IT) is the tenth most influential variable in the short-term model, whereas SC-IT is the fourth most influential variable in the long-term model. Overall, the external social capital variables are more influential in determining a person’s willingness to participate in a long-term planning process than determining a person’s willingness to participate in a short-term planning process.

**Implications and Recommendations**

*Policy Implications*

The results of this research have implications for policy-makers. This research indicates that both internal and external forces are influential in determining a person’s willingness to participate in the transportation planning process. However, the internal motivational determinants are more important in determining a person’s willingness to participate in the short-term, whereas the external social capital variables are more important in determining a person’s willingness to participate in the long-term. From a policy
From these results, the agencies need to embark on a two-tiered process of civic engagement.

For short-term planning processes, agencies need to recognize the personal motivating features that are important to people. When trying to increase citizen involvement, care should be taken to create a positive image that brings more people into the decision-making process. This research illustrates that there is a positive relationship between the attitudes people have and their willingness to become involved. The answers to the attitude questions in the survey for this study regarding: learning how a project could affect an individual, being able to influence decisions, being able to let officials know what their opinion is, being able to voice concerns, having their opinion listened to, having public officials treat them with respect, as well as making public involvement convenient, are all important when designing a public outreach program.

For long-term planning processes, agencies need to consider personal motivating factors, but must also recognize the importance of civic duty and trust inherent within the social capital construct. Personal motivating factors can be influenced by an agency’s actions. However, the same cannot be said of civic duty and trust. A person’s sense of civic duty (i.e., how actively involved an individual is in community civic groups) and trust is not something that a public agency can generally influence. However, through actions taken by an agency in building a positive image, the trust of an agency can build over time. With respect to civic duty, an agency may not be able to necessarily cause an increase in
a person’s civic virtue. But, an agency can proactively seek out people who belong to civic organizations to be leaders within citizen advisory committees.

*Managerial Implications*

The findings from this research are consistent with the role of the public manager as a participative facilitator, a role that increasingly is being expected of many in governmental leadership positions (Nalbandian, 1999). Participative facilitation in this context encourages public officials to work with the citizenry in a collaborative fashion. This research is also consistent with the notion that a more participatory or deliberative form of democracy can enhance the traditional liberal/representative form of democracy (Smith & Wales, 2000). Therefore, individuals become active participants in the policy decision-making process.

Generally, transportation planning agencies such as MPO’s have not had a difficult time getting people involved in participating in projects for which construction will start in the near future. However, MPO’s have had a difficult time in getting people to participate in more long-term visionary planning projects, such as getting people involved in the development of the MPO’s 20-year long range transportation plan (U.S. Department of Transportation & Florida Department of Transportation, 2001). Therefore, public transportation agencies like MPO’s will need to spend more resources on getting people involved in long-term planning processes versus short-term planning processes. The goal is to have as many people involved in the transportation decision-making planning process as possible. It has been shown that the most effective MPO’s are those that
proactively seek to engage the public in the decision-making process (Dempsey, Goetz, & Larson, 2000).

As a result, this research suggests that public managers need to consider more than a person’s selfish motivational concerns when looking to engage the public. Internal motivational concerns are an important part in determining whether an individual will be willing to participate in both the short-term and long-term. Motivating people to be involved in a short-term planning process is not that difficult. However, motivating people to be involved in long-term planning processes has proven to be more difficult. Therefore, it is the more long-term oriented planning projects that MPO’s need to get more citizens involved. As a result, MPO’s do not necessarily need to expend a significant amount of effort to get people to participate in short-term time frame projects.

A relatively simple suggestion that an agency could implement to get people involved in short-term planning projects would be to change the way public meetings are conducted. Instead of using a single speaker to address a large audience, public agencies could have multiple speakers working one-on-one with citizens, or in small groups, to encourage an open dialog between the citizens and the agency. In addition, a further suggestion would be for agencies to engage in discussions with the public prior to any technical working being prepared. By incorporating citizen input early in the process an agency can ascertain key community values. Through listening to citizens and incorporating community values, an agency such as an MPO can become a partner with the community.
in implementing projects. These two suggestions are also applicable to managers looking to get people involved in a long-term planning process.

In addition to the above suggestions, a person’s willingness to participate in a long-term transportation planning process is also affected by involvement in voluntary associations, as well as interpersonal social trust. Therefore, when designing a long-term public involvement process these additional issues will need to be considered. While assessing a person’s level of trust may be difficult for the public manager, assessing involvement in voluntary associations may be a little easier. Many civic organizations are listed in the phone book. A phone call to an organization from a public agency may very well lead to a speaking engagement in that organization’s weekly/monthly business meeting. Personal contact from an agency will help build not only the public manager’s social capital, but also that of the organization. Contacts made through this process can be an invaluable resource, not only for local community information, but also as a springboard for information about other civic organizations that may be interested in hearing about the future transportation plans for the community.

The public manager has two options regarding the use of existing civic organizations. First, the public manager can take advantage of all of the existing civic organizations by targeting public involvement activities towards these groups. Since people that are already joiners are also the same people that are more likely to participate, the public manager can use this knowledge to attract those people with little effort to become involved in the planning process. Second, since the public manager must focus limited
resources in getting people to participate, the manager can target organizational groups that may have been traditionally underserved, such as minority church groups, homeowners associations, housing authorities, etc.

Another key issue that this research highlights is that people have positive attitudes towards participation when they feel that their concerns are being listened to. This applies to both short-term and long-term involvement processes. When public meetings are held only to inform the public, the public does not really have much of a chance to be actively involved in the decision-making process. People responded positively to the survey questions that allowed citizens to be part of the decision-making process. In this case, the questions were not necessarily about participation, but were more about making participation personal to the individual, where being involved in the decision-making process brought the process to the people (U.S. Department of Transportation & Florida Department of Transportation, 2001). Therefore, public involvement methods that rely on collaborative processes will have a better chance of succeeding as compared to a traditional public meeting where the public senses that the decisions have already been made before the public has had a chance to become involved.

**Theoretical Implications**

Quantifying the determinants of public participation has been absent from previous research. Since public participation is a normative societal goal, sophisticated empirical analysis may have seemed unnecessary. Traditional public participation research has focused on the level of involvement, whereas this research focused on what are the
important determinants that influence a person’s willingness to become involved in public planning activities for different time frames. When looking only at increasing the level of public involvement, previous research studies looked only at how to increase the number of participants. Having a sufficient amount of people involved in the planning process is important, but it does not help understand what influences a person to become involved. What this research has shown is that there are key determinants that are important—and the important determinants are different for short-term and long-term public involvement activities.

Previously there has been a lack of methodological rigor within the public participation field. Examining the determinants of participation adds to the body of knowledge. It was shown that personal motivating factors and social capital (i.e., previous level of civic engagement and interpersonal trust) are important in determining a person’s willingness to be civically involved. This study also contributes to the literature by looking at participation in different time frames (short-term and long-term). As a result, it has been shown that people participate in short or long term planning processes based upon different factors. By adding methodological rigor to analyzing public participation, the relative importance of the factors that affect participation can now be quantified.

This research is important to both segments of the Public Administration community—the practitioner and the researcher. For the practitioner this research highlights that not all issues are going to be attractive to inducing public participation. The level of intrinsic motivation of participating in the transportation planning process for most people will be
relatively low on Ryan and Deci’s (2000) Motivation Continuum. People’s lack of intrinsic motivation in becoming involved in civic affairs will need to be acknowledged. Public managers will need to recognize the importance of extrinsic sources of motivation, such as personal motivation as well as civic involvement and trust, when developing a public participation program.

For the researcher, this research is the first step in bringing some methodological rigor to the study of public participation. This research identified at least two important key concepts as to why people are, or are not, willing to become involved in a public participation activity. And finally, this research has identified that there is a difference in what factors are more or less important to people when becoming involved in either short-term or long-term planning processes.

Although this study looked at public participation in the transportation planning process, the results have broad implications. Transportation planning is similar to other governmental purposes where the provision of services is provided to the public. In transportation planning, the service is the development of adequate infrastructure for the movement of people and goods. Other forms of service delivery could include: planning and zoning, school planning, park and recreation planning, etc. Therefore, the results of this study may be applicable to a wider range of issues other than transportation planning.
Limitations of the Study

The study is limited by several factors that might have affected the results. Although a random sample was selected from Florida households, 112 of the addresses provided by Survey Sampling, Inc. were returned by the postal service for various reasons (e.g., forwarding order had expired, insufficient address, wrong address, individual was deceased, etc.). In addition, 68 participants returned the survey but refused to complete it. Subtracting the non-deliverable and refusals from the original sample of 750 surveys left 570 potential survey participants. Of these, 213 returned completed surveys. Therefore, the response rate was 37.37 percent. It is possible that the 62.63 percent that did not respond would have answered the questions differently in a way relevant to the study from those who did respond. There is no way to determine if those non-respondents represented differences that were not captured by those who did respond.

The response rate was not as high as expected. A reasonable explanation for this may have been due to the timing of the survey administration. The survey was administered after Florida had experienced a series of four hurricanes within a six-week period. The level of attention that many citizens might have given the survey could well have been lessened due to hurricane fatigue.

Even though this study attempted to obtain a sample representative of residents throughout the State of Florida, none of the demographic characteristics approximated the population of Florida. In general, the survey population was older, more likely to be male, more likely to be a non-minority (i.e., Caucasian), more educated, and earned a
higher income than the typical Floridian. These differences may have implications for the results. For example, a larger number of non-minority respondents may have resulted in a sample with different attitudes, citizenship orientations, and social capital levels. In turn, different responses to the key dependent and independent variables may have resulted in an underestimate or overestimate of a person’s willingness to participate.

Both younger (18 to 34 years) and older (85 years and over) people are under-represented in the sample, while people between the ages of 45 to 84 are over-represented. The young and the old may be under-represented due to lifestyle and/or lifecycle issues. Previous studies have found that young people tend to participate less than older adults (Verba & Nie, 1972; Lake & Huckfeldt, 1998; Petersen & Rose, 1996; Kanck & Kropf, 1998; Ulbig & Funk, 1999; Theiss-Morse, 1993; Jankowski & Strate, 1995; and Oliver, 1997). Also, older individuals, in this case those 85 years and older, reach a point where many find it difficult to provide their own transportation to attend public meetings. Conversely, individuals between the ages of 45 to 84 may be over-represented in the sample because they have more time to complete a survey and/or are more interested in civic affairs than younger people.

Another limitation of the study may have been the level of familiarity that people have with public meetings. Many people do not attend public meetings, or if they have, have formed unfavorable attitudes of them. Attending a public meeting can sometimes be difficult, given the hectic life schedules that many families have. It is relatively easy for a respondent to answer on a survey that they would attend a public meeting, but actually
attending is another matter. Similar experiences have been observed when public transportation providers have tried to gauge the level of patronage of a new bus line or a new rail line. But, when the new bus or rail line is put in place, ridership is generally less than what was expected based upon marketing surveys (Hunt, 2000). The same is probably applicable with this survey as well. Overall, people answered favorably to attending a public meeting, for both short-term and long-term planning issues. However, the actual level of participation would probably be less if these meetings were not hypothetical situations.

**Unexpected Results**

A key finding of this research is the knowledge that the internal motivational variables play a more influential role in determining a person’s willingness to participate in a short-term transportation planning process, while the external social capital variables play a more influential role in determining a person’s willingness to participate in a long-term transportation planning process.

However, not all of the expected hypotheses and relationships were confirmed. The literature suggested that the external citizenship variables (CO-P, CO-M, and CO-NC) would play a more influential role in determining a person’s willingness to participate in a long-term transportation planning process. The results indicate that only the participative citizenship orientation variable (CO-P) was useful in determining a person’s willingness to participate. However, the participative citizenship orientation was only useful in determining a person’s short-term willingness, not long-term willingness as
suggested by the literature. This finding was surprising, as well as being counter intuitive.

Nearly all of the key independent variable bivariate correlations are statistically significant in the short-term model, except for the modern citizenship orientation variable (CO-M). However, not all of these relationships remained statistically significant in the multiple regression model. In the final short-term regression model the modern citizenship orientation (CO-M), the neo-classical liberal/representative citizenship orientation (CO-NC), and the interpersonal trust social capital (SC-IT) variables are not significantly related to a person’s willingness to participate in a short-term transportation planning process.

As with the short-term model, nearly all of the key independent variable bivariate correlations are statistically significant in the long-term model, except for the modern citizenship orientation variable (CO-M). However, in the final long-term regression model the internal motivational variable perceived level of control (PLC), as well as all of the external citizenship variables (CO-P, CO-M, and CO-NC) are not significantly related to a person’s willingness to participate in a long-term transportation planning process.

The lack of importance of the citizenship orientation variables in the long-term model is surprising. The literature suggested that varying levels of participation can be expected based on how a person views society and how government should function (Conover &
Feldman, 1984a, 1984b; Conover, Crewe, & Searing, 1991; Glover, 2002; and Theiss-Morse, 1993). At least within the context of this research, a person’s citizenship orientation is not influential in determining a person’s willingness to participate.

**Suggestions for Further Research**

The high bivariate correlation between attitude towards participation (ATP) and perceived level of control (PLC) indicate that these two concepts, at least as they were operationalized, are similar. Therefore, additional research should be undertaken to delve into the nuances of each concept, thereby exploring and expanding on the unique differences of these two concepts. One approach may be to conduct a qualitative study to delve in-depth into the positive/negative feelings related to participation, where a clearer distinction may be developed between ATP and PLC. An outcome of this research would be a better set of questions that could be used to assess ATP and PLC that would not overlap conceptually.

Another area for future research is the need to examine more closely the issue of participation between the short-term and long-term time frames. This research illustrated that different variables are more or less important in determining whether a person will be willing to participate in a short-term or long-term planning process. However, this should be the first of many discussions needed to fully understand this phenomenon.

Also, future research should look at actual participatory behavior. This research focused on hypothetical situations, where people were asked whether they would be willing to
participate in a public involvement meeting under a given scenario. Past experience has shown that people do not always do what they say they will do. Therefore, it is important to move this area of research from hypothetical scenarios to actual participatory situations.

A recommendation would be to assess actual participatory behavior during the planning and development of an actual project that is expected to be built within the next year or two, as well as people’s involvement in the development of an MPO’s 20-year long range transportation plan. This would help expand the current limitations of this research in two ways. First, actual participatory behavior could be observed; and second, differences could be observed to see which determinants are important in short-term and long-term participation applications.

And finally, all of these recommendations may point future researchers in new directions as to what does, or does not, play an important role in determining a person’s willingness to participate in a short-term and/or long-term planning processes.

**Summary**

The intent of this research was to identify the key determinants that lead individuals to be willing to participate in the transportation planning process. In addition to identifying the key determinants of participation, this research also looked to identify which determinants are more influential in determining a person’s willingness to participate in a short-term planning process versus determining a person’s willingness to participate in a
long-term planning process. That is, are the determinants of participation different in the short-term versus the long-term time frames? The results of this research suggest that the answer to this question is yes. Internal motivational variables are more influential in the short-term, while external social capital variables are more influential in the long-term.

A model of participation was developed to assess a person’s willingness to participate in the transportation planning process. From the model, a self-administered mail-back survey was developed to assess the key determinants of participation that were identified by the literature. From the survey two multiple regression models were developed and tested, one to examine short-term willingness and another to examine long-term willingness.

This study provides evidence for policy-makers that both internal and external forces are influential in determining a person’s willingness to participate in the transportation planning process. What the public manager can do is become a participative facilitator for the citizenry. When public managers work in a collaborative fashion with the public, the democratic process becomes open to all that wish to participate in the decision-making process. Since public transportation agencies, such as MPO’s, have typically had a difficult time getting the public involved in the long range planning process, the public manager can effectively look to existing civic organizations as a base to widen the agency’s outreach. People that are already members of civic organizations are more amenable to becoming involved in the long-term planning process. Therefore, the public
manager can use existing civic organizations as a base for widening the agencies long-term planning outreach programs.
APPENDIX A: SURVEY
Your responses to this questionnaire are important and they are confidential. You can be assured that your individual responses will not be shared with anyone.

Please place your completed survey in the envelope provided and mail today!

Survey code number

This code number is used to ensure we do not send you duplicate surveys. Your answers are confidential and your responses to all questions will be protected. Names from the mailing list will be destroyed.
INTRODUCTION

This survey looks to learn about people’s attitudes towards participating in public meetings concerning transportation improvements for your community. We estimate that it will take you no more than 15 MINUTES to complete this survey. This study would be impossible without your help.

Please answer each question as it applies to you and/or your family and insert your completed questionnaire in the postage free envelope.

If you wish to discuss this research project in further detail, you may contact the project director at his office by mail, phone, or e-mail:

Mike Neidhart  
(386) 322-5160, ext 35  
1190 Pelican Bay Drive  
Daytona Beach, FL 32119-1381  
E-mail: mneidhart@co.volusia.fl.us

You may also directly contact the College of Health and Public Affairs, Department of Public Administration, at the University of Central Florida in Orlando. You should call:

Wendell Lawther  
(407) 823-5361  
College of Health and Public Affairs  
Department of Public Administration  
University of Central Florida  
HPA II  
Suite 238  
Orlando, FL 32816-1395  
E-mail: lawther@mail.ucf.edu

Thank you so much for your time and cooperation!
SECTION 1
Below are several questions based on two scenarios. These questions will make more sense after you have read each scenario. To help us understand your thoughts, please answer each of the following questions by circling the number that best describes your opinion.

Scenario 1: Suppose you read in the newspaper that there is going to be a public meeting NEXT WEEK about a proposed plan to WIDEN A ROAD that is only 1-mile from YOUR HOME. This road is the main route you take to work, or use for shopping. The newspaper says that if this project is approved, construction will begin in 1-year. Based on this information, to what extent do you agree or disagree with the following statements?

1. I would be willing to ...

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Somewhat Agree</th>
<th>Uncertain</th>
<th>Somewhat Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>attend a meeting to listen to public officials discuss their plan</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>b.</td>
<td>attend a meeting to meet and talk with public officials about their plan</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>c.</td>
<td>write or call public officials to make sure my concerns are heard</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>d.</td>
<td>volunteer my time to join a neighborhood committee to make sure my concerns are heard</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>e.</td>
<td>volunteer my time to organize a neighborhood committee to make sure my concerns are heard</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
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</tbody>
</table>
**Scenario 2:** Suppose you read in the newspaper that there is going to be a public meeting NEXT WEEK about the development of a 20-YEAR VISION PLAN for long-term transportation improvements needed for YOUR community. Based on this information, to what extent do you agree or disagree with the following statements?

2. I would be willing to ...

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Somewhat Agree</th>
<th>Uncertain</th>
<th>Somewhat Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Attend a meeting to <strong>listen</strong> to public officials discuss the development of this 20-year plan</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
<tr>
<td>b. Attend a meeting to <strong>meet and talk</strong> with public officials about the development of this 20-year plan</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
<tr>
<td>c. <strong>Write or call</strong> public officials to make sure my concerns are heard</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
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</tr>
<tr>
<td>d. Volunteer my time to <strong>join</strong> a neighborhood committee to make sure my concerns are heard</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
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<td>(7)</td>
</tr>
<tr>
<td>e. Volunteer my time to <strong>organize</strong> a neighborhood committee to make sure my concerns are heard</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
</tbody>
</table>
SECTION 2

Below are several questions about attending a public meeting concerning your community’s transportation needs. To help us understand your thoughts, please answer each of the following questions by circling the number that best describes your opinion. Some of the questions may appear to be similar, but they do address somewhat different issues.

3. I would ATTEND a public meeting NEXT WEEK to discuss needed transportation improvements in my community if …

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Somewhat Agree</th>
<th>Uncertain</th>
<th>Somewhat Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I could learn how I may be affected</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
<tr>
<td>b. I could help influence the decisions that would be made</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
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<td>(7)</td>
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<tr>
<td>c. I could let public officials know what I think</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
<tr>
<td>d. I could voice my concerns</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
<tr>
<td>e. I could be involved in the official decision-making process</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
</tbody>
</table>

4. In general, how much do you care what your …

<table>
<thead>
<tr>
<th></th>
<th>Definitely Care</th>
<th>Care</th>
<th>Somewhat Care</th>
<th>Uncertain</th>
<th>Somewhat Don’t Care</th>
<th>Don’t Care</th>
<th>Definitely Don’t Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. family thinks you should do?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
<tr>
<td>b. close friends think you should do?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
<tr>
<td>c. neighbors think you should do?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
<tr>
<td>d. co-workers think you should do?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
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</tbody>
</table>
5. If a public meeting were held NEXT WEEK about needed transportation improvements in your community, how likely or unlikely would you be to ATTEND this meeting if ... 

<table>
<thead>
<tr>
<th></th>
<th>Extremely Likely</th>
<th>Likely</th>
<th>Somewhat Likely</th>
<th>Uncertain</th>
<th>Somewhat Unlikely</th>
<th>Unlikely</th>
<th>Extremely Unlikely</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I thought my opinion would be listened to</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
<tr>
<td>b. my work schedule was more flexible</td>
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<td>(3)</td>
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<td>(7)</td>
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<tr>
<td>c. I was asked to attend</td>
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<td>(5)</td>
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<td>(7)</td>
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<tr>
<td>d. the meeting location is near my home</td>
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<tr>
<td>e. the meeting time is convenient</td>
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<td>f. I thought public officials would treat me with respect</td>
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<td>(7)</td>
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<tr>
<td>g. my responsibilities at home and/or care for children were not so difficult</td>
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<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
</tbody>
</table>

6. If a public meeting were held NEXT WEEK about needed transportation improvements in my community ... 

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Somewhat Agree</th>
<th>Uncertain</th>
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<th>Disagree</th>
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<tbody>
<tr>
<td>a. my family would probably think that I should attend</td>
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<td>b. my close friends would probably think that I should attend</td>
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<td>c. my neighbors would probably think that I should attend</td>
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<td>d. my co-workers would probably think that I should attend</td>
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</tbody>
</table>
7. If a public meeting were held NEXT WEEK about needed transportation improvements in your community, how likely or unlikely would you be to ATTEND this meeting if ...

<table>
<thead>
<tr>
<th></th>
<th>Extremely Likely</th>
<th>Likely</th>
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<td>e.</td>
<td>attending would allow me to be involved in the official decision-making process</td>
<td>(1)</td>
<td>(2)</td>
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<td>(4)</td>
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</tbody>
</table>

8. I would ATTEND a public meeting NEXT WEEK to discuss needed transportation improvements in my community if ...  

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Somewhat Agree</th>
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<th>Somewhat Disagree</th>
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<td>(2)</td>
<td>(3)</td>
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<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>d.</td>
<td>the meeting location is near my home</td>
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<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>e.</td>
<td>the meeting time is convenient</td>
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<td>g.</td>
<td>my responsibilities at home and/or care for children were not so difficult</td>
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<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
</tbody>
</table>
SECTION 3

Many citizens have different views regarding civic involvement. To help us find out how people feel about citizen involvement, please answer each of the following questions by circling the number that best describes your opinion.

9. **I feel that ...**

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Somewhat Agree</th>
<th>Uncertain</th>
<th>Somewhat Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>I should have a say in the local government services that are provided in my community</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>b.</td>
<td>I have a responsibility to participate in my community in ways other than electing political leaders</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>c.</td>
<td>I should attend public meetings to discuss issues of importance to my community</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>d.</td>
<td>I have a responsibility to be involved in discussions about government services provided in my community</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>e.</td>
<td>I have a responsibility to talk with my fellow citizens about community issues</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>f.</td>
<td>I should just try to choose good political leaders, then let those leaders do their job</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>g.</td>
<td>I should leave government officials alone after they are elected so they can make good decisions for me</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>h.</td>
<td>I do not need to be involved in community issues because our leaders are doing a good job</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
</tbody>
</table>
9. I feel that ...

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Somewhat Agree</th>
<th>Uncertain</th>
<th>Somewhat Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>i.</td>
<td>I can be involved in community issues if I want, but being involved is not necessary for me to be a good citizen</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>j.</td>
<td>I have a responsibility to be in control of my own life, without intrusion from government</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>k.</td>
<td>I believe government should not interfere with my individual rights</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>l.</td>
<td>I should be able to use the money I earn as I see fit, without government intervention</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>m.</td>
<td>I have the right to make moral choices as I see them, not how the government sees them</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>n.</td>
<td>I have a right to take advantage of my economic success without having to support others</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
</tbody>
</table>

**SECTION 4**

Citizen involvement in a public meeting to discuss transportation improvements is only one of many ways in which citizens can be involved in their community. To help us find out how active people are in their community, please answer each of the following questions by circling the number that best describes your involvement in the following organizations.

10. In the past 12 months, have you attended, been a member of, or participated in any of the following organizations?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>church or religious organization</td>
<td>(1)</td>
</tr>
<tr>
<td>b.</td>
<td>sports league or recreational club (for adults or children)</td>
<td>(1)</td>
</tr>
</tbody>
</table>
10. **In the past 12 months, have you attended, been a member of, or participated in any of the following organizations?**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>c. art, music, or cultural organization</td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>d. neighborhood or homeowners association</td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>e. public interest group, political club, or political party</td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>f. parent-teacher association (such as the PTA or PTO)</td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>g. professional, trade, or business association</td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>h. charitable organization, service club, or fraternal organization</td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>i. any other kinds of clubs or organizations</td>
<td>(1)</td>
<td>(2)</td>
</tr>
</tbody>
</table>

**SECTION 5**

Below are several questions about how trusting you are of the people in your community. To help us understand your attitudes, please answer the following questions by circling the number that best describes your opinion.

11. **In general, I can trust ...**

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Somewhat Agree</th>
<th>Uncertain</th>
<th>Somewhat Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. the people in my neighborhood</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
<tr>
<td>b. the people I work with</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
<tr>
<td>c. the people who work in the stores where I shop</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
<tr>
<td>d. the people at my church or place of worship</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
<tr>
<td>e. most people</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
</tbody>
</table>
SECTION 6
To ensure that our sample for this survey accurately reflects the population as a whole we would appreciate you answering a few remaining questions.

12. What year were you born? __________

13. Are you male or female? (Check one box)
   □ Male
   □ Female

14. What race do you consider yourself? (Check one box)
   □ White, not Hispanic
   □ Black, not Hispanic
   □ Hispanic
   □ Asian/Pacific Islander
   □ Alaskan Native or Native American, not Hispanic
   □ Other

15. What is the highest grade of school or year of college you have completed? (Check one box)
   □ Less than high school (Grade 11 or less)
   □ High school diploma (including GED)
   □ Some college
   □ Associate degree (2 year) or specialized technical training
   □ Bachelor’s degree
   □ Some graduate training
   □ Graduate or professional degree

16. If you added together the yearly incomes of all the members of your family living at home last year, what would be the total income of your household in 2003? (Check one box)
   □ Less than $15,000
   □ $15,000 to $24,999
   □ $25,000 to $34,999
   □ $35,000 to $49,999
   □ $50,000 to $74,999
   □ $75,000 to $99,999
   □ $100,000 or more
Thank You for taking the time to complete this questionnaire. Your assistance in providing this information is very much appreciated. If there is anything you would like to tell us about the survey, or any topic covered in the survey, please do so in the space provided below.

THANK YOU!

PLEASE RETURN IN ENCLOSED ENVELOPE.
APPENDIX B: PARTICIPANT LETTERS
October 26, 2004

Mr./Ms. XXXXXXXXX
XXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXX

Dear Mr./Ms. XXXXXX:

A few days from now you will receive in the mail a request to fill out a brief questionnaire for an important research project being conducted through the University of Central Florida.

The project looks to find out how willing people are to attend public meetings about transportation improvement projects needed for the community.

I am writing in advance because we have found that many people like to know ahead of time that they will be contacted. The study is an important one that will help government leaders know what your thoughts are on attending public meetings.

Thank you for your time and consideration. It’s only with the generous help of people like you that our research can be successful.

Sincerely,

Mike Neidhart,
Project Director
October 29, 2004

Mr./Ms. XXXXXXXXXXX
XXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXX

Dear Mr./Ms. XXXXXX:

You are being asked by the University of Central Florida (UCF) to assist in a study that explores how willing people are to participate in public meetings concerning transportation improvements in your community, as well as people’s views on society and trust. Only a very small and selected group of persons are being contacted for this study.

The survey is entirely voluntary, so you should feel free to ignore any questions that cause you discomfort. By completing the survey and returning it, you will be extending your consent to being a participant. Your answers to the enclosed survey are completely confidential and will be released only as summaries in which no individual answers can be identified. The information from this survey will be shared with policy-makers throughout Florida so that they will know what people’s views are. When you return the completed questionnaire, your name will be deleted from the mailing list and never connected to these answers in any way.

If you have questions or comments about this study, please contact either Dr. Wendell Lawther or Mike Neidhart at the address or phone number provided on the inside cover of the survey. Mr. Neidhart is the project director for this research effort, and is a doctoral candidate in the Public Affairs Program at UCF in Orlando.

We realize this survey will take about 15 minutes of your time. If for some reason you prefer not to respond, please let us know by returning the blank questionnaire in the enclosed stamped envelope. To be useful, your response will need to be received by November 19, 2004.

We thank you very much in advance for helping with this study. Your assistance and support for this study are very important to its outcome.

Sincerely,

Mike Neidhart,
Project Director
November 9, 2004

Last week the “Public Participation Survey” seeking your opinions about attending public meetings was mailed to you. Your name was drawn randomly from a list of residents in Florida.

If you have already completed and returned the “Public Participation Survey” to us, please accept our sincere thank you. If not, please do so today. We are especially grateful for your help, because it is only by asking people like you to share your thoughts that we can understand how to make attending public meetings more useful and enjoyable.

If you did not receive a questionnaire, or if it was misplaced, please call us at 386-322-5160, ext 35 and we will get another one in the mail to you today.

Thank you,

Mike Neidhart, Project Director
College of Health & Public Affairs | University of Central Florida
P.O. Box 677663 | Orlando, Florida 32867-7663
386-322-5160, ext 35
November 16, 2004

Mr./Ms. XXXXXXXX
XXXXXXXXXXXXXXX
XXXXXXXXXXXXXXX

Dear Mr./Ms. XXXXXX:

About three weeks ago I sent you a copy of the “Public Participation Survey” that asked about your perceptions of attending public meetings regarding transportation improvements that may be needed in your community. To the best of our knowledge, we have not received your completed survey.

The comments of most people who have already responded include a wide variety of opinions about attending public meetings. Many have described their own experiences, both good and bad, in attending public meetings. We think the results are going to be useful to your elected officials as they plan how to better organize public meetings.

We are writing again because of the importance that your questionnaire has for helping to get accurate results. Although we sent questionnaires to people living throughout Florida, it’s only by hearing from nearly everyone that we can be sure that the results truly represent the views and experiences of Florida citizens.

We hope that you will fill out and return the questionnaire soon, but if for any reason you prefer not to answer it, please let us know by returning a note or blank questionnaire in the enclosed stamped envelope.

We thank you very much in advance for helping with this study. Your assistance and support for this study are very important to its outcome.

Sincerely,

Mike Neidhart,
Project Director
APPENDIX C: IRB HUMAN SUBJECTS APPROVAL LETTER
July 26, 2004

Mr. Mike Neidhart
1190 Pelican Bay Drive
Daytona, FL 32119

Dear Mr. Neidhart:

With reference to your protocol entitled, "Pathways Toward Participation: A Model of Individual Willingness to Participate in the Transportation Planning Process," I am enclosing for your records the approved, expedited document of the UCFIRB Form you had submitted to our office.

Please be advised that this approval is given for one year. Should there be any addendums or administrative changes to the already approved protocol, they must also be submitted to the Board. Changes should not be initiated until written IRB approval is received. Adverse events should be reported to the IRB as they occur. Further, should there be a need to extend this protocol, a renewal form must be submitted for approval at least one month prior to the anniversary date of the most recent approval and is the responsibility of the investigator (UCF).

Should you have any questions, please do not hesitate to call me at 823-2901.

Please accept our best wishes for the success of your endeavors.

Cordially,

Barbara Ward
Barbara Ward, CIM
Institutional Review Board (IRB)

Copies: Dr. Wendell Lawther, Public Administration/Public Affairs/COHPA
IRB office
LIST OF REFERENCES


O’Connor, R., Director of Public Involvement at HNTB (1997). Facilitating input and measuring voice: How the tools we choose make hidden value statements. Memo published in the Committee on Public Involvement newsletter.


