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Name: Jacob Bowen

Supervisor: Somesh Sharma

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Individual Decisions Towards Intercity Rail: Factors Influencing Level of Support

Name

Jacob Bowen

Country

USA

Supervisor: Somesh Sharma

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Summary

In recent years various intercity rail projects have moved into construction and late planning phases for the first time in the past fifty years in the US. These projects have faced and continue to face many challenges towards implementation including conflict with communities and regions in which these projects affect. This study explains which factors influence individual decisions as to support, oppose, or have no opinion towards an intercity rail project that will affect their community. Looking at the Brightline rail project, a controversial intercity rail project in the US state of Florida, the factors that most determine individual decisions towards the project were determined. How these determinate factors were first identified was through an overview of research into decision theory from the physiological perspective in which perceptions overtly determine the decision outcomes of individuals. The constructs of perceptions and decision theory were connected within the context of transportation in the US in order to form a concise research strategy that identified how individuals perceived the impacts of the project and some of the constructs that build perceptions through measurable individual characteristics. Perceptions towards the Brightline projects impacts and characteristics of individuals were gathered through an online and paper survey allowing for a quantitative analysis that was conducted to see precisely what role perceptions and individual characteristics played in determining how someone responded to the project. It was found that how an individual perceived the future impacts of the project overwhelmingly determined their response towards the project. The results also revealed how particular characteristics of an individual had some influence on their decision outcome while other characteristics had little to no influence. This study provides insight into the role of decision making from the individual level in relation to a major infrastructure project. To summarize the analysis the extent of individual characteristics and perceived project impacts is high in understanding the effects on decision outcomes towards the project understood through a variance of (80.08%). Perceived project impacts had both the greatest control amongst (IV'S) and the highest odds of predicting individual decision towards the Brightline project. Despite this control and high predictive power of perceived project impacts, risk and exposure still maintained a significant association with individual decisions towards the project. This study concludes that individual perceptions of project impacts has the greatest control in people's decisions towards the project while their risk and exposure to the project still retains a strong influence on overall decision outcomes.

Keywords

Perceptions, Brightline project, decision making, rational choice theory, cognitive constructs, intercity rail, community impact

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Rotterdam, October 2017,

Jacob Bowen

Abbreviations

IHS	Institute for Housing and Urban Development
FEC	Florida East Coast Railway
IV	Independent Variable
DV	Dependent Variable

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Chapter 1: Introduction

1.1 Background

Throughout most of the 20th century the US has moved from being mass transit oriented to mostly a car oriented society through both heavy investment in road infrastructure and large divestment in passenger rail infrastructure. This heavy investment in automobile infrastructure has helped to shape the way communities are built, leading to low density life styles with a sense of freedom and independence detached from train time tables allowing individuals to choose precisely where and when they want to go. This sense of individual freedom is deeply ingrained into the culture and democratic nature of communities across the US, with the freedom of movement greatly being enhanced first by the railroad network and later reinforced by the road network built in the 20th century (Meyer, 2014). Contrary to the raise in automobile use with heavy investment into the interstate highway system, trains experienced rapid decline in the second half of the 20th century leading to the bankruptcy or sell out of all private rail operations to the nationalized public rail company known as Amtrak by 1983. This decline in rail usage has level off and has begun to increase year to year in the past decade, creating more demand for intercity passenger rail. The increased demand for passenger rail combined with other factors such as increased road congestion and environmental concerns has highlighted the need for an improved railroad infrastructure network acknowledged by professionals and many government agencies such as the US Department of Transportation (ARTBA, 2017).

Despite the increase in travel demand for passenger rail and increased highway congestion, public funding for intercity rail has remained limited. Limitations in public funding have led to an aging rail infrastructure that has experienced travel delays and safety concerns related to train derailment. To further compound the issue of the public funding gap for intercity rail in the US, a proposed budget reduction of 13% is currently pending in the national government. A proposed solution and pragmatic shift among policy makers to address this funding gap is the encouragement of greater privatization and injection of private capital into the intercity passenger rail network.

In recent years the potential for the profitability of passenger rail has helped to spur the creation of several private passenger firms across the country with the vast majority of firms remaining in the early planning phases. A private rail firm that has made the most progress towards project implementation and the only private rail firm to reach the construction phase is the Brightline rail project, which is a higher speed private passenger railway currently under construction that will connect Orlando Florida to Miami Florida. Brightline is an independent subsidiary of Florida East Coast Rail, which is a freight company that owns the right of way for the majority of Brightline's operations. The Brightline project will run 390km within the state of Florida running through a large diversity of communities from rural retirement communities to the metropolis of Miami and Orlando. The total population of the state of Florida is 20 million, while hosting about 60 million tourist per year. A large portion of the 60 million tourist that come to Florida visit within a close proximity of the project area. The Orlando to Florida corridor is being built in two phases with phase one currently under construction connecting Miami to West Palm Beach, and phase two connecting West Palm Beach to Orlando still in the late planning stage.

1.2 Problem Statement

In recent decades starting in the 1960's a culture of community engagement and empowerment through grassroots efforts has expanded greatly. This rise in community empowerment in relation to major infrastructure projects was predominantly heightened during the various freeway revolts across US cities in which local communities successfully subdued freeway expansions through public protest and civic engagement. The freeway revolts of the 1960's and 1970's are often viewed as a positive progression of democratic empowerment with subsequent policy changes that required greater local consent for major infrastructure projects. However, this shift in heightened community empowerment has come into direct conflict with large scale transportation infrastructure projects (Mohl, 2004). As the greater society as whole may benefit from the implementation of new large scale infrastructure projects, local communities within the project area can sometimes be negatively impacted or receive no benefit. Without community consent empowered local communities and individuals have raised opposition to major projects often leading to long delays or complete cancellation of major infrastructure projects (Cavallaro; Maino, 2014). This opposition to projects can cost developers and governments significant amounts of money and resources ultimately leaving communities without crucial infrastructure needed for economic development for long periods of time or permanently. Community opposition is one of the major factors that have increased the length of time involved to complete an environmental review processes, increasing from an average of 2 years in the 1970's to an average of 8 years in 2012 (Schned; Todorovich, 2012). Delays in private infrastructure projects due to opposition from communities can create financial uncertainty for proposed projects, ultimately leading to a risk of gaining capital backing as created with any element of additional risk in finance. Compounded with the risk that community opposition poses to private rail projects is the situation in which no private rail company has operated in the US since 1970's giving potential investors limit financial history of operating a passenger railway.

Governments and private developers of various infrastructure projects have begun practicing early stakeholder engagement in which they engage the public in the earliest stage of planning as possible. Despite the success of early stakeholder engagement the challenge of preconceived benefits and costs of projects still remains for individuals even when being presented with often factual information (International Finance Corporation, 2014). Currently there is limited studies examining why individuals support or oppose passenger rail projects that will have an effect on their community. The focus of this study is not to highlight the benefits of intercity passenger rail as a wide array of literature currently exists.

1.3 Research Objectives

The objective of this research is to explain the factors that influence why some individuals within a community of the project area support the Brightline rail project while others oppose the project.

1.4 Provisional Research Question(s)

Based on the background and problem statement a provisional research question was developed: What factors influence individual support or opposition towards the Brightline rail project? This provisional research question was later revised following the literature review as: Which factors explain ‘individual responses’ towards the Brightline rail project? The term individual responses within this question refers individual’s opinion to support, oppose and the level of support or opposition.

1.5 Significance of the Study

The application of various decision theories based on individuals cognitive processing has been applied to further understand a wide array of complex situations (Guenther; Yingxu, 2007). Understanding the relationship of the cognitive decision process with individual decision to support, oppose or be indifferent to a major infrastructure project can provide a deeper insight into the influences of decision making towards infrastructure development. Data collected in this study is important to future projects because individuals in the context of the US hold a strong collective power within their communities fostering the ability to raise impending opposition to potential rail and other infrastructure projects (Mohl, 2004). Currently there is limited scientific investigation into the complementing factors of decision making towards rail projects on the individual level. This limited knowledge within the US context is brought on in part because there simply has not been any major intercity rail projects to study, other than the upgrading of the north east corridor(D.C to Boston) in 2000, since the 1950’s. In the context of countries with more recent intercity rail projects investigations from the individual level from citizens within affected communities still remains limited. Therefore this study aims to provide a basic foundation to further research into understanding the individual decision making process in the context of infrastructure projects.

Bringing a clearer understanding as to why individuals support or oppose any major infrastructure project can help aid efforts of governments and private developers to mitigate community conflict through further enhancing early stakeholder engagement by bringing a better understanding to preconceived perceptions. Understanding the extent in which individuals rationally support or oppose the Brightline rail project brings scientific relevance within elements of rational choice theory. Within the context of US transportation planning the perspectives of individuals within small cities and rural towns can be better integrated into broader transportation strategies that aim to connect larger metropolitan regions through mass transportation. Without the consent of these small cities and towns the feasibility of constructing private intercity rail lines becomes less realistic.

1.6 Scope and Limitations

Because many factors could explain the extent of individual support towards the Brightline project this study just focuses on how perceived benefits and cost (future project outcomes) affect the individual response to the project. Basing decisions from evaluating cost and benefit is an integral part of rational decision making faced with the limitation discussed further in literature review that perceptions of what is perceived as benefit or cost is highly subjective. In order to overcome this limitation the psychological concepts that relate to the perceptions of rationality are introduced into this study and measured through objective individual characteristics. A further limitation is that the study area of the Brightline project is large,

including two major metropolitan areas of Orlando and Miami, along with several small cities, towns and rural counties. This study focuses on a select study area in which there is a high proportion of project opposition in comparison to the more urbanized metropolitan areas of Orlando and Miami. This higher proportion of project opposition along with controversial nature of the project has created a likelihood of bias individual responses in evaluating perceptions. This limitation is addressed through measuring unique characteristics of each individual. The finale limitation is that a statistically significant sample of respondents was not gathered. An adequate number of responses was gathered to conduct relevant analysis and achieve the research object despite lacking the significance to generalize the population as whole.

Chapter 2: Literature Review / Theory

Introduction

This study explains the factors into why some individuals within a community support a major infrastructure project while others would oppose a major project. The foundation and argument used within this theoretical background connects why individuals make decisions in the context of community decision making in order to more adequately understand the response individuals give towards an infrastructure project. Concepts that influence individual decision making from the psychological perspective anchored within the constructs of perceptions is the core theme within the analysis of theories introduced in this chapter. The various perceptions of the expected community effects from passenger rail projects are also introduced in this framework in the form of evaluating variables that measure the extent of perceived project outcomes. Because this is a community study and the term is often used, the concept of community is addressed and contextualized. In reviewing literature involving major infrastructure projects there is limited analysis from the unit of individual citizens in regards to pre-implemented transit projects or projects that are not yet in operation. The application of decision theory and related concepts into the context of consent of infrastructure projects address this gap in literature.

2.1 Decision Making

Understanding why individuals make decisions is a question that scholars and professionals from a broad range of fields have attempted to answer for generations. Decision making has been heavily studied within the fields of economics, sociology, and more recently psychology. In this conquest of understanding decision making, many concepts and theories have been developed and linked together to explain why or how individuals and groups reach a decision. The why and how decisions are made has been defined as a process involving taking action or selecting an option over alternatives based from certain criteria or strategies of the decision maker (Wilson & Keil, 2001; Wang et al., 2004).

Rational Choice

Traditionally decision making theory has been based from optimization in which actors build their decisions on the rational outcome of maximizing benefit while minimizing loss. In the tradition of optimization scholars use rational models based on economic and mathematical assumptions with data. Researchers using rational choice models assume the decision maker will try to maximize their utility or benefits from the expected outcome of their decision. The decision maker will evaluate the expected consequences of various alternatives in a decision and will choose the most rational alternative that contributes to the greatest utility (Aleskerov, 2005).

Expected Utility

In economic terms the consumer will always attempt to maximize their utility of services through gaining the highest level of satisfaction from a service. Utility is the level of benefit or satisfaction gained from consuming a good or service. Expected utility in the context of decision making is significant because the decision maker will compare different prospects of expected utility and consider the outcome that will provide the greatest utility or maximum benefit to the decision maker. The utilization of expected utility is a core function in the ration decision making model (Mongin, 1997).

Prospect Theory

Developed from the bases of the expected utility theory the prospect theory is similar to expected utility theory in the sense that individuals still seek to maximize benefit and minimize losses from a decision outcome. Prospect theory deviates from expected utility theory by the introduction of individual perceptions of benefits and losses changing the magnitude of expected outcomes being positive or negative. The difference of perceptions each individual holds brings a varying degree of value into the benefits and losses of an outcome (Kahneman & Tversky, 1979).

Critiques of the Rationality Model

The true rationality within human decision making based on simply optimizing benefits has been challenged and critiqued through social experimentation within the field of psychology. Psychologists have added that humans are not perfectly rational creatures and our choices go beyond simply rational optimization. The major concern of the rational-decision-making model is that it does not consider factors that are un-quantified, such as ethical concerns. The rational choice model also leaves out personal feelings, loyalties, or sense of obligation. A bias with a preference towards facts, data and analysis can be created by leaving out intuition or desires within the rational choice model (Polic, 2009). From the psychological perspective human decisions are influenced from factors such as; past experiences (Juliussen, Karlsson & Garling, 2005), personal biases (Stanovich & West, 2008), and individual demographics differences (Bruin, Parker & Fischhoff, 2007). Despite these psychological factors that can be viewed as non-rational traits to decision making, many scholars have not abandoned the rational decision making model, rather rational decision making has been adapted to a broader approach (Polic, 2009). Essentially the revised view of rational choice theory states that individual actors still base their decisions on the most optimizing outcome that is subjectively conceived under cognitive constraints (Sato, 2013). With the introduction of cognitive constraints into the decision making some scholars have abandoned the rationality model while others have continued to use it and further adapt the rational decision making model.

2.2 Cognitive Constructs of Decision Making

The following concepts build into the critiques of the rational decision making model addressing the subjectivity of what builds the construct of rationality from the individual perspective. The bounded rationality model is introduced followed by the cognitive constructs that build perceptions of how individuals view the world.

Bounded Rationality

To more specifically highlight the cognitive constraints of individuals within the rationality model, the bounded rationality perspective has been developed. Looking at the bounded rationality model individuals still base their decisions from optimizing benefit and loss with the exception that individuals are constrained within limited human cognitive capacity (Pramanik, 2016). This constraint on the human mind is influenced from various factors such as personal bias, overload of information, time, past experiences, etc... The constrictive cognitive factors that bound rationality also influence the extent of perceived scale of gains and loss from decision outcomes from within the individual context. For example, a person living in a major city next to a highway may place a lower negative value on added noise pollution from a new high speed train compared to someone living in a quiet rural community. This difference in perceived value on the equal amount of noise pollution could potentially be

influenced by varying contextual factors that individuals are exposed to that contribute to the building of their mental constraints. Essentially the value of a benefit or loss and even the perception of an outcome being beneficial or not is influenced by our cognitive capacity. Within bounded rationality the decision maker is still seeking the most beneficial outcome, but with the exception of being faced with the limitation of not fully understanding what is most beneficial due simply to being “human” or possessing cognitive limitations that allow us to understand who we are and what we think is best in the face of massive amounts of information with a limited amount of time to understand (Polic, 2009).

2.2.1 Social Identity

One way in which constraints have been conceived by individuals is through their social identity. Social identity is how an individual views both themselves and the world around them through personal beliefs developed through socialization (Aguilar; Francisco, 2009). Social identity also focus on intergroup relationships through how individuals recognize themselves within a group such as socio economic class or age groups (Tajfel, 1972). Sato connects social identity into the rational choice model by explaining how individual beliefs about the world and oneself influences the decisions people make. Social identity does not only affect the cognitive constraints of individuals, but can also influences decision making through reinforcing personal beliefs towards oneself or social group (Sato, 2013). It is argued that reinforcing of personal beliefs can serve as a motivating factor for political action such as voting for a specific candidate or participating in a community protest. The perceived benefit from the rational choice perspective to choose to take political action goes beyond just personal gain, but includes supporting a benefit or reducing loss to one's group in which an individual identifies with, such as a political party (Aguilar; Francisco, 2009).

2.2.2 Culture in Decision Making

An underlining concept that influences and constrains decision making is the culture of an individual and the society in which they live. Culture is a broad concept composed of a large number of definitions. Looking at a variety of definitions of culture the commonality of culture being something that is shared and learned by a group of people within the different content of traits such as; ideas, facts, knowledge, behaviour, beliefs, and norms can be identified (Birukou; Blanzieri; Giorgini; and Giunchiglia, 2010). Culture can be viewed as something that makes up everything we do and even define what we are or how we identify ourselves (Spradley; McCurdy, 1972). If culture is linked to how individuals define themselves along with how they perceived problems through factors such as beliefs, knowledge, and norms then it can also be inferred that culture plays an important role in decision making. This linkage of culture and decision making can be identified within the cognitive boundaries that make up the bounded rationality model (Kohun; Skovira 2011). Essentially similar to how social identity influences the constraints in rational decision making, culture plays a role in both determining an individual's social identity and how information is processed to evaluate decisions.

Culture in US Context

Car Culture

Within the US there are some dominant cultural aspects that are recognized to be deeply ingrained into both the general population and in laws or policies. The strong focus on the values of individualism with an emphasis on personal freedom is reflected and reinforced into the “car culture” of the US. This car culture can be defined by how a society is built around automobile usages from aspects of land use to pop culture and even social status. Car culture and individualism have been argued as a major contributing factor to the failure of private intercity rail and public divestment of mass transit in the 20th century (Meyer, 2014).

Political Culture

Political culture is shaped by the core values of individuals in a society influencing how people and their governments react politically and interact with one another. The core values of individuals is the key element that political culture is built upon. In the US some of the core values that develop the country's political culture include; democracy, freedom, small government, equality, free markets, and private property rights. As with the values of different individuals in any nation there is no perfect homogenous set of values held by a society, rather there are large variations of values held within in a society (Lipinski; Paletz, 1994). This list of values provided in the US context is only a framework of generalized views that have helped developed the US political culture through generations of social interaction.

2.2.3 Values

A key concept that helps to explain the extent of decision behaviour within various decision models is the concept of values. Values can be defined as criteria individuals use to understand events, people and actions. The criteria used by individuals place a level importance, worth, or usefulness on events, people and actions in the form of values (Schwartz, 2007). With rational decisions based on maximizing benefit and minimizing loss, researchers have acknowledged the significance in which the people's values influence perceptions of potential benefit and losses. The value placed on possible outcomes of a decision is something that varies differently for each individual decision maker based on a degree of factors such as cognitive constraints built upon one's own culture and environment that form perceptions of future outcomes (Bettman; Johnson; &Payne, 1992). How an individual expresses feeling towards something or a particular issue is influenced by particular individual values (Oyserman, 2015). Schwartz, recognizes ten basic values and their corresponding motivational goals into why an individual holds a particular set of values. In Chart 2.1 below Schwartz groups sets of similar values that fit into one of four categories that are likely to transcend into a particular interaction with another variable. For example, individuals there are recognized to have a high value of stimulation and self-direction are likely to be more open to change within the community (Schwartz, 2007).

Organized by
motivational similarities
and dissimilarities

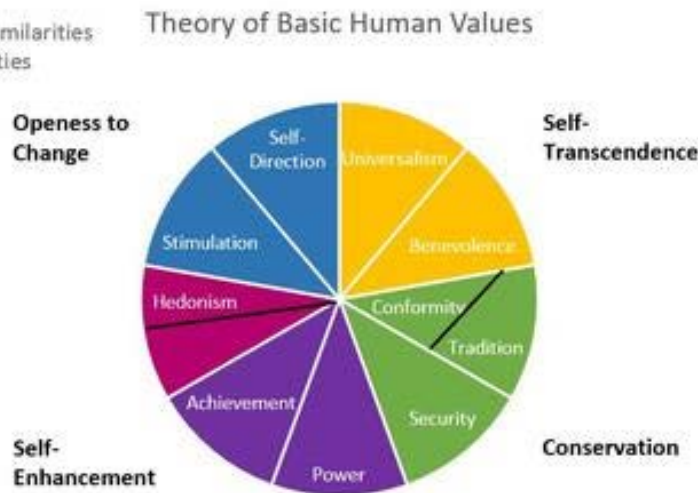


Chart 2.1 Basic Human Values

2.2.4 Past Experiences

Peoples past experiences in life serve as a basic cognitive reference point in predicting future outcomes in the world. This prediction of future outcomes as a basic perception directly correlates with past experiences. For example, someone who experiences a car accident will be more inclined to have a different perception of car safety in comparison to someone whom has experienced no car accidents. The person with the accident experience may have a greater likelihood to choose mass transit options over driving (Pramanik, 2016).

2.2.5 Perceptions in Decision Making

In looking at the interrelated cognitive constructs of culture, social identity, past experiences and values in which bounded rationality is built, perceptions are developed through the foundation of these psychological constructs. Perceptions, how individuals view the world, serve as a fundamental baseline into determining an individual's actions or how an individual will make a decision (Oyserman, 2015).

In this section the link between the cognitive constructs of culture, social identity, past experiences and values with individual perceptions is addressed. Also addressed is the underlying indicators that can help define and solidify the cognitive constructs in a measurable way.

In reviewing the definitions of culture, social identity, past experiences and values below similarities between all four definitions can be identified. These definitions are generated through a broad spectrum of academic lecture within the psychology perspective. The significance of this relationship to the concept perception is discussed further.

Culture:

Looking at a variety of definitions of culture the commonality of culture being something that is shared and learned by a group of people within the different content of traits such as; ideas, facts, knowledge, behaviour, beliefs, and norms can be identified (Birukou; Blanzieri; Giorgini; and Giunchiglia, 2010).

Social Identity:

Social identity is how an individual views both themselves and the world around them through personal beliefs developed through socialization (Aguiar; Francisco, 2009). Social identity also focus on inter group relationships through how individuals recognize themselves within a group such as socio economic class or age groups (Tajfel, 1972).

Past experiences

Experiences from the past that build how individuals infer the future and understand the world around them (Juliussen; Karlsson; and Garling, 2005)

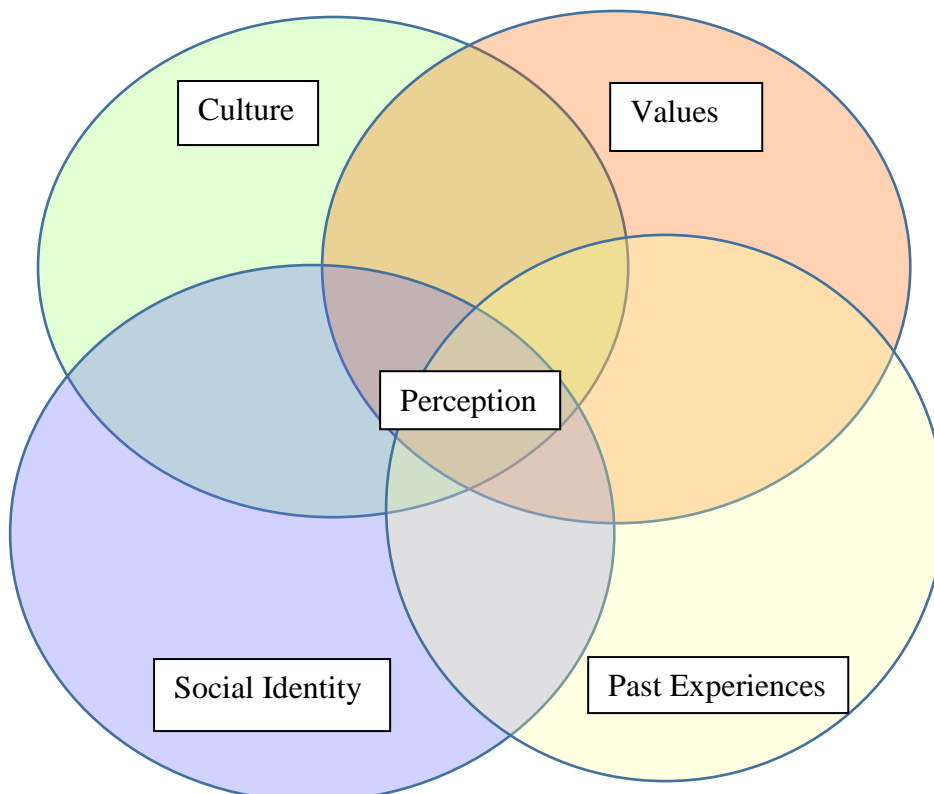
Values:

Values can be defined as criteria individuals use to understand events, people and actions. The criteria used by individuals place a level importance, worth, or usefulness on events, people and actions in the form of values (Schwartz, 2007).

Constructs of Perception

Observing the basic definitions used to define individual perceptions; culture, social identity, past experiences and values it can be recognized that all four concepts share a large degree of similarities. This common themes expressed is the idea of how individuals see and understand the world through some type of social context. How individuals see and understand the world concurrently serves as a fundamental definition to the concept of individual perceptions. The fluid commonality between the concepts of; culture, social identity, past experiences, values, and perception are illustrated in figure 2.1 below. Perceptions is placed at the focal point of the diagram where culture, social identity, past experiences and values come together in order to express the common idea of how individuals see and understand the world is shared by all the concepts.

Figure 2.1 Constructs of Perception



Why are the cognitive constructs of what bounds rationality used in this discussion to define and relate to individual perceptions and why is this relevant to the vary point of this framework? The answer is because perception is a key concept that is both developed through and shares similar definitions with the bounded cognitive constructs serving as a single simplified concept that helps to determine what an individual views as rationale. In making a decision through the traditional rational choice model the decision is solely based upon maximizing benefits and losses. With the application of “bounded constructs” in the rationality model the perception of what is viewed as a potential benefit or loss determines for the individual what would be a rational choice. In reviewing the cognitive constructs of individual perceptions the concepts are highly subjective and broad in nature. Faced with this limitation measuring cognitive constructs of a large number of individuals is difficult within time restrictions and is open to a high probability of unreliable data. In order to understand and measure some of the foundational constructs of individual perceptions and influential factors to decision making, objective individual characteristics are introduced as an independent variable.

2.2.6 Individual Characteristics

Individual characteristics were selected in this study to help indicate general perceptions of outcomes from the individual level. The main focus of this study is still understanding the relationship between perceived project outcomes and individual project support. However, many variables lie within the cognitive constructs of perception in which an assumption of these underlying variables can be related to having an effect on decisions towards the project. Because these underlying variables of cognitive constructs of perceptions has some level of effect on perception of project outcomes and thus project decisions, these variables are identified and addressed within this study.

Geographic proximity and location

In looking at individual's geographic proximity to an infrastructure project as a variable influencing perceptions and project decision, a mixture of results exists. In relation to rail projects, a very limited amount of literature exists correlating perceptions and geographic proximity. The topic of energy projects correlating proximity with perception and project support has been studied extensively yielding mixed results (Boudet; Bugden; Clarke; Leiserowitz, 2013). Despite this limitation in previous research with both lack of studies and inconsistency in correlating a relationship, the relevance of including geographic proximity as a variable still holds value. This relevance exists because an individual's proximity to the rail project will yield different outcomes or effects to the individual once the project is in operation. For example, an individual living in close proximity to the rail will experience some level of noise pollution, while another individual living a long distance from the rail will experience less or zero noise pollution. This type of scenario affected by proximity influences and helps explain the value of perceived outcomes for each individual.

Political Ideology

Political Ideology can be defined as a set of beliefs about how society should be built and the goals that should be prescribed to develop those beliefs (Erikson; Tedin, 2003) These views of how society should be composed and the means to achieve this composure is something that is socially developed from a shared framework (Parsons, 1951). Political Ideology is essentially a belief system developed through the values one holds in society in which are socially constructed within an individual's culture context and through one's own conceptual constructs. Generally the two main political spectrum's that are identified are conservative ideologies and liberal ideologies (Federico; Jost; Napier, 2009).

Length of Residence

Establishing a relationship between the length of time an individual lives in a community and perceptions has been evaluated within various fields. Length of residence affecting perceptions towards the community in which an individual lives has been identified to having a causal relationship (Beesley; Walker, 1990).

Occupation Status

An individual's occupation status can take on different meanings, in the context of this study occupation refers to whether an individual is employed, retired, or a student. There is literature supporting occupation status linking to the behavioural patterns of an individual. These behavioural patterns relate to decision making and the underlining constructs that influence decision making (Faunce, 1990).

Demographic factors

In evaluating research that correlates demographic factors within perceptions and decision making a significant amount of studies addresses this correlation to a large array of subject areas. Because there are a large number of demographic factors used to study perceptions within decision making, only the most prominent demographic factors were used for this study along with factors that are most relevant in the community context of the US. The demographic factors of age, gender, and socioeconomic status with their relationships to perceptions in individual decision making are identified in this section.

Age

The differences between the generations of individuals can be found with different values based through different cultures observed through past experiences that occurred during different time periods. For example, children that experienced the great depression in the 1930's were much more likely to hold stronger values of frugality and conformity compared to children that experienced more economic prosperity in the 1950's and 1960's. Essentially each age group generally holds unique past experiences within a variety of cultures of the past helping to shape individual perceptions (Jean; Keith, 2014).

Gender

There is strong evidence that supports gender differences within the individual decision making processes. This difference in decision making between genders can be linked through different life experiences developed through social norms that are applied on a societal level to individuals of different genders. These social norms applied to different genders have an impact on individual's views towards the world and how each person identifies themselves within society (Cardelle-Elawar; M, Sanz; L., Sanz, 2007).

Socioeconomic status

Socioeconomic status of individuals is used to measure the combination of economic and social status through the indicators of one's income, occupation and education (Baker, 2014).

Each of the indicators of one's socioeconomic status can have a profound effect on an individual's perspectives and decision making patterns. An individual of lower economic background (lower income level) is more likely to be more accepting of financially risky decisions that provide relatively short term benefits in comparison to one of a higher economic background. A correlation between income level and the perceptions of value of expected risk have been identified (Arvalho; Meier; Wang, 2013). Work experience or job occupation is

argued by some scholars to have an impact on decision making while other scholars refute to the contrary (Klein, 1999). Because of this argument between scholars the indicator of job occupation as a variable was omitted from this study. In looking at the relationship between education level and decision making there has been an impact identified through the measurable differences in cognitive abilities found in individuals that hold various levels of degrees. This deference can helped be explained not only through the different cognitive abilities, but also through one's experiences and socialization within their group of people of similar educational backgrounds (Klein, 1999).

2.3 Perceived Future Outcomes of Passenger Rail (Benefits and Loss)

The above theoretical knowledge provides a framework to the determinants of how individuals construct perceived rationality within decision making. In looking at one of the fundamental principles of rational decision making of maximizing utility or benefit, the general perceptions of benefits and costs in the context passenger rail projects have been identified in this section. Each of the potential outcomes to the community from the introduction of a passenger train line are also broadly defined within this section.

In 2015 Agrawal of the Mineta Transportation Institute compiled a set of 56 US public opinion polls into a report that asked respondents for their opinions towards public transit. In this report the perceived benefits of mass transportation used in U.S opinion polls that respondents typically agreed on include: reduction in road congestion, supporting a stronger economy, and reducing air pollution (Agrawal, 2015). Within a comprehensive literature review of the impacts of transportation, the issue of safety and noise pollution have been identified as the top concerns among a large array of potential impacts of mass transportation and passenger rail projects (Lucus; Markovich, 2011). The potential impacts from mass transit were aggregated into three sub variables that include; perception of economic, social, and environmental impacts to the community.

Economic Impact

The sub variable of perceived economic impact is based upon economic indicators relating to jobs, the general economy, tourism industry, land values, and rent prices. The implications of these indicators are described.

Improved access to infrastructure including intercity rail has a positive impact on national economic activity viewed from the macro level(Boarnet and Haughwout 2000, Chi, Voss and Deller 2006) Despite this positive economic activity created through improved infrastructure development the positive economic impact of intercity rail on the local level within the US context is less conclusive. Intercity passenger rail can be viewed as a “facilitator of change” meaning that the introduction of intercity rail will bring economic changes to the community and help to redistribute employment and population within a region. Due to a large variety of contextual factors that affect economic measurements the direct correlation between accesses to intercity rail and positive economic impact remain elusive (Guangqing; Kasu, 2015).

Land value impact

There is a significant amount of research available on the impacts of passenger rail and land values. Land values within close proximity to a new transit center often experience a rise in land value as increased commercial development and higher density residential housing commonly follows the development of rail stations (Guangqing; Kasu, 2015). Despite the ample amount of research completed between land values and passenger rail the impact on land values from intercity rail in the US context is very limited because there have been no new intercity rail projects in the past half century. In looking into the European context a correlation

between lower land values and noise pollution has been identified as each decimal of noise reducing housing values by 0.62% (Levinson, 2010).

Environmental impact

The common environmental concerns related to the introduction of intercity rail into the community are the introduction of noise pollution and the impact on air quality. The impact on the quality of life from the noise from high speed train movement from individuals within a close proximity to a rail corridor is a common concern and correlating reason for opposition to new transportation projects (Lucus; Markovich, 2011). In reference to the impact on air quality studies have acknowledged the positive effect on reduced air pollutants in direct correlation in situations in which car usages has been reduced due to the introduction of alternative transportation choices. Concerns in lower air quality and increase pollution rates however, have been identified in areas to close proximity of high frequency rail corridors (Luechinger; Schmutzler; and Rafael, 2013).

Social Impact

Two major impacts on a community from a major infrastructure project in relation to social issues is the topic of road safety and road congestion in relation to rail road at grade crossings. The implications of road safety and road congestion in relation to an inter-city rail project in the US context are described below.

Road safety impact

One of the main safety concerns involved with passenger rail lines within the community is the potential risk for accidents between pedestrians, cars and the passenger train. Where one of the greatest concerns of potential accidents exist is located at the rail at-grade crossings where cars and pedestrians cross the rail tracks. Despite the advancement in safety control systems on these at grade-crossings little is known in the US context about the safety implications of higher speed trains(177–201 kph) traversing these crossings in a high frequency since there are a limited number of higher speed trains in operation within the US (Levinson, 2010).

Road Congestion

In looking at the effects of introducing passenger rail on road congestion, the majority of research has concluded that the introduction of alternative travel choices will reduce the number of cars on the road. Despite this general finding there are still context specific cases in which the introduction of mass transportation may actually increase road congestion. For example mass transit options introduced into a rural community can actually increase the number of car users because people may move from less car dependent urban communities into rural communities due to the easy accessibility between the urban and rural area brought on by the new passenger rail line encouraging urban sprawl (Luechinger; Schmutzler; and Rafael, 2013).

Community

Because this study addresses decision making within the community the concept of community needs to be defined and contextualized. Community has hundreds of definitions and is used in a wide array of study areas. Researchers use the concept of community in a broad area of study, further expanding upon the common set of definitions provided for community. In order to select a more precise definition that fits the relevance of this study, defining community within the sociology perspective has been approached. Classic American sociologist recognized some commonalities in defining the concept of community through the many definitions already

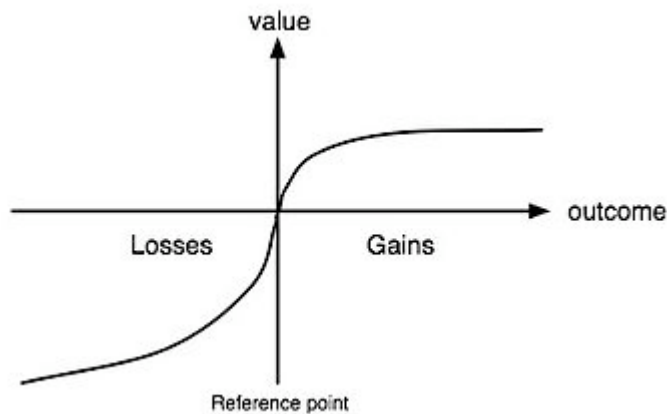
established in the middle of the 20th century. Goerge Hillary Jr (1955) recognized three major commonalities in the definitions of community: common element of area, common ties, and social interaction. People in a specific area that share common ties, and interact with one another. This general sociological definition of community defines the community broadly and leaves flexibility for further sub definitions that can be utilized for more specific study areas within sociology (Albert Hunter 1975 538). Patrick and Wickizer (1995) expand further on this classic sociological definition of community as the following: “1) Community as place, notably a geographically bounded location; 2) Community as social interaction, in which social networks and social supports are crucial; 3) Community as political and social responsibility, involving political and social motives in the formation of communal groups”. Using the three elements of place, networks, and social interaction community can be defined as; A network of broad interaction within the politically defined and geographically scaled boundary of a municipality or city.

Conclusion

How individuals make decisions from the rationality perspective can be explained through the motivation of gaining the best future outcomes whether it be for a group or an individual (Aguilar; Francisco, 2009). The understanding of what is perceived as a benefit to an individual can be understood through the cognitive constraints built upon values, culture, past experiences, social identity and the community in which people live.

In looking at the possible benefits and losses towards passenger rail in the US, researchers highlight benefits and losses as key arguments for the strengths and weakness towards high speed rail. The goal of this literature review was to define relevant concepts that build perceptions in which bound rationality in rational decision making towards expected outcomes of a future rail project. To further conclude the context of this literature review the concept of perceived project outcomes relationship towards individual responses to the project is illustrated below (Figure 2.3) through the context of the prospect theory model. The prospect theory model below illustrates the bases of rational decision making in which individuals build decisions upon achieving the outcome with the highest level of benefit (Kahneman &Tversky, 1979). The prospect theory model is applicable to this study through expressing the significance maximization of benefits on decision making. How the extent of benefits and losses of decision outcomes are determined is through an individual’s own personal perceptions (Oyserman, 2015). Because perceptions play an important role in decision making, the value or reference point of each individual in figure 2.3 is interpreted as the perception of benefit or loss of each decision maker. This can be applied to this study through perceived project outcomes as individuals will enter the model at a different reference point (Y axis) effecting the extent of perceived loss or benefit of the project. This modal looks at the relationship between perception of future outcomes and project support from a rational perspective, with cognitive constructs reflected through an individual’s characteristics affecting the “perception” in where an individual enters the model on the Y axis.

Figure 2.3 Prospect Theory Model



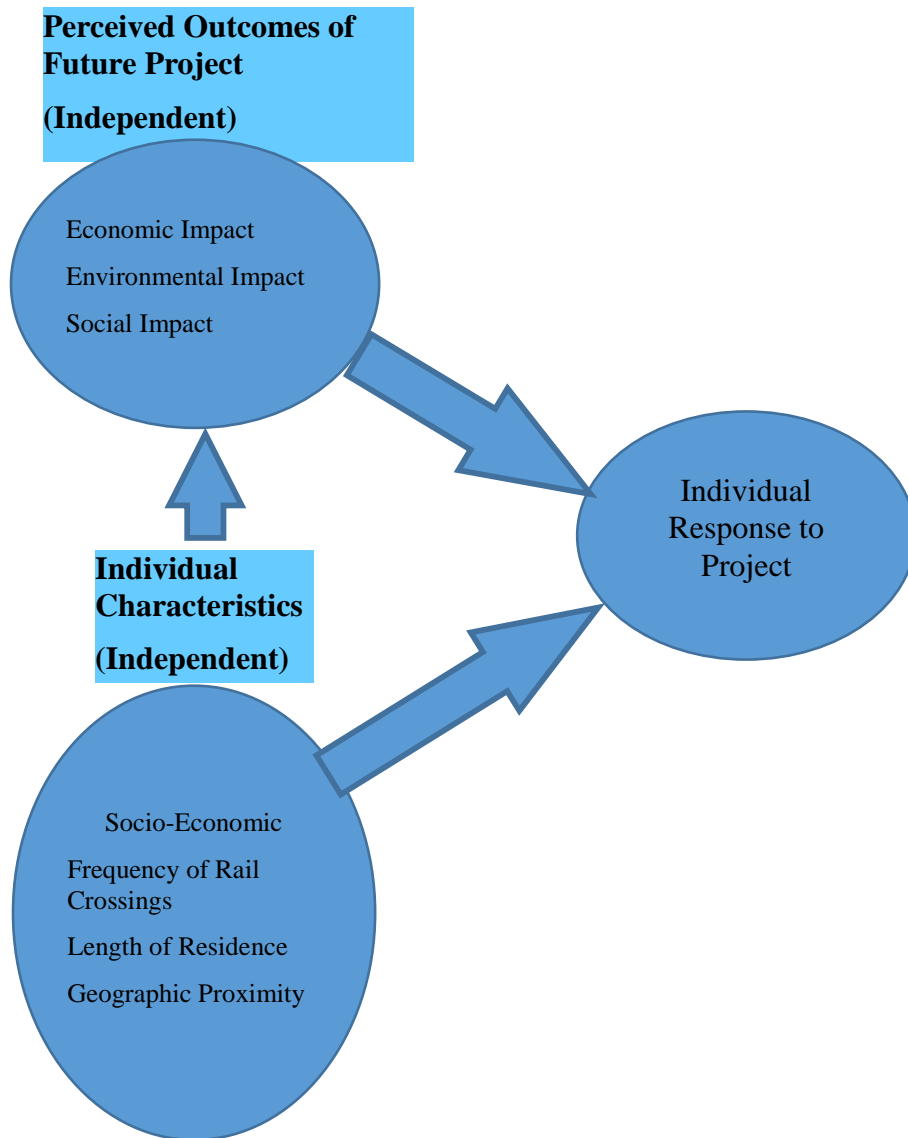
2.4 Conceptual Framework

The conceptual framework below includes one dependent variable and two independent variables. The dependent variable used is individual response to future project and the two independent variables used include perceived outcomes of future project and individual characteristics. In addition to being an independent variable perceptions of project impacts is also treated as an intermediate variable within this framework. Response to future project was selected as the dependent variable in order to measure the level of project support for each individual as a decision outcome. Perceived outcomes of the future project was selected as one of the independent variables with the goal of measuring the level of expected benefits and losses of the project to both the community and the individual survey respondent. Because this study adapted the rationality approach the influence of maximizing benefits and loss are significant in influencing decision outcomes (Aleskerov, 2005). Through gaining an understanding of what survey respondents view as a potential benefit or loss of the project (project outcomes) the research goal of explaining factors influencing individual support or opposition was established through perception of project outcomes as a factor. “Perceptions” are used within the independent variable due to the measurability of how individuals perceive future outcomes and the significance of perceptions in decision making. Despite perception being used within the independent variable and being measurable, perceptions are subjective and are highly influenced through individual bias (Bahamonde-Birke; Uwe Kunert; and Ortúzar de Dios 2015).

The independent variable of individual characteristics is introduced within this framework in order to address the bias within perceptions and as another factor that has an influence on decision making within the main research objective. Individual characteristics are more objective in nature in relation to perceptions while also identifying differences in individuals that affect decision making (Bowditch; Buono; and Stewart 2008). It is important to note that this model omits the direct cognitive constructs of perceptions focusing on objective individual characteristics as an alternative. These individual characteristics are used to provide a further understanding into the perceptions of outcomes as part of the cognitive process of building perceptions. The four cognitive constructs of culture, values, past experiences, and social identity are difficult to measure for each individual due both in part to the ambiguity of the terms and large similarities in definition. Despite using individual characteristics in this study in understanding perceptions a limitation is introduced through the omission of the four

cognitive constructs of perception through a lack of in depth understanding into how perceptions towards the project outcome are constructed.

Figure 2.4 Conceptual Framework



Chapter 3: Research Design and Methods

3.1 Chapter 3

This chapter operationalized the research strategy and concepts into a measurable study.

How the data was collected and analyzed was also explained within this chapter.

3.1 Revised Research Question

After conducting the literature review the main preliminary variables and research questions have been adjusted in order to better reflect the literature while allowing for a more cohesive definition of relationships established between variables. The adjustments made to the preliminary research question is expressed below:

Which **factors** explain **individual responses** towards the Brightline rail project?

Research sub-question:

To what extent does perception of project outcomes influence individual responses towards the Brightline project?

To what extent do individual characteristics influence the decision towards the project?

To what extent do individual characteristics and perception of project outcomes control individual decisions towards the Brightline project?

3.2 Operationalization: Variables, Indicators

Within the tables below the main variables, sub-variable, indicators with definitions and values are outlined. The dependent variable, individual response to the project, is first introduced followed by the main independent variables of perceived project outcomes and individual characteristics of each survey respondent. The independent variable of perceived outcomes of the project is divided into the five sub-variables of; road congestion, economic impact, environmental impact, land value impact, and safety impact. These five sub-variables serve to gauge each individual evaluation of perceived outcomes of the future project. The independent variable of individual characteristics is made up of eight different characteristics. These eight characteristics are used as both control variables and as factors that provide a deeper unit of analysis for each survey response. In defining the indicators within the tables below through the definition column, the language that is described in academic nature is reflected more simplistically when presented to community respondents.

Dependent Variable	Indicators	Definition	Values
Response to Project	Level of project support	Degree of individual's support of the project	Measured through 5 point Likert scale with ranges, 1 "Strong support" and 5 "strongly oppose" Support Oppose No opinion
	Decision towards the project	Individual opinion towards the project.	
	Neutral	Neither support or oppose the project	

Independent Variable	Sub-Variable	Indicators	Definition	Values
Perceived outcomes of future project	Economic impact	Number of Job's created	New jobs created within the community from rail activity	5 point Likert scale; "High Economic Growth/Increase" impact 1 and "High Loss" 5
		Number of tourist	Potential increase or decrees in amount of visitors	5 point Likert scale; "High Economic Growth/Increase" impact 1 and "High Loss" 5
		Level of land value Change in rent price	Overall effect on property values within the community	5 point Likert scale; 1 Significant increase in value 5 Significant decrease in value
	Environmental impact	Level of noise from trains	Degree with how much noise pollution will impact the community	5 point Likert scale; 1) Very high noise 5)No noise
		Amount of Air Pollution	Degree on the effects of community air quality in relation to the reduction of cars and from high	5 point Likert scale; 1) High Reduction 5) High Increase
	Social Impact	Frequency of accidents with train	Frequency of accidents that might happen from collisions between trains cars, and pedestrians	Number of accidents per unit of time: Once a month Once a year
		Amount of cars on the roads	Degree of how the project affect road congestion through amount of cars on the roads	5 point Likert scale; 1 "significantly increase" road traffic and 5 "significantly reduce" road traffic
		Traffic delays from at-grade rail crossings	Degree on the effects of community air quality in relation to the reduction of cars and from high number of diesel power trains	Amount of time in traffic daily

Independent Variable	Sub-Variable	Indicators	Definition	Values
Individual Characteristics	Geographic Proximity to Rail	Physical distance to rail	The distance that an individual lives in relation to the project rail line	Less than ½ mile
		Zip code		½ to 1 mile 1 to 2 miles Greater than 2 miles Don't know
	Political Ideologies	Political party identification	Which political party someone most closely identify self with	Party: -Republican -Libertarian -Democratic
	Socio-Economic Factors	Age	Belonging to an age group	Less than 24 25-34 35-44 45-54 55-64 More than 65
		Gender	Gender of an individual	Male Female
		Income	Belonging to an income group	Less than \$15,000 \$15,000-\$29,000 \$30,000-\$44,000 \$45,000-\$59,000 \$60,000-\$74,000 \$75000-\$89,000 Over \$90,000
		Education	Education background	-Some High School -High School Degree or GED -Some type of College Certification -Bachelor's Degree -Master's Degree -Doctoral Degree -Other

Independent Variable	Sub-Variable	Indicators	Definition	Values
		Occupation	Primary occupation that an individual holds at current time	-Student -Retired -Employed full time -Employed part time -Self employed -Homemaker -Other,
	Length of Residence	Time living in Community	Amount of time(Years) that an individual lives in the community Only place of residence/season resident	Less than (1) year (1) to (5) year(s) (6) to (10) years (11) to (15) years Greater than (15) years -Full time or seasonal
	Frequency of Rail Crossings	Number of times individual crosses the rail tracks	The number of rail crossings over a set amount of time	Everyday About Once a Week About Once a Month About Once every six Months About Once a Year About Every five years About Every Decade Never

3.3 Research strategy

This study aimed to gain insight into a large variety individual perceptions towards the potential effects of an intercity rail project as perceptions have significant affect in decision making (Bowditch; Buono; and Stewart 2008). Finding the perceptions of project outcomes was also key in this research based on the literature review that individuals seek a maximum benefit in decision outcomes (Kahneman &Tversky, 1979). The survey method was selected in order to measure individual perceptions of future project outcomes that had potential effects on decision making. Through using the survey method the relationship between variables were able to be quantified. To generalize individual perceptions of the project in relation to project support, a large number of responses was needed in order to adapt the results of this study to a broader context and make generalizations about the population within the project area. Because the concept of perceptions is abstract and psychological in nature several interviews with key informants were conducted in order to gain a more in depth analysis of the survey results. Also the survey method was used over other data collection methods because more objective responses in relation to individual characteristics could be gathered for a large number of respondents within a short amount of time.

In observing the variable of perceived future outcomes, the likelihood of individual biases having an influence on responses has significance because the questions are opinion based in nature and related to a project that is controversial in the communities in which this study takes place. In order to understand the root of response bias and the extent of the relationship between bias and responses, proxy questions and individual characteristics were introduced within the survey and analyzed. An example of a bias based on a unique attribute of an individual would be the relationship between an individual owning properties in close proximity to the proposed rail line. The two variables of property ownership and proximity to the proposed project likely amplifies the significance of land value impact in comparison to other perceived future impacts through the personal financial stake that this individual property owner faces. Knowing whether an individual owns property is evaluated through a proxy question while proximity of rail is known through both a proxy question and as an individual characteristic.

3.4 Data Collection Methods

Sample Size

The target group for the sample of this study is any adult resident of the Florida counties of Bravard, Indian River, St. Lucie, and Martin. Based off of 2010 census data the combined adult population (18 years+) of the four counties is 884,303 out of a total population of 1,105,513. This study aimed for a representative sample size out of the 884,303 adult residents from the four counties. The optimal sample size is 383 responses in order to achieve a confidence level of 95% and a confidence interval of 5%.

The reasoning for the section of the four counties listed above is because the counties contain the communities that are in both close proximity to the rail project and are in between the large metropolitan regions of Miami and Orlando. The broadness of the sample area to include counties for the study rather than specific municipal or city boundaries was also selected to include more diverse communities that contain a larger diversity of characteristics. Due to the ambiguity of city boundaries in the region and low density makeup of the region, community's identities and non-political boundaries are difficult to define within specific municipal borders. Because of this counties provide a more reliable geographic unit of analysis that better encompass the communities impacted in the study.

The questionnaire was used to collect quantitative data. The quantitative data collected for perceived outcomes of the project are qualitative in nature but is quantified using Likert scale questions. In order to bring about a more in depth understanding to the data, unstructured key informant interviews were introduced into this study as a supportive measure to help address the complexity of individual perception within the context of a major infrastructure project within Florida communities. As a follow up to the questionnaire and open question is placed at the end in order for respondents to express a more in depth personal insight towards any aspect related to the project. The key informant interviews were unstructured and informal in nature. The key informants that were used in the study include:

- An Employee from the city government of Cocoa FL that had a strong understanding of the community conflict related to the project.

- Informed business owners within close proximity (Less than 1 mile) to project rail road crossings.

The Survey

The survey was developed using the online survey platform Google forms. The survey was administered through the mixed mode methods in which the same survey was given in both online and print format. For both media formats of the questionnaire the random sampling method was used.

To achieve better reliability, the questionnaire underwent a pilot period before being published online. For the online questionnaire, community Facebook groups were approached within the project study area. The online survey method was introduced in order to reach out to a large number of respondents in a fairly large and sparsely populated geographic region. The survey was posted to each community page with a short description of the project along with a link to the survey. Respondents through Facebook we're also encouraged to share the survey link with other community members. Facebook groups within communities that had the closest proximity to the rail line were given priority in contact.

Additionally, to the online method, a paper survey was distributed in the Brevard county towns of Cocoa and Melbourne. These towns were selected due to the mixed support and opposition of the project from community members in comparison to other areas. The paper survey was introduced to help supplement respondents of the online survey that may not be active on Facebook, have online access, be a member of a community association, and simply would not volunteer for an online survey. The paper survey was a self-administered survey in which the questionnaire was distributed to respondents and then retrieved at a later time in the day. Both the online and paper surveys were distributed through the self-administered method in order to strengthen the confidentiality of responses, due to the controversial nature of the study. Questionnaires were distributed to whomever was working in each shop in the downtowns of both Cocoa and Melbourne. The questionnaires were only administered to

individuals that agreed to participate in the study and had some knowledge of the project within the community.

3.5 Data Analysis Methods

The data generated from the online questionnaire was downloaded and integrated into a spreadsheet document before being coded into the statistical analysis tool of SPSS. Both the independent and dependent variables underwent descriptive and inferential statistical analysis in order to answer the main research question and sub-questions. Descriptive analysis of the variables explained the decision of individuals towards the independent variables by analyzing the perceptions of the project. The dependent variable, response to project, is quantified and explained through the aggregation of survey results inputted into a descriptive analysis. Through the descriptive analysis the summery of responses from the survey are presented along with general relationships found between variables through the summery of responses. The descriptive analysis describes how each independent variable influences the dependent variable. This relationship was analyzed through both a cross tabulation between the IV'S and DV along with a measure of association through the Chi Square test.

Inferential statistical analysis were used to explain the extent of relationships between the IV's and DV. The extent of the relationship between perceived project impacts and level of project support was visualized and expressed through a linear regression modal. The multinomial logistic regression modal was used to explain the relationship between individual characteristic along with the interaction between individual characteristics and decision towards the project.

Chapter 4: Research Findings

Within this chapter an overview of the project study area is introduced within the context and history of passenger rail. Followed by this overview of the study area a descriptive explanation of the sample and the survey results are revealed. These results also show the correlation or basic relationship between Individual characteristics and perceptions with individual response to the project indicating a varied distribution of data for further analysis.

4.1: Introduction to Study Area

Nestled between the metropolitan areas of Miami (pop 5.6 million) and Orlando (pop 2.8 million) lay the communities that make up Brevard, Indian River, St Lucia, and Martin counties (US Census Bureau, 2010). These communities share a strong bond through the development of transportation with the original founding of many towns through the construction of Henry Flagler's rail road in what was once a coastal wilderness to launching the first man on the moon from the Kennedy Space Center in Brevard County. The four counties within this study are either part of the nicknamed regions known as the "Space Coast" from the presence of NASA or the "Treasure Coast" due to the large amount of wrecked merchant ships from the Spanish period. The vast majority of the population of the communities within the study area are aggregated together along the main transportation routes of Florida East Coast Railway (FEC), interstate 95 and the Atlantic Ocean.

The communities within the study corridor are low density in nature with large sprawling developments, beach side towns and "rail road towns" originally developed by oil tycoon Henry Flagler's (FEC). Tourism has remained a major industry in the area due to the extensive beach frontage within a year round warm climate along with the historic rail road towns that contain walk-able shopping districts that are a rarity in the vast sprawl of subdivisions that make up the majority of Florida.

In 1968 during a period of many railroads facing bankruptcy in the U.S, (FEC) stop all passenger rail service in the area moving to operating only freight service that has continued to present day. Currently for regional and local transportation the communities within the four county study area rely almost 100% on cars for transportation. In more recent years the region and the state of Florida as a whole have been faced with the prospects having a new high-speed rail line. In 2000 Florida voters approved a new amendment to the state constitution that established a high speed rail authority that aimed at connecting the major cities of Florida. By 2003 the authority conducted studies and established proposed routes, including a connecting route through the project study area. Despite progress towards high speed rail development funding for the project and the amendment attached to the Florida constitution was vetoed and



Image one: Melbourne Florida

Source: Author

removed by than Governor Jeb Bush citing reasons of high cost to tax payers and project risk. In 2009 under the American Reinvestment and Recovery Act, the Orlando to Miami corridor was selected as a high speed rail corridor by the federal government. By 2010 the region became eligible for \$1.25 billion dollars in federal funds towards the state high speed rail project. In the following year Florida Governor Rick Scott rejected federal funds for the project and once again canceled high speed rail plans in the region citing high risk and high cost to the tax payers once again. Shortly after this second failed attempt to bring about government funded high speed rail, FEC announced plans to implement a private



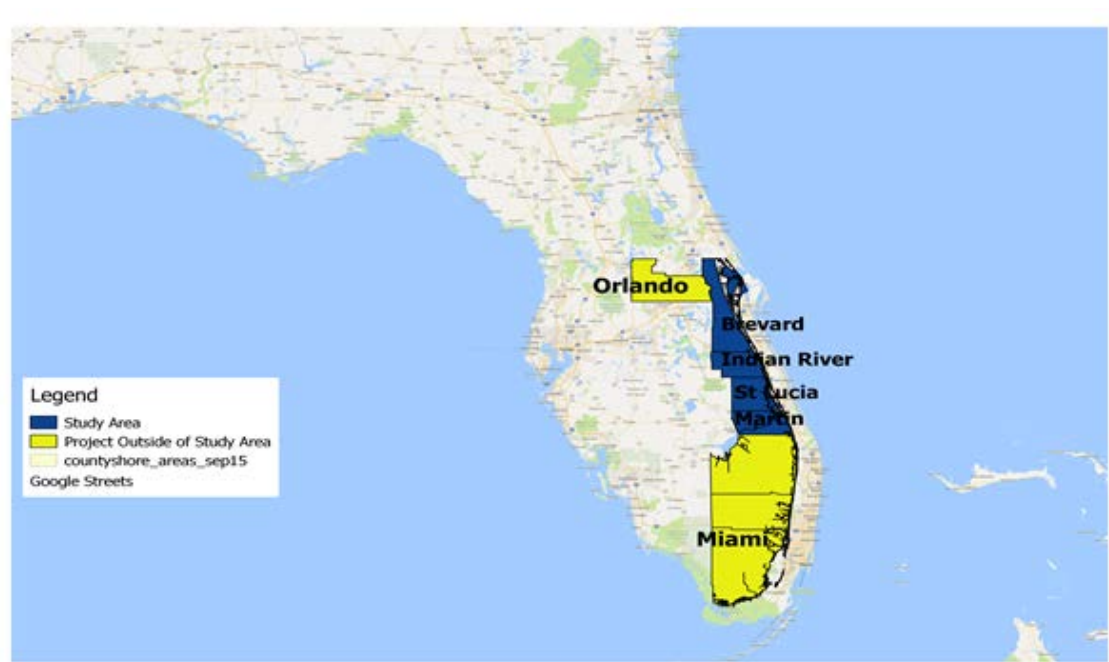
Image Two

Indian River County

passenger rail project along their currently owned property. FEC founded a subsidiary firm now known as All Aboard Florida, with the current project and operator of rail services being branded as Brightline. Currently the project has made greater progress toward implementation compared to other US inter-city rail projects, with the completion of the environmental review process along with station and rail construction in progress.

Despite progress made towards completion, opposition towards the project has brought about delays. The majority of project opposition has been centered from mostly within the project study area. In looking at the Project Study Area in figure 4.1 this study focused on evaluating the blue region of the four county study area. Within south Florida (Miami labeled yellow) the project is being launched as phase one by the end of 2017.

Figure 4.1 Project Study Area



Source: Author

4.2: Overview of Respondents

In looking at the respondents of the questionnaire 245 valid responses were collected that meet the criteria of adults living within the four county project study area. With the valid responses collected 39 were through the paper questionnaire and the remaining 206 responses were through the online questionnaire. The number of responses of 245 fell short of being statistically representative of the population sample of 884,303 adult residents from the four counties to reach a confidence level of (95%). However, despite this limitation an adequate number of responses was obtained to conduct a valid statistical analysis between the variables to answer the research question through providing deeper insight into perceptions from the individual level towards a major infrastructure project. Listed below in this section of the chapter is a brief description of select characteristics of respondents with visual representation through pie charts and tables. In addition to respondent's characteristics is a description of the relationship between individual characteristics and the decision towards the Brightline project through general correlation tables.

4.2.1 Decision Towards the Project

Looking at the decision towards the project (57.96%) of respondents in the survey opposed the project, (33.88%) supported the project and (8.16%) of respondents had no opinion towards the project. The majority response of opposition towards the project reflects to the fact that the majority of community governments within the project study area officially opposing the project in its current form.

Chart 4.1: Decision Towards the Project

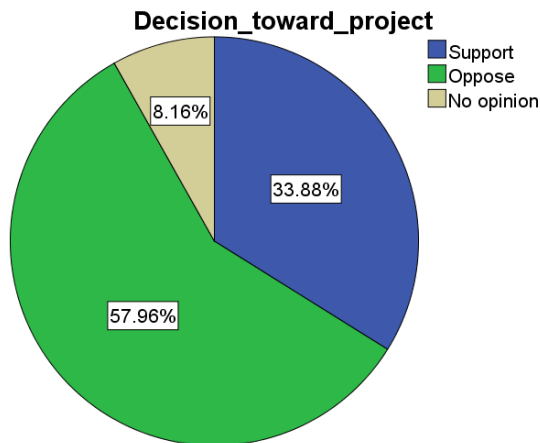
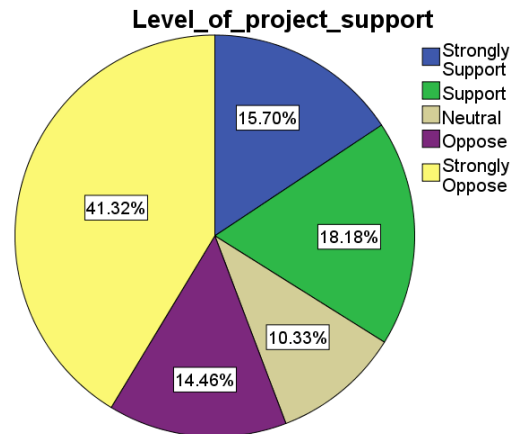


Chart 4.2 Level of Project Support

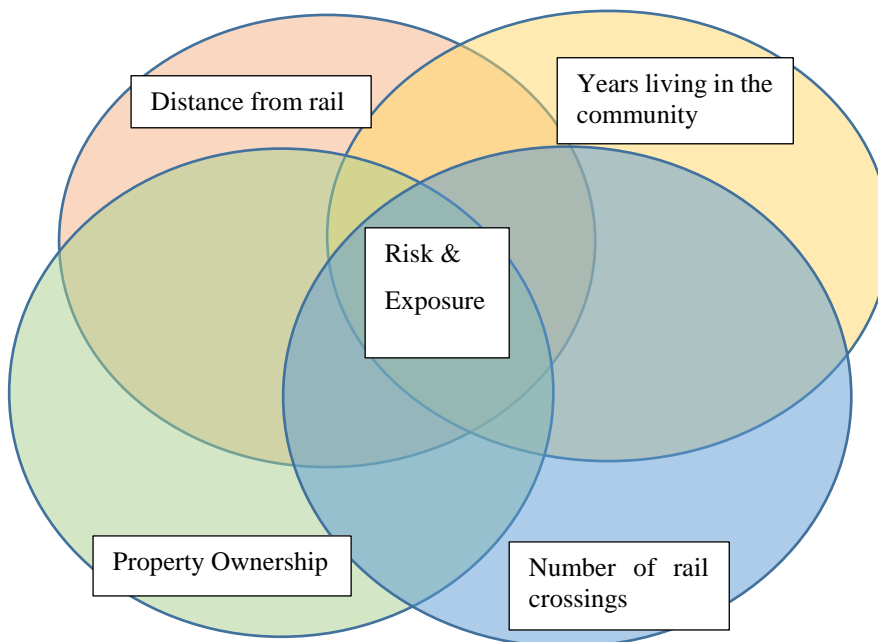


In braking down the level of project decision in level of project support, respondents answered to a clear majority of strongly opposing the project with (41.32%) strongly opposing. This high level of strong opposition in comparison to moderate opposition can be partially explained through the strong controversy surrounding the project. Examples of the intensity of opposition from some respondents can be identified through some general comments towards the project sourced from the questionnaire: “Total scam, totally against it.” “This is a boondoggle a farce” “It will devastate the TREASURE COAST.” Conversely supporters for the project are more divided in the level of support with (15.7%) of respondents strongly supporting the project and (18.18%) of supports moderately support the project.

4.2.2 Risk and Exposure to Current Railway and Future Project

In order to condense variables and provide a further relevance to this study in reference to individual characteristics a new variable was computed that encompassed someone's risk and exposure to the project. This new variable labeled as “risk and exposures” was described as the level that an individual is exposed to the project effects and to what degree they have a personal stake in the community. Exposure and risk as a variable was computed through the combination of; “Number of rail crossings”, “Distance from rail”, “Property ownership”, and “Years living in the community”. Chart 4.3 highlights how the relationship of these four indicator come together to form the common indicator of risk and exposure. In computing this new variable average weighted scores based on percentile groups were calculated through the mean of level of risk and exposure. The two top percentiles were combined to form “high risk and exposure” while all other means were combined to form “low risk and exposure”. To gain an in depth oversight of the respondents the descriptive of the four combined variables are presented separately. Following further analysis only the computed variable of risk and exposure was studied.

Chart 4.3 Risk and Exposure



In viewing the relationship of respondents with the current (FEC) tracks in distance from rail, an aggregation of (65.76%) of people knowingly live within 2 miles of the (FEC) tracks. In looking at the number of times individuals cross the (FEC) tracks the largest percentage of respondents, (43.67%) cross the tracks more than twice a day. This indicates a high interaction between community members and at grade rail crossings. This high rate of rail crossings induces the possibility of significant level of experience in traffic at train crossings or experiencing environmental impacts from the train from most respondents.

Chart 4.4 Distance from rail

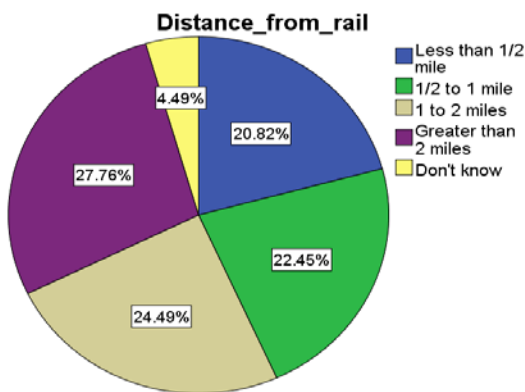
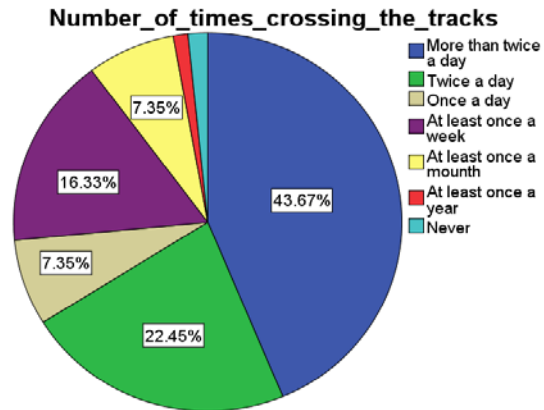


Chart 4.5 Frequency of crossing tracks



Property Ownership and Years Living in the Community

Chart 4.5 shows that (84.23%) of respondents own property within the project study area while (15.77%) of respondents rent property. The (84.23%) of respondents owning property have a higher financial stake or risk from the project if it were to impact property values in the future. For the amount of years individuals have lived in the community an aggregation of about (65%) have lived in the community for six years or more. These individuals have a greater exposure to any project impacts because they have more time, money, ext... invested into the community.

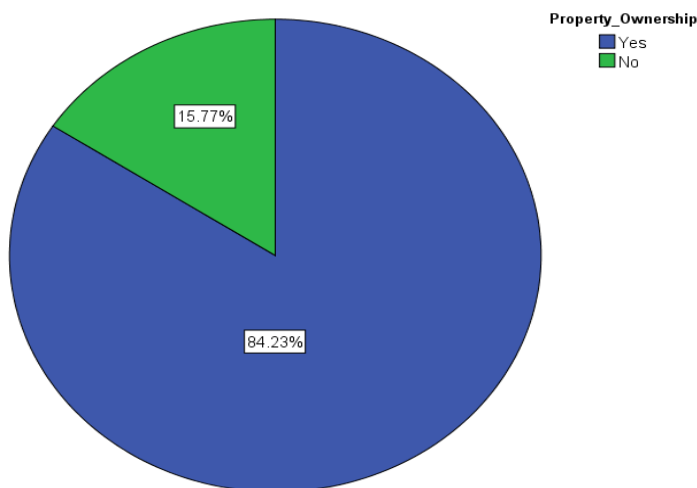


Chart 4.6 Property ownership

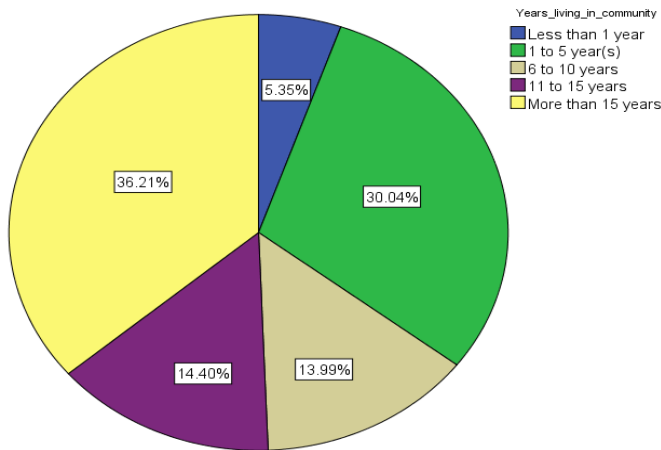


Chart 4.7 Years living in community

In the combined variable of Risk and Exposure (40.1%) of respondents had a high level of risk and exposure while (59.83%) of respondents had a low risk and exposure.

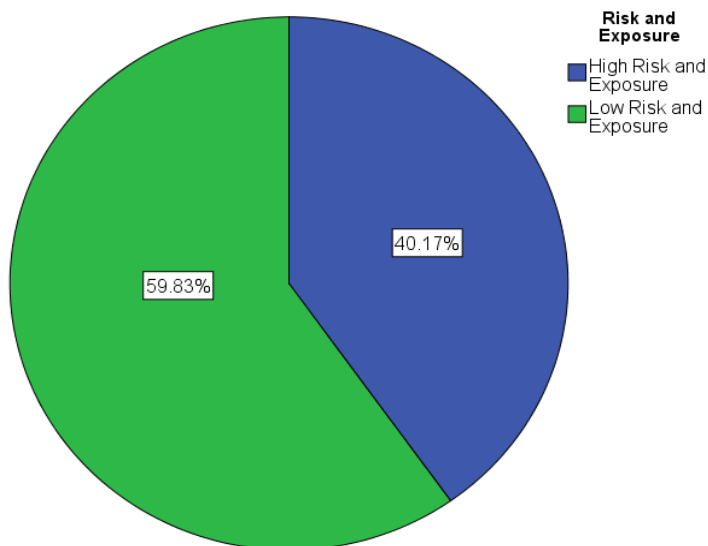


Chart 4.8 Risk and Exposure

Risk and Exposure & Decision Towards the Project

In viewing a cross tabulation between risk and exposure and the decision towards the project a strong relationship can initially be inferred through comparing the percentages of support and opposition between high and low levels of risk and exposure. For respondents that had high risk and exposure (22.9%) supported the project, while (76%) opposed the project representing a (53.1%) greater level of opposition. Respondents with low risk and exposure (41.3%) supported the project, while (46.9%) opposed the project representing a (5.6%) greater level of opposition.

Decision Towards Project * Risk and Exposure Crosstabulation

% within Risk_and_Exposure

		Risk and Exposure		
		High Risk and Exposure	Low Risk and Exposure	Total
Decision Towards Project	Support	22.9%	41.3%	33.9%
	Oppose	76.0%	46.9%	58.6%
	No opinion	1.0%	11.9%	7.5%
Total		100.0%	100.0%	100.0%

Table 4.1 Decision Towards Project & Risk and Exposure

4.2.3 Demographic Characteristics

Some general demographic characteristics were gathered through the questionnaire in order to provide further insight into the individuals of the study and to serve as control groups within the relationship of both (IV's) of individual characteristics and perceived outcomes of the future project with the (DV) individual response to the project. These relationships between demographic characteristic and project support are also graphically described within this section.

Age

In looking at the age distribution of respondent's ages of 55+ were most prominent within the survey with (39.5%) being ages 65 and older along with (18.52%) of respondents being ages 55 to 65.

In evaluating the relationship between Age and decision towards the project a general trend can be viewed with higher opposition for older age groups. This trend can be inferred despite age less than 24 having 100% opposition because only two respondents are ages 24 or less.

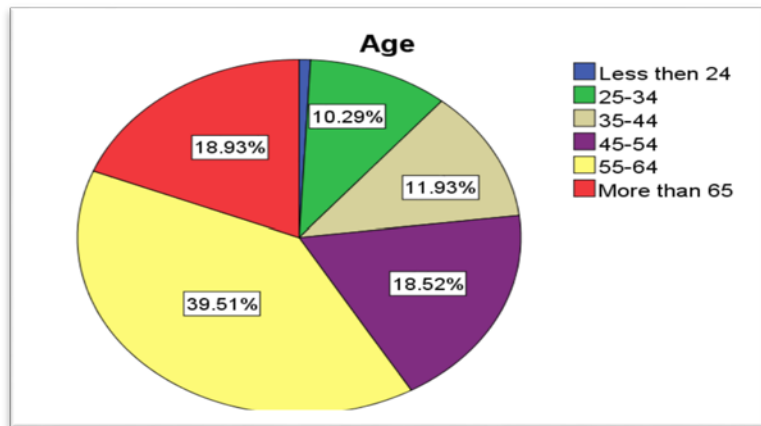


Table 4.2 Decision Towards Project & Age

Decision Towards Project * Age Crosstabulation

% within Age

		Age						Total
		Less than 24	25-34	35-44	45-54	55-64	More than 65	
Decision Towards Project	Support		32.0%	55.2%	37.8%	33.3%	21.7%	34.2%
	Oppose	100.0%	44.0%	37.9%	53.3%	59.4%	76.1%	57.6%
	No opinion		24.0%	6.9%	8.9%	7.3%	2.2%	8.2%
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Gender

For gender a very high proportion of females provided valid responses with (69.03%) females and (31.97%) male respondents. In looking at the relationship between gender and decision towards the project a higher proportion of males support the project with (41.0%) supporting compared to (30.7%) of female support representing a (9.3%) difference in project support between genders.

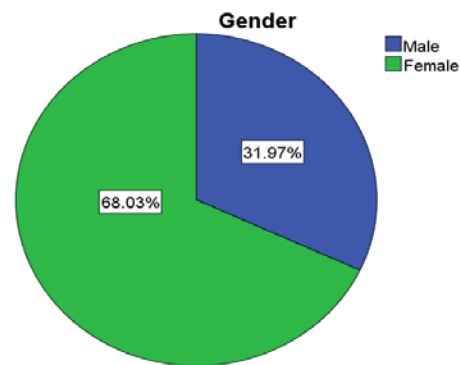


Chart 4.10 Gender

Decision Towards Project * Gender Crosstabulation

% within Gender

		Gender		Total
		Male	Female	
Decision Towards Project	Support	41.0%	30.7%	34.0%
	Oppose	52.6%	60.2%	57.8%
	No opinion	6.4%	9.0%	8.2%
Total		100.0%	100.0%	100.0%

Table 4.3 Decision Towards Project & Gender

Employment Status

In looking at the employment statues of the sample the largest proportion of respondents were either retired (33.47%) or employed full time (33.05%). The high number of retired individuals in this study relates to the high number of individual's ages 55+ that responded to the questionnaire and the demographic trend of the study area of having a high proportion of retirees.

With the relationship between employment statues and decision towards the project retired respondents had the highest proportion of opposition with (66.3%) of retired individual opposing the project. Individual's employed part time was the only employment group to support the project with (47.1%) of individual employed part time supporting the project.

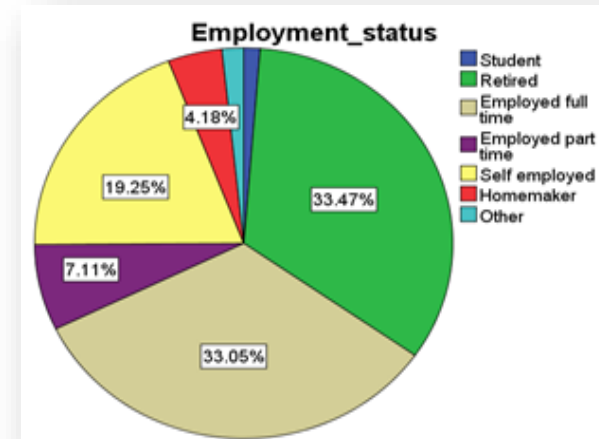


Chart 4.11

Employment Status

Decision Towards Project * Employment status Crosstabulation

% within Employment_status

		Employment status							Total
		Student	Retired	Employed full time	Employed part time	Self employed	Homemaker	Other	
Decision Towards Project	Support	66.7%	31.3%	40.5%	47.1%	30.4%	10.0%		34.3%
	Oppose	33.3%	66.3%	49.4%	35.3%	63.0%	80.0%	50.0%	57.7%
	No opinion	.00	2.5%	10.1%	17.6%	6.5%	10.0%	50.0%	7.9%
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4.4 Decision Towards Project & Employment status

Income

For the income of respondents a fairly even distribution of income groups were found. The largest portion of respondents earned on average of \$90,000 dollars or more per year before taxes while the smallest income group earned less than \$15,000 dollars per year before taxes. In looking at the relationship of income and decision towards the project no significant trends could be identified.

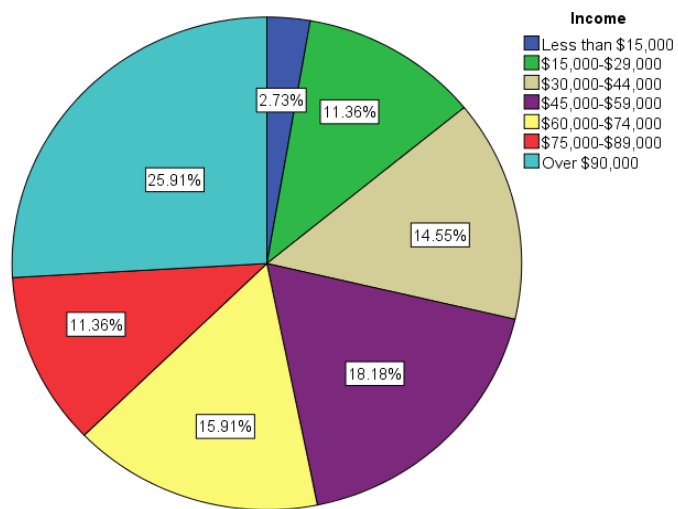


Chart 4.12 Income

Decision Towards Project * Income Crosstabulation

% within Income

		Income							Total
		Less than \$15,000	\$15,000-\$29,000	\$30,000-\$44,000	\$45,000-\$59,000	\$60,000-\$74,000	\$75,000-\$89,000	Over \$90,000	
Decision Towards Project	Support	16.7%	28.0%	46.9%	32.5%	31.4%	52.0%	31.6%	35.5%
	Oppose	66.7%	72.0%	46.9%	62.5%	62.9%	44.0%	50.9%	56.4%
	No opinion	16.7%	.00	6.3%	5.0%	5.7%	4.0%	17.5%	8.2%
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4.5 Decision Towards Project & Income

Education

For the education levels of respondents the two largest groups of education levels are some type of college certification (38.24%) and Bachelor's degree (34.03%). In looking at the relationship between income and decision towards the project, levels of support were fairly even across income levels with those with a high school degree(44.0%) and Master's degree(44.4%) having the highest levels of support.

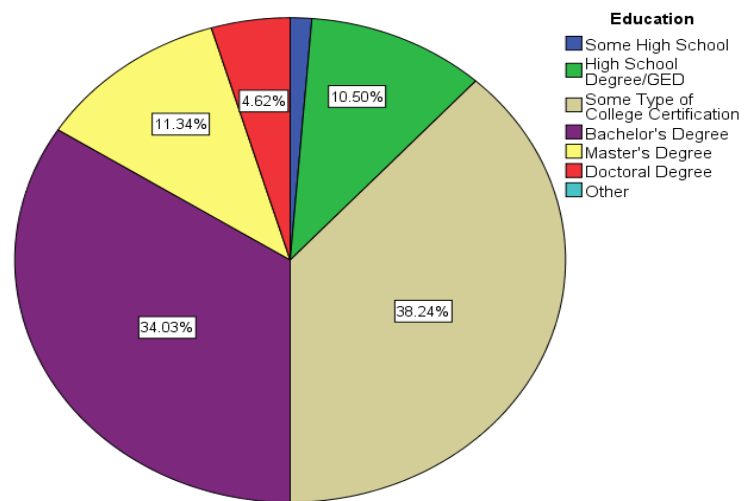


Chart 4.13 Education

Decision Towards Project * Education Crosstabulation

% within Education

		Education						
		Some High School	High School Degree/GED	Some Type of College Certification	Bachelor's Degree	Master's Degree	Doctoral Degree	Total
Decision Towards Project	Support	33.3%	44.0%	31.9%	34.6%	44.4%	9.1%	34.5%
	Oppose	66.7%	52.0%	62.6%	55.6%	51.9%	63.6%	58.0%
	No opinion	.00	4.0%	5.5%	9.9%	3.7%	27.3%	7.6%
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4.6 Decision Towards Project & Education

Political Ideology

In measuring political ideology the three most common political parties in the US were included in the survey to understand the general political ideology of the sample. The largest response of the questionnaire came from the conservative leaning Republican party (37.55%) followed by the liberal leaning Democratic party (23.27%). In looking at the relationship between political ideology and decision towards the project there is little difference between the proportion of Republicans and Democrats opposition towards the project. Only (1.72%) more Republicans oppose the project compared to Democrats. This small difference in opposition between the two parties goes against the general consensus of conservatives opposing mass transportation projects while liberals generally more strongly supporting mass transportation projects. The major difference

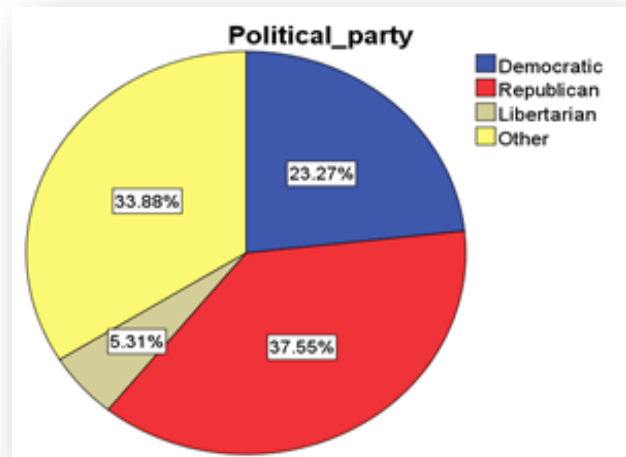


Chart 4.14 Political Party

in ideologies between the two parties in relation to transportation projects is centered on the issues of government spending and property rights in relation to obtaining right a ways (Gordon, 1991). These controversial issues are removed from the project with a majority of private financing along with almost all of the rail right of way in current possession of Brightline through ownership of the (FEC) tracks.

Decision Towards Project * Political Ideology Crosstabulation

% within Political_party		Political Ideology				Total
		Democratic	Republican	Libertarian	Other	
Decision Towards Project	Support	42.1%	37.0%	38.5%	24.1%	33.9%
	Oppose	52.6%	54.3%	53.8%	66.3%	58.0%
	No opinion	5.3%	8.7%	7.7%	9.6%	8.2%
Total		100.0%	100.0%	100.0%	100.0%	100.0%

Table 4.7 Political Ideology & Decision Towards Project

4.2.4 Perceived Outcomes of Future Project:

In this section a description of how individuals perceived future outcomes of the project are described with the relationship of level of project support. The level of project support was measured from the questionnaire through the response options towards the project of; (Strongly Oppose), (Oppose), (Neutral), (Support), and (Strongly Support). Perceived community impact was divided into percentages out of the total (100%) respondents who indicated specific level of support grouping. The perceptions of community impacts was measured from 11 indicators in the questionnaire. In order to more efficiently analyze the perception of future project impacts the 11 indicators were aggregated into three new variables of perceived community impact. The three new variables created were 'Perceived Economic Impact', 'Perceived Social Impact', and 'Perceived Environmental Impact'. For each variable the means of response scores

based on the Likert were aggregated into five average mean scores ranging from the highest community impact to the lowest impact. For perceived economic impact the mean response scores were aggregated into five average means ranging from highest positive impact to highest negative impact. In order to confirm the compatibility of the combined indicators a reliability analysis was conducted yielding Cronbach Alpha scores of (.727) for 'Perceived Social Impact', (.896) for 'Perceived Economic Impact' and (.691) for 'Perceived Environmental Impact'. All reliability scores were above or significantly close to (.700) indicating a reliability between data sets. Additionally in the analysis all 11 indicators of perception were combined into just one variable of 'Perceived Project Impacts' covering the overall perception of project impacts. Through combining all indicators reliability was confirmed with a Cronbach Alpha score of (.789). The overall perceived project impacts was measured from 'Highest Negative Impact (1)' to 'Highest Positive Impact (5)'. Below the frequencies of perceived project impacts are described followed by the relationship of the overall perceived project impacts with the level of project support.

Perceived Economic Impact

For perceived economic impact the greatest number of respondents perceived the project as potentially having a negative impact on the community(35.9%) while highest positive impact received the lowest number of responses(10.4%). Looking at table 4.9 a high correlation between perceived economic impacts and level of project support can be identified, with those who perceived the highest positive impact (66.7%) strongly support the project, while those who perceived the highest negative impact (87.5%) strongly oppose the project.

Economic Impact

		Frequency	Valid Percent
Valid	Highest negative impact	33	14.3%
	Negative	83	35.9%
	Minimal or no impact	42	18.2%
	Positive impact	49	21.2%
	Highest positive impact	24	10.4%
	Total	231	100.0%
Missing		14	
Total		245	

Table 4.8 Economic Impact

Level of Project Support * Economic Crosstabulation

% within New_Econ

		New_Econ					
		Highest Positive Impact	Positive Impact	Minimal or No Impact	Negative Impact	Highest Negative Impact	Total
Level of Project Support	Strongly Support(1)	66.7%	26.5%	14.3%	0.0%	3.1%	15.8%
	Support(2)	29.2%	49.0%	21.4%	2.5%	0.0%	18.4%
	Neutral(3)	4.2%	16.3%	21.4%	6.2%	3.1%	10.5%
	Oppose(4)	0.0%	8.2%	23.8%	21.0%	6.3%	14.5%
	Strongly Oppose(5)	0.0%	0.0%	19.0%	70.4%	87.5%	40.8%
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4.9 Level of project support & Economic impact

Perceived Social Impact

The greatest number of respondents perceived the project as having the highest social impact on the community (27.1%) and the least amount of respondents believed the project will have a high impact on their community (11.5%). For the relationship of level of project support and perceived social impact (71%) of those who perceived the highest impact strongly opposed the project while (44.8%) of those who perceived the lowest impact supported the project.

Social Impact		Frequency	Valid Percent
Valid	Highest Impact	64	27.1%
	High Impact	26	11.0%
	Moderate Impact	71	30.1%
	Low Impact	46	19.5%
	Lowest Impact	29	12.3%
	Total	236	100.0%
Missing	999.00	9	
Total		245	

Table 4.10 Social impact

Level of Project Support * Social Impact Crosstabulation

% within New Social Impact

		Social Impact					
		Highest Impact	High Impact	Moderate Impact	Low Impact	Lowest Impact	Total
Level of Project Support	Strongly Support	3.2%	0.0%	4.2%	39.1%	44.8%	15.5%
	Support	0.0%	8.0%	28.2%	28.3%	27.6%	18.5%
	Neutral	3.2%	12.0%	7.0%	10.9%	27.6%	9.9%
	Oppose	22.6%	12.0%	16.9%	10.9%	0.0%	14.6%
	Strongly Oppose	71.0%	68.0%	43.7%	10.9%	0.0%	41.6%
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4.11 Level of project support & Social impact

Perceived Environmental Impact

In looking at the perceived environment impact the greatest number of respondents perceive the project will have a moderate impact on the community (40.6%), while the least number of respondents perceived the project as has having the lowest impact on the community(1,2%). For those who perceived the highest impact (76.9%) strongly opposed the project and those that perceived the lowest impact (100%) strongly support the project.

Enviromental Impact		Frequency	Valid Percent
Valid	Highest Impact	27	11.1
	High Impact	65	26.6
	Moderate Impact	99	40.6
	Low Impact	50	20.5
	Lowest Impact	3	1.2
	Total	244	100.0
Missing	System	1	
Total		245	

Table 4.12 Environmental Impact

Level of Project Support * Environmental Impact Crosstabulation

% within New_Enviro

		Environmental Impact					Total
		Highest Impact	High Impact	Moderate Impact	Low Impact	Lowest Impact	
Level of Project Support	Strongly Support(1)	0.00%	1.56%	10.20%	48.00%	100.00%	15.8%
	Support(2)	0.00%	3.13%	25.51%	34.00%	0.00%	18.3%
	Neutral(3)	3.85%	6.25%	14.29%	12.00%	0.00%	10.4%
	Oppose(4)	19.23%	15.63%	18.37%	2.00%	0.00%	14.1%
	Strongly Oppose(5)	76.92%	73.44%	31.63%	4.00%	0.00%	41.5%
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4.13 Level of project support & Environmental impact

Overall Perceived Project Impacts

For the perception of all impacts of the project the greatest proportion of people perceived the project as potentially having a negative impact on the community (33.8%), while the lowest proportion of respondents perceived the project as having the highest positive impact (0.9%). For the relationship between perception of impacts and level of project support (82.6%) of those who perceive the highest negative impact strongly oppose the project, while (100%) of those that perceive the highest positive impact strongly support the project. In addition to percentages the mean level of project support in relation in perceived impacts was included in table 4.15 to show how the mean score drops as the perceived impact moves from highest negative impact to highest positive impact. A lower mean score translates into a higher level of project support.

Perception of Impacts

		Frequency	Valid Percent
Valid	Highest negative impact	48	21.3
	Negative	76	33.8
	Minimal or no impact	57	25.3
	Positive impact	42	18.7
	Highest positive impact	2	.9
	Total	225	100.0
Missing	999.00	20	
Total		245	

Table 4.14 Perception of impacts

Level of Project Support * Perception of Impacts Crosstabulation

% within Perception_of_Impacts

		Perception of Impacts				
		Highest negative impact	Negative	Minimal or no impact	Positive impact	Highest positive impact
Level of Project Support	Strongly Support(1)	2.2%	1.3%	12.3%	57.1%	100.0%
	Support(2)	0.00%	1.3%	45.6%	33.3%	0.00%
	Neutral(3)	0.00%	9.3%	19.3%	9.5%	0.00%
	Oppose(4)	15.2%	25.3%	10.5%	0.00%	0.00%
	Strongly Oppose(5)	82.6%	62.7%	12.3%	0.00%	0.00%
Mean Level of Support(Perceptions of Impacts)		4.76	4.47	2.65	1.52	1.00

Table 4.15 Level of project support & Perception of impacts

4.3 Overview of Findings

In looking at an overview of the survey findings the minority of respondents (33.88%) supported the project with (15.70%) strongly supporting the project. Reviewing the (IV) of Risk and Exposure those with high risk and exposure (22.9%) supported the project while those with low risk exposure (41.3%) supported the project. For demographic characteristics some general trends could be identified between age and employment status with respondents decision towards the project. Older respondents and those that were retired had a greater proportion of project opposition in comparison to respondents of younger age groups and with different employment statuses. No general trends could be viewed between gender, income, political ideology, and education.

For perceptions of project impacts more respondents general perceived the project as having negative impacts on their communities in the aspects of economic, environmental and social impacts. A high correlation could be identified between perceptions and level of project support. Those that perceived the highest positive economic impact (66.7%) strongly supported the project with (3.2%) of respondents strongly supported the project that perceived the highest negative social impact. Respondents that perceived the lowest environmental impact from the project meaning the most positive impact to the environment, (100%) of respondents strongly supported the project. For the overall perception those that perceived the highest positive impact from the project (100%) strongly supported the project. From these results a clear relationship between level of project support and perception of future impacts could be identified. Furthermore, the variable of risk and exposure along with the demographic characteristics of age and employment status could be identified as having a general trend of effecting decision towards the project. These results verify the validity of the data for further analysis

4.4 Relationships Between Individual Characteristics, Perceived Impacts, and Decision Towards the project

In the above section the descriptive and basic relationships of the variables were presented. In order to answer the main research question of, which **factors** explain **individual responses** towards the Brightline rail project, the relationships and interactions between the study variables were identified. Through the correlations and descriptive data above a valid distribution of data was determined for the bases of further analysis. In this section the relationship or associations between the IV'S (individual characteristics & perceived project outcomes) with the DV (decision towards project) were identified. Through this identification of approximate associations, crosstabs with Chi Square tests were used to see which variables had an approximate relationship with one another. For data that had a P value less than .05 the approximate association of data was considered significant and thus rejected the null hypothesis moving to further analysis in this study (Mchugh, 2013). This section does not address the extent of these relationships, rather the focus was just on establishing a general relationship or non-relationship between variables. An additional objective of this section was to narrow down and identify relevant variables for further analysis in the next section in which the extent of the relationships are later investigated and revealed.

Association of perception and decision towards project

A significant relationship of overall perception of project impacts and the decision towards the project can be identified with a P value $<.05$: $X^2(8, N=225)=171.280$, $P=.000$.

In looking at the perception of social, environmental, and economic impacts a significant relationship with the decision towards the project can also be identified through P values $<.05$: (Social impact; $X^2(8, N=236)=123.766$, $P=.000$)
(Environmental impact; $X^2(8, N=244)=111.833$, $P=.000$)
(Economic impact; $X^2(8, N=231)=158.021$, $P=.000$)

Individual characteristics

The approximate association of individual characteristics was broken down into demographic factors, Political ideology, and "Risk and Exposure"

Association of demographic factors and decision towards project

In identifying significant associations between demographic factors the decision towards the project the majority the following demographic factors had P values of $>.05$ indicating a non-significant relationship and thus accepting the Null hypothesis.
(Gender; $X^2(2, N=244)=2.643$, $P=.267$)
(Income; $X^2(12, N=220)=17.932$, $P=.118$)
(Education; $X^2(10, N=238)=12.443$, $P=.257$)

Demographic factors that had a significant association with decision towards the project are identified with P values of $<.05$ rejecting the Null hypothesis.

(Age; $X^2(10, N=243)=22.990$, $P=.011$)

(Employment Statutes; $X^2(12, N=239)=25.775$, $P=.012$)

Association of Political Ideology and decision towards project

It was found the political ideology did not have a significant association with decision towards the project through a P value $> .05$.

(Political Ideology; $X^2(6, N=245)=6.177$, $P=.404$)

Association of Risk and Exposure and decision towards project

The variable of Risk and Exposure was found to have a significant relationship with decision towards the project with a P value $< .05$ and thus rejecting the Null hypothesis.

(Risk and Exposure; $X^2(2, N=239)=23.028$, $P=.000$)

Through this section approximations of associations between the IV' and the DV were identified. For further analysis only variables with a significant relationship with decision towards the project were selected for further analysis with the exception of political Ideology. Political ideology was further analyzed despite a low association with the decision towards the project due to the prevalence of the high political nature of both the Brightline project and passenger rail in the US context (Sriraj, 2016).

4.5 Understanding Factors Having the Greatest Impact on Project Decision and to What Extent

Within this section of the analysis chapter some of the most crucial information in satisfying the research object and questions of what is essentially controlling individual decision outcomes towards the future Brightline project in their community are addressed. To this point of the study, factors relating to decision making from the cognitive constructs of perceptions have been brought forth and operationalized into a survey with the results presented previously in this chapter. A basic understanding of knowing which factors impact individual decisions towards the Brightline project have been identified through knowing the significance level of the P value between the IV's and DV. Despite knowing the general relationships between variables this study still does not answer its own objective and large parts of the research questions that include the parts of "greatest impact" and "to what extent". This section will both address this part of the research objective and question, along with further understanding the relationship between the IV's and the DV.

4.5.2 Perceived Project Outcomes and Level of Support

This section addresses the sub research question of; To what extent do perceived project outcomes influence the level of project support? In order to address this question the relationship between perceived project outcomes and the level of project support was analysed through the linear regression model. Results of the linear regression test conducted to determine the relationship of perceived project outcomes and level of project support is presented along with the assumptions to prove the validity of the linear regression test. To determine if the data collected for perceived project outcomes and level of project support was valid for a linear regression analysis the following assumptions were tested for violations:

Normality

The assumption of normal distribution of data was observed through a normal P-P plot of regression. In observing the normal P-P plot all values follow general diagonal patterns within a reasonable relationship to the regression line.

Homogeneity

Relative Homogeneity of variance was observed through the observation of histograms that visually displayed values. In observing histograms general random distributions of data was identified.

Outliers

No outliers were identified through observing box plots generated between variables

Linearity

Linearity was determined through observing scatter plots that visually indicated linear relationships between perceived project outcomes and level of project support.

Independence

In order to determine an independence of observations, the statistical test of Darbin-Watson was conducted. An independence of errors was confirmed between the desired statistics of 1.5 to 2.5 through the computation of the Darbin-Watson statistics of 2.103(Economic), 1.888(Environmental), 1.862(Social), 1.986(Overall perception).

Analysis

Because the above assumptions were reasonably met, four separate linear regressions were calculated to predict perceived project outcomes and level of project support. In this model level of project support was coded as follows: 1=strongly support, 2=support, 3=neutral, 4=oppose, 5=strongly oppose. The four linear significant regression equations that were found are :

Overall Perception: ($F(1,221)=371.315$, $P<.000$) with an R^2 of .628; predicted level of project support is equal to $6.349-1.172$ with perceived project impacts coded as 1=highest positive impact, 2=positive impact, 3=minimal or no impact, 4=negative impact, 5=highest negative impact

Economic: ($F(1,227)=299.281$, $P<.000$) with an R^2 of .569; predicted level of project support is equal to $7.880-1.417$ with economic impact being coded as 1=highest negative impact, 2=negative impact, 3=minimal or no impact, 4= positive impact, 5= most positive impact.

Environmental: ($F(1,239)=196.902$, $P<.000$) with an R^2 of .452; predicted level of project support is equal to $6.432-1.168$ with environmental impact coded as 1= highest impact, 2=high impact, 3=moderate impact, 4=low impact, 5= lowest impact.

Social: ($F(1,231)=250.055, P<.001$ with an R^2 of .451; predicted level of project support is equal to 6.221-10.55 with social impact coded as 1= highest impact, 2=high impact, 3=moderate impact, 4=low impact, 5= lowest impact.

Individual perceptions of social, economic, and environmental impacts were significant in predicting the level of project support. Looking at the scatter plots below, the slope lines show the extent of predicting relationships between perceived project impacts and level of project support. The greater the steepness the higher there is predictive power in this linear model. It is important to note that in all graphs below as perceived project impacts decreases, moving numerically along the X axis from 1(highest/most negative impact) to 5(lowest/most positive impact), level of project support increases, moving numerically along the Y axis from 5(strongly oppose) to 1(strongly support). This general negative trend can be more strongly viewed with the greater steepness through the trend of economic impacts in comparison to social and environmental impacts. Even further steepness can be identified through the overall perceptions of project impacts in chart 4.17.

Through the level of variance or R^2 in the preceding equations, perceptions can explain an individual's level of support for the project. The higher the R^2 that is revealed in this linear model the greater it's predicting value on the DV (Field, 2009). These linear regression models were able to show the significant relationships and how well these relationships are able to be predicted through the level of variance. Of the three sub variables of perception economic impacts was best for predicting level of project support with an R^2 of .566% while overall perceptions could predict the relationship with level of project support by an R^2 of .628%. For the context of this study and in general social science it can be said that the predicting power of R^2 is fairly powerful in predicting level of project support based on a respondents perceptions of the projects potential impacts (Faraway, 2002).

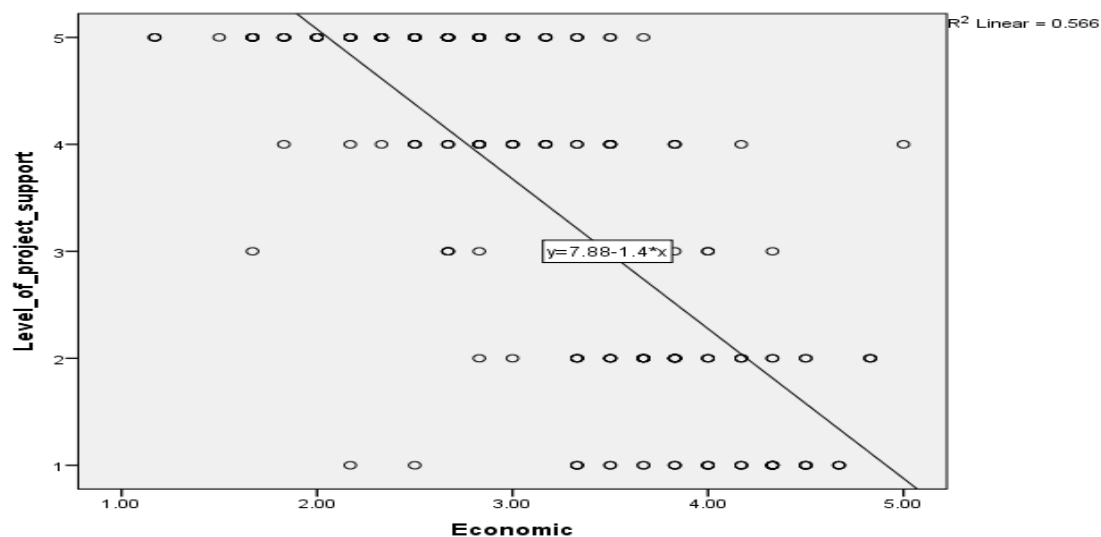


Chart 4.14 Level of project support & Economic impact

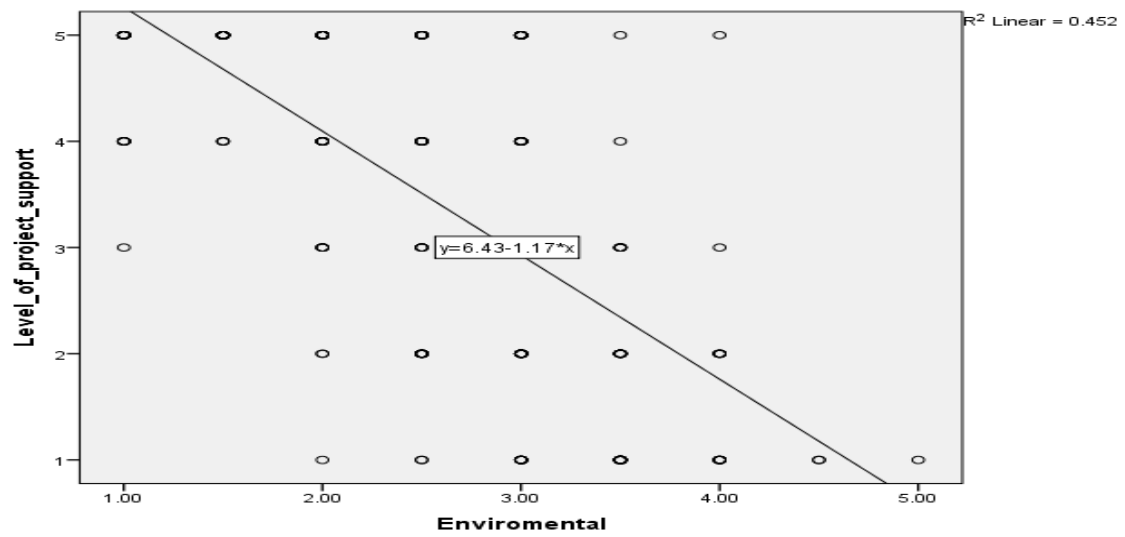


Chart 4.15 Level of project support & Environmental impact

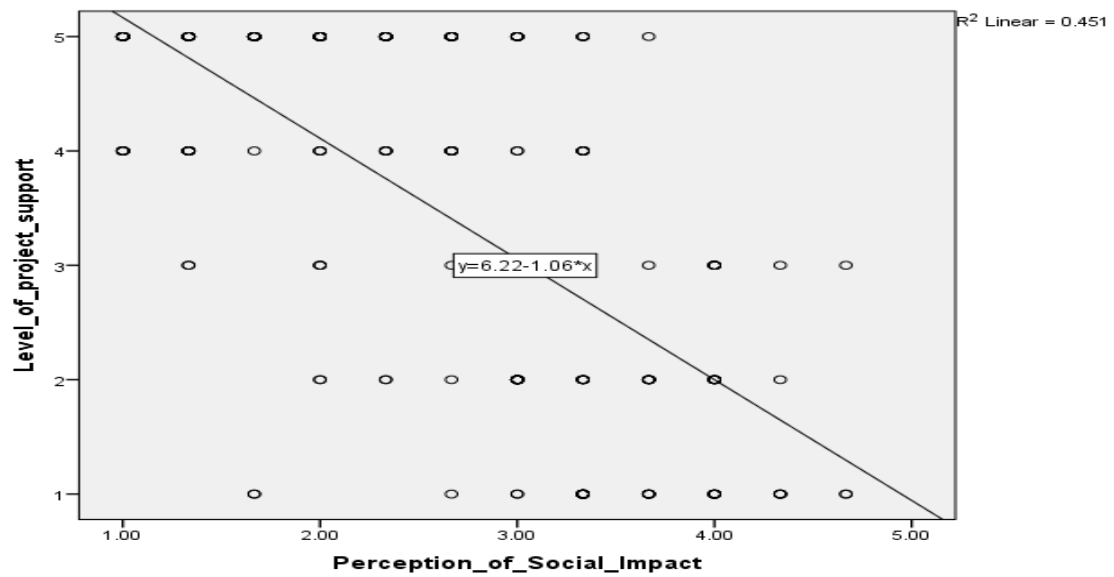


Chart 4.16 Level of project support & Social impact

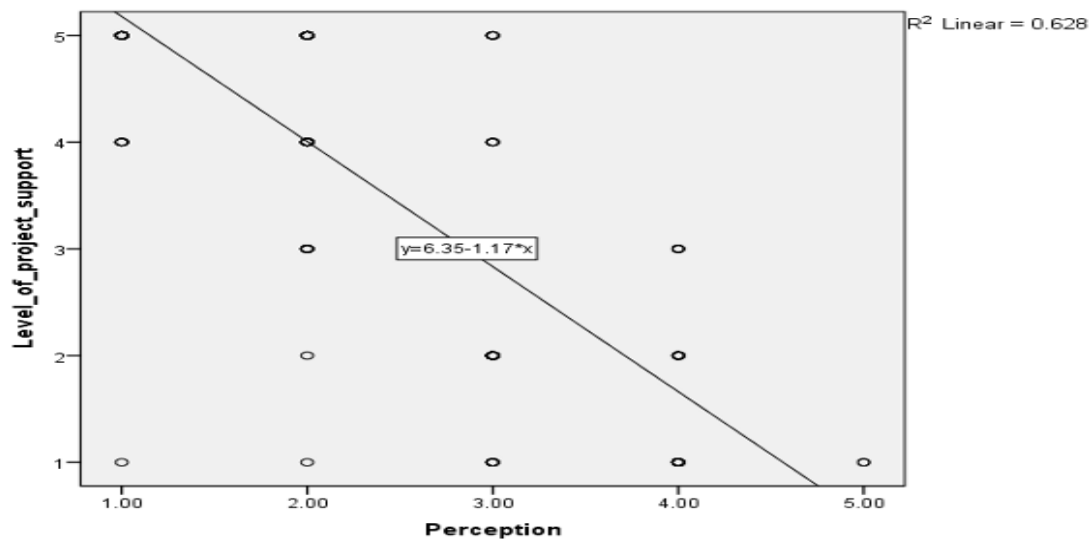


Chart 4.17 Level of project support & Perception of overall impacts

4.5.3 Individual Characteristics and Decision Towards the Project

Through the Chi square tests the level of association between individual characteristics and decision towards the project were understood through the interpretation of P values $< .05$ having a significant association. The individual characteristics with P values $< .05$ from the Chi square test included; Risk and exposure, age, political ideology, and employment status. What would happen if all of the significant individual characteristics or those with P values $< .05$ were used together to see their effect on respondents decision towards the project? In other words; what would happen to the significance level of individual characteristics if their effects were measured together in one statistical model? More importantly why is understanding the overall individual characteristics effects on the decision towards the project relevant to knowing which factors explain people's response towards the Brightline rail project? These inquiries above were first addressed through conducting a multinomial logistics regression model. This statistical modal was selected for analysis in order to better understand the extent individual characteristics influence the decision towards the project as a whole. Along with better knowing the association between individual characteristic the relationship was better understood through gaining the probability or odds of particular individual's decision outcome towards the project. In addition to addressing the main research question this section addresses the sub-research question of: To what extent do individual characteristics influence the decision towards the project?

In order to conduct a multinomial logistics regression the assumptions below were tested and met in order to insure the accuracy of the model. The two most crucial assumptions for multinomial logistic regressions that were tested and included within this study are the independence of observations and multicollinearity (Moske; Starkweather, 2004)

Independence

In order to determine an independence of observations, the statistical test of Darbin-Watson was conducted. An independence of errors was confirmed between the desired statistics of 1.5 to 2.5 through the computation of a Darbin-Watson statistic of 1.871.

Multicollinearity

Multicollinearity was tested between select variables yielding tolerance and VIF scores that can be observed in table 4.16. Tolerance scores that were higher than 0.1 and VIF scores lower than 10 indicate collinearity between variables. All scores in table 4.16 below met these parameters and thus express collinearity.

Collinearity Statistics		
(IV)	Tolerance	VIF
Risk and Exposure	0.94	1.064
Age	0.883	1.133
Political Ideology	0.986	1.014
Employment Status	0.928	1.077

Table 4.16 Collinearity Statistics

Analysis

The multinomial logistics regression test that was conducted in SPSS looked for an interaction effect between the dependent variable and the independent variables. When evaluating the (P-Values) of variables in the logistic regression modal the interaction of associations can be observed in table 4.17. In addition to revealing P values table 4.17 also shows the results of the Nagelkerkle R² of (32%) and an overall percentage of correct prediction of (63%), meaning that individual characteristics in table 4.17 explains around (32%) of variance in decision towards the project with a correct classification of 63%. Out of all of the individual characteristics only risk and exposure had a significant association with a respondent's decision towards the project. Because risk and exposure had a significant association in predicting individual responses towards the Brightline project the odds of predicating responses towards the project were accurately calculated.

Individual Characteristics	Sig. (P-Value)
Age	0.137
Political Ideology	0.131
Risk and Exposure	0.00
Employment Status	0.18
Nagelkerkle R ² .320	Correct prediction 63%

Table 4.17 Logistical association (Individual Characteristics)

Risk and Exposure significantly predicted whether a respondent supported the Brightline project; B= .971, Wald X² (1)=8.893, P<.05. Looking at the odd's ratio or Exp (B) in table 4.18, a one unit increase of risk and exposure indicates the odds of supporting the Brightline project increased by 2.641 times over opposing the project.

Parameter Estimates						
Decision Towards Project(Support)	B	Std. Error	Wald	df	Sig	Exp(B)
Intercept	-21.481	1.325	262.799	1	0	
Risk and Exposure	0.971	0.326	8.893	1	0.003	2.641

Table 4.18 Parameter Estimates (Individual Characteristics)

What can be gathered through the above logistical analysis is that most individual characteristics have a weak direct relationship with how an individual responds to the Brightline project. The one characteristic that stands out in this analysis is the variable of someone's risk and exposure to the project. Risk and exposure was identified as having a strong association with someone's decision towards the project and thus having the ability to predict whether someone would support or oppose the project. Based on the information within table 4.18 the extent of risk and exposure on decisions towards the project can be interpreted as the odds of predicting project support. The overall extent of individual characteristics affecting decisions towards the project can be interpreted as having a (63%) correct prediction with a (32%) level of association identified.

4.5.4 Individual Characteristics + Perceptions and Decision Towards the Project

Previously in this chapter, analysis were performed separately between individual characteristics and perceived project outcomes with individual response towards the project. However, in reality individual characteristics and perceived project outcomes are not completely independent from one another in relation to responses towards the project. Because of this, within this section a multinomial logistic regression was conducted to help further answer the sub research question of: To what extent do individual characteristics and perception of project outcomes control individual decisions towards the Brightline project? In order to comprehend which independent variables controlled individual decision outcomes the multinomial logistic regression was performed through the backwards stepwise method with interaction effects between variables. To insure the validity and accuracy for the multinomial logistics regression modal the assumptions below were tested and met. The assumptions that were tested are the independence of observations and multicollinearity.

Independence

In order to determine an independence of observations, the statistical test of Darbin-Watson was conducted. An independence of errors was confirmed between the desired statistics of 1.5 to 2.5 through the computation of a Darbin-Watson statistic of 1.732

Multicollinearity

Multicollinearity was tested between select variables yielding tolerance and VIF scores that can be observed in table 4.19. Tolerance scores that were higher than 0.1 and VIF scores

lower than 10 indicate collinearity between variables. All scores in table 4.16 below met these parameters and thus express collinearity.

Collinearity Statistics		
(IV)	Tolerance	VIF
Risk and Exposure	0.901	1.11
Perception	0.9	1.111
Age	0.846	1.182
Political Ideology	0.956	1.042
Employment Status	0.913	1.095

Table 4.19 Collinearity Statistics (Individual Characteristics + Perception)

Analysis

This multinomial logistics regression test that was conducted in SPSS looked for an interaction effect between the (DV) and the (IV's) along with if any (IV's) controlled the decision outcomes of individuals. When evaluating the (P-Values) of variables in the logistic regression modal the interaction of associations can be observed in table 4.20. In addition to revealing P values, table 4.20 also shows the results of the Nagelkerke R^2 of (80.8%) and an overall percentage of correct prediction of (88.9%), meaning that individual characteristics in table 4.20 explains around (80.8%) of variance in decision towards the project with a correct classification of (88.9%). In comparing the P values between table 4.17 and table 4.20 it can be observed that all individual characteristics have a lower association towards the (DV) based on the higher P-values in table 4.20. This result indicates that perceptions of future project outcomes has the greatest control of the interaction amongst the (IV's) and the (DV). Stated alternatively individual characteristics had a lesser effect on decision towards the project when individual perceptions of the project were taken into account and not isolated. Out of all the (IV's) analyzed risk and exposure along with perceptions had a significant association with respondent's decision towards the project based on P values < .05. Because there was significant association in predicting individual responses towards the Brightline project the odds of predicating responses towards the project were accurately calculated. Also included in table 4.20 is the association of perceptions with the variable of risk and exposure. Identified through the low P value risk and exposure did not have a significant association with individual perceptions of project impacts.

Individual Characteristics + Perception	Sig. (P-Value)
Age	0.561
Political Ideology	0.141
Risk and Exposure	0.003
Employment Status	0.101
Perception +Risk and Exposure	0.517
Perception	0.00
Nagelkerke R^2 .808	Correct prediction 88.9%

Table 4.20 Logistical association (Individual Characteristics + Perceptions)

Perceived impacts significantly predicted whether a respondent supported the Brightline project; $B=5.273$, Wald $X^2(1)=44.657$, $P<.05$. Looking at the odds ratio a one unit increase of perceived impacts indicates the odds of supporting the Brightline project by 194.907 times over opposing the project. Risk and Exposure also significantly predicted whether a respondent supported the Brightline project; $B=1.656$, Wald $X^2(1)=4.488$, $P<.05$. Observed through the odds ratio a unit increase of risk and exposure indicates the odds of supporting the Brightline project by 5.237 times over opposing the project.

Parameter Estimates						
Decision Towards Project(Support)	B	Std. Error	Wald	df	Sig	Exp(B)
Intercept	-19.154	3.1	38.171	1	0	
Perceived Impact	5.273	0.789	44.657	1	0	184.907
Risk and Exposure	1.656	0.782	4.488	1	0.034	5.237

Table 4.21 Parameter Estimates (Individual Characteristics + Perceptions)

To summarize the analysis conducted above the extent of individual characteristics and perceived project impacts is high in understanding the effects on decision outcomes towards the project understood through a variance of (80.08%). Perceived project impacts had both the greatest control amongst (IV'S) and the highest odds of predicting individual decision towards the Brightline project. Despite this control and high predictive power of perceived project impacts, risk and exposure still maintained a significant associations with individual decisions towards the project.

5.1 Conclusion and Recommendations

The aim of this research was to explain factors that influence why some individuals support the Brightline project while others oppose the project. In order to understand these factors a theoretical framework was developed based on the fundamentals of decision theory built upon the cognitive basis of individual decision making. Through the development of the theoretical framework a conclusion was drawn that the bases of decision making on the individual level is processed through one's perceptions. Also concluded from the theoretic framework is that one's perceptions and decision outcomes could be influenced or have an interacting effect with unique individual characteristics. The operationalization of this study defined the individual characteristics and perceptions of future impacts relevant to the context of individuals potentially impacted by the Brightline project. Through the finale analysis of responses from people within the project study area, the factors that explain individual responses towards the Brightline rail project were able to be identified.

Individual Characteristics and Project Decision

Overall individual characteristics were able to explain individual decisions towards the project by about (32%). Of the individual characteristics, risk and exposure had the greatest ability to explain individual responses towards the Brightline project. The greater an individual was exposed to the project and more was at personal risk the greater the likelihood someone would not support the project. Of the individuals with high risk and exposure only (76%) opposed the project while those with low risk and exposure (22.9%) opposed the project. Through the multinomial logistic regression test it was identified that risk and exposure was the only individual characteristic that could be used to help explain decision outcomes towards the project through the indication of a $P \text{ value} < .05$. This effect of risk and exposure on individual decision making directly supports the rational decision theory in which the prospect of benefits and losses ultimately influence decision outcomes (Aleskerov, 2005). Individuals with greater risk and exposure generally view themselves as having more to lose if the project were to yield negative effects through greater risk of property devaluation, increase in traffic, and potential safety hazards from high frequency in rail crossings. In looking at demographic characteristics no significant relationship could be determined with how individuals responded to the project. Moving towards political ideology and decision towards the project, not only was political ideology weak in determining decisions towards the project, it had the least association with individual decisions towards the project out of all characteristics identified in the regression test in table 4.20 of the previous chapter. This finding indicates that political ideology does not play a role in decision outcomes towards the Brightline project. Political ideologies weak role with influencing decision outcomes towards a passenger rail project within the US context is significant in the sense that mass transportation projects often face controversy along political party views and traditional agendas. Having political ideology not present as a factor in decision making indicates a potential conflict barrier removed for future passenger rail projects that are developed through the private sector.

Perceptions + Individual Characteristics and Project Decision

The factors of perceptions of project outcomes were able to significantly explain individual responses towards the project. Of the three types of perceived outcomes economic perceptions had the greatest impact on individual decisions towards the project with the ability to predict someone's decision towards the project by about (57%) compared to (45%) of both perceptions of environmental and social impacts. Overall a combination of all types of perceptions could

explain (63%) of the level of project support. In comparison to individual characteristics perceptions were better able to explain individual responses towards the Brightline project.

In evaluating all of the factors together individual responses towards the Brightline project could be explained by about (81%) through individual characteristics and perception of future impacts. Perceptions ultimately controlled how individual's responded to the project through both the change in association of individual characteristics with decisions towards the project and the evidence gathered in the correlations between perception decisions towards the project. For example, for those who strongly opposed the project (82.6%) perceived the highest negative impact from the project while those who strongly supported the project only (2.2%) perceived the highest negative impact. This high control of perceptions on decisions towards the project confers with the concept that one's perceptions determines how an individual will make a decision (Oyserman, 2015). Linking the constructs of perception, as viewed in figure 2.1(pg 10) and decision outcomes towards the project a mixed conclusion was revealed. In looking at risk and exposure to the project it can be argued based on the results and analysis that constructs of perception measured through individual characteristics do significantly determined individual decision outcomes towards the project. One the other hand it can also be argued that constructs of perceptions do not play significant role in influencing decision outcomes measured through the weak relationship between political ideology and demographic characteristics. It can thus be identified that some constructs of perception do influence decision outcomes while other constructs have some level of influence in decision outcomes. Furthermore, it is important to note that the selected constructs of perception through individual characteristics only provided a limited insight into what builds human perspectives cognitively due to the complexity and broad range of defining the foundations of perspectives. The inclusion of the individual characteristics in this study were brought fourth based on the context of literature in relation to transportation projects. To conclude this study the factors that could explain an individual response towards the Brightline project is one's perceptions of future project impacts and the level of one's risk and exposure to the project. The factor that could best explain an individual response towards the project was perceptions of future project impacts with economic impact giving the greatest extent of explanation.

5.2 Recommendations and Further Application

Based on the findings of this study several research recommendations and practical applications could be identified potentially enhancing infrastructure development in the future. One key finding that could improve the implementation of major infrastructure projects is the significance of perception towards future project impacts and the decision of individuals to support or oppose a project. Because perceptions hold such prevalence in whether someone supports a project or not, whom ever is the developer of a project should be sensitive to citizen perceptions within the preliminary planning stages of any infrastructure project. This research recommends that developers of any major infrastructure project gain an evaluation of how potential effected citizens perceive the possible impacts of project implementation. Having an awareness of how individuals perceive a projects impacts could bring about a few improvements to infrastructure development. One improvement to infrastructure development is the possibility of reducing conflict between infrastructure developers and private citizens thus increasing the speed of project implementation. Being aware of citizen perceptions of project impacts could reduce conflict by affording the opportunity of project developers to make communication efforts in aligning citizen perceptions with the overall goals of a particular infrastructure project. With the link between project perception and overall project support established, developers of infrastructure could also benefit from knowing citizen

perception towards a proposed project by creating more resilient project planning that can better forecast citizen opposition. This conflict forecasting could be integrated into project feasibility studies improving the accuracy in gauging the overall cost and deadlines of project implementation.

For further research it is recommended that more studies be conducted that integrate decision making from the individual level with infrastructure projects. Because little research exists in the realm of decision making of the individual and infrastructure projects there is lack of academic understanding within this topic area. Another specific recommendation based on the findings of this research is to apply individual perceptions of an infrastructure project to a different geographical scale. For example, a study could be conducted that analyses perceptions of regional or even national impacts as opposed to focusing on the community level of impact perceptions. A final research recommendation would be to study political ideology and the relationship with project support more in depth in relation to passenger rail projects. An example of a more in depth study would be to ably a wider range of indicators to the concept of political ideology and measure responses to various forms of passenger rail projects. As this study only measured political ideology through one indicator because the research focus was based on identify a wide array of influential factors from a broad spectrum. This path of research is recommended to be applied to transit projects in which the developer is either private or public.

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Views Towards The Brightline Rail Project

Hello, and thank you for taking part in this 4-7 minute survey. The purpose of this survey is to better understand the opinions of individuals towards the Brightline(All Aboard Florida) rail project in communities between Orlando and Miami areas.

This research is being conducted as part of a thesis study for the Master's program 'Urban Management and Development' at the IHS, Erasmus University Rotterdam in the Netherlands.

Confidentiality:

Your responses to this survey are strictly confidential and will be used only for scientific purposes.

* Required

1. Do you support or oppose the Brightline project? *

Mark only one oval.

- ☐ Support
- ☐ Oppose
- ☐ No opinion

2. To what extent do you support or oppose the Brightline Project?

Mark only one oval per row.

	Strongly Support	Support	Neutral	Oppose	Strongly Oppose
Level of project support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Future Project Impacts

In this set of questions you will be asked how you think the Brightline train could impact different aspects of your community(city) or you personally. These future impacts are long term impacts (10 years+) from the train once in operation.

3. How do you think the project will affect road traffic in your community?

Mark only one oval per row.

	Significantly increase road traffic	Increase road traffic	No impact on road traffic	Reduced road traffic	Significantly reduce road traffic
Impact on road traffic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. About how much time do you think you will experience in traffic delays from rail crossings with the Brightline project on a daily basis?

Mark only one oval per row.

	0 minutes	5 minutes	10 minutes	15 minutes	Greater than 15 minutes
Time spent in traffic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Once in operation how do you think the project will impact the local economy?*Mark only one oval per row.*

	High Economic Growth	Some Economic Growth	No Impact	Some Economic Loss	High Economic Loss
Impact on economy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Once in operation how do you think the project will impact the local tourism industry?*Mark only one oval per row.*

	High Increase in Tourism	Some Increase in Tourism	No Impact	Some Loss in Tourism	High Loss in Tourism
Impact on tourism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. How do you think the project will impact the local job market?*Mark only one oval per row.*

	High Job Creation	Some Job Creation	No Impact	Some Job Loss	High Job Loss
Impact on job market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. To what level do you think the project will contribute to overall noise pollution in the community?*Mark only one oval per row.*

	Very High Noise Pollution	High Noise Pollution	Moderate Noise Pollution	Low Noise Pollution	No Noise Pollution
Amount of noise pollution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. To what extent do you think the project will affect air quality in the community?*Mark only one oval per row.*

	High Reduction in Air Pollution	Some Reduction in Air Pollution	No Impact	Some Increase in Air Pollution	High Increase in Air Pollution
Affect on air quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. What impact do you think the project will have on average property values within the community?*Mark only one oval per row.*

	High Increase in Property Values	Moderate Increase in Property Values	No Effect on Property Values	Moderate Decrease in Property Values	High Decrease in Property Values
Impact on property values	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. What impact do you think the project will have on average rental prices within the community?

Mark only one oval per row.

	High Increase in Rent Price	Moderate Increase in Rent Price	No effect on Rent Price	Moderate Decrease in Rent Price	High Decrease in Rent Price
Impact on rent prices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. What impact do you think the project will have on your own property value(If you own Property)?

Mark only one oval per row.

	High Increase in Property Value	Moderate Increase in Property Value	No Effect On Property Value	Moderate Decrease in Property Value	High Decrease in Property Value
Impact on personal property	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. How frequent do you think accidents will occur at railroad crossings within the community if the project reaches the proposed capacity?

Mark only one oval per row.

	Everyday	About Once a Week	About Once a Month	About Once every six Months	About Once a Year	About Every five years	About Every Decade	Never
Number of accidents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Information About Yourself

In this last section you will be asked personal information, such as age and gender. Once again this survey is fully confidential. However, if you are uncomfortable answering any questions feel free to leave any of these questions blank.

14. What is your gender?

Mark only one oval.

- ☐ Male
- ☐ Female

15. What is your age?

Mark only one oval.

- ☐ Less than 24
- ☐ 25-34
- ☐ 35-44
- ☐ 45-54
- ☐ 55-64
- ☐ More than 65

16. How often do you cross the train tracks in your community?*Mark only one oval per row.*

	More than twice a day	Twice a day	Once a day	At least once a week	At least once a month	At least once a year	Never
Number of times crossing the tracks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. What is your main method of daily transportation?*Mark only one oval per row.*

	Car	Mass Transit (Bus, shuttle, train, ext...)	Bicycle	Walking	Scooter/Motorcycle	Other
Type of transportation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. Do you own property within the community?*Mark only one oval.*

- ☐ Yes
- ☐ No

19. If Yes, please indicate which type(s) of property you own in the community?*Check all that apply.*

- ☐ Residential(Place of residence)
- ☐ Residential(Rental Property)
- ☐ Commercial
- ☐ Industrial
- ☐ Vacant Land

20. About what distance is your home from the train tracks (Florida East Railway tracks)*Mark only one oval.*

- ☐ Less than ½ mile
- ☐ ½ to 1 mile
- ☐ 1 to 2 miles
- ☐ Greater than 2 miles
- ☐ Don't know

21. What is your Zip code? *

22. What is your annual household income before taxes?*Mark only one oval.*

- ☐ Less than \$15,000
- ☐ \$15,000-\$29,000
- ☐ \$30,000-\$44,000
- ☐ \$45,000-\$59,000
- ☐ \$60,000-\$74,000
- ☐ \$75,000-\$89,000
- ☐ Over \$90,000

23. Highest level of education?*Mark only one oval.*

- ☐ Some High School
- ☐ High School Degree/GED
- ☐ Some Type of College Certification
- ☐ Bachelor's Degree
- ☐ Master's Degree
- ☐ Doctoral Degree
- ☐ Other

24. What is your employment status?*Mark only one oval.*

- ☐ Student
- ☐ Retired
- ☐ Employed full time
- ☐ Employed part time
- ☐ Self employed
- ☐ Homemaker
- ☐ Other

25. How many years have you lived in your current city?*Mark only one oval.*

- ☐ Less than 1 year
- ☐ 1 to 5 year(s)
- ☐ 6 to 10 years
- ☐ 11 to 15 years
- ☐ More than 15 years

26. Are you a full time or seasonal resident?*Mark only one oval.*☐ Full Time☐ Seasonal**27. Which political party do you most closely identify with?***Mark only one oval.*☐ Republican☐ Libertarian☐ Democratic☐ Other**28. Do you have any additional general comments you would like to share regarding the Brightline rail project in your community?**

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Time Schedule

Time Schedule				
April-May	May-June	July	August - September	September-October
Problem Statement	Conceptual Frame Work	Data Collection/ Field Work	Data Analysis	Conclusions and Editing

Annex 2: IHS copyright form

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The number of pages for the thesis is about 60.

The thesis should be edited.

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The Chairman, IHS Research Committee Burg. Oudlaan 50, T-Building 14 th floor, 3062 PA Rotterdam, The Netherlands	j.edelenbos@ihs.nl Tel. +31 10 4089851
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