

## Research Paper

# Resident support for urban greenways across diverse neighborhoods: Comparing two Atlanta BeltLine segments

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## ABSTRACT

Urban greenways are increasingly seen as sustainable infrastructure initiatives designed to catalyze economic development, urban renewal and healthy cities. However, there has been little consideration for how the racial and socioeconomic composition of neighborhoods influence resident support for greenways. This is important due to documented divergent racial preferences for recreation and the potential paradoxical impact greenways can have on gentrification. Hence, this study assessed resident perceptions of the Atlanta BeltLine in two neighborhoods differing in their racial and socioeconomic composition. Using a theoretical framework grounded in social exchange theory and Weber's theory of formal and substantive rationality, results from 418 surveys (600 distributed) revealed that in an affluent, majority white neighborhood, the BeltLine was supported more by residents, with residents indicating greater use of the trail and higher levels of psychological empowerment than residents of a less affluent, majority African American neighborhood. Despite these differences, support for the BeltLine was found to be a function of the same factors of frequency of use, perceived economic benefits and perceived psychological empowerment across both neighborhoods. Results suggest that residents generally form their opinions of urban greenways in a similar fashion even though the model explained more variance in the majority white neighborhood (68% vs 57%), highlighting the need for future research to investigate other factors that may influence why African Americans support or oppose urban greenways in their neighborhoods. Implications are discussed for urban planners, who have the difficult task of developing urban greenways within heterogeneous cities.

## 1. Introduction

Urban greenways are increasingly positioned as sustainable infrastructure initiatives designed to catalyze economic development, urban renewal, and healthy cities (Lindsey, 2003; Salici & Altunkasa, 2014). Set within this emphasis on sustainability is the premise that urban greenways need to be supported by residents for them to deliver their anticipated benefits (Weber, Boley, Palardy, & Gaither, 2017). Corning, Mowatt, and Chancellor (2012, p. 284) write “Although trail research is not new, there is little information on residents and property owners adjacent to trails yet they are an important population as they are potentially more affected by trails than resident property owners living further from the trails.”

While the urban greenway literature is starting to embrace more research on resident perceptions of both the positive and negative impacts of urban greenways (Palardy, Boley, & Johnson-Gaither, 2018;

Weber et al., 2017), there has been little consideration for how the demographic composition of neighborhoods influences resident support for these recreational developments. The racial and socioeconomic composition of neighborhoods transected by these trails is important to consider given the potential paradoxical impact greenways can have on gentrification within lower income neighborhoods (Checker, 2011; Curran & Hamilton, 2012; Wolch, Byrne, & Newell, 2014). While recreational developments such as the Atlanta BeltLine are designed by urban planners to be solutions to the inequitable distribution of parks in the urban core of cities (Heynen, Perkins, & Roy, 2006; Sister, Wolch, & Wilson, 2010), they can bring environmental gentrification where these revitalized green spaces actually result in the “displacement and/or exclusion of the very residents the green space was meant to benefit” (Wolch et al., 2014, p. 235). Furthermore, a large body of literature has shown park use and recreational preferences can significantly differ by race and/or ethnicity (Byrne & Wolch, 2009; Floyd, Shinew, McGuire, &

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Noe, 1994; Gobster, 2002; Whiting, Larson, Green, & Kralowec, 2017).

Within a political ecology lens that frames green space developments as power-laden, “ideologically charged spaces,” with heterogeneous impacts (Byrne & Wolch, 2009 p. 747; Heynen et al., 2006; Roberts-Gregory & Hawthorne, 2016), it is likely that attitudes towards urban greenways will vary across neighborhoods differing in socioeconomic composition. It is also likely that the antecedents of resident support will vary because each neighborhood has its own set of histories, politics, and current problems that converge to create unique lenses from which residents view these recreational developments and ultimately judge their successes and failures (Checker, 2011; Curran & Hamilton, 2012). For these reasons, a study measuring resident support for urban greenways should consider racial and socioeconomic differences both within and across neighborhoods through which they pass and how such differences may influence resident engagement and support.

This study contributes to the urban greenway literature and extends the work of Palardy et al. (2018) by assessing resident perceptions of the Atlanta BeltLine in two neighborhoods differing in racial and socioeconomic compositions. Atlanta, GA, as with many U.S. cities, has neighborhoods that differ vastly in racial and socioeconomic composition (Keating, 2001; Kruse, 2005; Johnson Gaither et al., 2016). The two trail segments of interest are the BeltLine’s Northside and Southwest Connector Trails. The segments are similar in that they are both approximately one mile in length, go through single-family neighborhoods, and include public parks (Fig. 1). However, the main difference between the two trails is the racial (74–90% White vs. 96% African American) and socioeconomic composition of the neighborhoods

adjacent to the respective sections (\$70,000–\$104,000 median income for the Northside vs. \$29,000–\$38,000 median income for Southwest).

This study builds on the findings from Palardy et al.’s (2018) previous BeltLine study in two primary ways. First, residents’ responses to the core constructs of Palardy’s model (support for the BeltLine, frequency of use, economic benefits, and psychological, social and political empowerment) will be compared using independent samples t-tests between these two neighborhoods. This approach provides a direct test of whether residents of the two neighborhoods perceive themselves being impacted differently by the respective trails. Second, the study seeks to determine if predictors of support for the BeltLine differ between Northside and Southwest residents. It is possible that both neighborhoods support the BeltLine, but for different reasons (e.g., frequency of use vs. perceived economic benefits). It is also possible that the amount of variance explained in support for the BeltLine will vary by neighborhood, which would suggest future research needs to identify other factors that may influence support for greenways within each neighborhood. An understanding of how factors influencing support differ across neighborhoods will provide urban planners with information on how to tailor future urban greenways to increase resident support within diverse cities.

## 2. Literature review

Neighborhoods within the city of Atlanta have undergone significant racial and income transformations since the 1960s. By 1980, whites represented just 32.4% of Atlanta’s population, a decline of 56.6% from 1970 (Kruse, 2005). White flight was propelled by black integration of city neighborhoods, schools, and other public facilities (Kruse, 2005). While there has been substantial in-migration of whites—particularly younger, educated populations in recent years—Atlanta neighborhoods, specifically on the city’s south side, remain majority African American and, in many cases, lower or moderate income. These neighborhoods include those that contain the Southwest Connector Trail. South Atlanta residents lament the relative lack of economic investment in this part of the city; however, there are concerns that investments in green infrastructure and other amenities will price lower-income African American communities out of their neighborhoods (Atlanta BeltLine Partnership, 2013; Powers, 2017). Green space development is often perceived by some as a harbinger of gentrification (Checker, 2011; Curran & Hamilton, 2012). If this perception applies to BeltLine initiatives, we may see variation in support for the resource across neighborhoods with differing racial and socioeconomic composition.

### 2.1. Theoretical framework

The theoretical framework for measuring resident support was constructed using two overlapping theories: social exchange theory (SET) and Weber’s theory of formal and substantive rationality. SET stems from sociology and social psychology. It proposes that individuals create and maintain social relationships in exchange for the benefits received from the relationship (Blau, 1964; Emerson, 1976; Homans, 1958). This theory has often been applied in studies assessing resident attitudes to tourism because it considers the varying perceptions of the costs and benefits of recreational developments over time (Ap, 1992; Nunkoo & Ramkissoon, 2012). SET provides the urban greenway literature with a theoretical framework capable of explaining residents’ attitudes toward urban greenways based on their perceptions of the benefits and costs to their neighborhoods. The theory is also useful because it provides a theoretical explanation for how it is possible for residents to have both negative and positive attitudes towards greenways while still supporting these types of recreational developments.

Despite these strengths, the literature has critiqued SET for its underlying assumption that all participants are rewarded, inflating the importance of economic benefits, and assuming actors always behave



Fig. 1. Maps of Two Neighborhoods Surveyed. Retrieved from: beltline.org.

rationally (Boley, McGehee, Perdue, & Long, 2014). One way of addressing these issues is to conjoin SET with Weber's theory of formal and substantive rationality (Boley et al., 2014). Weberian theory is based on the concept that there are two types of rationality that drive economic activity: formal and substantive rationality (Jagd, 2002; Kalberg, 1980). Formal rationality drives the pursuit of efficiency and extrinsic benefits that typically have a quantifiable value, whereas substantive rationality is value-driven and prompts a desire for intrinsic benefits, such as community pride or social cohesion (Jagd, 2002; Kalberg, 1980). This literature proposes that these two forms of rationality coexist and oppose each other in economic decision-making, forcing stakeholders to resolve the tension between the two (McGehee, 2007).

The aforementioned tension is thought to exist when residents are confronted with recreational developments like the Atlanta BeltLine, which force residents to consider extrinsic benefits, such as economic gains and frequency of use, alongside intrinsic values, like neighborhood cohesion, pride, and power to guide the development of urban greenways within the neighborhood (Palardy et al., 2018). Where SET fails to fully account for non-economic benefits, Weberian theory can be drawn upon to recognize residents' intrinsic values as a basis for the formation of attitudes and subsequent support for urban greenways.

## 2.2. Predictors of resident support: extrinsic and intrinsic values

Using the framework provided by conjoining SET and Weberian theory, this study investigates resident support for urban greenways as a function of both their extrinsic and intrinsic values. This model is based on the work of Palardy et al. (2018) that used frequency of use and the constructs of perceived economic benefits and psychological, social, and political empowerment to predict resident support of urban greenways.

Use and use frequency are key behavioral measures in recreation research and have been commonly employed to study the success of urban greenways (Gobster, 1995; Jim & Chen, 2006; Lee, Scott, & Moore, 2002; Wolch et al., 2010). The literature has consistently shown that users of urban greenways experience benefits such as improved physical health, psychological well-being, and socialization (Kaczynski, Potwarka, & Saelens, 2008; Ross et al., 2012). In light of these benefits from use, SET and Weberian theory suggest there should be a positive relationship between frequency of use and support.

Economic benefits from urban greenways, like increased property value and stimulation of the local economy, have also received considerable attention from the literature (Lindsey, Man, Payton, & Dickson, 2004; Nicholls & Crompton, 2005). These benefits may come at a cost, however, as higher property values lead to a corresponding increase in property taxes, spurring gentrification of neighborhoods (Dooling, 2009; Wolch et al., 2014). SET and formal rationality from Weberian theory create an appropriate context to study the relationship that these tangible economic costs and benefits have with support for urban greenways. Therefore, we posit that the greater residents perceive the economic benefits of having the urban greenway in their neighborhood, the more likely they will be to support it.

Empowerment recently has been studied as a predictor of resident support for development in the recreation and tourism literature (Boley et al., 2014; Maruyama, Woosnam, & Boley, 2016; Strzelecka, Boley, & Strzelecka, 2017). For the purposes of this study, the overarching construct of empowerment is divided into psychological, social, and political empowerment as is commonly done in the psychology, tourism, and development literature (Friedmann, 1992; Scheyvens, 1999).

Psychological empowerment arises when the pride and self-esteem of residents is bolstered through the appreciation of the unique or special features of their community (Scheyvens, 1999). Prior studies have found this non-economic, intrinsic-value based construct to be a strong predictor of support for tourism and urban greenways (Boley

et al., 2014; Palardy et al., 2018; Strzelecka et al., 2017). It is hypothesized using the substantive portion of Weber's theory that the more residents see the BeltLine as a source of neighborhood pride, the more they will support it.

Social empowerment stems from the recreational use of amenities, which in turn can strengthen social ties and cohesion within a community. Positive perceptions of social empowerment have been found to be a significant predictor of support for tourism (Maruyama et al., 2016; Strzelecka et al., 2017) as well as urban greenways (Palardy et al., 2018). Additionally, evidence from the greenway literature suggests greenways can strengthen social empowerment by promoting socialization and cohesion within neighborhoods (Corning et al., 2012; Shafer, Lee, & Turner, 2000). Using the substantive portion of Weber's theory and these past research findings, it is hypothesized that the more residents see the BeltLine as bringing social cohesion to their neighborhood, the more they will support it.

Political empowerment is derived from improving a community's self-determination and control over decision-making (Cole, 2006; Scheyvens, 1999). While studies have found psychological and social empowerment to have a positive and significant relationship with support, political empowerment has not been found to be significantly related to support (Palardy et al., 2018). Given the importance of community decision-making to greenway development, the relationship of the political dimension of the construct to support is still investigated in this study (Cole, 2006; Scheyvens, 1999). It is hypothesized that the more residents perceive themselves as having a voice and control over greenway developments within their neighborhood, the more supportive they will be of its presence within the neighborhood.

## 3. Methods

### 3.1. Site selection

The Atlanta BeltLine is an ambitious infrastructure initiative to redevelop a series of defunct rail lines into a 33-mile network of urban trails encircling the urban core of the city of Atlanta (BeltLine.org, 2016). With only a few segments of the Atlanta BeltLine completed at the time of data collection (Spring 2016), site selection was limited to those communities adjacent to trail sections that had already been completed. The neighborhoods of focus were selected because of their homogeneity in trail type (both are spur trails) and their heterogeneity in socioeconomic composition. To control for other factors that could influence resident attitudes toward the BeltLine, neighborhood selection was further refined by controlling for the predominance of single-family housing within the neighborhood and the similar qualities of the trails, such as their length and the presence of public parks along the trail segments. This allowed for a more direct test of how racial and socioeconomic differences between the neighborhoods influenced resident attitudes towards the BeltLine.

Using these criteria, neighborhoods adjacent to the Northside Trail and Southwest Connector Trail were selected for the study. The trails are roughly one mile in length, and they connect to parks and ultimately the 22-mile main loop of the proposed Atlanta BeltLine (Figs. 1 and 2). The trails are six miles apart and have some other small differences, such as perceptions of safety within the neighborhoods (Weber et al., 2017); also, the Southwest Connector Trail is somewhat more concealed from view than the Northside Trail due to dense vegetation (Fig. 2).

The Northside Trail was built in 2010 and connects the neighborhoods of Ardmore Park and Collier Hills, running along Tanyard Creek Park. Portions of census tracts 90 and 91.01 were sampled from these neighborhoods. Residents of these census tracts are predominately white (74–90%) with median household incomes ranging from \$70,000 to \$104,000. The Southwest Connector Trail was built in 2013 and connects the Lionel Hampton Trail and Nature Preserve to Westwood Avenue. It runs through the neighborhoods of Beecher Hills,

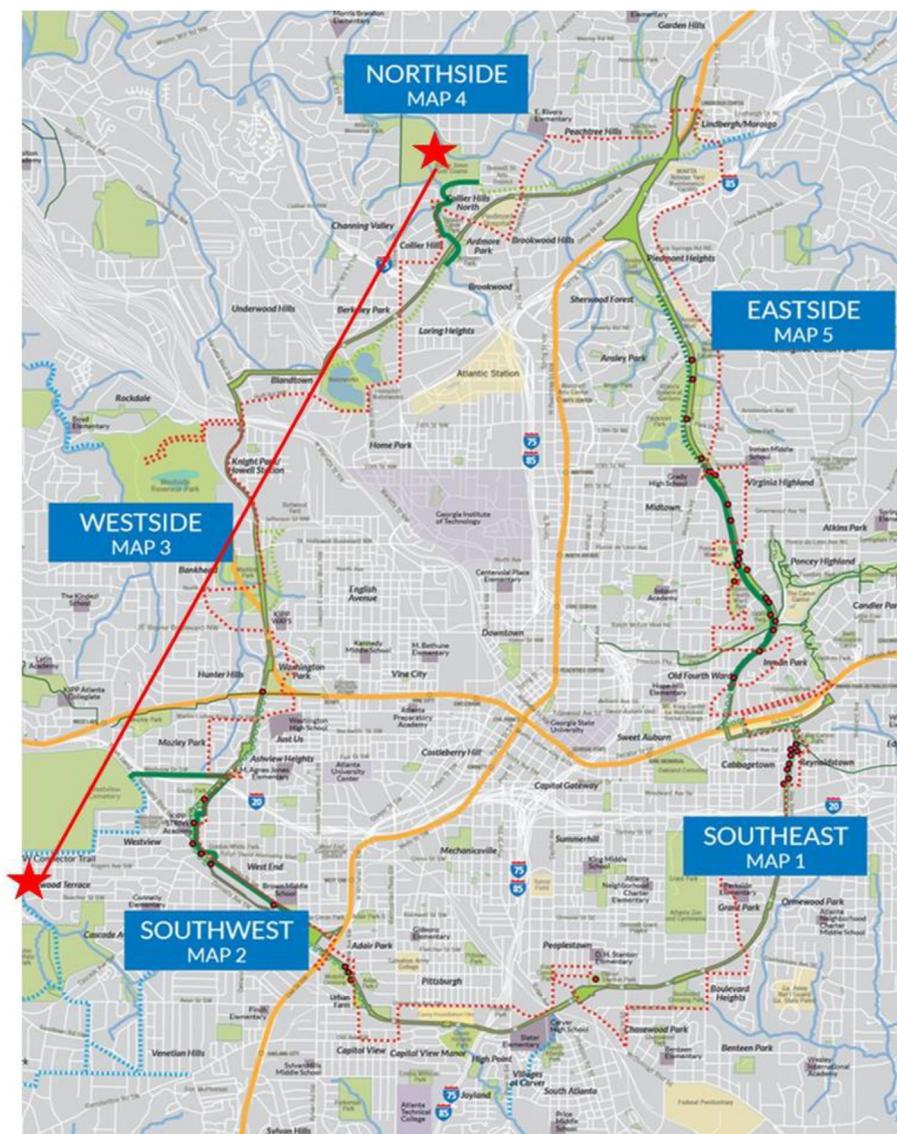


Fig. 2. Map of the Atlanta BeltLine with the distance between the Northside Trail and the Southwest Connector Trail shown.

Bollingbrook, Westwood, and Westview to the north of Cascade Road. Portions of Census tracts 60, 80, and 81.01 were sampled from these neighborhoods. Residents of these census tracts are predominately African American (96%), with median incomes ranging from \$29,000 to \$38,000. The very large income difference is likely due in part to a higher percentage of retirees in communities adjacent to the Southwest Connector living on fixed incomes.

### 3.2. Survey instrument

The five constructs used to model resident support for the Atlanta BeltLine were frequency of use, perceived economic benefits, and psychological, social, and political empowerment. For frequency of use, residents were asked whether they had ever used the trail and, if yes, how often they use it. Categories for use were ‘rarely,’ ‘monthly,’ ‘weekly’ and ‘multiple times a week.’ We combined this information into a single categorical variable ranging from zero to four, with zero representing ‘never’ and four representing ‘multiple times a week.’ The perceived economic benefits construct was measured with three items adapted from Boley, Strzelecka, and Woosnam’s (Published Online) Economic Benefits from Tourism Scale (EBTS). Its purpose is to measure resident perceptions of how the BeltLine positively impacts the

economic development of their neighborhood. The BeltLine’s impact on psychological, social, and political empowerment was measured using a 12-item instrument adapted from Boley and McGehee’s (2014) Resident Empowerment through Tourism Scale (RETS) to an urban greenway context. Similarly, the construct of support for BeltLine was measured using a four-item scale adapted from Boley and Strzelecka’s (2016) Support for Tourism Scale. To ensure reliability and validity, each construct was tested for construct validity using confirmatory factor analysis in IBM’s AMOS software. After establishing construct validity, the structural relationships between the constructs and resident support for urban greenways were tested using Structural Equation Modeling within the same AMOS software.

### 3.3. Survey distribution

To ensure the study captured an accurate representation of the residents living in the selected census tracts, proportionate, census-guided, systematic random sampling was implemented (Boley & McGehee, 2014). This method employed stratified sampling of 300 households in each neighborhood. The method works by determining the percentage of households in each census block relative to the total number of households within the census tracts selected to represent the

**Table 1**  
Socioeconomic and Demographic Composition of BeltLine Neighborhoods.

Sociodemographic and Socioeconomic Variables	Northside Trail Residents (%)	Southwest Connector Trail Residents (%)	Test Value	p
<b>Gender<sup>1</sup> (n<sub>NTR</sub> = 226, n<sub>SCTR</sub> = 180)</b>			<b>1.872</b>	<b>0.171</b>
Male	47.3	40.6		
Female	52.7	59.4		
<b>Race<sup>1</sup> (n<sub>NTR</sub> = 225, n<sub>SCTR</sub> = 176)</b>			<b>264.799</b>	<b>&lt; 0.000</b>
African American	9.3	86.4		
American Indian	0.4	1.7		
Asian	5.8	4.5		
Caucasian	76.9	1.7		
Hispanic	4.0	5.7		
Other	3.6	0.0		
<b>Education level<sup>1</sup> (n<sub>NTR</sub> = 226, n<sub>SCTR</sub> = 177)</b>			<b>144.317</b>	<b>&lt; 0.000</b>
Less than high school	0.0	5.6		
High school or GED	2.2	18.6		
Technical, vocational or trade school	1.8	15.3		
Some college	5.8	27.1		
Bachelor's degree	54.4	21.5		
Master's degree	27.0	9.6		
Ph.D./ professional degree	8.8	2.3		
<b>Household Income<sup>1</sup> (n<sub>NTR</sub> = 204, n<sub>SCTR</sub> = 155)</b>			<b>112.422</b>	<b>&lt; 0.000</b>
< \$30,000	7.4	34.8		
\$30,000–\$59,999	11.8	33.5		
\$60,000–\$89,999	18.6	18.7		
\$90,000–\$119,999	17.2	7.1		
\$120,000–\$149,999	10.8	2.6		
\$150,000–\$179,999	7.4	2.6		
\$180,000–\$209,999	6.9	0.0		
≥ \$210,000	20.1	0.6		
<b>Rent vs. Own</b>			<b>0.2473</b>	<b>0.619</b>
Rent	33.8	36.2		
Own	66.2	63.8		
	Mean age in years			
<b>Age<sup>2</sup> (n<sub>NTR</sub> = 215, n<sub>SCTR</sub> = 154)</b>	<b>41 (σ = 14.4)</b>	<b>52 (σ = 17.0)</b>	<b>– 6.817</b>	<b>&lt; 0.000</b>

<sup>1</sup> Differences tested with Pearson chi-square test.

<sup>2</sup> Differences tested with independent-samples *t*-test.

neighborhood. Once this percentage was calculated, it was multiplied by 300 to ensure that the 300 surveys were allocated across the neighborhood based upon the proportion of households residing in each part of the neighborhood. For example, if five percent of the total households were located in block 1 of census tract 1, then 15 surveys were allocated to that census block (0.05 × 300). Once the number of surveys allotted to each census block was determined, the surveys were then randomly distributed within each block. All residences fell within a 2.1 km radius of trail access points with residents being able to access the trail without having to cross any major roads or leave the core of the neighborhood.

Surveys were randomly distributed door-to-door by three research teams during March and April of 2016. Each team started at a corner of the block and visited every other house, moving in a clockwise direction. If a resident agreed to participate, a survey packet with instructions was left to be picked up later the same day, and the next immediate house was skipped over. However, if no resident answered the door, the next immediate house was contacted. The sampling strategy was repeated until all the allotted surveys for each block were distributed.

The research teams visited 1883 households, resulting in contact with 712 eligible residents. Six hundred residents agreed to participate while 112 declined to take the survey (84% participation rate). Four hundred and thirty-nine surveys were returned for a completion rate of 73%. Discarding surveys that were insufficiently or haphazardly completed yielded 418 usable surveys and an overall response rate of 59%. Two hundred and thirty of these surveys were from neighborhoods along the Northside trail resulting in a response rate of 76.7%, which was significantly higher than the response rate from the neighborhoods

along the Southwest Connector Trail where only 188 surveys were returned (62.7%) ( $\chi^2 = 13.898$ ;  $p = 0.0002$ ). The authors also attended neighborhood meetings within the Southwest neighborhood to ensure that the research team had a good understanding of residential concerns regarding the Southwest Connector Trail and to share study results with residents.

## 4. Results

### 4.1. Sample composition

Respondents tended to be majority female in both neighborhoods (Table 1). The Southwest sample ( $\bar{x} = 52$ ;  $\sigma = 14.4$ ; Range = 19–89 years old) was significantly older than the Northside sample ( $\bar{x} = 41$ ;  $\sigma = 17.0$ ; Range = 22–80 years old). As expected, the Northside neighborhood was primarily White (76.9%) while the Southwest neighborhood was predominantly African American (86.4%). These findings are consistent with statistics from the 2010 census of the same neighborhoods (Table 2). The median level of educational attainment was higher in the Northside neighborhood than the Southwest neighborhood (90.2% with a bachelor's degree or higher in the Northside vs. 33.4% in the Southwest), as was the median annual household income (\$90,000–\$119,999 vs. \$30,000–\$59,999). There was no difference in homeownership rates between the two neighborhoods.

### 4.2. Comparison of support and predictors of support for the BeltLine

Prior to running structural models for each neighborhood, mean scores on the constructs of perceived economic benefits, psychological

**Table 2**  
Sample characteristics compared to census statistics.

	Housing Units	Race	Median <sup>1</sup> Income	Median <sup>1</sup> House Price	Median Age	Mean Age
<i>Northside Neighborhoods (e.g. Collier Hills, Ardmore Park)</i>						
Census Tract 90	466	94.5% White	\$114,489	\$505,300	36.0	–
Block Group 1*						
1012	21	89.7% White	–	–	50.3	–
1013	21	100% White	–	–	40.5	–
1014	25	95.9% White	–	–	34.2	–
1015	15	64.3% White	–	–	28.5	–
1016	13	94.7% White	–	–	–	–
Census Tract 90	998	79% White	\$63,571	\$493,600	29.4	–
Block Group 3*						
3001	19	100% White	–	–	40.5	–
3002	20	83.8% White	–	–	39.5	–
3008	21	97.9% White	–	–	35.5	–
3009	40	95.9% White	–	–	34.1	–
3010	48	93.7% White	–	–	35.9	–
3011	18	100% White	–	–	34.2	–
3012	26	100% White	–	–	33.7	–
3013	24	93.4% White	–	–	35.8	–
Census Tract 91.01	3241	74.3% White	\$69,750	\$267,900	34.2	–
Sample Demographics	215	76.9% White	62% ≥ \$90,000	–	36.0	41.0
<i>Southwest Neighborhoods (e.g. Beecher Hills, Westwood Terrace, Westview)</i>						
Census Tract 80 Block Group 5	627	94.9% Black	\$54,352	\$153,100	47.7	–
Census Tract 81.01	447	96.6% Black	\$28,929	\$71,600	46.3	–
Census Tract 60	1675	94.4% Black	\$26,359	\$97,400	41.2	–
Block Group 1	311	94.4% Black	\$34,318	\$89,600	29.4	–
Block Group 2	412	93.2% Black	\$31,328	\$96,000	41.4	–
Block Group 3	445	95.2% Black	\$31,711	\$108,700	42.4	–
Sample Demographics	154	86.4% Black	68% ≤ \$59,999	–	51.5	52.0

<sup>1</sup> Median income and median house price are not available at the block level.

empowerment, social empowerment, political empowerment, and support for the BeltLine were compared using independent samples t-tests (Table 3). A chi-square test was also performed on frequency of use to see if different patterns of use emerged between the two neighborhoods. Statistically significant differences were found across psychological empowerment, political empowerment, support for the BeltLine, and frequency of use. Only 13.8% of residents along the Northside section reported never having used the trail compared to 28.3% of residents in the Southwest section. Northside residents also used the trail more frequently during the week compared to Southwest residents (59% vs. 41%). Residents of the Northside neighborhood were found to perceive themselves to be more psychologically empowered from having the trail in their neighborhood (3.99 vs. 3.69), while residents of the Southwest neighborhood were more politically empowered (3.01 vs. 2.64). The level of support was also found to differ significantly between the two study areas, with residents along the Northside Trail more strongly supporting the presence of the Atlanta BeltLine Trail in their neighborhood than residents in the Southwest neighborhood (4.45 vs 4.01 on a five-point scale). Perception of economic benefits and social empowerment did not significantly differ between the two communities.

#### 4.3. Confirmatory factor analysis for the Northside Trail neighborhoods

Prior to testing the hypotheses, Confirmatory Factor Analysis (CFA) was performed using IBM’s AMOS program to gauge overall model fit and construct validity. Because frequency of use is measured by a single item, it was not included in the CFA. Overall model fit indices for the Northside sample revealed good model fit:  $\chi^2 = 204.730$ ,  $p < 0.001$ ; normed- $\chi^2 = 1.442$ , RMSEA = 0.044, CFI = 0.98. Because the  $\chi^2$  test is known to be sensitive to sample size and model complexity, the other fit indices (e.g., RMSEA, CFI) were examined and their values were found

to be acceptable (Hair, Black, Babin, Anderson, & Tatham, 2006).

Construct validity determines whether the items in the survey adequately measure the latent constructs of support for the BeltLine, economic benefits and psychological, social, and political empowerment. All constructs adhere to the three-indicator rule, which states that all constructs should possess at least three significant indicators to prevent identification issues (Hair et al., 2006). Convergent validity and discriminant validity are subcomponents of construct validity. Convergent validity is a measure of the strength of the relationship between indicators and the parent construct. As shown in Table 4, convergent validity was established by all 19 indicators being significant and exhibiting standardized factor loadings exceeding the 0.50 critical value, the average variance extracted (AVE) estimates for each construct exceeding 50%, and the construct reliability (CR) for each construct exceeding 0.70 (Hair et al., 2006).

Discriminant validity examines whether constructs in the model are notably distinct from one another. A strict measure of discriminant validity is to compare the AVE estimate of each construct to the squared correlation between constructs (Hair et al., 2006). Constructs have discriminant validity if the AVE estimate is higher than the squared correlations. The AVE estimates were higher than the squared correlations except in one instance (Table 5). The AVE estimates for social empowerment (67%) and psychological empowerment (76%) were slightly lower than the squared correlation between social empowerment and psychological empowerment (0.77). This result indicates these two constructs may not be unique. While the convergent validity was adequate and discriminant validity was found between most of the constructs, the high squared correlation between psychological and social empowerment indicates these constructs may share more variance with each other than is explained through their item measures. This limitation concerning shared variance should be kept in mind when drawing conclusions.

**Table 3**  
Independent-samples T-test of Responses to Survey.

	Northside Residents Means	Southwest Residents Means	t	p
<b>Psychological Empowerment<sup>1</sup></b>				
<i>The Atlanta BeltLine.</i>	<b>3.99</b>	<b>3.69</b>	<b>3.334</b>	<b>0.001</b>
Makes me proud to live in this neighborhood.	4.03	3.74	3.005	0.003
Makes me feel special to live in this neighborhood.	3.84	3.56	2.723	0.007
Makes me want to tell others about what we have to offer in my neighborhood.	4.05	3.68	3.868	< 0.000
Reminds me that I live in a unique neighborhood.	4.01	3.74	2.776	0.006
Makes me want to work to keep my neighborhood special.	3.99	3.95	0.475	0.635
<b>Perceived Social Empowerment<sup>1</sup></b>				
<i>The Atlanta BeltLine.</i>	<b>3.64</b>	<b>3.48</b>	<b>1.843</b>	<b>0.066</b>
Makes me feel more connected to my neighborhood.	3.85	3.51	3.459	0.001
Provides ways for me to get involved in my neighborhood.	3.46	3.59	-1.474	0.141
Fosters a sense of 'community spirit' within me.	3.60	3.52	0.910	0.363
<b>Perceived Political Empowerment<sup>1</sup></b>				
	<b>2.64</b>	<b>3.01</b>	<b>-4.076</b>	<b>&lt; 0.000</b>
I have a voice in development decisions pertaining to the BeltLine Trail.	2.60	2.97	-3.507	0.001
I have access to the decision making process when it comes to the BeltLine Trail.	2.53	2.87	-3.308	0.001
My vote makes a difference in how the BeltLine trail is developed.	2.76	3.10	-3.360	0.001
I have an outlet to share my concerns about the BeltLine Trail.	2.77	3.20	-4.323	< 0.000
<b>Perceived Economic Benefits<sup>1</sup></b>				
	<b>3.04</b>	<b>3.16</b>	<b>-1.369</b>	<b>0.172</b>
My neighborhood benefits economically from the BeltLine Trail.	3.45	3.46	-0.072	0.943
New businesses have come into this neighborhood because of the BeltLine Trail.	2.99	3.00	-0.087	0.931
The BeltLine Trail has increased opportunities for business expansion in this neighborhood.	3.25	3.42	-1.739	0.083
<b>Support for the Atlanta BeltLine<sup>1</sup></b>				
	<b>4.45</b>	<b>4.01</b>	<b>5.301</b>	<b>&lt; 0.000</b>
In general, the positive benefits of the BeltLine Trail outweigh its negative impacts in my neighborhood.	4.51	3.83	7.12	< 0.000
I believe the BeltLine Trail should be actively encouraged within my neighborhood.	4.40	4.14	2.903	0.004
I support the BeltLine Trail.	4.53	4.13	4.499	< 0.000
My neighborhood should continue to support the BeltLine Trail.	4.46	4.08	4.391	< 0.000
<b>Frequency of Use<sup>2</sup></b>				
	Percent of responses	108.694		< 0.001
Never	13.8%	28.3%		
Rarely	6.7%	14.5%		
Monthly	20.4%	16.8%		
Weekly	28.4%	20.3%		
Multiple Times a Week	30.7%	20.3%		

<sup>1</sup> Scale: 1 = Strongly Disagree to 5 = Strongly Agree.

<sup>2</sup> Differences between "Frequency of Use" tested with Pearson chi-square test.

4.4. CFA for the Southwest connector trail neighborhoods

The same CFA strategy was replicated with the Southwest sample. Overall model fit indices were similarly good:  $\chi^2 = 249.960, p < 0.001$ ; normed- $\chi^2 = 1.760$ , RMSEA = 0.064, CFI = 0.96. Standardized factor loadings were all significant and above 0.50, AVE estimates were greater than 50%, and CR were above 0.70, which taken together establish convergent validity. The AVE estimates were greater than the squared correlations between constructs in all but one instance. The AVE associated with economic benefits (61%) was exceeded by the squared correlation between economic benefits and psychological empowerment (0.63). The problematic squared correlation only slightly exceeded economic benefits' AVE, and psychological empowerment's high AVE (80%) exceeded the problematic squared correlation, indicating that the constructs are unique and demonstrate discriminant validity (Table 5). Tests for convergent and discriminant validity indicated good construct validity in the Southwest sample model.

4.5. SEM results for Northside sample

After model fit and construct validity were established for both models, structural equation modeling (SEM) using IBM's AMOS was conducted to evaluate how well each factor predicted support for the BeltLine in each sample. Results of the SEM are shown in Table 6. Model fit remained acceptable when specifying pathways for support for the Northside BeltLine Trail:  $\chi^2 = 229.467, p < .001$ ; normed- $\chi^2 = 1.471$ ; RMSEA = 0.045; CFI = 0.98. The squared multiple correlation ( $R^2$ ) support of the Northside Trail was 0.68, indicating that the model explained 68% of the variance in support for the

BeltLine within the neighborhood. For the Northside neighborhood, economic benefits ( $\beta = 0.227, p = 0.046$ ), psychological empowerment ( $\beta = 0.402, p < 0.001$ ) and frequency of use ( $\beta = 0.183, p < 0.001$ ) were found to be significant predictors of support. Social empowerment ( $\beta = 0.196, p = 0.146$ ) and political empowerment ( $\beta = -0.099, p = 0.079$ ) were not found to be significant predictors of support.

4.6. SEM results for the Southwest sample

The SEM analysis of the Southwest sample produced good model fit indices as well:  $\chi^2 = 282.684, p < 0.001$ ; normed- $\chi^2 = 1.666$ ; RMSEA = 0.060; CFI = 0.96. In the Southwest sample, the squared multiple correlation ( $R^2$ ) was 0.57, indicating that the model explained 57% of the variance in support for the BeltLine. This is 10% less variance than explained in the Northside neighborhood. Significant predictors of support for the BeltLine within the Southwest neighborhood were the same as in the Northside sample: economic benefits ( $\beta = 0.298, p = 0.024$ ), psychological empowerment ( $\beta = 0.373, p = 0.013$ ) and frequency of use ( $\beta = 0.131, p = 0.031$ ). Social empowerment ( $\beta = 0.181, p = 0.186$ ) and political empowerment ( $\beta = -0.128, p = 0.187$ ) were not found to be significant predictors.

4.7. Post hoc SEM analysis with socio-economic variables

Because of variations in age, race, and income between the two neighborhoods, we conducted a post hoc analysis to examine the extent to which BeltLine support was explained by socio-economic variables

**Table 4**  
Confirmatory Factor Analysis of Measurement Model.

Scale and Item Description	Northside			Southwest		
	R	AVE	CR	R	AVE	CR
<b>Psychological Empowerment</b> <i>The Atlanta BeltLine...</i>		<b>76%</b>	<b>0.95</b>		<b>80%</b>	<b>0.95</b>
Makes me proud to live in this neighborhood.	0.88*			0.90†		
Makes me feel special to live in this neighborhood.	0.88*			0.91†		
Makes me want to tell others about what we have to offer in my neighborhood.	0.90*			0.91†		
Reminds me that I live in a unique neighborhood.	0.88*			0.89†		
Makes me want to work to keep my neighborhood special.	0.82*			0.86†		
<b>Social Empowerment</b> <i>The Atlanta BeltLine...</i>		<b>67%</b>	<b>0.88</b>		<b>69%</b>	<b>0.86</b>
Makes me feel more connected to my neighborhood.	0.84*			0.86†		
Provides ways for me to get involved in my neighborhood.	0.76*			0.76†		
Fosters a sense of 'community spirit' within me.	0.86*			0.87†		
<b>Political Empowerment</b>		<b>74%</b>	<b>0.93</b>		<b>67%</b>	<b>0.87</b>
I have a voice in development decisions pertaining to the BeltLine Trail.	0.89*			0.87†		
I have access to the decision making process when it comes to the Beltline Trail.	0.91*			0.83†		
My vote makes a difference in how the BeltLine Trail is developed.	0.83*			0.86†		
I have an outlet to share my concerns about the BeltLine Trail.	0.80*			0.71†		
<b>Economic Benefits from the BeltLine</b>		<b>58%</b>	<b>0.82</b>		<b>61%</b>	<b>0.79</b>
My neighborhood benefits economically from the BeltLine Trail.	0.81*			0.85†		
New businesses have come into this neighborhood because of the BeltLine Trail.	0.75*			0.70†		
The BeltLine Trail has increased opportunities for business expansion in this neighborhood.	0.73*			0.78†		
<b>Support for the BeltLine</b>		<b>82%</b>	<b>0.96</b>		<b>69%</b>	<b>0.88</b>
In general, the positive benefits of the BeltLine Trail outweigh its negative impacts in my neighborhood.	0.90*			0.63†		
I believe the BeltLine Trail should be actively encouraged within my neighborhood.	0.88*			0.92†		
I support the BeltLine Trail.	0.93*			0.86†		
My neighborhood should continue to support the BeltLine Trail.	0.92*			0.87†		

Note: Measure of model fit:  $RMSEA_{Northside} = 0.044$ ,  $CFI_{Northside} = 0.98$ ;  $RMSEA_{Southwest} = 0.064$ ,  $CFI_{Southwest} = 0.96$ .

R = standardized regression coefficient; AVE = average variance extracted; and CR = construct reliability.

\*  $p = 0.001$ ; Scale: 1 = Strongly Disagree to 5 = Strongly Agree.

(age, race, income, education, gender, homeownership, and length of residency in neighborhood), along with the empowerment and frequency of use variables. We also include Neighborhood (e.g., Northside vs Southwest side) as a binary predictor variable to see if trail segment alone was a significant predictor of resident support for their respective neighborhood's portion of the BeltLine. The nominal race variable was recoded in a binary minority/white variable with African Americans (79%), American Indians (2%), Asians (6%), and Hispanics (5%), and 'other' (8%) assigned a value of 1 and Whites assigned a value of 0. This provided the ability to test whether minority status had any influence on support for the urban greenway within the resident's neighborhood. This analysis was conducted with both samples combined for two main reasons. First, it provided the ability to test for the trail segment/neighborhood influence on support for the BeltLine. Second, the little variation in race in the Southwest neighborhood (98% minority) inhibited the ability to test for the influence of being a minority on support for the BeltLine.

Results revealed that trail segment had no influence on support for the BeltLine and that age and minority status were the only

two significant socio-economic predictors, with older residents ( $\beta = -0.085$ ,  $p = 0.034$ ) and minorities ( $\beta = -0.100$ ,  $p = 0.042$ ) being less supportive of their neighborhood's portion of the BeltLine (Table 6). While age and minority status were found to be significant negative predictors of support, it should be noted that their influences were not as strong as psychographic predictors of psychological empowerment ( $\beta = 0.383$ ,  $p = 0.001$ ), perceptions of the economic benefits from the Beltline ( $\beta = 0.231$ ,  $p = 0.003$ ), social empowerment ( $\beta = 0.202$ ,  $p = 0.021$ ), or frequency of use ( $\beta = 0.149$ ,  $p = 0.001$ ).

### 5. Discussion and conclusion

Using a political ecology lens that acknowledges the heterogeneous impacts urban greenways have across the neighborhoods they transect (Byrne & Wolch, 2009 p. 747; Heynen et al., 2006), this study's main objective was to examine how resident perceptions of the Atlanta BeltLine differed across two neighborhoods that varied in their racial and socioeconomic composition. A large-scale quantitative examination of resident attitudes toward urban greenways has been lacking within

**Table 5**  
Correlations and Squared Correlations between Constructs within the Model.

	Northside					Southwest				
	SB	PSY	SOC	POL	ECON	SB	PSY	SOC	POL	ECON
Support for the BeltLine (SB)	<b>1.00</b>	0.62	0.58	0.07	0.43	<b>1.00</b>	0.52	0.39	0.16	0.44
Psychological Empowerment (PSY)	0.79	<b>1.00</b>	0.77	0.14	0.57	0.72	<b>1.00</b>	0.62	0.28	0.63
Social Empowerment (SOC)	0.76	0.88	<b>1.00</b>	0.19	0.57	0.63	0.79	<b>1.00</b>	0.50	0.51
Political Empowerment (POL)	0.27	0.38	0.44	<b>1.00</b>	0.27	0.40	0.53	0.71	<b>1.00</b>	0.34
Economic Benefit (ECON)	0.66	0.76	0.75	0.52	<b>1.00</b>	0.67	0.79	0.71	0.58	<b>1.00</b>

Note: Values below the diagonal are correlation estimates among constructs and values above the diagonal are squared correlations.

**Table 6**  
Structural Paths of Predictors for Support for the Atlanta BeltLine.

Structural paths	B	p	R <sup>2</sup>	Rank
<b>Northside sample<sup>1</sup></b>			<b>0.68</b>	
Psychological empowerment → support	0.402	< 0.001		1
Economic benefits → support	0.227	0.019		2
Frequency of use → support	0.183	< 0.001		3
Social empowerment → support	0.196	0.146		
Political empowerment → support	-0.099	0.079		
<b>Southwest Sample<sup>2</sup></b>			<b>0.57</b>	
Psychological empowerment → support	0.373	0.013		1
Economic benefits → support	0.298	0.024		2
Frequency of use → support	0.131	0.031		3
Social empowerment → support	0.181	0.186		
Political empowerment → support	-0.128	0.187		
<b>Combined Sample with Socio-economic Variables<sup>3</sup></b>			<b>0.68</b>	
Psychological empowerment → support	0.383	< 0.001		1
Economic benefits → support	0.231	0.003		2
Social empowerment → support	0.202	0.021		3
Frequency of use → support	0.149	< 0.001		4
Minority (yes or no)	-0.100	0.042		5
Age	-0.085	0.034		6
Political empowerment → support	-0.090	0.072		
Trail Segment/Neighborhood	0.085	0.127		
Income	0.033	0.486		
Gender	-0.064	0.060		
Rent vs. Own	-0.021	0.588		
Education	0.067	0.112		

<sup>1</sup> Model fit for Northside: RMSEA = 0.045; CFI = 0.98; CFI = 0.96.

<sup>2</sup> Model fit for Southwest: RMSEA = 0.060.

<sup>3</sup> Model fit for Combined model: RMSEA = 0.052; CFI = 0.96.

the landscape and urban planning literature and is vital to ensuring urban planners can deliver the anticipated benefits associated with urban greenways (Lindsey, 2003; Salici & Altunkasa, 2014).

This study applied Social Exchange Theory and Weber’s theory of formal and substantive rationality to explain why residents support or oppose urban greenways across heterogeneous neighborhoods. Through this theoretical perspective, results revealed that even though the communities differed in racial and socioeconomic composition, a similar range of formal (i.e., economic) and substantive (i.e., non-economic) factors influenced their support for the Atlanta BeltLine. For example, even though there were many significant differences in how residents used the BeltLine and were empowered by it, support for the BeltLine within both neighborhoods was found to be a function of the same formal factors of frequency of use and perceived economic benefits and the same substantive factor of psychological empowerment. Results suggest that residents generally form their opinions of urban greenways in a similar fashion and that these opinions are influenced simultaneously by both formal and substantive factors.

Results also confirm the importance of investigating resident attitudes toward urban greenways across neighborhoods. For example, results indicated significant differences on 13 out of the 19 items included in the model, and the model explained 10% less variance for the Southwest neighborhood. Although there are certainly similarities in how residents formulate support for urban greenways, the significantly lower variance explained in support for the Southwest Connector Trail indicates there could be other salient factors such as demographics and specific neighborhood concerns influencing residential support for urban greenways that were not included in the model. For example, the results of the combined post hoc model with socio-economic variables found age and minority status to have a negative influence on support for the BeltLine. These variables may partly explain why Southwest residents, who tend to be older and overwhelmingly African American, have slightly lower levels of support for their portion of the Beltline ( $\bar{x} = 4.01$ ) compared to Northside residents ( $\bar{x} = 4.45$ ). Results provide credence to examining residents’ attitudes toward urban greenways across diverse neighborhoods because Atlanta, GA, as with many U.S.

cities, has neighborhoods that differ vastly in racial composition and age structure (Keating, 2001; Kruse, 2005; Johnson Gaither et al., 2016).

This study has practical implications for urban planners who have the difficult task of developing and managing urban greenways within heterogeneous cities that have a variety of neighborhoods that each have their own sets of histories, politics, and current problems that converge to create unique lenses from which residents view urban greenways (Curran & Hamilton, 2012; Wolch et al., 2014). While these two neighborhoods differed in racial and socioeconomic composition, residents largely supported their neighborhood’s portion of the BeltLine with mean scores of “Support” over 4 on a 5-point scale. Both neighborhoods also supported their portion of the BeltLine for similar reasons (e.g., psychological empowerment, frequency of use, and perceived economic benefits). These findings provide a common starting place for urban planners to focus their efforts. If managers can design and manage urban greenways in a manner that makes residents proud of their neighborhood, use the trail more frequently, and associate positive economic benefits with the trail, then the results of this study suggest that they are likely to increase resident support across all residents regardless of socioeconomic status or race. Suggestions for increasing psychological empowerment include allowing neighborhood trails segments to aesthetically vary by the unique physical and human geography of the neighborhood. This would bolster psychological empowerment among residents because their section of the urban greenway would be unique to what embodies their neighborhood. It is also suggested that residents should be included in the physical building and maintaining of the trail. By having residents be a part of the beautification of their neighborhood, they are likely to take increased ownership over their greenway segment and see it as a source of neighborhood pride.

Increasing use of urban greenways has been a significant focus of much of the previous literature (Gobster, 1995; Shores, Scott, & Floyd, 2007; Wolch et al., 2010). These studies have largely found that health, leisure time, distance, and fear are constraints to residents using urban greenways with demographic variables such as income, age, gender, and race moderating the level of these constraints. Findings from this study build on this prior research and suggest that if residents are able to overcome these perceived constraints and begin to use the trail more frequently, they will be more likely to support the trail. However, this is no easy task because these constraints are often entrenched and hard to overcome in short periods of time. Suggestions for facilitating use among residents within the Southwest neighborhood include hiring more safety patrol officers to monitor the greenway and installing more call boxes to increase perceptions of safety among residents (Weber et al., 2017). Increasing use may itself increase residents’ perception of safety because there is a positive feedback loop of the more people on the trail creating greater perceptions of safety. City planners may also want to consider vegetative controls along the sides of greenways to increase users’ line of sight and their ultimate perceptions of safety.

Related to frequency of use, the age of residents should also be considered by urban greenway managers. The post hoc model including socio-economic variables found age to have a negative relationship with support for the BeltLine within the combined sample. While previous research has found the activity level of trail users to significantly go down past the age of 38 (Gobster, 2005), residents are life-long stakeholders of these urban greenways and efforts should be made to facilitate use among residents of various ages. This increased use will not only provide the many health and psychological benefits commonly associated with exercising on greenways (Gobster, 1995; Jim & Chen, 2006; Lee et al., 2002; Wolch et al., 2010), but it is also likely to grow support among aging residents.

Lastly, managers need to be concerned about how residents perceive the economic impacts of urban greenways. Results from both neighborhoods show that the more residents associate the BeltLine with positive economic benefits, the more they are likely to support it. Urban

planners should consider zoning ordinances around urban greenways and seek to design urban greenways in a manner that connect residential areas to existing or potential commercial areas. If urban greenways function as conduits for residents accessing restaurants, bars, boutiques and grocery stores, they are likely to spur economic development in the area. If the zoning ordinances are not favorable to commercial development, city planners may want to consult residents to see if there is interest in rezoning certain areas adjacent to these greenways to foster this type of economic development.

However, it should also be made clear what measures are being taken to prevent gentrification, as this is a well-documented concern of lower-income residents in neighborhoods with new greenway developments (Curran & Hamilton, 2012; Dooling, 2009; Immergluck & Balan, 2018; Wolch et al., 2014). While gentrification is notably a difficult problem to solve, solutions include politically empowering residents to ensure their voices are heard prior to building greenways, educating residents about how the planning process works, and maintaining neighborhood diversity through the use of policy tools such as the Low-Income Housing Tax Credit and setting aside portions of affordable-housing developments in newly developed neighborhoods (Smith, 2014). The Atlanta BeltLine Commission has already proactively worked with the Atlanta City Council to pass an inclusionary zoning policy requiring developers of ten or more residential rental units within the Atlanta BeltLine Overlay District to set aside either 10% of units for those earning 60% or less of the area median income (AMI) or 15% for those earning 80% or less of the AMI (BeltLine.Org). To date, this has resulted in 2565 affordable housing units within walking distance, but many still criticize the BeltLine for being the culprit of gentrification (Immergluck & Balan, 2018; Powers, 2017).

Future research may also want to investigate the gentrifying force of urban greenways in neighborhoods occupied primarily by renters. While our post hoc analysis did not show homeownership to influence resident support of the BeltLine, Immergluck and Balan (2018) acknowledge that renters are more vulnerable to the forces of gentrification than residents who live in owner-occupied dwellings. One of this study's findings—that the economic benefits of urban greenways are associated with residential support—conveys the importance of urban planners giving considerable thought to how urban greenways can foster economic development while also planning for how this boost in economic development brings real benefits to all residents. Curran and Hamilton's (2012) 'just green enough' approach suggests that working with residents to provide the right balance of green space, recreation, restaurants, and jobs for all residents, including the working class, is an important starting place to ensure that these greenways developments are not just environmentally sustainable, but also meet the triple bottom line's requirements of economic and social sustainability (Elkington, 1998).

Even though these are three strategies urban planners can implement to increase resident support for urban greenways, around 30–40% of the variance in why residents support or oppose urban greenways remains unexplained through this study's model. These findings indicate that there are other unknown reasons for residents' support or opposition to urban greenways. This is particularly true for the Southwest neighborhood where only 57% of the variance in their support for the Southwest Connector Trails was explained through the model. Future research should attempt to answer why these differences exist, and illuminate why communities of differing racial and socioeconomic composition perceive urban greenways differently.

### 5.1. Future research and limitations

One limitation of this study is its quantitative nature. Large-scale data collection was chosen to increase confidence and produce generalizable results. However, this research is only generalizable to the residents of these two purposefully selected neighborhoods in Atlanta, Georgia. More research is needed to test the presented model across

different regional and cultural contexts prior to establishing conclusions on how resident perceptions of urban greenways vary by racial and socioeconomic factors. Another limitation associated with the quantitative nature of the study is in understanding why residents perceive greenways as psychologically empowering or economically beneficial. Follow-up qualitative research through focus groups and in-depth interviews is needed to identify the factors that lead to increased use, psychological empowerment, and urban greenways being economically beneficial to residents. The lower level of variance explained by the model in the Southwest neighborhood also indicates the need for further qualitative work to identify other factors that are influencing support for the BeltLine within this neighborhood. Perhaps these focus groups and in-depth interviews would elicit that residents' support or opposition is also a function of the type of other users on the greenway and the emotional solidarity, or lack thereof, that they share with one another (Woosnam, 2012). For instance, if one's neighborhood greenway was being used predominantly by tourists or by residents from other parts of the city, there could be frustration with the greenway and ultimately less support as it could be viewed as a recreational development solely for outsiders. It is also possible that other users are using the greenway in a manner incompatible with what residents feel is acceptable (e.g. skateboarding vs. walking) or in a manner that they deem reckless, leading to recreational conflict and potentially less support (Gobster, 1995; Vittersø et al., 2004).

Because of constraints on time and funding, this study was only able to test the measurement model in two neighborhoods within a single city. It would be useful to explore resident attitudes toward urban greenways in other types of neighborhoods, such as those composed largely of non-White and non-African Americans (e.g. Asians and Hispanics), those with middle levels of income, or denser urban areas. Future research should also examine how resident attitudes towards urban greenways evolve over time. For example, both segments of the BeltLine trail had been open for more than three years at the time of data collection (c. 2010 Northside Trail; c. 2013 Southwest Connector Trail). It is possible that residents adjacent to recent greenway developments, such as the newly opened Westside portion of the BeltLine, have different perceptions of the costs and benefits of urban greenways within their neighborhoods. Longitudinal research tracking resident attitudes from when the initial greenway plans are proposed through decades past completion would provide a more complete picture of how residents' perceptions of these urban greenways evolve over time. More research is also needed on the influence of age on resident support for greenway development. The post hoc analysis found age to have a negative relationship with support for the Beltline; but with age being a recognized factor limiting use (Gobster, 2005), future research using path analysis is needed to see if age has a direct impact on support or if its influence is mediated by frequency of use.

In conclusion, research on resident perceptions of the costs and benefits of urban greenways, and how these relate to support, is in its early stages. It is suggested that urban planners interested in greenway development approach neighborhoods as each having its own set of histories, politics, and current problems that converge to create unique lenses from which residents view urban greenways and ultimately judge their success or failure. Without treating residential neighborhoods as unique with their own set of idiosyncrasies, urban planners run the risk of developing urban greenways that alienate residents and fail to provide the sustainable benefits so often praised within the literature. While this research focuses solely on two segments of the Atlanta BeltLine, it suggests to urban planners that a good place to start in winning over resident support is to design urban greenways that increase residential use, facilitate resident pride, and deliver economic benefits.

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