Trees in Business Districts
The Urban Forest and Retail Environments

Research Review

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• Research Settings:
  big city - neighborhood districts
  mid size - Athens CBD
  small city - Main Streets

Sponsors:
NUCFAC - USDA Forest Service
Georgia Forestry Commission
Athens/Clarke County Consolidated Govt
National Scenic Byways Research Center
many local partners!
Research Question:
What is the response of visitors and/or shoppers to trees in CBD streetscapes?

Measures:
Visual preference
Place perceptions
Patronage behavior
Product pricing

www.cfr.washington.edu/research.envmind
Methods - survey research

mailing to random sample of resident addresses

on-street sampling

Methods - Athens, GA

person-to-person contact

random locations & times

UGA students

365 respondents
Results: Visual Preference

Mid-size city - Athens, GA

Mean Scene Ratings

lowest rated scene mean 1.34

Scale:
1=not at all
5=like very much

20 images

highest rated scene mean 4.67
Three Preference Categories
descriptions & mean ratings

Category 1: Dominant Buildings
mean: 1.98

Category 2: Buffered Buildings
Mean 3.13

Category 3: Green Streets
mean: 4.00

Trees & Visual Quality

Visual Preferences

- lower without trees
- higher with big trees
- little difference in response based on visitor demographics
Preferences

Image Preference Categories - Vegetation Content

Results: Visitor Patronage

Mid size city - Athens, GA
Part Three

The streets and sidewalks of Athens are being upgraded and improved. Different design options have been proposed. Imagine that in time most of the business district looks like these images. Please answer the questions below.

Would you visit the Athens business district per month?
- Less than once a month
- Once a month
- 2 to 3 times per month
- 3 to 5 times per month
- More than 5 times per month
- More than 10 times per month

Would you spend more or less time doing these activities in the Athens business district?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Less</th>
<th>More</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attend a concert, show or performance</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Go to a club or bar</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Walk with friends, colleagues or family</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Take a walk or study break</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Shopping for specific products or services</td>
<td>1</td>
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</tr>
<tr>
<td>Women and men shopping in the district</td>
<td>1</td>
<td>2</td>
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Average Time Spent:

<table>
<thead>
<tr>
<th>Activity</th>
<th>0</th>
<th>15</th>
<th>30</th>
<th>45</th>
<th>60</th>
<th>90</th>
<th>2 or more</th>
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<td></td>
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If this entire district looked like this, how often would you visit the Athens business district per month?
- Less than once a month
- Once a month
- 2 to 3 times per month
- 3 to 5 times per month
- More than 5 times per month
- More than 10 times per month

Would you spend more or less time doing these activities in the proposed version of the district?

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1. Place Perceptions

- Amenity and Comfort
- Interaction with Merchants
- Quality of Products
- Maintenance and Upkeep

trees as cues of caring & quality
2. Patronage Behavior

- travel time, travel distance
- duration of visits, frequency of visits
- willingness to pay for parking

*increased market base & trade area*

Visitor Patronage

- *both visit frequency & visit length positively affected by trees*
- *existing forest condition is a positive experience*
Patronage Behavior

Time You Would Spend in this Place?

<table>
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<tr>
<th>Time Period</th>
<th>% Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>up to 30 min</td>
<td></td>
</tr>
<tr>
<td>30 to 59 min</td>
<td></td>
</tr>
<tr>
<td>1-2 hours</td>
<td></td>
</tr>
<tr>
<td>&gt; 2 hours</td>
<td></td>
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Similar response patterns for other behaviors:
- time of travel
- distance of travel
- how often would return to place

Results:
Product Pricing

Large cities - all U.S.A.
Product Pricing

- higher willingness to pay for all types of goods
- higher in districts with trees

trees & consumer spending

### Goods Categories

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<th>Goods Categories</th>
<th>Mean Stated Price</th>
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<tbody>
<tr>
<td>convenience goods</td>
<td>- 50% -</td>
</tr>
<tr>
<td>shopping goods</td>
<td>- 39% -</td>
</tr>
<tr>
<td>specialty goods</td>
<td>- 35% -</td>
</tr>
</tbody>
</table>

**Legend:**
- No Trees
- Trees
- Trees/Access
Consumer Benefits!

- **Consumer Preferences**
  - lower without trees, higher with (large) trees, 9-12%

- **Place Perceptions**
  - comfort, upkeep, product quality, merchant caring, business quality

- **Patronage Behavior**
  - travel time & distance, visit frequency/length

- **Product Pricing**
  - willingness to pay, 9-12% higher with trees

Results Discussion

- Trees make a retail “experience”
- Place Marketing
  - More expensive to recruit new customer than to retain established customer
  - Trust, quality, loyalty
- Trees & District Image
  - Product and business quality
  - Higher price willingness-to-pay

Design Details

Trees in Retail Business Districts
Problem!

Drivers run off the road and crash into trees
Class 1: Least Risk

Run-off-the-road accidents
auto damage & driver injury

Urban/Rural Distribution

![Graph showing Urban/Rural Distribution](image-url)

- Miles Traveled
- Crashes

2001 Traffic Data

Percent

Location

Rural - Urban
Bell Town District, Seattle, WA

Double row trees, Conifer plantings
Seaside, Oregon
Claremont, CA
www.cfr.washington.edu/research.envmind