The Role of Locus of Control in Driving Pro Environmental Behavior in Hospitality

Brishna Nader  
*California State University, Monterey Bay*

Cris de los Santos  
*California State University, Monterey Bay*

Follow this and additional works at: [https://digitalcommons.csumb.edu/uroc_csusrc](https://digitalcommons.csumb.edu/uroc_csusrc)

**Recommended Citation**  
Nader, Brishna and de los Santos, Cris, "The Role of Locus of Control in Driving Pro Environmental Behavior in Hospitality" (2019). *CSU Student Research Competition Delegate Entries*. 12.  
[https://digitalcommons.csumb.edu/uroc_csusrc/12](https://digitalcommons.csumb.edu/uroc_csusrc/12)

This Presentation is brought to you for free and open access by the Undergraduate Research Opportunities Center (UROC) at Digital Commons @ CSUMB. It has been accepted for inclusion in CSU Student Research Competition Delegate Entries by an authorized administrator of Digital Commons @ CSUMB. For more information, please contact digitalcommons@csumb.edu.
The Role of Locus of Control in Driving Pro-Environmental Behavior in Hospitality

Brishna Nader, Marketing
Cris de los Santos, Sustainable Hospitality Management

33rd Annual CSU Research Competition
Business, Economics and Public Administration Session
Friday, April 26, 2019
Background

Research Questions

● How do guests' beliefs about their ability to influence environmental outcomes influence the factors they find important when booking and staying at a hotel?

● How does that belief interact with their feelings of guilt and the beliefs of important others to affect sustainable behavior, particularly recycling?
Locus of Control

Perception and reaction towards rewards and reinforcements (Rotter, 1966)

Internal LOC
Belief that personal actions bring results (Lefcourt, 1991)

External LOC
Belief that external actions bring results (Lefcourt, 1991)
Internal Locus of Control

BAD grade
“*I must not have studied enough. I can do better next time.*”

GOOD grade
“*I’m so glad I studied hard!*”

External Locus of Control

BAD grade
“*The test was flawed. There’s no way to do well.*”

GOOD grade
“*The instructor must have graded wrongly.*”

Guilt

Increases perceived consumer effectiveness
(Antonetti & Maklan, 2014)

Stimulate pro-social, pro-environmental behavior

Self-control
(Blasi, 1999; Mellers & McGraw, 2001; Baumeister, 2002)
Subjective Norm

Perception of how important others evaluate behavior (Ajzen & Fishbein, 1980)

Positive
Approval of important others

Negative
Disapproval of important others
Literature Review

Antonetti & Maklan (2014)

LOC

Guilt


Subjective norm

Guilt

Purchasing and recycling behavior
Literature Review (cont’d)

- Locus of Control
- Guilt
- Subjective Norm
Hypotheses

H$_1$: When selecting accommodations, guests with internal LOC will find hotel environmental practices more important than guests with external LOC.

H$_2$: During their stay, guests with internal LOC will find sustainable hotel practices more important than those with external LOC.
Hypotheses

$H_{3a}$: Under the negative subjective norm with feelings of **high guilt**, there will be **no significant differences in recycling behavior** among those with internal vs. external LOC.

$H_{3b}$: Under the negative subjective norm with feelings of **low guilt**, those with **internal LOC will display stronger recycling behavior** compared to those with external LOC.
Methods

● Data collection
  ○ Digital survey
  ○ 200 respondents

● Participants
  ○ Tourists to Monterey, CA
  ○ Students from CSUMB

● Sample descriptives
  ○ Age: 18-25 (49%)
  ○ Gender: Female (48.5%)
  ○ Median income: <$30k (35.5%)
<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Example of Item</th>
<th>Scale</th>
<th>Reference</th>
<th>Median Split</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locus of Control</td>
<td>Through my personal choices, I can contribute to the solution of environmental issues</td>
<td>“Strongly disagree” (1) to “Strongly agree” (5)</td>
<td>Antonetti &amp; Maklan (2014)</td>
<td>Low (external) High (internal)</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>If I recycle on a regular basis, most people who are important to me would:</td>
<td>“Disapprove”(1); “Approve” (5)</td>
<td>Biswas, Licata, McKee, Puling, &amp; Daughtridge (2000)</td>
<td>Low (negative) High (positive)</td>
</tr>
<tr>
<td>Dependent Variable</td>
<td>Example of Items</td>
<td>Scale</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------</td>
<td>-----------------------------------------</td>
<td>--------------------------------------------</td>
<td>------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Importance of factors in selecting accommodations</td>
<td>Location</td>
<td>“Not at all important” (1) and “very important” (5)</td>
<td>Han, Hsu, Lee, &amp; Sheu (2011)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Environmental practices</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Importance of sustainable hotel practices</td>
<td>Reuse sheet</td>
<td>“Strongly disagree” (1) to “Strongly agree” (5)</td>
<td>Baker, Davis, &amp; Weaver (2013)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reuse towel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency of recycling behavior</td>
<td>To which extent do you recycle?</td>
<td>“Never recycle” (1) and “always recycle” (7)</td>
<td>Antonetti &amp; Maklan (2014)</td>
<td></td>
</tr>
</tbody>
</table>
Analysis

- Median split
  - High/Low
  - 2 (LOC: internal vs. external) x 2 (Subjective norm: internal vs. external) x 2 (Guilt: high vs. low) ANOVA

- ANOVA tests
  - Main effects
  - Interaction effects
Analysis

- Three-way ANOVA
  - 2 (LOC: internal vs. external) x 2 (Subjective norm: positive vs. negative) x 2 (Guilt: high vs. low) ANOVA
  - Median split
  - Main effects
  - Interaction effects
Results
Factors for Selecting Hotel Accommodations

- When booking a hotel, **environmental practices** are more important for **internal LOC** than external LOC
- Supports H1

\[ t(196) = -3.25 \ p = .001 \]
Importance of Sustainable Hotel Practices

- **Internal LOC** rated all hotel sustainable practices as more important than external LOC.
- Supports H2.

* all comparisons significant
Conclusion: H1 & H2

Guests with internal LOC (vs. external LOC) consider pro-environmental practices more important when 1) booking a hotel, and also 2) during their stay.
Guilt and SN on Recycling Behavior

- Recycling behaviors of internal vs. external LOC differ under the influence of negative SN under low guilt
- Recycling behavior of internal LOC is significantly higher than external LOC
- Support H3a & H3b
Conclusion: H3a & H3b

Even *without* motivation of their peers (negative SN) and under feeling of low guilt, **internal locus of control** encourages consumers to recycle more.
Discussion

● Implications
  ○ Guilt messaging

● Limitations
  ○ Convenience sample
  ○ Students & tourists

● Future research
  ○ Comparing student vs. tourist samples
  ○ Experiment with message framing
  ○ Field study at local hotel
Acknowledgements

Faculty Mentors:

Dr. Jenny Lin
Dr. Angeline Nariswari
Dr. Angel Gonzalez

Funding:
Thank You!
Data Collection Timeline

- Start data collection from tourists: November 16, 2018
- Start data collection from students: December 4, 2018
- End data collection from both students and tourists: December 20, 2018
Please read and rate the following statements:

<table>
<thead>
<tr>
<th>Through my personal choices, I can contribute to the solution of environmental issues</th>
<th>Strongly disagree (1)</th>
<th>Somewhat disagree (2)</th>
<th>Neither agree nor disagree (3)</th>
<th>Somewhat agree (4)</th>
<th>Strongly agree (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Subjective Norm Scale

If I recycled on a regular basis, most people who are important to me would:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Approve</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disapprove</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Guilt Scale

Please rate the following statements:

<table>
<thead>
<tr>
<th>Strongly disagree (1)</th>
<th>Disagree (2)</th>
<th>Somewhat disagree (3)</th>
<th>Neither agree nor disagree (4)</th>
<th>Somewhat agree (5)</th>
<th>Agree (6)</th>
<th>Strongly agree (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>When I fail to recycle I feel guilty</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

- When I fail to recycle I feel guilty
When selecting a hotel accommodation, how important are each of the following factors:

<table>
<thead>
<tr>
<th></th>
<th>Not at all important (1)</th>
<th>Slightly important (2)</th>
<th>Moderately important (3)</th>
<th>Very important (4)</th>
<th>Extremely important (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental practices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The following is a list of hotel practices. To what extent do you agree or disagree that hotels should perform these routine:

<table>
<thead>
<tr>
<th>Strongly disagree (1)</th>
<th>Somewhat disagree (2)</th>
<th>Neither agree nor disagree (3)</th>
<th>Somewhat agree (4)</th>
<th>Strongly agree (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reuse sheets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
To which extent do you recycle

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never recycle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
T-Test H1 & H2

- When selecting hotel accommodations, LOC played a significant part in the importance of environmental practices \((t(196) = -3.25, p = .001)\).

- Guests with internal LOC placed a higher importance on environmental practices than did guests with external LOC (internal \(M=3.39\); external \(M=2.84\))
T-Test H3

- **Under low guilt & negative subjective norm**, there is a **significant differences** between internal vs. external LOC ($t(69) = -3.21 \ p = .002$) (Internal $M = 5.50$; External $M = 3.82$)

- **Under low guilt & positive subjective norm**, there is **non significant differences** between internal vs. external LOC ($t(37) = -0.103 \ p = 0.10$) (Internal $M = 9.09$; External $M = 6.06$)

- **Under high guilt & negative subjective norm**, there is **non significant differences** between internal vs. external LOC ($t(26) = 0.25 \ p = 0.806$) (Internal $M = 5.81$; External $M = 5.92$)

- **Under high guilt & positive subjective norm**, there is **non significant differences** between internal vs. external LOC ($t(58) = -1.27 \ p = 0.208$) (Internal $M = 6.49$; External $M = 6.20$)
Three-way ANOVA

- Subjective norm (positive & negative) * Guilt (high & low) \( (F(1, 190) = 4.75, p = .031) \)
- Subjective norm (positive & negative) * LOC (internal & external) \( (F(1, 190) = 2.14, p = .145) \)
- Guilt (high & low) * LOC (internal & external) \( (F(1,190) = 3.17, p = .077) \)
- Subjective norm (positive & negative) * Guilt * LOC \( (F(1,190) = 5.66, p = .018) \)
Main effect

- LOC ($F(1, 190 = 5.92, p = .016)$)
  - Internal LOC ($M = 6.13, SD = 1.01$) vs. external LOC ($M = 4.82, SD = 1.95$)

- Guilt ($F(1, 190= 11.80, p = .001$)
  - High guilt ($M = 6.24, SD = 0.9$) vs. low guilt ($M = 4.86, SD = 1.90$)

- Subjective norm ($F(1, 190 = 6.28, SD = 0.86$)
  - Positive SN ($M = 6.28, SD = 0.86$) vs. negative SN ($M = 4.67, SD = 1.91$)
Interaction effects

Two-Way Interaction

- LOC and subjective norm on recycling behavior \((F(1, 194) = 8.34, p = .004)\)
- LOC and guilt \((F(1, 194) = 8.02, p = .005)\)
- Subjective norm and guilt \((F(1, 194) = 9.92, p = .002)\)

Three-way interaction

- The three-way interaction is driven by the negative subjective norm, particularly when comparing internal versus external LOC under low guilt \((F(1, 190) = 5.66, p = .018)\). In these cases, the recycling behavior among those with internal LOC is significantly higher than those with external LOC (internal \(M=5.50\); external \(M=3.82\), \(t(69) = -3.21, p = .002\)).
<table>
<thead>
<tr>
<th></th>
<th>External LOC (n=99)</th>
<th>Internal LOC (n=99)</th>
<th>t</th>
<th>df</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reuse sheets</td>
<td>2.84</td>
<td>3.46</td>
<td>-2.989</td>
<td>196</td>
<td>0.003</td>
</tr>
<tr>
<td>Reuse towels</td>
<td>2.76</td>
<td>3.48</td>
<td>-3.569</td>
<td>196</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Recycle cans and bottle</td>
<td>4.64</td>
<td>4.02</td>
<td>-4.199</td>
<td>196</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Recycle paper</td>
<td>3.88</td>
<td>4.63</td>
<td>-4.879</td>
<td>196</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Use refillable products</td>
<td>3.59</td>
<td>4.46</td>
<td>-5.489</td>
<td>196</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Save water</td>
<td>4.04</td>
<td>4.72</td>
<td>-4.837</td>
<td>196</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Use environmentally friendly products</td>
<td>3.79</td>
<td>4.67</td>
<td>-6.206</td>
<td>196</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Use reusable bags</td>
<td>3.64</td>
<td>4.61</td>
<td>-6.583</td>
<td>196</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Use biodegradable products</td>
<td>3.63</td>
<td>4.56</td>
<td>-6.205</td>
<td>196</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Pick up litter</td>
<td>4</td>
<td>4.7</td>
<td>-4.578</td>
<td>196</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>
## Results

### Table 1. Factors for selecting hotel accommodation

<table>
<thead>
<tr>
<th></th>
<th>LOC external (n=99)</th>
<th>LOC internal (n=99)</th>
<th>t</th>
<th>df</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>3.78</td>
<td>3.91</td>
<td>-0.806</td>
<td>196</td>
<td>0.421</td>
</tr>
<tr>
<td>Location</td>
<td>3.96</td>
<td>4.15</td>
<td>-1.309</td>
<td>196</td>
<td>0.192</td>
</tr>
<tr>
<td>Ease of booking</td>
<td>3.49</td>
<td>3.71</td>
<td>-1.458</td>
<td>196</td>
<td>0.146</td>
</tr>
<tr>
<td>Convenience</td>
<td>3.64</td>
<td>3.85</td>
<td>-1.471</td>
<td>196</td>
<td>0.143</td>
</tr>
<tr>
<td>Environmental practices</td>
<td>2.84</td>
<td>3.39</td>
<td>-3.253</td>
<td>196</td>
<td>0.001</td>
</tr>
</tbody>
</table>