Re-examining the Influence of Trust on Online Repeat Purchase Intention: The Moderating Role of Habit and its Antecedents

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The Source of the Research Idea

Repeat customers are five times more profitable than new customers, but more than 50 percent of repeat customers seldom complete a third purchase.

It is important for online sellers to understand why buyers are willing to make repeat purchases from these online stores.

Many researchers suggest that trust is particularly important within the context of online shopping.
Trust is characterized by uncertainty, conscious attention, and gradual development over time.

Trust may increase gradually based on positive outcomes from repeated behavior,

but its importance in determining repeat purchase intention may decrease over time.

However, little research has been done to examine the contingency under which the relationship between trust and repeat purchase intention will be reduced.
The importance of trust will decrease when the conscious consideration of uncertainty becomes silent.

Spontaneous shopping behavior, resulting from the automatic retrieval of the learned association, implies that habit formation is involved here and that the impact of trust decreases due to the non-necessity for the conscious consideration of uncertainty.

A repetitive satisfactory shopping experience may not only increase trust but also develop habit and reduce the impact of trust gradually.
Researchers have found that habit moderates the relationship between satisfaction and online repurchase intention.

Unfortunately, none of them have investigated the moderating effect of habit on the relationship between trust and repeat purchase intention.
The objective of this paper is to address the following research questions:

- Does habit reduce the impact of trust on repeat purchase intention?
- What are the antecedents of habitual online shopping?

This study will help us to gain a better understanding of the relationship between habit, trust and the repeat purchase intention of online buyers.
Theoretical Background and Hypotheses (1/9)

Figure 1. Research Model
Definition of Habit:

- situation-behavior sequences that are or have become automatic…the individual is usually not conscious of these sequences (Trindis, 1980).

- learned sequences of acts that have become automatic responses to specific cues, and are functional in obtaining certain goals or end states (Verplanken and Aarts, 1999).

- In general, these definitions reveal that habit is not the same as behavior (Limayem ey al., 2007).
Habits are learned acts and goal-directed.

Habits are gradually laid down in the procedural memory through repeated performance.

The development of a habit requires a certain amount of repetition or practice (Aarts et al., 1998).
When uncertainty is high, people have no clear guidance to enable them to interpret others’ behavior, and thus trust exerts a strong influence in such situations.

In situations involving little uncertainty, trust plays little role in helping people to understand or judge others’ behavior.

The present study theorizes that habit may make the conscious consideration of uncertainty unnecessary and thus the importance of trust will decrease.

**H1.** The habit of shopping from an online seller reduces the influence of trust on repeat purchase intention.
An association between online shopping behavior and a successful transaction will be learnt.

Familiarity with the website interface and transaction procedures will cause buyers to feel that they are shopping in a stable context, which will facilitate their propensity to perform repeated behavior with minimal cognitive monitoring.

**H2.** Familiarity is positively related to the habit of shopping from an online seller.
Utilitarian and hedonic values as the online shopping goals.

Habits are goal-directed; the higher value an online shopper perceives, the more likely it is that the habit will be reinforced.

**H3**: Perceived value is positively related to the habit of shopping from an online seller.
If a response generated in an interaction is judged to be satisfactory, it will tend to be reproduced under subsequent, equivalent circumstances from habit rather than thought (Thorngate, 1976).

Satisfactory experiences with a behavior are a key condition for habit development, as they increase one’s tendency to repeat the same course of action again under similar circumstances (Aarts et al., 1997).

**H4:** Buyers’ satisfaction is positively related to their habit of shopping from an online seller.

Cognitively-oriented appraisal of perceived value leads to emotionally satisfying judgments.

**H5:** Perceived value is positively related to buyer satisfaction.
Satisfaction with past outcomes increases customers’ confidence that they are not being taken advantage of and that online sellers are concerned about their welfare during the transactions (Lankton et al., 2010).

Consumers’ feeling of satisfaction is associated with their perceptions of the fulfillment of the required level of honesty, benevolence and competence by the website (Flavia´n et al., 2006).

**H6:** Buyers’ satisfaction is positively related to their trust in the online seller.
Measurement Development

A small-scale pretest of the questionnaire was conducted with 10 Ph.D. students.

A large-scale pretest with 162 customers of the target online shopping mall.

The results indicate that the measurement model fulfills the criteria for reliability, convergent validity, and discriminant validity, with composite reliability values ranging from 0.89 to 95, AVE ranging from 0.61 to 87, and factor loadings ranging from 0.73 to 0.95.
Measurement Development

Some studies have measured habit by assessing the frequency of past behavior.

Some problems: e.g., it is unlikely that there is always a linear relationship between behavioral frequency and habit.

We adopted SRHI (Verplanken and Orbell, 2003) to measure habit.

The SRHI is a 12-item instrument for assessing a respondent’s subjective experience of several features of a habit.
Research Methodology

Survey Administration

- The research model was tested with data from the customers of the Yahoo!Kimo shopping mall.
- The web survey yielded a total of 454 complete, valid responses for the data analysis.
Research Methodology

Data Analysis

A two-step approach: (1) measurement model and (2) structural model.

Measurement Model

Value was operationalized as a formative second-order construct.

The second order construct (i.e. value) was approximated using the approach of repeated indicators suggested by Chin et al. (2003).
Repeated Indicators (Second-Order)
Formative second-order construct (IV) → Formative second-order construct (DV)
### Factor Score (Second-Order)

<table>
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</tr>
<tr>
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<td>Manifest Variable Scores (Used)</td>
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<td>Path Coefficients</td>
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<tr>
<td>Stop Criterion Changes</td>
<td>Quality Criteria</td>
<td>Factor Score (Second-Order)</td>
</tr>
</tbody>
</table>

Factor Score:

- FA: -1.0692, -0.8349, -0.4728, -0.6550, -0.8312, -0.0327, -0.4029, -2.2423, -1.7418
- HV: 0.3982, 1.0508, 1.0727, 0.6992, 0.8855, 1.2356, 0.5539, -0.7306, 0.2603
- Habit: 0.3982, 0.3046, 1.0727, 0.6992, 0.1930, 0.7352, 0.1603, 0.6027, 0.5266
- RI: -0.3648, -1.7443, -0.5006, -1.0121, -1.4946, -0.0632, -0.3929, 0.1551, -1.0208
- SA: 0.3982, -0.3153, -1.5389, 0.6992, -0.4704, 0.1736, -0.5930, -1.1360, -0.8097
- TR: 0.3982, 0.6853, 1.0727, 0.6992, -0.1387, 0.2041, -0.2550, 0.8136, 0.5661
- TR: -0.7029, 0.0525, 0.2396, 0.6992, -0.1488, -0.3486, -0.4780, 0.4049, 0.2536
- TR: 0.3982, 0.3306, 0.7494, -0.3213, 0.5437, -0.5113, 0.6407, 0.7944, 0.6331
- TR: 0.3982, -1.4270, 0.2008, -0.3213, -0.4895, -0.0109, -0.3929, -0.2894, -1.0350
- TR: 0.3982, -0.9459, -0.4794, -0.3213, -0.1387, -0.8273, -0.1067, -0.4937, -0.8611
- TR: 1.1179, 0.8830, 1.2391, 0.6992, 0.5437, -0.0377, 0.4456, 0.8136, 0.9972
- TR: -1.0563, -0.0020, 0.1873, 0.0089, -0.1387, -0.0276, -0.4048, -1.4151, -0.7711
- TR: 1.4994, -0.4938, -0.1225, -0.9858, -0.1387, 1.2356, -0.4940, 0.4016, -0.0881
- TR: -0.7029, -0.7459, 0.2008, -0.3213, -0.1387, 0.2041, -0.3780, 0.6027, -0.1508
- TR: 0.3982, -1.8814, -0.3130, 0.6992, -1.1629, -0.8273, -0.2151, -5.5003, -1.4431
- TR: -0.3648, -0.3782, 0.0102, -0.3213, 0.5347, 0.0146, -0.4025, 0.3724, -0.0563
- TR: 0.3982, -0.8081, 1.2391, 0.6992, 1.2363, 0.4627, 0.0142, 0.3691, 0.1455
- TR: 0.3982, 0.8746, 0.0344, -0.3213, 0.2112, -0.8056, -0.4170, 0.6027, 0.8894
- TR: -0.7029, -0.2916, -0.6710, -0.3213, -0.1387, -0.5637, -0.1375, -0.2700, -0.3223
- TR: 0.3982, -1.0900, -0.3141, -0.6550, -0.8121, -0.5382, -0.2821, -0.9415, -1.9160
- TR: -1.8041, -0.5460, -0.1814, -1.3429, -0.1387, -0.8273, -0.2725, -1.8368, -1.3347
- TR: -0.3214, -0.1022, 0.5790, 0.6992, -0.4895, 0.7046, -0.0934, -1.1557, -0.6852
- TR: 0.7516, 0.5068, 1.0727, 1.0300, 0.5437, 1.2356, 0.5539, 1.4754, 1.1109
- TR: -2.1856, -0.9221, -0.1225, -0.3213, -0.8312, -0.8273, -0.3415, -1.3795, -1.3291
- TR: 0.3982, -1.5027, -1.5429, -1.3423, -0.4804, -1.0386, 0.7980, -5.003, -1.2073
- TR: 1.1179, 1.0813, 0.2008, 0.3684, 1.9097, 2.0252, -0.1196, 1.2416, 1.3538
- TR: 0.3982, -0.3022, 0.2008, 0.6992, -0.1387, 0.2041, -0.3780, -0.7241, -0.5766
- TR: 0.0167, -0.8590, -1.3725, -0.6550, 0.2121, 0.2565, -0.7037, 0.3789, -0.3225
- TR: 0.0449, -0.4915, 0.5830, -0.3213, -0.1387, -0.0377, 0.4277, 0.1453, -0.2272
- TR: 0.0319, 0.6853, 0.7534, 0.0089, -0.1387, 0.4678, -0.1248, -0.0655, 0.3936
- TR: -0.3496, 0.0608, 0.2008, -0.3213, -0.1387, 0.2041, -0.3780, 0.1453, 0.1224
- TR: 0.3982, 1.2507, 0.3924, 0.6992, 0.8855, 0.9988, -0.1053, 0.3724, 0.9791
- TR: -0.7029, -0.7459, -0.9943, -1.3428, -0.4804, 0.2041, -0.5407, -0.7306, -0.8727
- TR: 0.3982, -0.5566, -0.3130, 0.3660, 0.5437, -0.2490, -0.3499, 0.0656, -0.3917
- TR: 0.0167, -0.5697, -1.3523, -0.9859, -0.8312, -0.2745, -0.1668, -0.7566, -0.7656
- TR: 0.3852, -0.6180, 0.0480, 0.6992, -0.8121, 0.2041, -0.3951, 0.0850, -0.4168
Formative Model

| Table 9. Cases with Interpretational Confounding and External Consistency Problems |
|-----------------------------------------------|-----------------------------------------------|
| **Formatively Specified** | **Reflectively Specified** |
| Formatively Theorized | Correct specification (case 1) | Miss specification (case 2) |
| (IT Infrastructure Flexibility) | ✓ Problems with interpretational confounding observed | ✓ Problems with interpretational confounding not observed |
| | ✓ Problems with external consistency and model fit observed | | |
| Reflectively Theorized | Miss specification (case 4) | Correct specification (case 3) |
| (Relational Knowledge) | ✓ Problems with interpretational confounding observed | ✓ Problems with interpretational confounding not observed |
| | ✓ Problems with external consistency and model fit observed | | |

Research Methodology

**Reliability:**

All of the composite reliability values are above 0.7, satisfying the commonly acceptable level.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Items</th>
<th>Composite Reliability</th>
<th>Mean (STD)</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilitarian Value (UV)</td>
<td>5</td>
<td>0.91</td>
<td>5.46 (1.15)</td>
<td>0.66</td>
</tr>
<tr>
<td>Hedonic Value (HV)</td>
<td>5</td>
<td>0.91</td>
<td>4.72 (1.26)</td>
<td>0.67</td>
</tr>
<tr>
<td>Satisfaction (SA)</td>
<td>3</td>
<td>0.94</td>
<td>5.14 (1.08)</td>
<td>0.84</td>
</tr>
<tr>
<td>Familiarity (FA)</td>
<td>3</td>
<td>0.93</td>
<td>5.64 (1.00)</td>
<td>0.83</td>
</tr>
<tr>
<td>Habit (HA)</td>
<td>11</td>
<td>0.97</td>
<td>4.73 (1.29)</td>
<td>0.75</td>
</tr>
<tr>
<td>Trust (TR)</td>
<td>4</td>
<td>0.92</td>
<td>4.79 (1.13)</td>
<td>0.75</td>
</tr>
<tr>
<td>Repeat Purchase Intention (RI)</td>
<td>3</td>
<td>0.97</td>
<td>5.31 (1.03)</td>
<td>0.91</td>
</tr>
</tbody>
</table>
Convergent Validity:

- All indicator loadings should be significant and exceed 0.7.
- AVE > 0.50.
**Discriminant Validity:**

- Cross-factor loadings
- The square root of the AVE > correlation

<table>
<thead>
<tr>
<th></th>
<th>UV</th>
<th>HV</th>
<th>SA</th>
<th>FA</th>
<th>HA</th>
<th>TR</th>
<th>RI</th>
</tr>
</thead>
<tbody>
<tr>
<td>UV</td>
<td>0.81</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HV</td>
<td>0.47</td>
<td>0.82</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SA</td>
<td>0.56</td>
<td>0.65</td>
<td>0.92</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FA</td>
<td>0.55</td>
<td>0.44</td>
<td>0.58</td>
<td>0.91</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HA</td>
<td>0.40</td>
<td>0.60</td>
<td>0.65</td>
<td>0.49</td>
<td>0.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR</td>
<td>0.44</td>
<td>0.49</td>
<td>0.68</td>
<td>0.48</td>
<td>0.58</td>
<td>0.87</td>
<td></td>
</tr>
<tr>
<td>RI</td>
<td>0.53</td>
<td>0.51</td>
<td>0.67</td>
<td>0.60</td>
<td>0.69</td>
<td>0.59</td>
<td>0.95</td>
</tr>
</tbody>
</table>

Note: Diagonal elements (in bold) are the square root of the average variance extracted (AVE).
Common method bias:

- **Harman’s one-factor test**: evidence for common method bias exists when a general construct accounts for the majority of the covariance among all of the constructs.

- **Latent method factor** (common latent variable; common latent construct)
Latent Method Factor

Method Factor Loading
Common method bias is unlikely to be a serious concern if the following two criteria are fulfilled:

- the method factor loadings are insignificant
- the indicators’ substantive variances (squared loadings) are substantially greater than their method variances.
Multicollinearity

- variance inflation factors (VIF) < 3.0
- condition numbers less than 10 indicate a weak multicollinearity problem.
  - condition number equals the square root of the largest eigenvalue divided by the smallest eigenvalue.
Research Methodology

- **Structural Model**
  - Habit as a control variable

![Diagram](image_url)

*Figure 2. Main Effect Model: Habit as a Control Variable*
Research Methodology

**Structural Model**

- Habit as a moderator

![Diagram showing the structural model with nodes for familiarity, utilitarian value, hedonic value, value, satisfaction, trust, habit, and repeat purchase intention. The diagram includes paths and correlation coefficients such as 0.536***, 0.630***, 0.232***, 0.710***, 0.421***, 0.519***, 0.682***, and 0.277***. The significance levels are marked with * (p < .05), ** (p < .01), and *** (p < .001).](image)

*Figure 3. Interaction Effect Model: Habit as a Moderator*
Effect size

<table>
<thead>
<tr>
<th>Model</th>
<th>( R^2 )</th>
<th>( f^2 ) *</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Main Effects Model (With Habit as a Control Variable)</td>
<td>0.534</td>
<td>0.054</td>
</tr>
<tr>
<td>2. Interaction Effect Model (With Habit as a Moderator)</td>
<td>0.558</td>
<td>-</td>
</tr>
</tbody>
</table>

\[
f^2 = \frac{R^2(\text{Interaction Effect Model}) - R^2(\text{Main effect Model})}{1 - R^2(\text{Interaction Effect Model})}
\]

.02, 0.15, and 0.35 have been suggested to be small, moderate, and large effects.
Discussion and Implications

**Summary of the Results**

- **Trust** has a significant effect on repeat purchase intention.
- **Habit** exerts a negative moderating effect on the relationship between **trust** and **repeat purchase intention**.
- We identified the three antecedents of habit as **satisfaction**, **value** and **familiarity**.
  - **Satisfaction** plays a dominant role, followed by value, then familiarity.
  - **Value** has a positive effect on satisfaction and satisfaction also has a significant impact on trust.
Discussion and Implications

**Implications for Theory**

In the past, some studies on online repeat purchase report that no significant relationship exits between trust and repeat purchase intention.

Apparently, such reports contradict the mainstream view that has been established in the field.

It is here that the theoretical relevance of detecting the moderating effect of habit on the relationship between trust and repeat purchase intention becomes evident.
Implications for Theory

- Trust-based behavior results from a mixture of cognitive and emotional trust.

- When online shopping behavior is repeatedly executed in a stable context and becomes habitual, the need to engage in the cognitive evaluation of the online seller’s trustworthiness will be suppressed.

- However, the emotion-driven form of trust may still exert its influence on repeat purchase intention.
Implications for Theory

Future research should continue to explore the complex relationship between habit, trust, and repeat purchase intention.

For example, what would be the threshold level of trust, at which the influence of trust on repeat purchase intention will decrease and the role of habit will become influential?

It would also be interesting to know whether, in an extreme case, the effect of trust will be nullified by the effect of habit.
Implications for Practice

How to build customers’ trust is still a goal with a higher priority.

A buyer may or may not purchase products from a trustworthy seller, but he/she will definitely not purchase products from an untrustworthy one.

Without winning customer trust first, there is no point in instigating customers’ habits.
Implications for Practice

Gaining consumer trust is largely under the control of online sellers.

For example, providing fair transactions by keeping promises and fulfilling obligations in terms of product and service qualities throughout the whole transaction process.
Discussion and Implications

- **Implications for Practice**
  - Regarding hedonic value, online shopping websites should try to enable the customers enjoy the whole transaction process.
  - It could be the colorful design of the user interface, having fun during the transaction process, such as:
    - pop-up discount offers during the search and purchase process,
    - surprising marketing strategies,
    - warm greeting cards to increase customer satisfaction, etc.
Implications for Practice

An extremely interesting example of hedonic value is the feature provided by WOOT! (www.woot.com).

It focuses on selling cool, cheap stuff and encouraging unfiltered community discussion about it.

It sells one item only per day. That is, it offers a new item every single day.

It is very common for its product descriptions to mock the product, the customer, or Woot itself.
The End!
Thank You Very Much!