The Paralyzed Customer: an Empirical Investigation of Antecedents and Consequences of Decision Paralysis

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This article makes a further contribution to the identification of effects on consumer choice behavior under high product variety. Based on previous research a structural equation model is developed that involves both quantitative and qualitative characteristics of variety. Therefore a novel construct is introduced that refers to the tendency to disengage and evade the choice process by choosing an avoidant option. In order to evaluate consequences of these tendencies toward paralysis, their impact on customer satisfaction is assessed. The model is empirically tested with regard to the German cellular phone market. Implications for business practice and future research are deduced.

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ABSTRACT

This article makes a further contribution to the identification of effects on consumer choice behavior under high product variety. Based on previous research a structural equation model is developed that involves both quantitative and qualitative characteristics of variety. Therefore a novel construct is introduced that refers to the tendency to disengage and evade the choice process by choosing an avoidant option. In order to evaluate consequences of these tendencies toward paralysis, their impact on customer satisfaction is assessed. The model is empirically tested with regard to the German cellular phone market. Implications for business practice and future research are deduced.

INTRODUCTION

Today, life requires consumers to make an immense number of decisions. For example, ordering a coffee at Starbucks is not as simple as one might think. Customers have to deal with almost uncountable combinations to finally enjoy a half decaf, vanilla, low fat, extra foamy, caffe latte. In a similar way, companies in various areas try to attract consumers with an overwhelming abundance of different products. Previous research supports the positive impact of product variety on attractiveness of assortments (Iyengar and Lepper 2000) and store choice (Hoch, Bradlow, and Wansink 1999). In addition, a common finding is that a high variety of an assortment increases the probability of meeting heterogeneous preferences (Lancaster 1990; Kahn 1998; Bayus and Putsis 1999; Hoch et al. 1999). However, consequences of increasing variety are not exclusively beneficial. Literature suggests a negative link between assortment size and decision satisfaction (Heitmann, Lehmann, and Herrmann 2007). Furthermore, different determinants for distinct forms of decision avoidance are proven to result from choice set size (Anderson 2003). In this context, experiments of Tversky and Shafir (1992) reveal that adding only one alternative to a small choice set enhances the tendency to defer or even omit choice. Iyengar and Lepper (2000) also observe a significant decline in purchase probability when the number of choices grows. Redelmeier and Shafir (1995) evidence similar effects on the decision to maintain the status quo. In addition to the quantitative trait of assortment size, further qualitative choice set factors such as similarity and alignability of alternatives can be held responsible for inducing consumers’ indecision (Dhar 1996; 1997; Gourville and Soman 2005). Appropriately, Schwartz (2000, p.87) summarizes that “freedom of choice is a two-edged sword, for just on the other side of liberation sits chaos and paralysis.”

According to Anderson (2003) we differentiate between three distinct extreme peculiarities that represent decision paralysis: status quo bias, omission bias, and choice deferral. While status quo bias reflects the decision makers’ inflated preference not to change the current situation (Samuelson and Zeckhauser 1988), omission bias is observable when individuals fail to choose (Ritov and Baron 1995). By contrast, choice deferral constitutes a situation in which decision makers decide not to choose for the present and adjourn their decision indefinitely (Dhar 1996). Literature suggests common origins for these different aspects: rising decisional conflict and corresponding preference uncertainty can be held responsible (Tversky and Shafir 1992; Redelmeier and Shafir 1995; Dhar 1997). In addition, negative emotions such as anticipated regret are able to rush decision makers into choosing an avoidant option (Luce 1998; Schwartz 2004; Keys and Schwartz 2007). Furthermore, evaluation costs in the form of cognitive effort is expected to contribute to an explanation of decision paralysis (Iyengar and Lepper 2000; Gourville and Soman 2005). This foundation of recent findings allows the introduction of a new construct that in contrast to previous approaches not only detects actual avoidant behavior in terms of choice deferral, status quo, and omission bias, but also the tendency to evade the choice-making process. Thus, tendencies toward paralysis are defined as the extent of decision makers’ preference to (1) maintain the status quo, to (2) omit and/or to (3) delay choice resulting from decisional conflicts, negative emotions, and evaluation efforts.

In spite of the wide range of findings regarding reasons for different forms of decision paralysis, conclusions about its consequences are rare. Thus, the purpose of this paper is threefold: First, in order to generate a better understanding of the determinants and—for the first time—consequences of decision paralysis, a framework is developed that is able to identify negative effects on the choice-making process resulting from diverse characteristics of variety. Secondly, we conceptualize and operationalize, the newly-introduced construct, namely tendencies toward paralysis. Thirdly, the proposed structural equation model as well as the conceptualization and operationalization of the novel construct are verified by means of partial least squares (PLS) using data from the German cellular phone market. Finally, implications and directions for further research and business practice are discussed.

CONCEPTUAL FRAMEWORK AND HYPOTHESES

Consequences of Tendencies toward Paralysis

The formation of tendencies toward paralysis can lead to the application of simplifying heuristics, such that only little relevant information is involved, with the result of a less than optimal choice (Payne, Bettman, and Johnson 1993; Schwartz 2007). Thus, a greater tendency to disengage from the choice-making process constitutes a source of dissatisfaction (Iyengar and Lepper 2000). Vice versa, Ritov and Baron (1995) suggest an increasing satisfaction in consequence of low tendencies toward paralysis. They evidence that decision makers feel more satisfied with the positive outcome of an active decision than if the result of omission turns out to be positive. Moreover, social psychological findings reveal that achieved objects are not evaluated independently of previous decision-making processes. In this context, the fit between intended and actual procedure is proved to influence object evaluation positively (Higgins et al. 2003). Assuming that formation of decision paralysis produces a discrepancy between actual and intended behavior, this should be further evidence of the negative impact on satisfaction. In sum, we expect the following consequences of tendencies toward paralysis:

\[ H_1: \text{The higher the tendencies toward paralysis, the lower the customer satisfaction.} \]
Direct Influences on Tendencies toward Paralysis

The state in which decision makers are not in a position to assess with reasonable certainty which of several alternatives best meets their goals is defined as preference uncertainty (Anderson 2003). Consumers have the intention to justify their decisions to both themselves and others. The appearance of uncertainty concerning the optimal solution makes justification harder, whereupon decision makers seek options that decrease personal responsibility (Redelmeier and Shafir 1995). This need can be fulfilled with omission, maintaining the status quo, and delay (Anderson 2003). Therefore, we propose the following hypothesis:

H1: The higher the preference uncertainty, the higher the tendency toward paralysis.

Regret theory (Bell 1982; Loomes and Sugden 1982) provides a further approach to explain tendencies toward paralysis. According to Zeelenberg (1999, p.93) regret is defined as “a negative, cognitively based emotion that we experience when realizing or imagining that our present situation would have been better, had we decided differently.” This approach assumes not only that decision makers regret a bad choice in hindsight but also that the possibility of such a feeling can be anticipated and involved even before making a decision (Loomes and Sugden 1982; Sugden 1985; Zeelenberg 1999). Following Kahneman and Tversky (1982), decision makers are likely to expect an intensive experience of regret if a negative outcome is a result of personal action than of inaction. Analogically, consumers should undertake as little action as possible or even eliminate choice to avoid future regret (Thaler 1980; Heitmann, Herrmann, and Kaiser 2007). Thus, the following hypothesis should hold:

H2: The higher the anticipated regret, the higher the tendencies toward paralysis.

Another important source of decision paralysis is evaluation costs resulting from the investment of time and cognitive effort into decision making that is required for information search and analysis (Shugan 1980; Anderson 2003). These expenses can be considered as opportunity costs as they could be spent on other activities. As decisions become too costly in this regard, individuals tend to simplify their choice by selecting an avoidant option (Loewenstein 1999). Therefore, the following hypothesis applies:

H3: The higher the evaluation costs, the higher the tendencies toward paralysis.

Previous research emphasizes that choice behavior of uncertain individuals can be explained via the anticipation of regret (Crawford et al. 2002). If individuals are uncertain about which of the offered alternatives best meets their goals, they have to suspect that rejected options turn out to be superior in hindsight (Schwartz et al. 2002). Consequently, we suggest the following relationship between these direct determinants of tendencies toward paralysis:

H4: The higher the preference uncertainty, the higher the anticipated regret.

Indirect Influences on Tendencies toward Paralysis

Three quantitative and qualitative key choice-set factors are used to describe variety adequately: the number of alternatives, their alignability, and complexity. Regret theory suggests that the utility of one alternative cannot be considered as independent of the utility of the other selectable options. Thus, the choice from more than one attractive alternative is conducive to the development of anticipated regret (Brownstein 2003). Moreover, increasing quantitative variety produces both higher expectations about the outcome (Desmeules 2002) and decreasing probability to come to the optimal decision (Iyengar and Lepper 2000; Schwartz 2000; Schwartz et al. 2002). Hence, we assume the following hypothesis:

H5: The higher the number of choices, the higher the anticipated regret.

A second effect that is associated with an increasing number of choices concerns the rising amount of available information (Schwartz et al. 2002). Individuals typically feel that they are in a better position to evaluate a choice set when they have processed as much available information as possible (Zhang and Fitzsimons 1999). Furthermore, Shugan (1980) suggests a positive relationship between the number of alternative products and the thinking costs as the difficulty of the decision task increases proportionally to the number of selectable options:

H6: The higher the number of choices, the higher the evaluation costs.

In accordance with Malhorta (1982) a consumer who is confronted with a choice set of five alternatives has to evaluate 10 paired comparisons to completely rank these options corresponding to preference. Increasing the number of alternatives to 10 inflates the number of required paired comparisons to 45. Hence, it is assumed that consumers do not perform all needed comparisons under the condition of a continually increasing number of choices, with the result that certainty about which option best matches their preferences decreases:

H7: The higher the number of choices, the higher the evaluation costs.

Alignability, the second trait of variety under consideration, refers to the system according to which the offered alternatives differ. Gourville and Soman (2005, p.383) define an alignable assortment “to be one in which the alternatives vary along a single, compensatory product dimension.” By contrast, a nonalignable assortment requires trade-offs between dimensions, such that attainment of one desirable feature involves abandoning another
desirable feature. The fact that decision makers are forced to give up needs that are fulfilled by rejected alternatives produces regret by definition. Conversely, differences between alternatives of an alignable choice set are small, such that both perceived losses and resulting regret are diminished. We conclude this discussion with the following hypothesis:

H11: The higher the alignability, the lower the anticipated regret.

Moreover, it is obvious that a set of options that have alignable aspects of information is relatively easy to evaluate, whereas multiple differences between nonalignable alternatives in noncompensatory dimensions make an immediate comparison difficult and demand more cognitive effort (Zhang and Fitzsimons 1999; Gourville and Soman 2005):

H12: The higher the alignability, the lower the evaluation costs.

Alignable differences reflect both commonalities and differences in such a way that there is a corresponding attribute in each of the alternatives that continuously varies along the level. Due to this characteristic decision makers focus on alignable differences, whereas nonalignable differences are often ignored (Zhang and Markman 1998). Hence, processing of nonalignable alternatives is less complete. Individuals obtain a lower amount of relevant information and may feel less capable of identifying the option that best meets their needs. As a result of this discussion, we add the following hypothesis to our model:

H13: The higher the alignability, the lower the preference uncertainty.

Finally, complexity of the alternatives, that is, the extent to which a product or service is perceived to be relatively difficult to understand and to use (Holak and Lehmann 1990), is expected to influence decision making. Aside from the price structure, the number of attributes per alternative can be considered an important complexity driver (Burnham, Frels, and Mahajan 2003). If relevant information of a product is difficult to understand, individuals are likely to perceive higher risk of making a wrong decision (Holak and Lehmann 1990); as a result, the anticipation of regret should be effected positively as well (Josephs et al. 1992). Thus, we conclude the following hypothesis:

H14: The higher the complexity, the higher the anticipated regret.

Moreover, a product that is perceived to be difficult to understand makes evaluation of the offered alternatives more costly. The large number of attributes associated with complex products complicates the search for relevant information, the processing of the information, and the comparison of alternatives (Shugan 1980; Burnham et al. 2003). Hence, we predict the following relation:

H15: The higher the complexity, the higher the evaluation costs.

Finally, the fact that relative advantages of complex products are not discernible (Holak and Lehmann 1990) should affect decision makers’ certainty in identifying the alternative that best meets their preferences. This leads to the following hypothesis:

H16: The higher the complexity, the higher the preference uncertainty.

### EMPIRICAL STUDY

#### Research Design and Sample Characteristics

To verify the postulated model, an online survey was conducted to collect empirical data in September 2008. As mentioned, the study focuses on the German cellular phone market as this branch, in particular, offers a large number of different products that typically consist of the cell phone itself, tariffs with various price structures, and other services (Burnham et al. 2003). This high variety is expected to be ideally suited to cause the proposed processes. Answers of 473 participants who completely evaluated their last tariff choice are used for analysis. Respondents’ gender is nearly uniformly distributed (49% female, average age 27.2 years). Neither sex nor age significantly affects the evaluation of the constructs (p<.05).

With the objective of testing for non-response bias, this study adopts Armstrong and Overton’s (1977) approximation arguing that late respondents are likely to be similar to non-respondents. Thus, data sets were separated into thirds according to the number of days elapsed between the initial mailing and the time the surveys were completed. A comparison of the fastest and slowest thirds reveals no significant differences in the means of the constructs (p<.05).

#### Survey Measures

All scales used in this study are adopted from existing literature. The operationalizations of the expected determinants and consequences of tendencies toward paralysis typify reflective indicator models, as the direction of causality is from construct to item (Jarvis, MacKenzie, and Podsakoff 2003). Tendencies toward paralysis itself are conceptualized as second-order construct (Jarvis, MacKenzie, and Podsakoff 2003). According to Anderson (2003) the formative dimensions inaction, delay, and status quo are chosen to characterize tendencies toward paralysis. Each dimension is assessed by three reflective indicators. To measure inaction and delay, the three items with the highest loadings of scales presented by Mann et al. (1997) are adopted; they were originally meant to evaluate buck-passing and procrastination. Analogously, three indicators to evaluate attitude toward switching (Bansal and Taylor 1999) serve as reverse measures to operationalize the preference for maintaining the status quo.

#### Evaluation and Adjustment of Measurement Models

The measurement as well as structural parameters is estimated using PLS as this method is well suited to estimate complex structural equation models (Bagozzi and Yi 1994; Fornell and Cha 1994). In particular, it is appropriate as the proposed model incorporates both formative and reflective indicators (Diamantopoulos and Winkelhofer 2001). The adequacy of reflective measurement models is assessed by examination of individual item reliabilities, convergent and discriminant validity, predictive relevance, and unidimensionality (Hulland 1999; Johnson, Herrmann, and Huber 2006). As seen in table 1, only one item, namely SAT1, has to be removed as the loading of its respective construct could not exceed the critical value of .7 (Sarkar et al. 2001). Examination of discriminant and predictive validity (Q2) as well as unidimensionality of all reflective measurement models can be considered satisfactory.

The appropriateness of the three formative dimensions of the second-order variable tendencies toward paralysis is assessed through examining discriminant validity as well as multi-collinearity measures (Diamantopoulos and Winkelhofer 2001). Both the highest value of construct correlations (.40) and the highest calculated variance inflation factor (1.66) confirm the quality of this measurement model.
TABLE 1
Operationalization of Latent Variables

<table>
<thead>
<tr>
<th>Latent Variables and Items</th>
<th>Loading</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Choices (Iyengar and Lepper 2000): AVE=.92, CR=.96, α=.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I had to select a cell phone tariff,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOC1 I felt that I had too many options to choose from. (R)</td>
<td>.95</td>
<td>47.41</td>
</tr>
<tr>
<td>NOC2 I felt that I had too few options to choose from.</td>
<td>.98</td>
<td>169.25</td>
</tr>
<tr>
<td>Alignability (Zhang and Fitzsimons 1999): AVE=1.00, CR=1.00</td>
<td>1.00</td>
<td>.00</td>
</tr>
<tr>
<td>ALG1 Comparing the different cell phone tariffs and their attributes was very easy.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complexity (Cannon and Perreault 1999): AVE=.78, CR=.91, α=.86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compared to other services I use, cell phone tariffs are …</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLX1 complex.</td>
<td>.80</td>
<td>21.00</td>
</tr>
<tr>
<td>CLX2 complicated.</td>
<td>.94</td>
<td>140.79</td>
</tr>
<tr>
<td>CLX3 difficult to understand.</td>
<td>.89</td>
<td>61.99</td>
</tr>
<tr>
<td>Evaluation Costs (Heitmann et al. 2007): AVE=.86, CR=.97, α=.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECO1 How much time/effort did it take to evaluate the alternatives in order to feel comfortable making a choice? (“very little/a lot”)</td>
<td>.93</td>
<td>107.85</td>
</tr>
<tr>
<td>ECO2 It was tough to choose from the different tariffs being offered.</td>
<td>.93</td>
<td>90.49</td>
</tr>
<tr>
<td>ECO3 I could not afford the time to fully evaluate relevant purchase options.</td>
<td>.93</td>
<td>76.76</td>
</tr>
<tr>
<td>ECO4 I concentrated a lot while making this choice.</td>
<td>.94</td>
<td>114.51</td>
</tr>
<tr>
<td>ECO5 It was difficult for me to make this choice.</td>
<td>.91</td>
<td>67.64</td>
</tr>
<tr>
<td>Anticipated Regret (Heitmann et al. 2007): AVE=.74, CR=.92, α=.88</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARE1 When I selected a cell phone tariff, I was worried to get information after the purchase on superior competing products.</td>
<td>.89</td>
<td>56.46</td>
</tr>
<tr>
<td>ARE2 When I chose a tariff, I was curious about what would have happened had I chosen differently.</td>
<td>.89</td>
<td>62.40</td>
</tr>
<tr>
<td>ARE3 When I selected a cell phone tariff, I was curious how much I would appreciate competing offers.</td>
<td>.77</td>
<td>27.02</td>
</tr>
<tr>
<td>ARE4 Even after finding a good option, I feared that I am overlooking better tariffs.</td>
<td>.90</td>
<td>74.87</td>
</tr>
<tr>
<td>Preference Uncertainty (Urbany et al. 1997): AVE=.88, CR=.96, α=.93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRE1 certain (R)</td>
<td>.95</td>
<td>166.43</td>
</tr>
<tr>
<td>PRE2 sure (R)</td>
<td>.96</td>
<td>167.45</td>
</tr>
<tr>
<td>PRE3 confident (R)</td>
<td>.90</td>
<td>49.40</td>
</tr>
<tr>
<td>Customer Satisfaction (Fitzsimons et al. 1997): AVE=.79, CR=.94, α=.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAT1 My choice turned out better than I had expected. eliminated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAT2 Given the identical set of cell phone tariffs to choose from, I would make the same choice again.</td>
<td>.86</td>
<td>45.29</td>
</tr>
<tr>
<td>SAT3 How satisfied were you with the tariff you chose? (“extremely dissatisfied/extremely satisfied”)</td>
<td>.95</td>
<td>176.95</td>
</tr>
<tr>
<td>SAT4 I am very happy with the cell phone tariff I selected.</td>
<td>.94</td>
<td>123.81</td>
</tr>
<tr>
<td>SAT5 Thinking of an ideal example of a cell phone tariff, my choice was very close to the ideal example.</td>
<td>.80</td>
<td>35.80</td>
</tr>
</tbody>
</table>

Notes: All measures not indicated otherwise were assessed on seven-point Likert scales, anchored by “strongly disagree” (1) and “strongly agree” (7). (R)=reverse scored, AVE=Average Variance Extracted, CR=Construct Reliability.

Evaluation of Parameter Estimation

The results of the estimation of path coefficients appear in figure 1. Except for H₄, H₅, H₆, and H₇, the theoretically derived hypotheses turn out to be statistically significant. Considering the construct evaluation costs, the assessment of explained variance and Stone-Geisser’s Q2 can be considered satisfactory (R²=.413, Q²=.247). In contrast, with regard to the variable preference uncertainty, the values of these criteria (R²=.095, Q²=.330) suggest that other factors not involved in the postulated model also determine this construct to a significant extent. However, the R² criterion for customer satisfaction demonstrates that at least 14% of variance of this construct is explained by tendencies toward paralysis exclusively. Finally, from the calculation of variance inflation factors result values below 10, precluding multi-collinearity.

In summary, results evidence two significant drivers, namely anticipated regret and preference uncertainty, which produce tendencies toward paralysis. Moreover, a high negative relationship between paralysis and customer satisfaction is discovered. Due to the fact that the characteristics of variety under consideration influence decision paralysis via multiple paths, assessment of total effects of these indirect determinants sheds light on their relative importance (Fornell, Lorange, and Roos 1990; see table 3). Owing to its comparatively high total effect of -.120 alignability is demonstrated to be the dominant factor to influence decision paralysis (complexity .065; number of choices .030). Furthermore, it is observable that the total impact of preference uncertainty on tendencies toward
TABLE 2
Operationalization of Tendencies Toward Paralysis

<table>
<thead>
<tr>
<th>Dimensions of Tendencies toward Paralysis and Items</th>
<th>Loading</th>
<th>Weight</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inaction (Mann et al. 1997): AVE=.71, CR=.88, α=.80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INA1 I wanted to avoid making the decision.</td>
<td>.83</td>
<td>.46</td>
<td>4.56</td>
</tr>
<tr>
<td>INA2 I preferred to leave the decision to others.</td>
<td>.87</td>
<td>35.27</td>
<td></td>
</tr>
<tr>
<td>INA3 I did not like to take responsibility for making this decision.</td>
<td>.83</td>
<td>30.41</td>
<td></td>
</tr>
<tr>
<td>Delay (Mann et al. 1997): AVE=.69, CR=.87, α=.76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEL1 I waited a long time before starting to think about the decision.</td>
<td>.82</td>
<td>5.7</td>
<td>5.40</td>
</tr>
<tr>
<td>DEL2 I delayed making the decision until it was too late.</td>
<td>.80</td>
<td>45.93</td>
<td></td>
</tr>
<tr>
<td>DEL3 I put off making this decision.</td>
<td>.87</td>
<td>49.65</td>
<td></td>
</tr>
<tr>
<td>Status Quo (Bansal and Taylor 1999): AVE=.88, CR=.96, α=.93</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I made my decision I thought switching my cell phone tariff would be …</td>
<td></td>
<td>.37</td>
<td>3.82</td>
</tr>
<tr>
<td>STQ1 a good idea. (R)</td>
<td>.94</td>
<td>81.14</td>
<td></td>
</tr>
<tr>
<td>STQ2 wise. (R)</td>
<td>.96</td>
<td>73.03</td>
<td></td>
</tr>
<tr>
<td>STQ3 desirable. (R)</td>
<td>.91</td>
<td>39.21</td>
<td></td>
</tr>
</tbody>
</table>

Notes: All measures were assessed on seven-point Likert scales, anchored by “strongly disagree” (1) “strongly agree” (7). (R)=reverse scored, AVE=Average Variance Extracted, CR=Construct Reliability.

paralysis (.406) exceeds the influence of anticipated regret on this construct (.324).

IMPLICATIONS

Implications for Business Practice

In particular, the intensity and significance of the investigated negative relationship between tendencies toward paralysis and subsequent customer satisfaction point out the importance of our findings for business practices, especially for cell phone service providers. In this context, the identified quantitative and qualitative characteristics of variety turn out to be appropriate parameters to manipulate decision paralysis. Results suggest that a well-directed assortment configuration and communication with regard to number, alignability, and complexity of offered alternatives should be central considerations. Due to the comparatively high total effect of alignability, cell phone service providers should pay most attention to this choice set factor. Furthermore, the relatively high calculated construct averages of the perceived number of choices (5.09) and subsequent increase of anticipated regret and evaluation costs suggest that it would be desirable to reduce assortment size. Also, because of the investigated impact of complexity, companies should simplify their tariffs in both pricing schedules and number of attributes (Burnham et al. 2003) to avoid customers regretting their decision before they even make it. As a result of the high negative relation between tendencies toward paralysis and customer satisfaction, high switching barriers in terms of long contract durations and periods of notice should be considered more critically.

Implications for Future Research

Conceptualization and operationalization of the introduced construct tendencies toward paralysis provides a new holistic approach to assess avoidant choice behavior. The basically satisfactory assessment of quality criteria of this construct demonstrates that the combination of the three dimensions, namely inaction, delay, and status quo, that previously have been analyzed only separately, can be considered as effectual. However, examination of predictive validity and explained variance of endogenous model constructs suggest that further research should focus on both identifying further determinants that produce decision paralysis and identifying more meaningful antecedents of these determinants. Moreover, although the predicted effects on the construct evaluation costs were predominantly significant, the positive relation between this variable and tendencies toward paralysis cannot be supported. Thus, a replacement of this construct eventually by expected evaluation costs might lead to better results. Against the background of a continually increasing product variety in diverse areas of today’s life, the discovered significant negative consequences should not be disregarded by companies and researchers in the future.

REFERENCES

FIGURE 1
Structural Model with Path Coefficient Estimates

TABLE 3
Total Effects of Indirect and Direct Determinants

<table>
<thead>
<tr>
<th>Antecedents</th>
<th>Tendencies toward Paralysis</th>
<th>Customer Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect Determinants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Choices</td>
<td>.030</td>
<td>-.011</td>
</tr>
<tr>
<td>Alignability</td>
<td>-.120</td>
<td>.045</td>
</tr>
<tr>
<td>Complexity</td>
<td>.065</td>
<td>-.025</td>
</tr>
<tr>
<td>Direct Determinants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anticipated Regret</td>
<td>.324</td>
<td>-.123</td>
</tr>
<tr>
<td>Preference Uncertainty</td>
<td>.406</td>
<td>-.154</td>
</tr>
<tr>
<td>Evaluation Costs</td>
<td></td>
<td>Not significant</td>
</tr>
</tbody>
</table>


