

THE DIMENSIONALITY OF CONSUMER SATISFACTION/ DISSATISFACTION: AN EMPIRICAL EXAMINATION

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ABSTRACT

Consumer satisfaction/dissatisfaction (CS/D) is usually operationalized as a unidimensional construct. However, some theoretical and empirical evidence supports a two-factor conceptualization of CS/D. Satisfaction data were collected from 193 students immediately following a regularly scheduled advising appointment. Crosstabulation and confirmatory factor analyses provide some evidence for a two-factor conceptualization of CS/D.

INTRODUCTION

Since satisfaction has become an issue of focused attention in marketing, the dimensionality of consumer satisfaction/ dissatisfaction (CS/D) has been questioned (Swan and Combs 1976; Maddox 1981) and the issue remains unresolved (Yi 1990). The primary issue is whether satisfaction is a unidimensional construct (e.g., with anchors of "completely dissatisfied" and "completely satisfied") or two separate constructs, one being "level of satisfaction" and the other being "level of dissatisfaction." Resolution of this issue will yield important theoretical and managerial implications (Leavitt 1977; Yi 1990).

The two-factor conceptualization is based on Herzberg's Two-Factor Theory (Herzberg, Mausner, and Snyderman 1959) and derives support from two basic observations. First, consumers appear capable of being both satisfied and dissatisfied at the same time and therefore the two constructs must be at least somewhat independent. Second, consumers who are asked to recall both satisfying and dissatisfying experiences recall different "levels" of phenomena for describing why they are satisfied versus dissatisfied; satisfied consumers recall generalized psychological, "expressive" reasons while dissatisfied consumers recall more concrete, specific, "instrumental" reasons (Swan and Combs 1976).

Only equivocal empirical evidence has been found to support the two-construct

conceptualization. Swan and Combs (1976) found weak preliminary support. Their study was replicated by Maddox (1981) using larger samples of customers drawn from multiple industries. Maddox found little support for the two-factor conceptualization, and concluded that such a conceptualization also yields implications which run contrary to common sense.

However, more recently, Gardial et al (1994) found some interesting significant differences between satisfying and dissatisfying experiences. Their results indicate that "dissatisfaction thoughts" were less likely to consider internal comparison standards than were "satisfaction thoughts." Further, dissatisfaction thoughts were also more likely to be associated with consequences, supporting the hypothesis of Swan and Combs (1976) that dissatisfied consumers were more likely to focus on "instrumental" reasons for their dissatisfied state. Gardial et al (1994) conclude that their results "... suggest that satisfaction and dissatisfaction may not be polar opposites, a debate which has not been settled within the satisfaction literature" (p. 557).

The support which does exist for the two factor conceptualization is derived almost exclusively from studies using a single methodology: the "critical incidents" method. In the critical incidents method, consumers are asked to recall specific events in which they were especially satisfied and especially dissatisfied. Their descriptions of these events are subjected to detailed analysis. An alternative explanation of the published findings yielded by this method is possible. Briefly, it is possible that the satisfaction construct is unidimensional, but, given that satisfied and dissatisfied consumers may process CS/D differently (Dröge and Halstead 1991), they remember different kinds of factors as being responsible for their ultimate level of satisfaction. Because the critical incidents method requires consumers to "retrace" their CS/D process, it is not surprising that their responses are qualitatively different. As Dröge and Halstead (1991) propose, dissatisfied consumers may continue to process long after an experience in order to try to reach

closure. Satisfied consumers have no need to process extensively and simply move on. If this proposition is true, it should not be surprising that dissatisfied consumers remember more details of their CS/D experience and attribute their dissatisfaction to these details.

Babin, Griffin and Darden (1994) address the question of whether satisfaction is unidimensional using a different approach. They collected data using a combination of one-factor and two-factor satisfaction scales and conduct a confirmatory factor analysis. They conclude there is some evidence that "...at least under some circumstances, dissatisfaction and satisfaction are distinct." However, the factors they analyze contain both emotion items and satisfaction judgment items. Thus, it is unclear to what extent their results capitalize on the orthogonality of emotion, which is widely accepted, versus the orthogonality of satisfaction, which is still unresolved. They seem to conclude that satisfaction is an emotional reaction to an evaluation rather than the evaluation itself, and do not address the issue of the dimensionality of satisfaction judgments directly.

In short, limitations exist with both the critical incidents method and with the operationalizations of Babin, Griffin and Darden (1994). Though the evidence in support of a two factor conceptualization of satisfaction is weak, enough evidence exists to warrant additional examination of this question.

METHOD

In order to address this topic, data were collected in a field study of a large midwestern university. Undergraduate business students responded to satisfaction items on a larger questionnaire immediately following a regularly scheduled advising appointment. CS/D items used can be classified as 1) unidimensional, 2) satisfaction only, 3) dissatisfaction only; item wording and scale anchors appear in Table 1.

It is recommended that students visit the advising center once per term before they register for classes the following term. Therefore, the advising services received by subjects were actual advising services provided to all students; the services were not contrived in any way and were

seen as part of a student's normal routine. Usable responses were obtained from 193 students.

Two analyses are conducted here: crosstabulation and confirmatory factor analysis. Each is summarized next.

Crosstabulation Analysis

If satisfaction is a bipolar construct, one would expect to find a particular pattern of responses in a crosstabulation table of two unidimensional items. Specifically, if a unidimensional satisfaction item and a unidimensional dissatisfaction item are crosstabulated, one would expect that all responses would appear in the first row or first column of the table. That is, when respondents are "moderately" or "highly" satisfied, they will be "low" on the dissatisfaction scale; when respondents are "moderately" or "highly" dissatisfied, they will be "low" on the satisfaction scale. Thus, if a significant number of respondents are simultaneously satisfied and dissatisfied, a unidimensional conceptualization of satisfaction would not be supported. Conversely, if responses do not appear in the middle of the table but cluster only in the first row or first column, the two-dimensional conceptualization of satisfaction would not be supported.

Confirmatory Factor Analysis

If satisfaction is unidimensional, confirmatory factor analysis should indicate that a two-dimensional model does not fit the data better than does a single factor model. The models to be tested appear in Figure 1. If Model B yields acceptable fit indices and $f_{2,1}$, $f_{3,2}$, and/or $f_{3,1}$ are less than 1.0, the unidimensional model would not be supported. Conversely, if those three phi's are close to 1.0 and Model B fits the data no better than Model A, the unidimensional model would be supported.

RESULTS

Crosstabulation Analysis

Results of the crosstabulation analysis appear in Table 2. In the first crosstabulation table, approximately 38% ($n=73$) of the respondents

Table 1
Items Used to Measure Satisfaction

ITEM ID	ITEM WORDING	SCALE POINTS	ITEM ANCHORS
<u>Overall Satisfaction Items -- Unidimensional</u>			
OSAT1	Overall, how do you feel about the advising services you just received?	7 pt.	Very dissatisfied-- Very satisfied
OSAT2	Overall, how do you feel about the advising services you just received?	7 pt.	Terrible-- Delighted
ASAT11	...How satisfied are you with the advising center?...My overall experience with the advising center.....	7 pt.	Very dissatisfied-- Very satisfied
<u>Satisfaction Only Items</u>			
OSAT4	Overall, how do you feel about the advising services you just received?	7 pt.	Not at all satisfied-- Very satisfied
SATIS	Overall, how satisfied are you with your recent experience with the advising center?	11 pt.	0%: Not at all satisfied-- 100%: Completely satisfied
<u>Dissatisfaction Only Items</u>			
OSAT3	Overall, how do you feel about the advising services you just received?	7 pt.	Very dissatisfied-- Not at all dissatisfied
DISSAT	Overall, how dissatisfied are you with your recent experience with the advising center?	11 pt.	0%: Not at all dissatisfied-- 100%: Completely dissatisfied

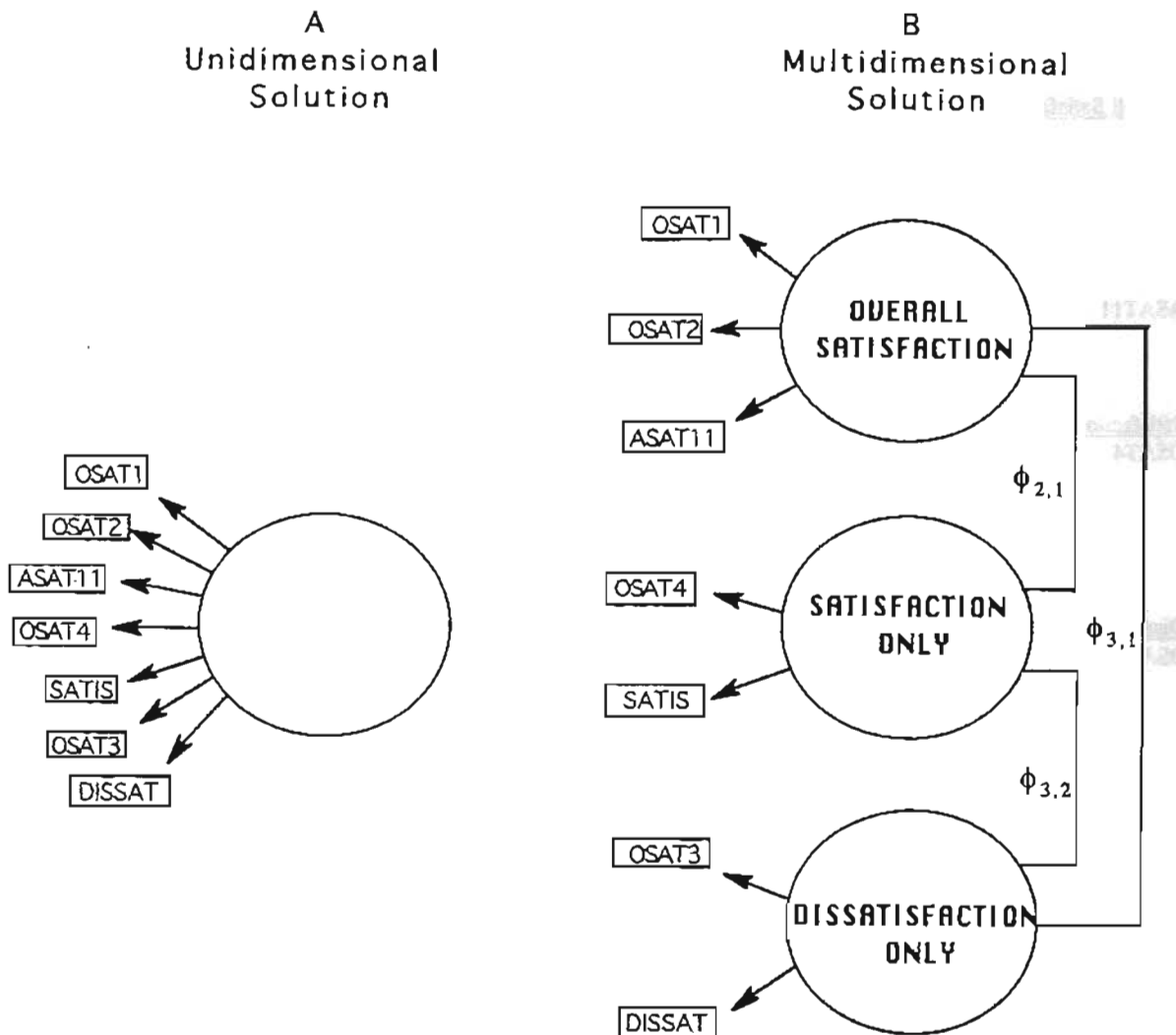
Table 2
Results--Crosstabulation Analysis

		OSAT4					SATIS		
		Low	Med	High			Low	Med	High
O S A T 3	Low	2	18	86	D I S S A T	Low	1	4	125
	Med	5	65	6		Med	6	45	3
	High	11	1	1		High	9	0	1

simultaneously rate themselves in the middle or high categories on both the unidimensional satisfaction (OSAT4) and the unidimensional

dissatisfaction (OSAT3) scale. In the second table, approximately 25% (n=49) of the respondents simultaneously rate themselves in the middle or

Figure 1
Potential Outcomes



high categories on both the unidimensional satisfaction (SATIS) and the unidimensional dissatisfaction (DISSAT) scale.

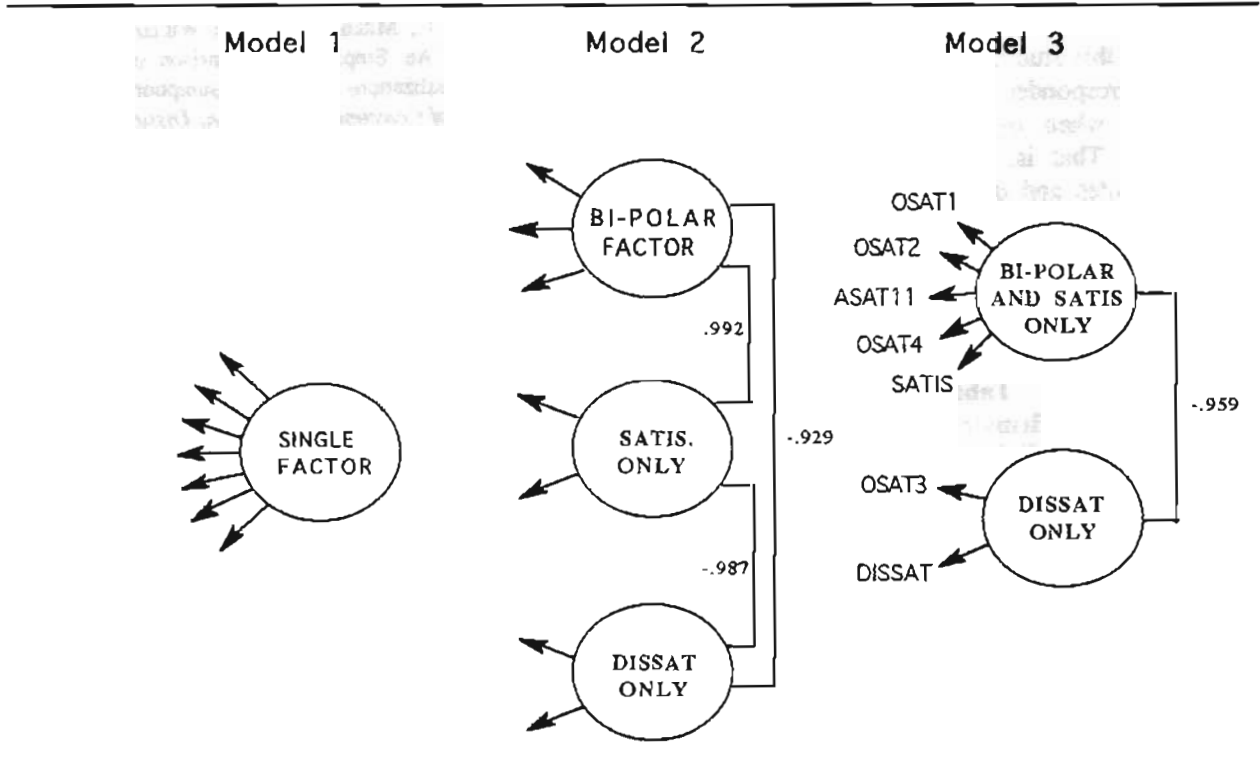
Confirmatory Factor Analysis

Results of the confirmatory factor analysis appear in Figure 2 and Table 3. The single construct model shows minimally acceptable fit with a chi-square of 58.75 (15 d.f.) and a GFI of .908. The multi-dimensional model shows significantly better fit with a chi-square of 40.14 (14 d.f.) and a GFI of .942. However, the

correlation of the "overall satisfaction" construct and the "satisfaction only" construct is .992 indicating the two are likely to be indistinguishable. Likewise, the correlation between "satisfaction only" and "dissatisfaction only" is -.987 indicating the two are nearly identical but with opposite signs. The correlation between "overall satisfaction" and "dissatisfaction only" is -.929 indicating the two are highly correlated but may not be identical constructs.

Finally, because the results suggest that "dissatisfaction only" is distinct from "overall satisfaction" but "satisfaction only" is not, Model

Figure 2
Fit Statistics--Confirmatory Factor Analysis



	Model 1	Model 2	Model 3
Chi-Square	58.75	40.14	49.59
DF	15	14	15
GFI	.908	.942	.927
RMSR	.110	.083	.094

3 was attempted. The model fit less well than Model 2 and the correlation between "overall satisfaction" and "dissatisfaction only" is -.959.

Parameter estimates for all three models appear in Table 3.

CONCLUSIONS

Taken as a whole, the results provide weak support for a two-dimensional conceptualization of satisfaction. In the crosstabulation analyses, over one-third of the respondents are simultaneously satisfied and dissatisfied, a result contrary to a unidimensional view of satisfaction.

Results of the confirmatory factor analysis are less clear. While the multidimensional model (Model 2) exhibits superior fit, correlations among the constructs are confusing. Support for a multidimensional model would have been provided had both $f_{2,1}$ and $f_{3,2}$ been significantly different from 1.0; strong support would have been provided had all three been different from 1.0.

DISCUSSION AND IMPLICATIONS FOR FUTURE RESEARCH

Consistent with the findings of Babin, Griffin and Darden (1994), the results presented here

provide some support for a two-dimensional conceptualization of CS/D. However, there is another potential explanation for the results obtained in this study. It is possible that subjects may have responded as if satisfaction has two dimensions when overall satisfaction is being measured. That is, subjects are satisfied with some attributes and dissatisfied with others, and may maintain this dichotomy when answering questions of overall satisfaction. Future research should address the issue of the dimensionality of satisfaction at the specific attribute level.

Table 3
Results--Confirmatory Factor Analysis

	Model 1	Model 2	Model 3
OSAT1	0.898	0.910	0.901
	----	----	----
	0.806	0.828	0.812
OSAT2	0.852	0.864	0.854
	18.412	20.486	19.454
	0.726	0.747	0.730
ASAT11	0.822	0.820	0.819
	16.896	17.726	17.399
	0.675	0.673	0.670
OSAT4	0.913	0.903	0.916
	22.414	----	24.416
	0.833	0.815	0.840
SATIS	0.907	0.900	0.899
	21.970	24.646	22.813
	0.823	0.810	0.809
OSAT3	-0.882	0.896	0.903
	-20.218	----	----
	0.778	0.804	0.816
DISSAT	-0.817	0.896	0.890
	-19.513	22.587	21.492
	0.759	0.802	0.792

Note: For each cell, the first value is the completely standardized parameter, the second value is the t-value, and the third value is the squared multiple correlation.

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