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Josée Bloemer, David Dekker

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Josée Bloemer*

David Dekker**

* PhD, full professor of marketing and market research, University of Nijmegen, P.O. Box 9108, 6500 HK Nijmegen, tel: +31 24 3613018, fax: +31 24 36111933 , e-mail: j.bloemer@nsm.kun.nl
** PhD, post-doc marketing, University of Nijmegen, P.O. Box 9108, 6500 HK Nijmegen, tel: +31 24 3615462, fax: +31 24 36111933, e-mail: d.dekker@nsm.kun.nl

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ABSTRACT

In this paper we elaborate on two specific processes that relate personal values to satisfaction with (financial) services. These processes are reflected in the value percept model and value disconfirmation model. We generalize both models into a new value disparity-disconfirmation model. This model provides testable conditions to evaluate and compare the validity of the value percept disparity model and the value disconfirmation model. We specify our model in terms of several hierarchical linear models and assess the empirical fit of these models with data on 18 bank branches. The results of our study support the value disconfirmation model. Furthermore, the external dimension of personal values has a larger impact on satisfaction than the internal dimension. This indicates that differentiation between personal values is important in the assessment of their impact on satisfaction. Further theoretical and managerial implications of our study are discussed.

Key words: values, satisfaction, value percept disparity model, value disconfirmation model

Introduction

Satisfaction is a key variable in services marketing that determines the development of long-term relationships (e.g., Sirdeshmukh, Singh and Sabol 2002). Different authors suggest that personal values (as opposed to economic values of objects) are important antecedents to satisfaction (Oliver 1997; Westbrook and Reilly 1983). Here we define personal values in line with Rokeach (1973, p.5) as 'an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence'. These personal values are important in the explanation of satisfaction with services, as services often are instrumental for attainment of these values. For example, customers that see a sense of belonging an important value in their lives may seek attainment of this value in services that for example require or suggest a membership.

In this paper we elaborate on two specific processes that relate personal values to satisfaction with (financial) services. These processes are reflected in the value percept disparity model and the (value) disconfirmation model (Oliver 1997; Westbrook and Reilly 1983). Note that usually the disconfirmation model is specified in terms of perceived and expected performance (Oliver 1997; Westbrook and Oliver 1991). We claim that a disconfirmation model in terms of values is an useful extension. One advantage is that we focus on service aspects in terms of customer characteristics in stead of service characteristics. More specifically, in the value disconfirmation model we assume that customers form expectations about values associated with a service and evaluate the values they experience (perceive) in that service against these expected service values. According to the value disconfirmation model this evaluation subsequently results in a degree of satisfaction.

In contrast, the value percept disparity model proposes that satisfaction increases as the disparity between customers' perceived service values and the customer's _own_ values decreases (Westbrook and Reilly 1983). Similar to the value disconfirmation model this model also assumes an evaluation process. The difference with the value disconfirmation model is that evaluation occurs against the customers' own values, not against expected service values.

Different authors emphasize the importance of clarifying of the relationship between values and satisfaction (Oliver 1997; Westbrook and Reilly 1983). However, the distinctive relationships between personal values and satisfaction that we describe above have received little attention in the literature. Therefore, analog to Spreng MacKenzie and Olshavsky (1996), we develop a theoretical model that generalizes both the value percept disparity model and the value disconfirmation model: a value disparity-disconfirmation model. We introduce the construct of expected-value disparity to complement value percept disparity. Adding this construct to the value percept disparity model implies a new model that also encompasses the value disconfirmation model. Consequently, this value disparity-disconfirmation model provides testable conditions to evaluate and compare the validity of the value percept disparity model and the value disconfirmation model.

A distinctive feature of this study is that we collected data from two independent sources; customers and employees. First, we measure personal values and perceived personal values in services directly from customers. Second, we assume that customers' expected personal values in services are a function of employees' personal values. Therefore, we derive expected service values from employee data. The advantage of this approach is that we independently measure perceived and expected personal values in services. Another feature is that we explicitly distinguish between internal and external personal values. Exploration of the effects that different personal value types have on satisfaction allows us to refine our understanding of the relationship between personal values and satisfaction. However, the main contribution to the existing literature follows from our assessment of the empirical fit of the value percept disparity model and the value disconfirmation model. This allows us to describe the specific processes that relate personal values to satisfaction.

Theoretical Background

Satisfaction

Satisfaction is a central concept in the relationship marketing literature (e.g., Erevelles and Leavitt 1992; Oliver 1997). Different types of satisfaction have been identified. Process definitions of satisfaction emphasize the disconfirmation paradigm (Oliver and DeSarbo 1988; Tse and Wilton 1988; Yi 1990). According to this paradigm, customers form expectations to which they compare performance. A comparison of expectations and perceptions will result in either confirmation or disconfirmation. Customers' expectations are confirmed when perceptions exactly meet expectations. Disconfirmation will be the result of a discrepancy between expectations and perceptions. Two types of disconfirmation can be identified: positive disconfirmation occurs when perceptions exceed expectations and negative disconfirmation occurs when expectations exceed perceptions. Confirmation and positive disconfirmation will be likely to result in satisfaction, whereas negative disconfirmation leads to dissatisfaction.

In line with Oliver (1997)and Westbrook and Reilly (1983) we define satisfaction as the customer's value fulfillment response. It is the judgement that the service provides

a pleasurable level of consumption related value fulfillment, including levels of under- and over-fulfillment. This process definition focuses on evaluations of satisfaction with respect to brief service interactions. Also, it takes into account evaluations from service experiences that involve consumption periods of considerable duration, which often occur in (financial) service settings.

Values

Rokeach (1973, p.158) has argued that (personal) 'values are … significantly related to all kinds of behavior'. More recently, the effect of values on customer behavior has been addressed in several studies (Allen and Ng 1999; Durgee, O'Connor and Veryzer 1996; Shim and Eastlick 1998; Wharton and Harmatz 1995). Most current models of the influence of values on behavior are based upon the value – attitude – behavior hierarchy model (Homer and Kahle 1988).

The conceptualization and operationalization of the value concept has been addressed in many different ways throughout the years (Allen and Ng 1999; Durgee, Oconnor and Veryzer 1996; Kahle 1983; McGuire 1976; McIntyre, Claxton and Jones 1994; Mitchell 1983; Peter and Olson 1994; Rokeach 1973; Schwartz and Bilsky 1987; Vinson, Scott and Lamont 1977; Wharton and Harmatz 1995; Zetterberg 1995). Although the Rockeach's list of values is probably one of the best known and universally used lists of values, in this research we will use Kahle's list of values (Kahle, Beatty and Homer 1986). Some advantages are the parsimony, predictive utility, simplicity in administering, and, relevance and influence on daily lives of this list (Beatty et al. 1985; Novak and Macevoy 1990). Furthermore, it is shown that Kahle's list of values encompasses an external dimension and an internal dimension (Beatty et al. 1985; Homer and Kahle 1988; Kahle 1983). They show that values vary in terms of the importance of others in value fulfillment and that the internal/external dimension is relevant in a customer behavior context. On the one hand, customers who place more importance on internal values (e.g. self-fulfillment, sense of accomplishment) want to have as much control as possible over all aspects of their lives. On the other hand, customers who place more importance on external values (e.g. sense of belonging, being well respected and security) emphasize the importance of others in their environment. The external dimension of the

Kahle List of Values includes values that are more other directed while the internal dimension includes values that are more directed to the self. The distinction between these two types of values might be of particular importance in a (financial) service setting, because the importance of service contact employees will vary among customers.

The Relationship between Personal Values and Satisfaction

Two models that can be used to study the relationship between personal values and satisfaction are the value percept disparity model (Westbrook and Reilly 1983) and the value disconfirmation model (Oliver 1997). The value percept disparity model was originally formulated by Lock (1967; 1969). This model recognizes explicitly that customers hold their own values, and perceive values in services. Satisfaction is an emotional response triggered by cognitive-evaluative processes in which the perceived values of a service are compared to one's own values. The smaller the disparity between the percept of the service values and one's own values, the more favorable the evaluation becomes, i.e. satisfaction increases. It is important to note that Westbrook and Reilly (1983) consider absolute value percept disparities.

Conceptual clearness and theoretical parsimony of the value percept disparity model require further scrutiny of the model in an empirical setting (Westbrook and Reilly 1983). In particular does the value percept disparity model outperform the value disconfirmation model in explaining customer satisfaction? An empirical test conducted by Westbrook and Reilly (1983) shows the positive impact of value percept disparity on satisfaction. However, they failed to show that the value percept disparity model outperforms the disconfirmation model. The authors therefore suggest that the processes determining satisfaction may be more complex than previously assumed. This would require the integration of the theoretical streams underlying each separate model.

More recently, other authors have also recognized the importance of values in explaining satisfaction. Oliver (1997) suggests that values as such have an important impact on satisfaction. Complementary, the value percept disparity model provides information about the causes of consumer satisfaction in values as compared to the value disconfirmation model. Similarly, several authors evaluate both models in terms of value

or desire congruency (Spreng, MacKenzie and Olshavsky 1996; Spreng and Olshavsky 1993).They find that value congruency contributes independently to satisfaction over and above a value disconfirmation of expectations standard. Moreover, Fournier and Mick (1999), with their phenomenological and longitudinal investigation of satisfaction, show that values and value percept disparity operate distinctively from the disconfirmation model and play an important role in explaining consumer satisfaction. Also, Rosen and Surprenant (1998) show that values-enhancing components of service relationships play an important role in explaining satisfaction.

Westbrook and Reilly (1983) argue that customers seek attainment of values, rather than confirmation of their expectations on service attributes. Moreover, they also emphasize the need to integrate the value percept disparity model and the disconfirmation model. We argue that such integration can be achieved by incorporating in a model the expectations about the degree to which services contribute in the attainment of customers' personal values, instead of focusing on 'expected service attributes'.

However, this requires a new value-satisfaction model (the value disparity-disconfirmation model). The introduction of the 'expected value disparity' concept as a complement to 'perceived (or experienced) value disparity' will integrate both models (as we show in the next section). In this new model we assume that customers evaluate both their expectations as well as their perceptions against their own personal values. This complements the value disparity model, which just focuses on the difference between customers' own values and the service values they perceive. Thereby this model ignores any a priori expectation formation about the values that services will provide. Furthermore, the new model complements the value disconfirmation model, which focuses on the difference between perceived service values and the expected service values. Thus, this model ignores any direct effects of evaluations against customers' own values.

Theoretical Model

In order to describe the relationship between personal values and satisfaction we propose a general model of value disparity-disconfirmation, which integrates the value percept

disparity model and the value disconfirmation framework. This model provides testable conditions to evaluate and compare the value percept disparity model and the value disconfirmation model. Let,

$$S = f(VP, VC, VE) \tag{1}$$

where satisfaction (S) is a function of customer perceived service values (VP), customers' own values (VC), and customer expected service values (VE). Analog to Westbrook and Reilly (1983) we define value percept disparity as $VPD = VP - VC$, while we define value expectancy disparity as $VED = VE - VC$.

Oliver (1980; 1981) suggests a linear specification for the value disconfirmation framework. Here, we also assume a linear effect of value percept disparity and value expectancy disparity on satisfaction:

$$S = \beta_1 VPD + \beta_2 VED. \tag{2}$$

This implies a value disparity-disconfirmation framework, as we can rewrite 2 as,

$$S = \beta_1 (VPD - VED) + \beta_3 VED \tag{3}$$

and,

$$S = \beta_1 (VP - VE) + \beta_3 VE - \beta_3 VC \tag{4}$$

where $\beta_3 = \beta_1 + \beta_2$.

However in (4) we put a restriction on the value disconfirmation model as we assume that the effects of VE and VC to be equal. To loosen this restriction we expand 2 as follows

$$S = \beta_1 VPD + \beta_2 VED + \beta_4 VE \tag{2a}$$

and rewrite 4 as

$$S = \beta_1 (VP - VE) + \beta_5 VE - \beta_3 VC. \tag{4a}$$

where $\beta_5 = \beta_3 + \beta_4$.

Equations (2a) and (4a) are two expressions of the value disparity-disconfirmation model that nests the value disconfirmation framework and the value percept disparity model. Specification of the value disparity-disconfirmation model in terms of (2a) directly reveals the effects predicted by the value percept disparity model. In terms of (4a) the value disparity-disconfirmation model reveals the direct effects predicted by the

value disconfirmation framework. As (4a) is a linear transformation of (2a) we can derive from the coefficient estimates of one, the coefficient estimates of the other model.

Furthermore, because the two models are nested in the larger model, we can derive the conditions under which this general model reduces to either of these nested models. First, $\beta_1 \neq 0$, $\beta_2 = 0$ and $\beta_4 = 0$ in (2a) implies that the value percept disparity model (Westbrook and Reilly 1983) bests fits the data. Second, the condition $\beta_1 \neq 0$, $\beta_4 \neq 0$ and $\beta_1 + \beta_2 = \beta_3 = 0$ supports the idea that the value disconfirmation model bests fits the data. In this case, the values that customers expect to realize with services would affect satisfaction, while their own values would not affect satisfaction (note that β_5 reduces to β_4 if $\beta_3 = 0$). Third, if and only if $\beta_1 \neq 0$, $\beta_3 \neq 0$ and $\beta_5 \neq 0$ then our generalized value disparity disconfirmation model receives support. In this case we may conclude that the processes described by for example, Westbrook and Reilly (1983) and Oliver (1980; 1981; 1997), both contribute to explaining satisfaction in terms of customer values.

These (mathematical) conditions can be translated in testable (substantive) hypotheses. We choose to specify our hypotheses in terms of (2a), because it is computationally easier to transform coefficients in (2a) into coefficients of (4a) than vice versa. Under, the first condition above we saw that it is necessary for the value percept disparity model to hold that the value percept disparity coefficient in (2a) is larger than zero. Therefore, based on this model we hypothesize,

H1: Perceived value disparities have a positive effect on customer satisfaction.

Note that if we find support for this hypothesis it will not imply that the value percept disparity model shows best fit with the data. Support for this hypothesis is also necessary for the other two models. However, additional hypotheses should hold for the other less parsimonious models to show a better fit. In fact, both the value disconfirmation model as well as our more general value disparity-disconfirmation model suggests an effect of expected-value disparity on satisfaction.

Analog to the value disconfirmation model, in our value disparity-disconfirmation model we would expect a negative effect of expected value disparity on satisfaction. A negative effect would adjust customers' perceived evaluation for their a priory evaluation based on expectations. Therefore,

H2a: Expected value disparities have a negative effect on a customer's satisfaction.

In contrast to the value disconfirmation model, our value disparity-disconfirmation model does not assume that the value expectancy disparity coefficient (β_2 in (2a)) equals the value percept disparity coefficient (β_1 in (2a)). If the latter would equal the former this would make individuals own values, at least mathematically, redundant in the value disparity-disconfirmation model. In fact, the value disparity-disconfirmation model would reduce to the value disconfirmation model. Let us emphasize that substantively this does not mean that value percept disparity and value expectation disparity processes are not relevant in the relationship between values and satisfaction. However, for us to show that the value disparity-disconfirmation model holds, the absolute values of the evaluation and adjustment factor need to be unequal. Therefore, we hypothesize,

H2b: The absolute effect of perceived value disparity is not equal (either larger or smaller) to the absolute effect of expected value disparity.

In fact, when we can not support this hypothesis we show that the a priori and post hoc evaluations have a similar weight. Furthermore, support for H2b would reject the specific value disconfirmation model. Only if we cannot reject H2b and customers' expected service values have a positive effect on satisfaction (β_4 in (2a)), the value disconfirmation model is (statistically) preferable, because it would be more parsimonious. Therefore, we check the following hypothesis,

H3: Expected service values have a positive effect on customer satisfaction.

Complementary we form a hypothesis on which types of values affect satisfaction more in service settings. Some customers will put higher emphasis on external values while other customers will attach more importance to internal values (Homer and Kahle 1988; Kahle 1983; Kahle, Beatty and Homer 1986). Especially, external values are related to the relationship of the customer with others, whom in our setting include the service provider. Therefore it might be easier for a service provider to achieve satisfaction when customers place more emphasis on the external dimension of values instead of the internal dimension. Therefore, we formulate the following hypothesis:

H4: Customers that put more importance on the external dimension of the values can be more easily satisfied than customers that put more importance on the internal dimension of the values.

In other words when customers think that for example, a sense of belonging, being well respected and security are more important than self fulfillment, sense of accomplishment they will be more easily satisfied with a service than customers who think that self fulfillment and sense of accomplishment are of greater importance.

Method

Data are collected from a sample of customers and employees of 18 bank branches from a Belgium bank, in three mid-sized Flemish towns. In total 439 randomly selected customers responded to the request to fill out a questionnaire. Furthermore, 200 employees of those 18 branches responded to a similar request. Both samples are representative for the focal branches in terms of gender, age, education and occupation.

As mentioned we use Kahle's List of Values (1983) to measure the values of the customers and the employees. This list is concise and has shown high reliability in previous research. Respondents (customers and employees) were asked to indicate the importance to them of each of the value items on a 7-point scale ranging from "of little importance" (1) to "of great importance" (7). Similarly they were asked to score the degree to which they perceived these values in services at their local branch ("very little"

(1) to "very much" (7)). For the measurement of satisfaction we use, in line with our definition, a multiple-item measurement scale that is validated and shows high reliability in previous research (Oliver 1997). All items are measured on 9-point Likert scales ranging from completely disagree to completely agree.

The unique dataset provides the opportunity to partly harness against the perils of common method variance, which typically occur in cross-sectional self-report data. From the employee's own value importance data we develop a proxy for customer expected service values (VE). Research on relationship evaluations, suggests that not only customers own values play a role in evaluating relationships, they also consider values of the service provider (Gassenheimer, Houston and Davis 1998). The values of service providers are an input in the expectations formation process of customers. Especially, for services the interpersonal contact between customers and providers place focus on value attainment. As the employee data is independent from the customer data we circumvent some of the common method variance problems that would occur if we were to collect all data only from customers.

A serious reason for concern is that the customer data has a nested structure as customers are grouped by branches. This implies that OLS analysis is inappropriate, and we should use multi-level analysis (Aitkin and Longford 1986; Goldstein 1995; Snijders and Bosker 1999). In the following, we first discuss the measurement and construction of the different variables we use. Subsequently, we discuss the multi-level models we estimate and the tests we use for statistical inference.

Variables

The dependent variable, satisfaction, is measured with a three item 9-point Likert like scale. This scale has a high level of internal consistency (Cronbach's α = .87). The explanatory variables we use are based on two value dimensions we derive from Kahle's List of Values. Similar to other studies (e.g., Kahle 1983; Kahle, Beatty and Homer 1986), we construct an external values and an internal values dimension for both the separate customer sample and the employee sample. In general, fit statistics show acceptable levels of validity and internal consistency (see table 1). Although, chi-square statistic for the external values rejects the model this could be due to the sample size

(Jöreskog and Sörbom 1989). As the AGFI is independent of sample size and is sufficiently high for both measures we may conclude that validity of these factors is sufficient.

*** Insert table 1 about here***

Based on these measures we calculate the expected value disparity (*VED*) and the perceived value disparity (*VPD*). We take as a measure for expected values the branch average of the employee scores on the internal and external value dimensions,

$$VE = \sum_{j_b} VAL_{j_b v} \bigg/ n_b \tag{5}$$

Hence, expected value disparity is defined as,

$$VED_{i_b v} = (\sum_{j_b} VAL_{j_b v} \bigg/ n_b) - VAL_{i_b v} \tag{6}$$

Where *VAL* identifies a specific value dimension of a customer, i_b indicate customers at branch *b*, j_b indicate employees at branch *b*, *v* indicates the specific value dimension (internal or external), and n_b is the number of employees in branch *b*. Furthermore, we define perceived value disparity as,

$$VPD_{i_b v} = VAL_{i_b v} - PVAL_{i_b v} \tag{7}$$

where the indices have the same meaning as in (1) and *PVAL* identifies a perceived value dimension.

Multi-Level Analysis

As mentioned above our customer data have a nested structure (customers reside under branches), therefore we use multi-level analysis. As level-one units we consider customers, as level two units we consider branches. As became clear in hypothesis 5 we distinguish between the effects of internal and external values on customer satisfaction. Therefore we consider three different models: the internal values model, the external values model, and the full model.

For our multi-level analysis we specify hierarchical linear models, more specific, random intercept models. Such models explicitly incorporate specific error terms for the

different levels, i.e. there is random variability both on branch level as well as on customer level. However, in contrast to a fixed effect model we do not need to introduce dummy variables for each branch (level 2 unit). We choose a random model specification for two reasons. First, the number of customers per branch is relatively small, which would result in large standard errors if we would estimate a fixed effect model. A second consideration is that we have a sample from a population of branches. If we want to draw conclusions about the population random models are appropriate (Snijders and Bosker 1999, p.43-44). Furthermore, we do not expect that the coefficients for level 1 (customer level) depend on level 2 (branch level). To keep the model parsimonious we therefore specify a random *intercept* model[1].

We use restricted maximum likelihood (REML) as estimation method. Restricted maximum likelihood takes into account the loss of degrees of freedom in estimating the variance components (Snijders and Bosker 1999). This prevents against the downward bias that maximum likelihood would cause, which is especially problematic when the number of groups is small (Snijders and Bosker 1999). As we have 18 branches in or dataset REML indeed seems most appropriate.

Tests

In our empirical analysis for hypotheses 1, 2, and 3 we use regular t-tests, and evaluate the results at *p*-value levels of .05, .01, and .001. To assess hypotheses 4 and 5 we use Wald-tests, which allow comparing multiple different coefficient estimates (Greene 2000; Snijders and Bosker 1999). Furthermore, to compare the different models we calculate the explained variances on level 1 and level 2 according to the procedure suggested by Snijders and Bosker (1999). In short, this procedure determines the reduction in estimation error of the dependent variable on level 1 (here individual satisfaction) and on level 2 (i.e., the expected satisfaction of customers at the same branch), due to addition of explanatory variables in the empty model. Furthermore, we test for all models whether the multi level approach is relevant with a likelihood ratio test between OLS likelihoods and REML likelihoods.

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[1] We estimated several random slope models, which produced similar results.

Results

In table 2 we present the descriptive statistics of the variables we use in the regression analysis and their Pearson correlations.

Insert Table 2 About Here

In table 3 we present the results from our hierarchical linear regression models. Model 1 incorporates only the internal value based variables; model 2 incorporates only the external values, while model 3, the full model, incorporates variables based on both value dimensions.

In accordance to hypotheses 1 and 2a, both model 1 and model 2 show that expected and perceived value disparity, as well as expected values have the effects on customer satisfaction as predicted by the value disconfirmation model. In line with hypothesis 1, model 1 shows that perceived value disparity on internal values has a positive effect on satisfaction (.254, p-value < .001). Furthermore, model 2 shows a positive effect of perceived value disparity on external values (.378, p-value <.001).

Moreover, we see in model 1 a negative effect of expected value disparity of internal values (-.184, p-value <.01), and in model 2 a negative effect of expected value disparity of external values (-.446, p-value <.001) on satisfaction. These findings support hypothesis 2a. Also, in both models 1 and 2 we see a positive effect of the customer expected service value measure although this effect is only significant in model 2 (respectively, .322, p-value >.05, and, .623, p-value <.05) supporting hypothesis 3.

To test hypothesis 2b we perform a Wald-test. We test whether the absolute values of expected and perceived value disparity are equal (for procedure see Greene 2000). The Wald-statistics (W) for models 1 and 2 (respectively, W=1.375, p-value=.241, and, W=.975, p-value=.323) don't allow us to reject this null hypothesis, and hence we find support for hypothesis 2b. This implies together with the support for hypothesis 1, 2a and 3 that the data reported in this study best fits the value disconfirmation model.

Also, our results show that not all value dimensions have a similar impact on satisfaction. From a Wald-test that compares simultaneously the effect sizes of internal and external value disparities (expected and perceived) we find support for hypothesis 4. Based on the Wald-statistic (W=18.847, p-value=.000) we reject the null hypothesis that effects of expected value disparities (internal and external) are equal, and simultaneously, that perceived value disparities (internal and external) effects are equal. The results show that the effects based on external values are larger in absolute terms.

Furthermore, in model 3, we see that only the effects of the external value based measures remain significant when we look at the simultaneous effects of the external and internal dimension. This suggests that internal value disparities are covariates of the external value based measures, however the latter have greater explanatory power, while the former do not contribute any additional explanatory power. This also follows from the reduction in R^2 on level 1 (R_1^2) and level 2 (R_2^2) when we compare model 2 and model 3. We see that R_1^2 and R_2^2 both decrease in the more elaborate model 3. Hence, adding internal variables to model 2 does not enhance the explained variance. Usually, adding variables will increase R^2. Note, that we do not consider regular R^2, rather estimates of R_1^2 and R_2^2. Although, the population R_1^2 and R_2^2 will increase when adding variables, this is not necessarily so for the estimates. Snijders and Bosker (1999, p.104) suggest that a drop in R_1^2 and R_2^2 estimates is indicative for model misspecification.

*** Insert Table 3 about Here***

Discussion

We contribute to the existing literature by assessing the empirical fit of the value percept disparity model and the value disconfirmation model. Results show that we may not discard the expectation formation process described in the value disconfirmation framework. Also, we find that customers' own values can not be directly linked to satisfaction as suggested in the value percept disparity model when we take into account expected service values. These findings suggest that customer values affect satisfaction differently than Westbrook and Reilly (1983) propose. An explanation could be that

customers' own values affect the perceptions and/or expectations they develop on the values of their service providers. The effect of customer values hence might be indirect, in contrast to the direct effects Westbrook and Reilly (1983) propose.

This immediately shows one shortcoming of our study. We only consider one (important) underlying variable of customers' expectations (average employees' values). Although, we strongly believe that employee's values are an important determinant of customers' expectations, especially in repeated service delivery situations, it might not be the only determinant. Therefore, attention to the antecedents of expected service values and the role of employee values is a worthwhile topic for further inquiry and needed to validate our results.

Moreover, different values seem to play different role as external values are more important than internal values in explaining satisfaction. Besides the fact that this is interesting from a managerial perspective, it has some interesting theoretical consequences. Our results show that for services only subset of values seems to be relevant. This raises several questions. For example, service aspects link to specific external values. Also, it is of interest to study how values are communicated between employees and customers. Hence, additional attention should also be paid to the influence of specific values and the mere disparity between customers' values and values of the service providers' employees.

Our approach to assess the value percept disparity and value disconfirmation model both theoretically and empirically offers ample opportunity for subsequent research along similar lines. Since we only studied a single service setting and focus on a limited number of values at one particular moment in time, we are hesitant to generalize our results beyond the scope of this study. Especially, in light of earlier findings, we feel that in different circumstances the value disparity-disconfirmation model might show different results. Moreover, the effects of moderating variables like marketing strategies, service involvement, usage, and socio-economic variables need to be studied. As our research has an exploratory nature, further research addressing the issues we raised is needed.

Conclusions

We integrated the value percept disparity model and the value disconfirmation model into the value disparity-disconfirmation model. This model allows us to derive the theoretical conditions underlying both nested models. This more general model provides opportunity to empirically test the validity of both models simultaneous. The major contribution of this study to the existing literature is the elaboration upon the specific processes that relate personal values to satisfaction.

In short, the results did not show support for the value percept disparity model. In fact, the empirical data better fit the conditions set by the value disconfirmation model. The results show the hypothesized negative impact of expected value disparity on satisfaction, and the positive impact of perceived value disparity on satisfaction. As the absolute difference between these effects is small, we cannot present support for the processes described by the value percept disparity model. This is not to say that these processes do not exist nor might have an indirect effect on satisfaction. Rather, it shows that the processes described by the value disconfirmation model are more prominent.

Furthermore, we show that in our research setting of a financial service provider the external dimension of values is more instrumental in predicting satisfaction than the internal dimension. This suggests that a distinction between value dimensions is important in the assessment of their relationship with satisfaction.

Managerial Implications

The most important managerial implication is that the value disconfirmation model is the most parsimonious model that describes the relationship between personal values and satisfaction. This implies that perceived and expected values in services are more prominent for satisfaction than customers' own values. Managing expectations of service values in line with perceptions of service values is important to create satisfaction.

As we assume that customer value expectations are a function of employees' values this allows expectations management trough employee values. As values are relatively stable human traits one suggestion is that managers take employee values into account when hiring new staff. A straightforward suggestion would be that contact

employees who really value taking good care of the customer in terms of respecting the customer, giving him/ her a feeling of being part of the family and being totally reliable should be preferred over contact employee's that lay more importance on values like self fulfillment, fun and enjoyment.

As external values seem to have a prominent role in determining satisfaction an obvious management implication is to focus on communicating external values. Financial service providers should focus on external values and make sure that the service delivery process meets or exceeds expectations on for instance creating a sense of belonging, being well respected and security for the customer. In a financial service setting this might be achieved by relationship management in which contact employees play a vital role. This is in line with several recent empirical studies that demonstrate the importance of positive customer perceptions about service employees (Kamakura et al. 2002).

Table 1
Value Measures

	Factor Loadings
Customers Own External Values	
χ^2=16.43, df = 2, p-value = .00, RMSEA = .13, AGFI= .91, α= .69	
Sense of belonging	.573
Warm relationships with others	.674
Being well respected	.600
Security	.563
Customers Own Internal Values	
χ^2=5.63, df = 3, p-value = .06, RMSEA = .06, AGFI= .97, α= .65	
Excitement	.822
Self-fulfillment	.483
Fun and enjoyment	.255
Self respect	.327
Sense of accomplishment	.642
Customers Perceived External Service Values	
χ^2=19.47, df = 2, p-value = .00, RMSEA = .14, AGFI= .89, α= .81	
Sense of belonging	.706
Being well respected	.825
Security	.776
Warm relationships with others	.573
Customers Perceived Internal Service Values	
χ^2=2.54, df = 3, p-value = .28, RMSEA = .03, AGFI= .99, α= .72	
Excitement	.748
Self-fulfillment	.749
Fun and enjoyment	.708
Self respect	.702
Sense of accomplishment	.574

Table 2
Descriptives and Correlations

Variables [b]	Avg.	S.D.	Correlations (ρ) [a]					
			(2)	(3)	(4)	(5)	(6)	(7)
(1) Satisfaction	5.215	1.223	.155	-.263	.026	-.003	-.215	.049
(2) E.V. Expected Disparity	-.001	.982		.410	.227	.339	.071	.051
(3) E.V. Perceived Disparity	.956	1.307			.025	.191	.620	-.031
(4) E.V. Average of Employees [c]	5.608	.214				-.010	.004	.353
(5) I.V. Expected Disparity	-.132	1.156					.544	.129
(6) I.V. Perceived Disparity	.751	1.538						-.024
(7) I.V. Average of Employees [c]	5.353	.231						

[a]) n=439
[b]) E.V. = External Values; I.V. = Internal Values
[c]) These variables measure customers' expected values of the service provider

Table 3
Random intercept models of Customer Satisfaction

	Models		
	(1)	(2)	(3)
Constant	3.712^{*}	2.087	2.118
	(2.487)	(1.318)	(1.158)
Customer Level			
<u>Internal Values</u>			
Expected Value disparity	$-.184^{**}$		$-.124$
	(-2.977)		(-1.677)
Perceived Value disparity	$.254^{***}$		.098
	(5.523)		(1.414)
<u>External Values</u>			
Expected Value disparity		$-.446^{***}$	$-.531^{***}$
		(-6.873)	(-6.254)
Perceived Value disparity		$.378^{***}$	$.453^{***}$
		(8.026)	(6.233)
Branch Level			
<u>Expected service values</u>			
Average External Values Employees		$.623^{*}$	$.751^{*}$
		(2.200)	(2.397)
Average Internal Values Employees	.322		-.142
	(.279)		(-.496)
Model Statistics			
Residual Variances			
Customer level ($\hat{\sigma}^2$)	1.356	1.193	1.201
Branch level ($\hat{\tau}^2$)	.041	.032	.032
Explained Variance [a]			
Customer Level (R_1^2)	.071	.185	.180
Branch Level (R_2^2)	.197	.364	.363
-2(Log Likelihood - Log Likelihood OLS)	8.356^{**}	6.866^{**}	12.608^{***}

*)p-value $< .05$; **)p-value $< .01$; ***)p-value $< .001$;

[a]) Empty model $\hat{\sigma}^2= 1.451$; Empty Model ($\hat{\tau}^2$)= .052; Harmonic Mean N : 248.347

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