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Too Much of a Good Thing: Curvilinear Effects of Service Evaluation Constructs and the Mediating Role of Trust

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TOO MUCH OF A GOOD THING: CURVILINEAR EFFECTS IN THE EVALUATION OF SERVICES AND THE MEDIATING ROLE OF TRUST

STRUCTURED ABSTRACT

PURPOSE OF THIS PAPER. The satisfaction-trust paradigm has been recently criticized regarding its ability to deliver positive consumer behavioral outcomes. This study argues that -amongst others- a reason for this unpleasant situation may be the failure of service managers to account for non-linearities in the satisfaction-trust paradigm.

DESIGN/METHODOLOGY/APPROACH. The setting for this study has been the super-market retail channel. A total of 942 respondents were “intercepted” in supermarket stores, employing a face-to-face personal interviewing method. For the detection of curvilinear effects the study employed the two-step single indicant method of Ping (1998).

FINDINGS. We posit consumer trust as an important intervening variable through which non-linear service evaluation effects translate into word-of-mouth. Findings imply that investing resources in satisfaction programs do not do a good job in building positive word-of-mouth from a point on. Economic value evaluations and trust judgments seem to be both necessary and sufficient conditions for building consumer relationships.

RESEARCH LIMITATIONS/IMPLICATIONS. Theoretically, our work extends the relationship marketing research stream suggesting that curvilinear mechanisms are likely present in the well accepted satisfaction-trust paradigm. Limitations of the study relate to the generalization of the findings in other sectors besides grocery retailing and its cross-sectional nature.
PRACTICAL IMPLICATIONS. The findings of this study suggest that relationship marketing managers would be ill-advised in their investment decisions should they use a linear-only terms trust model.

ORIGINALITY/VALUE. This article extends the trust literature in that it investigates whether consumer trust suffers from diminishing returns. Service providers who strive to build long-term relationships with their customers may not do a good job if they continue to invest in trust determinants that present diminishing returns to scale.

Keywords: Trust, word-of-mouth, satisfaction, economic value, curvilinear mechanisms, grocery retailing.

INTRODUCTION

Building consumer loyalty remains a key priority but also a problem area for many service managers (Yim et al. 2008). Most consumer relationship programs are premised on the satisfaction-trust paradigm so as to build consumer loyalty. However questions remain regarding the power of these linkages (Palmatier et al. 2008). Evidence (e.g., Chaudhuri and Holbrook, 2001) suggests that simply providing satisfying experiences might not be sufficient for long-term success in today’s hypercompetitive markets.

A possible explanation for this unpleasant situation relates to the problematic implementation of the satisfaction-trust paradigm. Specifically, it seems that an often disregarded step towards the successful implementation of the satisfaction-trust paradigm is to account for non-linearities in each link of the paradigm (Anderson and Mittal, 2000). Failing to account for non-linearities in the satisfaction-trust paradigm may lead to misallocation of resources and consequently to incorrect priorities in the effort to build
consumer loyalty. Zeithaml et al. (1996) and more recently Anderson and Mittal (2000) note the importance of research in understanding the non-linearities inherent in the service evaluation-consumer outcomes chain.

Though the need for research in this area is well documented, there are limited studies directly confronting the phenomenon of non-linear relations in service evaluation networks. Importantly, although there are few studies investigating non-linearities in the satisfaction-loyalty link, there is a lack of research in non-linear service evaluation frameworks including multiple determinants and specifically including the relational construct of consumer trust (see Agustin and Singh, 2005 for an exception). If building relationships with consumers is a major strategic goal then research investigating non-linearities in the service evaluation-outcomes chain should also incorporate the critical relational mediator of trust (Palmatier et al. 2006; Arnott 2007).

The study extends the trust and loyalty literatures in that it investigates whether major consumer trust determinants like overall satisfaction and perceived economic value have differential effects on trust in different levels of fulfillment. In other words, is the existent managerial preoccupation with overall satisfaction and perceived economic value warranted, at least after a somewhat high level of fulfillment? Managerially this seems to be of topical importance, since service providers who strive to build consumer loyalty through relationship-building processes (i.e., through trust) may not do a good job if they continue to invest on trust determinants that present diminishing returns to scale. On the other hand, in times of parity markets, it may be important for a service provider to know whether there are service performance determinants that incrementally increase important outcomes.
Theoretically, the present study addresses the call of Geyskens et al. (1998), who concluding a meta-analysis study on trust, call for more future research in exploring more complex interactive patterns related to trust. In the same vein, Sirdeshmukh et al. (2002) conclude that extant trust research has mostly focused on linear effects by passing the possibility of interactive and non-linear effects.

**HYPOTHESES**

Figure 1 depicts the research model. We investigate linear and curvilinear effects on both internal (i.e., trust) and behavioral outcomes (i.e., word-of-mouth). We have chosen trust due to its managerial and academic prominence in the relationship marketing paradigm (i.e., Morgan and Hunt 1994). We have chosen word-of-mouth due to its importance in building long term growth (Reichheld, 2003). Reichheld (2003) finds that willingness to talk up a company to friends, family, and colleagues is one of the best indicators of loyalty because of the consumer's sacrifice in making the recommendation.

<Insert Figure 1 about here>

We recognize the existence of a considerable debate in the literature relating to the linkages that connect satisfaction, value and trust (e.g., Geyskens et al. 1998; Agustin and Singh 2005; Brady et al. 2005). However, the study does not aim to resolve these controversies; the main objective is to theoretically and empirically examine the potential existence of curvilinear relationships between satisfaction, value, trust and word-of-mouth intentions. Much marketing research has examined the connections among satisfaction, perceived value, trust and loyalty intentions (e.g., Sirdeshmukh and Singh, 2002; Johnson and Grayson, 2005). Most studies seem to agree that satisfaction and
perceived value positively influence consumer trust and behavioral outcomes, and that consumer trust positively influences loyalty.

**Curvilinear Effects of Value and Satisfaction on Trust**

To the best of our knowledge, no marketing study to date has empirically examined the possibility of simultaneous curvilinear effects of multiple trust determinants on trust. Agustin and Singh (2005) empirically examine the curvilinear effect of transaction-specific satisfaction on trust. They find transaction-specific satisfaction as having a negative quadratic effect on trust. They call for more research on their findings.

In another study, Adobor (2005) investigating the trust-creation process in the context of inter-firm alliances, hypothesizes and finds empirical evidence for a quadratic effect of expectations on trust.

Agustin and Singh (2005) suggest that human needs can be characterized as either monovalent or bivalent. Monovalent needs present increasing (concave upward) or decreasing returns to scale (concave downward), whereas bivalent needs present monotonically increasing returns to scale. Growth needs and hygiene needs (Herzberg 1966) are posited as monovalent, with the former having incrementally increasing returns to scale on goal pursuit and the latter having decreasing incremental returns to scale. Hygiene factors tap the economic/utilitarian side of exchanges whereas motivation factors tap the relational/emotional side of exchanges.

Consistent with Agustin and Singh (2005) and building from content theories of motivation, the study postulates satisfaction as presenting decreasing incremental returns to scale on the relational construct of trust. In the same vein, perceived economic value is posited as also having a negative quadratic effect on trust.
In this study satisfaction is conceptualized as the degree of need fulfillment in a stream of previous transactions (i.e., cumulative satisfaction). We define satisfaction as an experiential judgment of outcomes compared to a set of goals of standards (Oliver, 1996). Satisfaction evaluations are more likely to represent evaluations of core, economic-oriented aspects of exchanges and at a lesser extent to represent evaluations of social aspects of the exchange. According to Oliver (1996), satisfaction evaluations are likely to be more representative of judgments related to the self rather than others (i.e., excellence, efficiency, and aesthetics) (Oliver, 1996).

In the same vein, economic value is conceptualized as a positive function of economic-oriented rather than social receipts and as a negative function of what is sacrificed. Agustin and Singh (2005) hypothesized value as a bivalent need. However, their empirical findings indicate value as a monovalent need presenting decreasing returns to scale. In their study, they define value as a higher-order (compared to trust) relational construct. Their definition suggests that the get component of relational value is inclusive of social receipts besides economic-oriented receipts. However their operationalization of relational value is closer to our conceptualization of economic value (i.e., resembles Grewal et al. (1998) operationalization).

Based on these definitions, satisfaction evaluations as well as economic value perceptions are more likely to represent the evaluation of lower-order/ hygiene needs. Building on this idea, satisfaction and perceived value are posited as trust-maintaining variables, mainly tapping the utilitarian/ economic aspects of a relational exchange.

We suggest that for a company to incrementally increase trust levels, it should convince consumers about the ethics that it brings into the exchange (Gundlach and
Arguably, satisfaction and economic value evaluations mostly convey signals of competence and professionalism to consumers. Satisfaction and economic value evaluations do not seem to provide guarantees to the consumers that the corporation will not act opportunistically when nobody looks or controls for such an unfavorable behavior. Therefore, it is likely that satisfaction and economic value evaluations mainly tap the competence dimension of trust and at a lesser extent its benevolent dimension, which is hypothetically considered to be of a higher-order, compared to competence trust (McAllister, 1995). Cho (2006) provides indirect empirical support for such a claim. He finds that core service offerings in an online setting (e.g. site design, security features) impact competence trust more than benevolent trust.

Finally, the hypothesized negative quadratic effect of economic value on trust can be supported using attribution theory. Providing immense value to consumers (e.g., adequate receipts at a minimal or even zero cost, as is the case with free goods), is something novel or unusual in today’s marketplace. According to Berscheid et al. (1976), in such unusual situations attributional processes are especially likely to be evoked. Consumers may start questioning providers’ motives, which may lead to consumer suspiciousness regarding the quality of the receipts. This situation is likely strengthened in the context of general consumer suspicion and high information asymmetry. Such inferences may make consumer value as presenting concave downward effects on consumer trust. Therefore:
**Hypothesis 1:** Consumers’ perceptions of a) cumulative satisfaction and b) economic value have a negative quadratic effect on trust perceptions. At higher levels of these variables each additional unit will bring less in incremental trust.

On the other hand, we expect consumer trust as having a positive quadratic effect on positive word-of-mouth intentions, consistent with its monovalent mechanism.

Consumer trust judgments are more likely to include the evaluation of more relational/ higher order needs (i.e., honesty and benevolence) tapping social aspects of the exchange as well (Agustin and Singh, 2005). Higher levels of trust would substantively convince consumers for the ethicality of the corporation and would ultimately assure consumers that even when nobody controls for corporate opportunistic behavior, the corporation will not act in such a way. Trust is conceptualized as a motivator, higher-order monovalent need that mostly relates to the social and psychological aspects of a relational exchange (Gwinner *et al.* 1995). This is especially the case in consumer relational exchanges, namely exchanges that are not only economic and rational but social too (Agustin and Singh, 2005).

**Hypothesis 2:** Consumers trust will have a positive quadratic effect on positive word-of-mouth. At higher consumer trust levels each additional unit will bring more in incremental positive word-of-mouth than the previous unit did.

**The Mediating Role of Trust**

Consumer trust has been recognized as a mediating variable in many disciplines, including social psychology (Blau, 1964), management (Cropanzano and Mitchell 2005),
and marketing (Morgan and Hunt 1994; Palmatier et al. 2008), and the service evaluation literature shows accumulating evidence for the mediating role of trust in the satisfaction-loyalty link (Sirdeshmukh et al. 2002). In linking this evidence with our direct-effects hypotheses joining consumer satisfaction and economic value on trust, we expect a mediating role of trust. Therefore:

*Hypothesis 3:* Consumers’ trust at least partially mediates the effect of satisfaction and economic value on positive word-of-mouth.

**RESEARCH DESIGN AND METHOD OF ANALYSIS**

**The Food Retailing Industry**

Grocery retailing serves as the empirical context of the present study. Sirohi *et al.* (1998) suggest that the super-market channel, in the face of slow growth and intensified competition, should turn its resources in cultivating long-term relationships with the right customers. Consequently, trust as a relational construct and as a critical social exchange mediator (Cropanzano and Mitchell, 2005) should be the focal point of food retailers’ relationship marketing strategy.

Additionally, consumers have numerous reasons so as to feel vulnerable to grocers’ practices. Specifically, buying and consuming merchandise through the supermarket channel entails numerous perceived risks for the consumer, which is a necessary condition for the development of trust (Molm *et al.* 2000). Major examples include food safety incidents and scares that are quite often in today’s food markets especially in
Europe. Therefore, it seems that the consumer undertakes important physical (food safety and nutritional value) risks when (s)he decides to trust a food retailer.

**Data Collection and Sample Characteristics**

The population target for this study involves super-market shoppers, inhabitants of the broader Attica region in Greece. The sampling frame includes twenty stores selected from five different super market retail chains in a way to offer a broad geographical coverage of the Attica region. Because the characteristics of respondents may vary by day of the week and time of the day (Bush and Hair, 1985), researchers were present different days in a week and at different times so as to avoid this problem (Bush and Hair 1985). Accordingly, data collection took place both on weekdays and weekends and during a mix of daytime and nighttime hours.

An initial pilot test with 70 respondents pointed to the rewording of some vague items and guided the design of the research questions and of the data collection method. A total of 942 respondents were “intercepted” in supermarket stores, employing a face-to-face personal interviewing method. According to Bush and Hair (1985), the intercept procedure is a relatively inexpensive method of collecting high quality, accurate data in a face-to-face manner.

**Measures**

The study operationalizes overall trust using the writings of Sirdeshmukh *et al.* (2002). Four, seven-point semantic differential scales assess these items. Satisfaction measures are drawn from Spreng *et al.* (1996). Perceived value resembles the acquisition
value component of Grewal et al. (1998). Finally word-of-mouth is measured using a single-item (Reichheld 2003).

Method of Analysis

To estimate the parameters of the moderation terms, we used Ping’s (1998) two-step single-indicant estimation method (2SI). To calculate standard errors and to formally examine mediation effects, we selected the bootstrapping framework (Shrout and Bolger 2002).

Ping (2003) notes that detecting more than one or two significant interactive terms is difficult, and including one interactive term may amplify or suppress the significance of other interaction terms. He suggests the stepwise procedure of one interaction at a time for finding the terms that are more likely to be replicated in fresh samples. Moreover, building from Lubinski and Humphreys (1990) (see also Agustin and Singh, 2005), we have also modeled the interaction of satisfaction with economic value on consumer trust.

Finally, so as to investigate whether the inclusion of the quadratic terms in the linear terms model is empirically meaningful, the study uses the difference of $R^2$ values. This is examined through the significance of the effect size $f^2$ (Gefen et al. 2000).

RESULTS

The linear-only terms measurement model fits reasonably well, establishing unidimensionality ($\chi^2 (41) = 105.13, p<0.00$, RMSEA=.04, CFI=.99). Further, all
measures conform to accepted reliability, convergent validity, and discriminant validity standards (see Table 1).1

<Insert Table 1 about here>

**Hypotheses Testing**

So as to investigate curvilinear effects hypotheses, we employ the hierarchical procedure recommended by Ping (1998).

In accordance with the linear model results, satisfaction and economic value have a strong positive effect on trust (B=.38, p=.003 and B=.34, p=.002 correspondingly). Consumer trust has also a positive direct effect on word-of-mouth (B=.18, p=.04).

Analyses using the stepwise-one-interaction/ quadratic-at a time technique (Ping 2003) indicate that the satisfaction quadratic term is significant in the predicted direction (B= -.12, p=.004), providing support for H1a. Though not formally hypothesized and included in the model for analytical reasons (Lubinsky and Humphreys, 1990; Ping, 2003), the satisfaction by economic value interaction term is significant, positively influencing consumer trust (B=.14, p=.004). The quadratic effect of economic value on trust is significant but in the opposite direction (B=.10, p=.004). Therefore H1b is rejected.

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1 The measurement error term for the single-item measuring Word-of-Mouth is fixed at (1-Reliability) times the variance of the single item indicator. The reliability of this construct is assumed to be .85, based on the calculated composite reliabilities of the Satisfaction, Economic Value and Trust constructs.

2 Unstandardized Estimates
However, based on the stepwise technique (Ping 2003), the two dominant non-linear terms include the quadratic effect of satisfaction, the satisfaction by economic value interaction term but not the quadratic effect of economic value. A reason may be that the satisfaction by value interaction term is highly correlated (γ=.79) with the value quadratic term. Further analyses indicate that the value quadratic term masks the effect of the interaction term and vice versa. We will provide post-hoc explanations for both effects in the discussion section, but the reader should note that the satisfaction by economic value interaction terms is more likely to be replicated in fresh samples than the quadratic effect of economic value on trust. However, the difference between their modification indices is only marginal (7.49 for the interaction term and 6.58 for the quadratic term).

Finally, the hypothesized quadratic effect of trust on word-of-mouth is not significant. Therefore hypothesis 2 is rejected. Trust seems to have a bivalent (i.e., a monotonic) mechanism when influencing word-of-mouth.

So as to formally investigate hypothesis 3 we employ the bootstrapping framework (Shrout and Bolger, 2002). Results provide support for the mediating role of trust in the effect of both significant linear and non-linear terms on word-of-mouth. Specifically, in the linear only terms model, results indicate that economic value and satisfaction indirectly influence word-of-mouth through consumer trust (B=.05, p=.04 and B=.08, p=.05 correspondingly). In the non-linear terms model the situation is similar. The quadratic effect of satisfaction negatively influences word-of-mouth indirectly through trust (B= -.02, p=.035). Likewise, the satisfaction by economic value interaction term positively influence word-of-mouth through consumer trust (B=.03, p=.031).
The addition of the three on-linear terms in the main effects model is empirically meaningful, since their addition increased $R^2$ for trust by 4%. This difference is significant at the .01 level ($F$ value=83.4, $p=.004$).

**Rival Models**

We ruled out several competing explanations. The selection of the rival models is rooted in the extant literature (Sirdeshmukh *et al.* 2002; Brady *et al.* 2005). First we investigated whether the main-effects full mediation model (Model 1) (i.e., the research model) fits the data better than competing models. We fitted a partial mediation model (i.e., economic value and satisfaction influence word-of-mouth directly) (Model 2), a model where satisfaction is the mediator variable (i.e., economic value and trust influence satisfaction, positing satisfaction as a higher-order construct) (Model 3) and its partial mediation variant (Model 4). Finally, we fitted a model where economic value is the mediator variable (i.e., value is posited as a higher-order construct) (Model 5) and its partial mediator variant (Model 6).

The results indicate (see Table 2) that the research model (Model 1) is superior compared to the remaining specified models either in terms of $\chi^2$ difference or in terms of parsimony and number of significant paths (Morgan and Hunt, 1994).
DISCUSSION AND IMPLICATIONS

Relationship marketing research and practice operate according to the satisfaction to trust to loyalty paradigm. However, besides these efforts, strictly loyal consumers have become the exception rather than the rule (Gijsbrechts et al. 2008). As a result, the satisfaction-trust paradigm has been recently criticized regarding its ability to deliver positive consumer behavioral outcomes (Yim et al. 2008). This study argues that - amongst others- a reason for this unpleasant situation may be the failure of service managers to account for non-linearities in the satisfaction-trust paradigm. This may lead to incorrect priorities in the process of building consumer loyalty.

Implications for Marketing Theory

Our work extends the relationship marketing research stream suggesting that curvilinear mechanisms are likely present in the well accepted satisfaction-trust paradigm. Contrary to the majority of the extant relationship marketing literature, the study finds that mechanisms in place for building word-of-mouth through trust are far from being linear and simplistic.

The study provides empirical evidence that for further deepening an existing trust relationship merely having consumers satisfied, though necessary, does not suffice. Specifically, increasing levels of satisfaction beyond some level does not result in proportionate increase in consumer trust and word-of-mouth (i.e., the customer acquisition goal of service companies).

Although we hypothesized economic value as having decreasing returns to scale on consumer trust, the results indicate that the value mechanism is both a necessary and
sufficient mechanism for further establishing trust, consistent with a bivalent need conceptualization (Agustin and Singh 2005).

However, note that when we temporarily fix the satisfaction by economic value interaction term to zero, the quadratic effect of economic value on trust becomes significant, denoting incremental returns to scale. Strictly speaking, the satisfaction by economic value interaction term is more likely to be replicated in fresh samples compared to the quadratic effect of economic value (Ping 2003). Importantly, the positive interactive effect on trust seems intuitively and theoretically sound: economic value diminishes the salience of satisfaction in determining consumer trust. In high economic value perceptions, satisfaction is important in building trust whereas in low economic value perceptions, satisfaction (i.e., experiential reactions to excellence, efficiency and aesthetics-see Oliver 1996) has a tempered effect on consumer trust. However note that this interaction effect can be reversely interpreted (i.e., satisfaction rather than value is a moderating factor). It is likely that economic value is the moderating factor when it is more personally relevant than satisfaction evaluations and vice versa. Previous research (e.g., Neal 1999) seems to support economic value as being more important for consumers when compared to satisfaction judgments. This might especially be the case in industry contexts characterized by high commoditization and competition levels (as is the case with grocery retailing, the context of the present study).

According to Ping (2003), when a theoretically supported interaction term suppresses a constituent quadratic term (i.e., the quadratic effect of economic value) then the significance of the quadratic terms might be by chance. We adhere to this proposition, which renders economic value as a bivalent need. However, given the marginal results
and recent empirical evidence rendering value as a monovalent need having a concave downward effect on loyalty intentions (i.e., Agustin and Singh 2005), it seems worthwhile to discuss this tentative finding indicating economic value as a monovalent need having a concave upward effect on consumer trust.

What mechanisms make perceived economic value have increasing returns to scale on the trust outcome?

A potential explanation for the positive quadratic effect of value on trust can be found in equity research. Olsen and Anderson (2003) suggest that value perceptions operate in a fashion similar to perceived distributive equity, meaning that value perceptions may signal to consumers that providers are fair in their dealings with them.

Extremely high economic value levels can be defined as follows: providing adequate level of receipts at a cost that is sufficiently low or even zero (as in a free good) (Oliver 1996). Based on this definition, immense value perception levels indicate that consumers perceive as taking from service providers much more than they give which transitively signals a provider behavior that is at least honest and caring (i.e., the benevolence dimension of consumer trust). Further, immense value provision may make consumers feel more confident regarding providers’ skills and capabilities (i.e., the competence dimension of consumer trust).

Finally, our empirical findings, joining the empirical finding of Agustin and Singh (2005), indicate that the service industry context may moderate some of the effects. While they predict a bivalent mechanism for value, they find a negative quadratic effect of value on loyalty intentions in two industries, namely retail clothing and the airline industry. Our findings concur with their findings regarding the negative quadratic effect
of satisfaction and the positive effect of the satisfaction by the economic value interaction term. However, the positive quadratic effect of economic value marginally found in this study indicates that the industry context may moderate the sign of this quadratic effect. Economic value perceptions, though important in all three industries investigated, is likely to be more important in grocery retailing contexts, since compared to the other two industries groceries represent a greater share in consumers’ overall spending patterns.

However the previous discussion relates to conjectures that remain to be further investigated. Strictly speaking our findings indicate: a) satisfaction as a monovalent need, representing a concave downward effect on consumer trust, b) economic value and consumer trust as bivalent needs (i.e., they continue to motivate goal pursuit regardless of the level of fulfillment), and c) economic value and satisfaction as having a significant interactive effect on trust.

**Implications for Marketing Practice**

This research has important managerial implications. Bearing in mind possible non-linearities in the satisfaction-trust link can be useful when designing relationship marketing programs that aim at increasing consumer trust by positively influencing consumer satisfaction judgments. Managers should be aware of the possibility that linear and straightforward linkages are probably inadequate in describing relationships between evaluative judgments and important outcomes.

Our findings help managers understand that trust responses influenced by satisfaction improvement programs can be different than a linear-model specification would suggest. Our findings contradict the erroneous beliefs of many managers that the
more one invests in satisfying consumers the more consumers will trust the service provider and are expected to spread positive word-of-mouth. Instead, if curvilinearities found in this study are taken into account, overspending on satisfaction judgments for building lasting relationships with consumers (i.e., through trust) can be avoided. Imagine the case of a manager who understands the criticality of the satisfaction judgment in building trusted relationships with consumers, and his company scores quite high in a satisfaction rating scale (i.e., six in a seven point scale). Ill-advised by a linear-terms only model (s)he would strive to get satisfaction scores that are on the highest end of the satisfaction rating scale, something that would admittedly cost much but would not have any incremental effect on the trust outcome.

The findings of the study, suggest that (s)he will be better off to invest resources in building high value perceptions, since economic value is likely to be a bivalent consumer need (Agustin and Singh 2005). Figure 2 graphically portrays these findings.

<Insert Figure 2 about Here>

To highlight the simultaneity in curvilinear effects of loyalty determinants, this figure plots predicted trust levels against the observed scores of satisfaction and economic value. This plot reveals that, in a grocery retailing context, satisfaction and economic value are associated with opposite influences on trust levels. Satisfaction depicts a significant decreasing rate of return, whereas economic value is associated with an increasing rate-of-return. Therefore, satisfaction and economic value yield differential

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3 The three-dimensional graph is a partial plot over the observed domains of the two independent variables included.
effects on trust. The strategic implication for practicing managers is straightforward: To maximize trust levels and (indirectly word-of-mouth intentions), managers should optimize and not maximize satisfaction judgments. Instead, they should strive to maximize value perceptions and achieve higher trust levels through enforcing consumers’ belief for a fair treatment.

Differently put, service providers who move consumer satisfaction levels from ‘satisfied’ to ‘very satisfied’ will not experience expected incremental linear improvements in consumer trust. Delighting consumers (i.e., raising customer satisfaction levels to very high levels) is probably not a good strategy for further deepening trusted relationships, especially if one weighs the trust-building benefits of delighting consumers against the costs of delighting them (Rust and Oliver, 2000; Fullerton and Taylor 2002). Instead, investing in economic value appears as a much more successful strategy in building consumer trust and further achieving a positive word-of-mouth outcome.

This managerial implication is quite important in the e-tailing era as well. Specifically, as Strauss and Frost (2009) and Turban et al. (2009) underline, technology likely decreases loyalty since, switching costs are decreased and customers are now able to find the best offer in a more effective and efficient way. Along these lines, they note that customers use technology to help them find the lowest price (especially for tangible products with specific standards – e.g. a bottle of beer, a camera, etc.). In other words, they claim that for several product categories, economic value is a very important store selection criterion in the e-tailing arena. This discussion well explains the findings of the present study in the sense that highly-satisfied customers may not trust more a company that tries to satisfy them more. They will trust more the company that will invest more in
increasing the economic value it offers to them, since they are aware that technology can now (compared to the past) help them to find a better offer anytime, anywhere and at low cost and effort. Also, they know that technology can help firms decrease product prices. So, despite the fact that they are highly satisfied with a specific firm they may easily switch to another supplier in order to take advantage of a better economic offer.

Along these lines, managers should understand that investment decisions in trust building initiatives should be guided from careful target segmentation analysis. Specifically, in low trust segments priority should be given in developing positive satisfaction judgment without necessarily investing more resources in value perceptions. Put another way, managers should get the basics right if they want to cultivate a trusting relationship with consumers. For further deepening such a relationship- that is in the case of the high trust segment- investing further in satisfaction will not be effective since in higher levels of this variable each additional unit increase will bring less in incremental trust than the previous unit did. In this case investments should be better targeted towards increasing value perceptions.

LIMITATIONS

This study is not without limitations. However these limitations offer opportunities for further research. First of all, the data comes from the super-market retail channel. The super-market retail channel has its own idiosyncrasies limiting the generalizability of the results produced by this study. Specifically the super-market channel can be considered as a low-involvement service (Streukens and Ko de Ryuter, 2004). Future research should examine the study’s findings in service settings that represent relatively more risk-prone purchase situations for consumers (e.g., insurance industry) and in service setting where
the economic value mechanism is not a top priority for consumers (e.g., health care industry etc.). Mittal et al. (1998), test curvilinear effects in high-involvement contexts (i.e., health care) but their investigations involve transaction-specific rather than overall satisfaction evaluations. Importantly, their investigations do not focus on relational processes (i.e., trust building efforts).

Another limitation pertains to sample representativeness. The sampling frame included five out of the seven main food retail chains operating in the wider Attica region. These five retailers whatsoever altogether hold more than the 54% of the total market share (ICAP 2005). Data do not represent information from consumers that shop from a) more upscale and b) discount retail stores. Future research should include consumer respondents patronizing such types of stores as well.

Future research should further investigate whether curvilinear effects govern the relationship between other customary trust antecedents as well, for example benevolence, firm reputation, intense of selling tactics and consumer dependence on the service provider.

Finally research is needed so as to investigate whether there are psychographic or personality consumer variables that may act as moderators in the curvilinear relationships found in this study. For example, price consciousness may moderate the curvilinear effect of economic value perceptions on trust.
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Figure 1: The Research Model

Notes: Bolded paths are hypothesized relationships. Dotted lines indicate mediated effects of quadratic effects on Word-of-Mouth through Trust.
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<td>.42</td>
<td>.52</td>
<td>.38</td>
</tr>
<tr>
<td>CR</td>
<td>.85</td>
<td>.87</td>
<td>.79</td>
<td>N/A</td>
<td>.77</td>
<td>.72</td>
<td>.75</td>
</tr>
</tbody>
</table>

**Table 1. Reliability, Convergent and Discriminant Validity Results**

**Notes:** a) Entries in the diagonal represent Average Variance Extracted (AVE), b) Off-diagonal entries represent shared variance between constructs, c) AVE>(Intercorrelations)² for all linear and quadratic terms and d) CR= Composite Reliability index computed for both linear and quadratic terms
Figure 2: Curvilinear Effects of Satisfaction and Economic Value on Trust
### Table 2. Comparison of Rival Models

<table>
<thead>
<tr>
<th>RIVAL MODELS</th>
<th>$\chi^2$</th>
<th>d.f.</th>
<th>$\chi^2$/d.f.</th>
<th>$\chi^2_{\text{diff}}$ (d.f. diff)$^a$</th>
<th>CFI</th>
<th>RMSEA</th>
<th>PNFI</th>
<th>% SS Direct Paths</th>
<th>% SS Indirect Paths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1 (RM)</td>
<td>105.1</td>
<td>41</td>
<td>2.56</td>
<td>Compared Base</td>
<td>.99</td>
<td>.041</td>
<td>.73</td>
<td>3 of 5 (60%)</td>
<td>2 of 2 (100%)</td>
</tr>
<tr>
<td>Model 2 (PM)</td>
<td>104.2</td>
<td>39</td>
<td>2.67</td>
<td>0.9(2)</td>
<td>.99</td>
<td>.042</td>
<td>.69</td>
<td>3 of 5 (60%)</td>
<td>2 of 2 (100%)</td>
</tr>
<tr>
<td>Model 3 (SM)</td>
<td>108.9</td>
<td>41</td>
<td>2.66</td>
<td>3.8(0)**</td>
<td>.98</td>
<td>.042</td>
<td>.73</td>
<td>2 of 5 (40%)</td>
<td>Zero</td>
</tr>
<tr>
<td>Model 4 (PMSM)</td>
<td>104.2</td>
<td>39</td>
<td>2.67</td>
<td>0.9(2)</td>
<td>.99</td>
<td>.042</td>
<td>.69</td>
<td>3 of 5 (60%)</td>
<td>2 of 2 (100%)</td>
</tr>
<tr>
<td>Model 5 (VM)</td>
<td>108.5</td>
<td>41</td>
<td>2.65</td>
<td>3.4(0)*</td>
<td>.98</td>
<td>.042</td>
<td>.73</td>
<td>2 of 5 (40%)</td>
<td>Zero</td>
</tr>
<tr>
<td>Model 6 (PMVM)</td>
<td>104.2</td>
<td>39</td>
<td>2.67</td>
<td>0.9(2)</td>
<td>.99</td>
<td>.042</td>
<td>.69</td>
<td>3 of 5 (60%)</td>
<td>1 of 2 (50%)</td>
</tr>
</tbody>
</table>

**p<.05, * p<.10.

$^a$The results of the difference between the Research Model and the Competing Models

Notes: RM: Research Model (Full Mediation Model), PM=Partial Mediation Model, SM=Satisfaction Model, PSM=Partial Mediation Satisfaction Model, VM=Value Model, PMVM=Partial Mediation Value Model, SS=Statistically Significant