

# Atlantic Marketing Journal

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Volume 4 | Number 2

Article 1

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September 2015

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### Recommended Citation

Branchik, Blaine J. PhD and Shaw, Eric H. PhD (2015) "Net Transaction Value: A Model of High-Involvement Decision-Making in Buyer Choice Behavior," *Atlantic Marketing Journal*: Vol. 4 : No. 2 , Article 1.

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# Net Transaction Value: A Model of High-Involvement Decision-Making in Buyer Choice Behavior

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**Abstract** - This study proposes Net Transaction Value (NTV), a unified theory of buyer decision-making. NTV hypothesizes that a buyer makes an implicit and subjective calculation before making a purchase in a high involvement context. In making this calculation, the buyer deducts the costs anticipated from a transaction or transaction stream from its associated benefits. In contrast to prior value equal benefits minus cost models, the NTV model conceptually expands, operationally defines, and empirically tests two types of benefits and costs. Benefits in the NTV equation reflect not only those derived from the product or service offering itself, but also from the monetary aspects of the transaction or purchase deal. Costs, over and above the selling price, reflect both the buyer's self-imposed costs as well as the costs sellers impose on the buyer. This study uses the NTV model to develop and test the relationships between these benefit and cost variables and the buyer's perceptions of net transaction value as manifest in purchase intention. Results confirm that the buyer includes the benefits of the product or service offering itself, benefits associated with the price deal, the buyer's own costs over and above price, and seller-imposed costs over and above price in the calculation of NTV. As a result, NTV extends extent research on decision-making and provides a valuable tool for describing, explaining and predicting buyer decisions.

**Keywords** -Decision-making, marketing, value, reference price, consumer behavior

**Relevance to Marketing Educators, Researchers and/or Practitioners** - By capturing all benefits and costs buyers associate with a purchase and testing the relationship of these predictor variables against purchase intention, the NTV model is designed to explain and predict buyer decision-making in a high-involvement purchasing context. It provides direction to practitioners for adjusting elements of their marketing mixes to increase their offerings' appeals to targeted buyers.

## Introduction

One of the most common decisions people make in the ordinary business of life involves purchases of products and services. Of the 2012 U.S. gross domestic product of over \$15.68 trillion, personal consumption expenditures accounted for over \$11.1 trillion (Bureau of Economic Analysis 2013), or about 70.8 percent.

Uncertainty and risk are pervasive issues in planning and decision-making problems (Antunes et al. 2014). The most difficult buying decisions for individuals or organizations are those involving high expense, risk, and/or complexity. These purchase decisions typically involve a new product/service category. In the consumer-buyer literature such decisions are termed “extensive problem-solving” (Howard and Sheth 1969), and in the organizational-buying literature “new task purchases” (Robinson, Faris, and Wind 1967). Despite the difference in terminology, the underlying concept is the same. The buying decision entails high-involvement requiring significant information search and complex mental processing. These decisions also follow a distinct series of steps (Lavidge and Steiner 1961; Fishbein and Ajzen 1975). The culmination of the buyer decision-making process is a market transaction (Alderson 1965; Grewal, Monroe and Krishnan 1998; McGarry 1950; Zeithaml 1988).

In a market transaction a buyer gives monetary value to a seller and receives a product or service of equal or greater subjective value in return. It is argued that decision-makers attempt to optimize the value received from any sort of reciprocal exchange through an overall assessment of their net gain from the various alternatives (Homans 1958, Stigler 1952). Buyers, therefore, perform implicit mental calculations to determine whether they are receiving more than they are giving in the commercial exchange and which of the various alternatives offers them the best deal. One mental calculation that is cited frequently in the marketing literature—although never operationalized—explains purchase intentions and actual behavior based on the equation: value = benefits - costs (e.g. Dodds and Monroe 1985, Hauser and Urban 1986, Woodruff 1997).

A similar approach, with only minor variation in terminology, was proposed by Homans (1958), called the social exchange equation, where benefits = rewards – costs. An interesting twist on the equation is offered by Kotler (2003, ): value = benefits / costs. There are two points. First, there is the minor difference in formulation, division rather than subtraction. It is far more likely that people performing mental arithmetic would find it easier to subtract pros from cons to arrive at a net preference among alternatives rather than perform mental division and then deal with alternative ratios. Second, and more interestingly, Kotler differentiates types of benefits and costs. He identifies two types of benefits: (1) functional benefits and (2) emotional benefits (neither benefit is conceptually or operationally defined). Kotler also expands costs into four types:

(1) monetary, (2) time, (3) energy and (4) psychic (conceptual definitions of some terms are vague and operations definitions are not provided).

The calculation of costs and benefits often extends beyond considerations involving the selling prices to include other monetary and non-monetary factors. These additional factors include the financial terms of the transaction, and both buyer and seller-imposed non-price costs. The purpose of this research is to extend previous work on the various components of costs and benefits by integrating all of these aspects of buyer decision-making into an empirically testable model. It is expected that a stronger conceptualization of these complex buyer decision processes will foster a richer understanding of human behavior in general and buying behavior in particular.

Drawing from the marketing and behavioral economics literature, this study develops a model called Net Transaction Value (NTV) based on the formula:  $\text{value} = \text{benefits} - \text{costs}$ . The NTV model incorporates both parties (seller and buyer) to a transaction; it includes both monetary and non-monetary benefits and costs associated with the transaction; and reflects both tangible and intangible antecedents of the transaction, discussed shortly. By capturing the benefits and costs and testing the relationship of these predictor variables against purchase intention, the NTV model is designed to explain and predict buyer decision-making in a high-involvement purchasing context.

## **Net Transaction Value Model**

The net transaction value (NTV) model involves two types of benefits and two types of costs. On the benefit side, variables in the model capture the buyer's feelings, net of price, toward (1) the product or service offering itself, termed acquisition utility; and (2) the financial terms of the purchase, called transaction utility (Grewal et al 1998; Lichtenstein et al 1990; Thaler 1983, 1985). On the cost side, variables capture the buyer's feelings towards (1) anticipated self-imposed costs over and above the price associated with the purchase, named acquisition costs (Bender 1964, Downs 1961); and (2) those additional costs imposed by the seller on the buyer, termed transaction costs (Coase 1937, Williamson 1979).

### **NTV Model Context**

For purposes of this research, the NTV model is placed in four overlapping contexts: (1) bounded rationality, (2) high involvement, (3) consumer buyer decision-making, and (4) the evaluative phase of the decision-making process. Bounded rationality (Simon 1978, Williamson 1981) means people lack perfect information, have limited time to decide, and are inconsistent in making decisions. This implies that the model incorporates subjective and relative judgments based on shifting reference points rather than completely objective and absolute determinations.

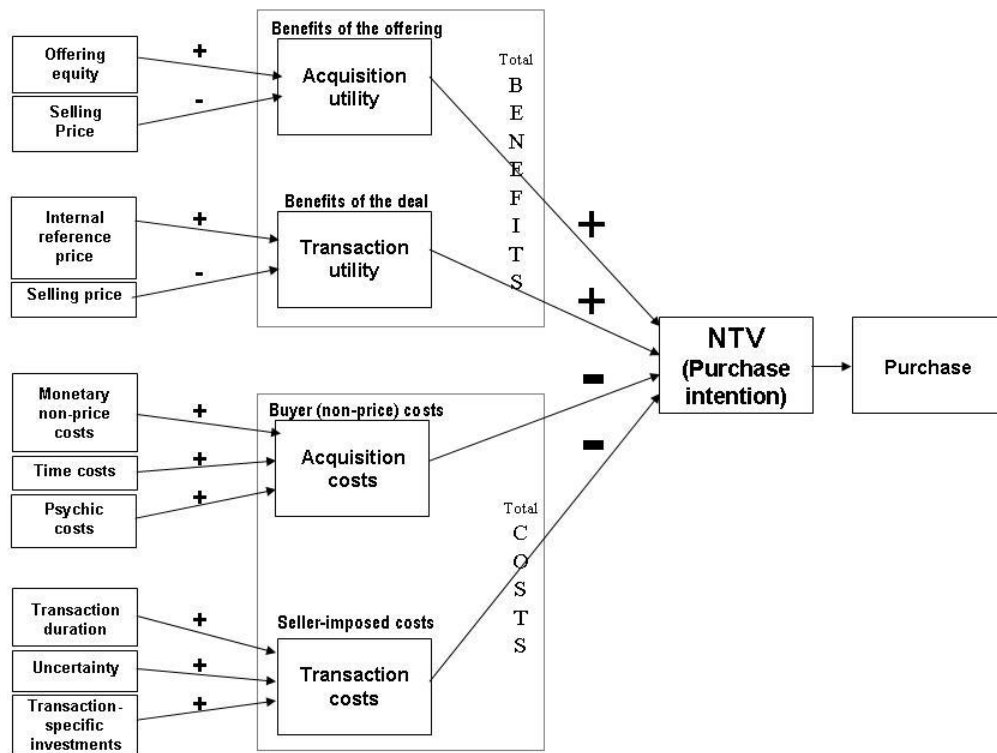
Second, the NTV model depicts the high-involvement learning (Sheth and Mittal 2004) buyer decision-making context related to extended problem-solving (EPS) (Howard and Sheth 1969). High involvement indicates that buyers move through a hierarchy of effects passing from cognitive to affective to conative steps in the decision process (Lavidge and Steiner 1961). The buyer first gathers and cognitively processes information and as a result develops an evaluation or feeling towards aspects of the purchase. The NTV model assesses feelings associated with the product or service under consideration, the price-deal, and various cost elements. Finally, an intention of varying conviction is formed to take action.

Next, although the NTV model conceptually can accommodate both consumer purchasing and industrial buying centers, this study operationalizes the NTV model in the context of a consumer purchasing decision. The main difference between firm and consumer buying is that firms usually have well-defined purchasing procedures (Robinson, Faris and Wind 1967) that attempt to impose a more methodical—and therefore less subjective and implicit—decision process. One can argue as to the ultimate rationality of these decisions. But for purposes of this study, focus will be on consumer decision-making.

Finally, for purposes of analysis, the NTV model is situated in the decision making process where the consumer buyer is evaluating a specific purchase alternative from a specific seller (Engel, Kollat and Blackwell 1968; Howard and Sheth 1969). The model assumes several antecedent steps: that the buyer (1) has acknowledged a need, problem or goal to be resolved; (2) has established the salient evaluative criteria; and (3) has searched for information about how well each alternative matches the criteria. At this point in the process the buyer performs the mental calculations to determine net transaction value, and the model describes, explains and predicts purchase intention.

### **The NTV Model**

In the model, Intentions are equated with the buyer's calculation of net value associated with a given purchase denoted NTV;  $NTV = \text{benefits} - \text{costs}$ . Benefits net of price are composed of two affective variables: acquisition utility and transaction utility. Similarly costs over and above price consist of two affective components: acquisition costs and transaction costs. These variables are related in the formula  $NTV = (\text{acquisition utility} + \text{transaction utility}) - (\text{acquisition costs} + \text{transaction costs})$ . The four affective variables, in turn, are based on cognitive variables. A graphical representation of the NTV conceptual model is shown in Figure 1.



**Figure 1: Net Transaction Value (NTV) Conceptual Model**

### *Acquisition Utility*

Acquisition utility represents the buyer’s feelings toward the benefit, net of price, anticipated from the acquisition of a product or service. Acquisition utility results from the difference between the total amount the buyer is *willing* to pay for a product or service offering—a monetary expression of the benefits of the offering to the buyer—and its actual selling price (i.e., consumer’s surplus) (Grewal, Monroe and Krishnan 1998; Thaler 1983, 1985). In the NTV model, the total amount a buyer is willing to pay is denoted offering equity. Offering equity is a reflection of the buyer’s subjective evaluation of the value of the total benefits of a product or service offering and incorporates a price premium. It results from the buyer processing information received from a variety of sources, including marketing messages, past experience, or advice from family and friends.

Selling price is the amount a seller demands for his/her product or service offering. As such, it represents the value the seller places on that offering. Acquisition utility (Thaler 1983, 1985) is conceptually equal to offering equity minus selling price. If the offering equity of a product or service is greater than its selling price, then acquisition utility is positive, therefore a purchase is more

likely. Conversely, if the offering equity is less than selling price, then acquisition utility is negative and a purchase is less likely. Hypothesis 1 of this study therefore states that there is a significant positive relationship between acquisition utility and net transaction value.

### *Transaction Utility*

Transaction utility is the difference between the total amount a buyer *expects* to pay for a product or service offering and its actual selling price (Grewal, Monroe, and Krishnan 1998; Thaler 1983, 1985). It represents the buyer's feeling toward the price deal or financial aspects of a transaction or transaction stream (Thaler 1983, 1985). In the NTV model, the total amount a buyer expects to pay is his or her internal reference price. Internal reference price results from the buyer processing information received from any source including price lists, advertised "list" prices, or past experiences, friends, family, or colleagues. A buyer may have more than one internal reference price for a given offering depending on purchase venue. Thaler (1985) found that buyers had one internal reference price for a bottle of beer purchased in a convenience store and a significantly higher internal reference price for that same bottle of beer purchased in a luxury hotel.

To calculate transaction utility, the selling price is subtracted from the internal reference price. If the internal reference price is greater than selling price, then the buyer experiences positive transaction utility, therefore purchase is more likely. Conversely, if internal reference price is lower than selling price, the buyer experiences negative transaction utility and is less likely to make a purchase. Hypothesis 2 of this study therefore states that there is a significant positive relationship between transaction utility and net transaction value.

A recent study (Grewal et.al 1998) tested two models and in one found a mediating relationship between transaction utility and acquisition utility. In this study, however, these variables are seen as two independent variables per Thaler's (1985) original proposal.

### *Acquisition Costs*

Although the two benefit components of the NTV model include price, there are a number of both monetary and non-monetary costs presented in the NTV model over and above selling price that buyers take into account before making a purchase decision. One of those sets of factors is acquisition costs. These are the sum of the monetary, time and psychic costs anticipated or expended by the buyer (Bender 1964, Downs 1961). Monetary costs include transportation, parking, installation/assembly fees, service, credit charges or sales taxes. Time costs include: search, travel, waiting, negotiation, and selection time. Energy or psychic costs include the physical energy related to walking long distances or carrying heavy packages, or the mental costs related to anxiety, frustration or inner conflict (Downs 1961, Bender 1964). If acquisition costs are higher, then

NTV is lower, and therefore the likelihood of purchase is lower. Hypothesis 3 of this study therefore states that there is a significant inverse relationship between acquisition costs and net transaction value.

### *Transaction Costs*

Transaction costs are those additional costs over and above selling price imposed by the seller on the buyer or represent the buyer's evaluation of opportunistic seller actions during a transaction or transaction stream. Transaction costs have three dimensions: (1) transaction duration or frequency; (2) uncertainty; and (3) transaction-specific investments (Williamson, 1979). Transaction duration refers to the length of the time commitment. A consumer making a decision on alternative prescription "maintenance" drugs will be required to make an on-going series of transactions over time to maintain good health or a buyer searching for auto insurance may have a policy commitment for six-months or longer. During this period, the buyer will be precluded from cancelling the transaction to pursue a better deal with another insurer.

Uncertainty, the inability of a buyer to predict future events, increases transaction costs. Risks of a seller's bankruptcy or decision to increase prices or decrease services levels add to the real cost of a product or service. Finally, transaction-specific investments entail the acquisition of special goods, procedures or training to establish a long-term transaction relationship. These investments might include a buyer being required to learn special software or to acquire expertise using hardware to interact with the seller. They result in monetary or non-monetary costs that increase a buyer's costs.

Conceptually, transaction costs result from the sum of transactional duration, uncertainty and specific investments (Williamson 1979, 1981). The higher the transaction costs, the lower the NTV, and the lower the likelihood of purchase. Hypothesis 4 of this study therefore states that there is a significant inverse relationship between transaction costs and net transaction value.

## **Data Collection**

Auto insurance served as the focal product/service offering used to operationalize the NTV model due to its perceived importance across demographic groups. Importance is essential to ensuring that respondents are highly involved in the purchase decision.

A large nationwide insurance company provided access to their database of auto policyholders and prospects to assess respondent feelings toward their current auto insurance policy and carrier and their re-purchase intention. "Policyholders" refers to those motorists currently insured by the company. "Prospects" refer to those who had been in contact with the company by phone, Internet, U.S. mail or face-to-face meeting but had not purchased an auto policy at the time of the survey.



Using the U.S. postal service, 9,520 questionnaires were sent to a random U.S. sample of 9520 policyholders and prospects. A cover letter explained that the survey was part of a university marketing research project. An LCD television set was offered as an incentive to encourage response. Nine hundred eighty seven responses were returned, for an initial response rate of 10.4%. Of the surveys returned, 71 were unusable because of large amounts of missing data or respondents' inability to estimate current premiums, which was necessary to ensure they had established an internal reference price. As a result, the final number of usable surveys was 916, for a final response rate of 9.6%.

### **Survey instrument**

The survey instrument consisted of two sections containing several sub-sections. The first section included areas to verify that respondents had purchased auto insurance before and could estimate their premium and insurance term. A sub-section measured the respondent's level of involvement with auto insurance. A final sub-section measured the respondent's perceptions of acquisition utility, transaction utility, acquisition costs, transaction costs, and purchase intention. The second section was intended to collect demographic information. Ten versions of the final survey were distributed, differing only in how the various sub-sections were presented to respondents. Two pilot studies developed and purified the measures used in this study (Churchill 1979). The first pilot study included 79 upper-level undergraduate students. The second pilot study included 100 upper-level undergraduate and graduate students. Both groups were enrolled in a large public university in the southeastern U.S. The following paragraphs discuss specifics related to each measure.

### **Measures**

#### *Involvement*

A 10-item subset of the Personal Involvement Inventory (PII) (Zaichkowsky 1985), a well-known 20-item, seven-point semantic differential scale was selected to ensure that respondents viewed auto insurance as a high involvement purchase, in keeping with the NTV model's contexts. We selected the subset to eliminate word pairs that were inappropriate for assessing involvement with a purchase decision for a service such auto insurance, such as mundane-fascinating, unexciting-exciting, and boring-interesting.

#### *Acquisition utility*

The acquisition utility scale is an eight-item, seven-point Likert scale adapted from Grewal, Monroe and Krishnan (1998). Items were modified to expressly mention auto insurance in the item statements. As a result of the first pilot study, a ninth statement was removed due to low loadings on the factor. In addition, instructions associated with this survey sub-section were added to focus respondents on their auto insurance policy and their insurer.

#### *Transaction utility*

This scale is a six-item, seven-point Likert scale that was adapted from Grewal, Monroe and Krishnan (1998) and augmented by three items to specifically capture the notion of expected versus actual selling price, and the value of the deal. A second six-item, seven-point semantic differential scale adapted from Urbany et.al. (1997) was assessed in the first pilot study and eliminated due to reliability and validity issues.

#### *Acquisition costs*

Two original acquisition costs scales were assessed for reliability and validity in the pilot studies. Original scales were developed due to the lack of pre-existing scales to measure acquisition costs as they are defined in the NTV model. Both scales were developed to capture the construct's dimensions of self-imposed buyer costs of money, time and energy. The first scale, a ten-item, seven-point Likert scale segregated the money, time and energy dimensions of the construct. The second scale, a four-item, seven-point Likert scale integrated all dimensions or used language describing broad costs in each item. As may have been expected, the first scale did not display adequate convergent validity in pretests. Rather, the analysis extracted three factors. Therefore, it was discarded. The second scale was retained for the final study after one statement was removed due to low loading on the factor.

#### *Transaction costs*

Two alternative transaction costs scales were originally assessed for reliability and validity in pilot studies. The first scale, a five-item, seven-point Likert scale (Smith and Barclay 1997) was intended to measure forbearance from opportunism. The wording was significantly altered and simplified for purposes of this study. The second scale, an original five-item, seven-point Likert scale developed for this study, focuses on the seller's imposition of costs upon a buyer and the dimensions of transaction costs including transaction duration, uncertainty, and transaction-specific investments. Both scales were deemed acceptable in terms of reliability and validity as a result of the first pilot study. However, the second of the two scales captured more broadly the idea of seller-imposed costs on the buyer beyond opportunism as described in the NTV model. It was therefore retained.

#### *Purchase intention*

A three-item, seven-point Likert scale, adopted from Grewal, Monroe and Krishnan (1998) and Taylor and Baker (1994), was used to measure respondent's intention to repurchase their existing policy from their existing insurer. Wording was added to the final scale as follows: *“Assume that selecting a new insurer the next time you purchase auto insurance would be relatively easy. How would you rate your likelihood of the following?”* This wording was intended to avoid a possible phenomenon associated with a service such as auto insurance whereby the buyer may not select a new seller due to automatic “evergreening” or renewal of the service from one time period to the next. By adding the prefacing

language, it was hoped that subject responses to this section would better generalize to other products and services.

Scales for acquisition utility, transaction utility, acquisition costs and transaction costs and their reliabilities are provided in Table 1, below.

<i>Scale items</i>	<i>Cronbach's alpha Based on standardized items</i>
<p>Acquisition utility</p> <ol style="list-style-type: none"> <li>1. I feel I am getting my money's worth with my current policy.</li> <li>2. Taking into account my insurer's reputation, I feel that my current policy is a good value for the money.</li> <li>3. Taking into account my coverage, I feel that my current policy is a good value for the money.</li> <li>4. Compared to the maximum price I would be willing to pay for this policy, the price I paid conveys good value.</li> <li>5. I value my policy because it meets my needs for a reasonable price.</li> <li>6. Given my policy's coverage, I think I am getting good value for the money I spend on auto insurance.</li> <li>7. Given the reputation of my insurer, my current premium is reasonable.</li> <li>8. I feel that I am getting a good quality policy for a reasonable price.</li> </ol>	.98
<p>Transaction utility</p> <ol style="list-style-type: none"> <li>1. My current insurance premium is inexpensive relative to what I had expected it to be.</li> <li>2. Taking advantage of the price-deal of my current policy makes me feel good.</li> <li>3. Compared to what I might expect to pay, my current premium is a good deal.</li> <li>4. It gives me a lot of pleasure to know that I am saving money with my current premium over what others are paying.</li> <li>5. Beyond the money I save, taking advantage of my current insurance premium deal gives me a sense of satisfaction.</li> <li>6. I am happy with the price I pay for my auto insurance relative to other options.</li> </ol>	.95
<p>Acquisition costs</p> <ol style="list-style-type: none"> <li>1. There were a variety of time, money, or energy costs that I undertook to acquire this policy beyond just the premium(s).</li> <li>2. I spent a lot of time, money or energy dealing with the insurance agent in acquiring this policy.</li> <li>3. I have spent a lot of energy, time or money dealing with my insurance company.</li> <li>4. There are a variety of expenses – both monetary and non-</li> </ol>	.85

monetary - that I encounter for this policy besides just the premium(s).	
<p>Transaction costs</p> <ol style="list-style-type: none"> <li>1. My current insurer has required me to learn computer, telecommunications, or billing systems in order to do business with them.</li> <li>2. My insurer sets the ground rules by which we do business.</li> <li>3. By making me sign up for a specific insurance term, my current insurer has limited my ability to get a better deal elsewhere.</li> <li>4. I have discovered that my insurer has imposed burdens on me over and above the insurance premium.</li> <li>5. I am concerned my insurance company will make changes to my policy or premium that I will be forced to comply with.</li> </ol>	.76
<p>Purchase intention</p> <ol style="list-style-type: none"> <li>1. The next time I buy an auto insurance policy, the probability of buying a similar policy to my current one from the same insurer is...</li> <li>2. The probability that I would consider buying this same auto insurance policy from this same insurer is...</li> <li>3. The likelihood that I would re-purchase my current auto insurance policy is...</li> </ol>	.93

**Table 1: Scale Items and Reliabilities**

## Data Analysis

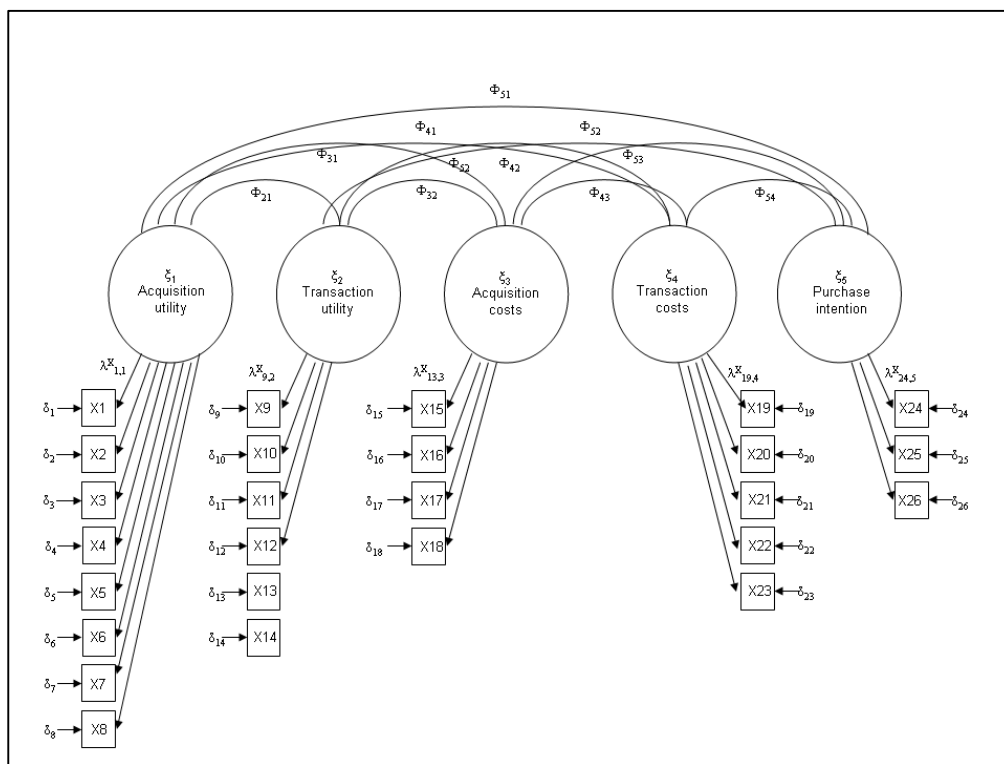
Respondents exhibited a wide variety of demographic characteristics. Males comprised 50.6% of respondents, females 49.4%. This ratio was not significantly different from the U.S. Census Bureau's July 1, 2004, ratio estimate of 49.2% male and 50.5% female (does not sum to 100% due to rounding and respondents omissions on this question) (US Census NC-EST2004 2005). Although slightly different in age distribution from US population 2004 estimates, substantial numbers were represented in all adult age ranges. Ethnicities approximated distribution in the actual U.S. population. Household incomes were represented at all levels, with the highest percentage, 20.4% of respondents coming from households with an income between \$35,000 and \$49,999 per annum; and the smallest percentage, 3.2%, coming from household with an income less than \$10,000. Households at this income level might find it difficult to afford a car and thus auto insurance.

## Analysis Approach

The measurement model, shown in Exhibit 3, below, consists of formative indicators for acquisition utility, transaction utility, acquisition costs, transaction costs, and purchase intention. Exploratory factor analysis was performed to assess the loadings of the observed variables on their intended

latent variables (Churchill 1979) with maximum likelihood extraction and direct oblimin rotation. All observed variables displayed significant loadings on their specified latent variable.

As shown in Figure 2, the all-X measurement model consists of five latent variables, each denoted by  $\xi$ , described by the observed items  $\chi$  summarized in Exhibit 2. The regression of each  $\chi$  to its respective construct (or  $\xi$ ) is represented by its  $\lambda_{\chi}$ . For ease of reading, only the first  $\lambda_{\chi}$  for each construct is provided in Figure 3. Phi ( $\Phi$ ) represents the correlation between each construct and  $\delta$  represents the error term of each  $\chi$ . Results of confirmatory factor analysis conducted using LISREL 8.53 software suggest an acceptable fit of the observed variables to their latent constructs.



**Figure 2: NTV Measurement Model**

The Goodness of Fit index (GFI) (Bentler and Bonnet 1980, Byrne 1998, Jöreskog and Sörbom 1986) assesses how well the covariances predicted from the parameter estimates approximate the sample covariances. One signifies a perfect fit of the data with the hypothesized model. Although no absolute threshold levels for acceptability have been established, a GFI between 0.80 and 0.89 represents an acceptable fit. The NTV measurement model's CFI is 0.89. The Incremental Fit Index (IFI) (Bollen 1989) although similar to the GFI,

further accounts for sample size. Similar to the GFI, an IFI above .90 suggests a good model fit. The IFI for the NTV model is 0.98. Like the IFI, the Comparative Fit Index (CFI) (Bentler 1990) compares the fit of the proposed model to other, more restricted models. A CFI above .90 suggests a very good model fit. The CFI for the NTV model is 0.98. In an ideal model, residuals should be near zero. A summary statistic for residuals is the root mean-square residual (RMR) (Bollen 1989, 257). The standardized RMR represents the average value across all standardized residuals and ranges from zero to 1.00. In a well-fitting model, this value should be .05 or less (Byrne 1998 115). The RMR associated with the measurement model was 0.048.

The structural model and associated coefficients are shown below in Figure 3, below.

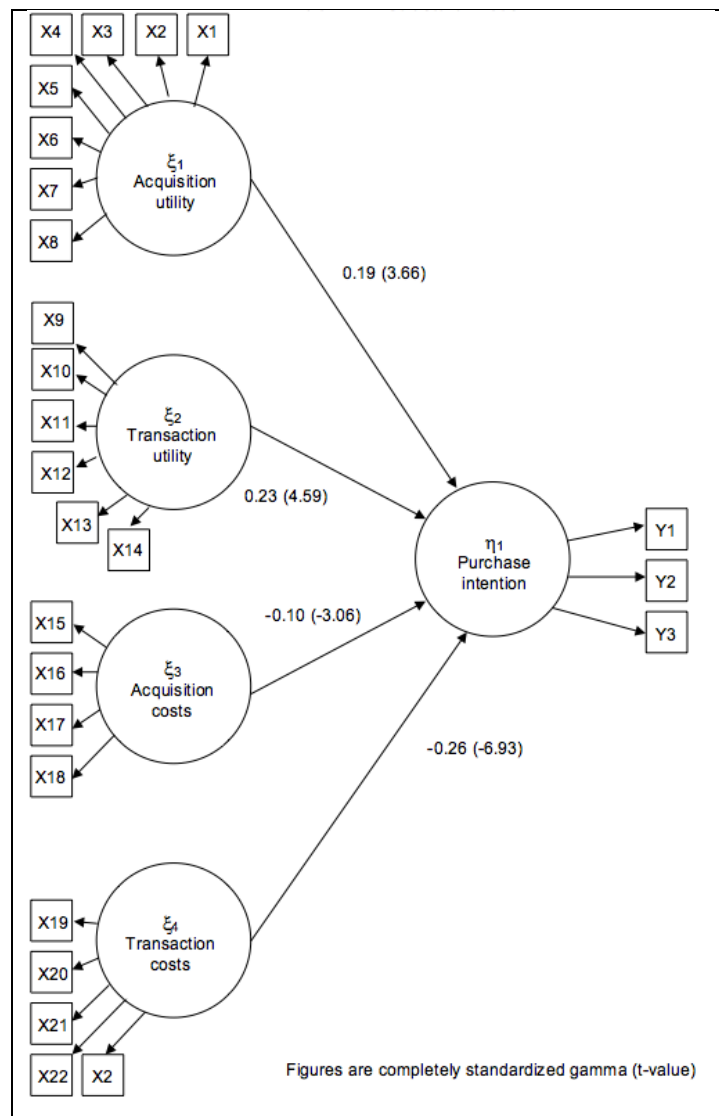


Figure 3: NTV Structural Model

The structural model graphically depicts the direction and sign of hypothesized relationships between the four latent predictor variables and the latent dependent variable. It further summarizes the relationship between the latent predictor variables and their indicators.

## Results

As summarized in Exhibit 4, all of the paths in the structural model are significant. The NTV model helps to explain buyer intention to repurchase, illustrated with an adjusted R square of 27%.

First, hypothesis H1 is supported with a gamma of 0.19 and t-value of 3.66. There is a significant positive relationship between acquisition utility (AU) and net transaction value as represented by purchase intention (PI). The higher a buyer's net assessment of benefits anticipated from a given transaction, the more likely the buyer is to make that purchase.

Second, hypothesis H2 is supported with a gamma of 0.23 and a t-value of 4.59. There is a significant positive relationship between transaction utility (TU) and net transaction value as represented by PI. The higher a buyer's net assessment of benefits anticipated from the price deal of a transaction, the more likely the buyer is to make that purchase.

Thirdly, hypothesis H3 is supported with a gamma of -0.10 and a t-value of -3.06. There is a significant inverse relationship between acquisition costs (AC) and net transaction value as represented by PI. The higher a buyer's net assessment of personal costs associated with a purchase, the less likely the buyer is to make that purchase.

Finally, hypothesis H4 is supported with a gamma of -0.26 and t-value of -6.93. There is a significant inverse relationship between transaction costs and PI. The higher the level of costs that buyers perceive a seller is imposing on them, the less likely the contemplated transaction is to take place.

## Discussion

The data's support of the four hypotheses stated above indicates that buyers in a high involvement purchase do undertake a subjective and implicit calculation offsetting anticipated benefits of a contemplated purchase with their associated costs. Further, those benefits and costs can be placed in two respective categories related to the acquisition and the transaction.

The results of this study offer three important implications for marketing practitioners. First, they confirm that buyers do undertake a variety of benefit and cost considerations into account when making a purchase decision. As a result, sellers have ample opportunity to influence the ultimate purchase

decision of a target buyer. Second, the study confirms the need for sellers to understand which components of their actual product or service or price offers are most valued by buyers. By increasing *offering equity*, a component of AU, sellers can enhance their profitability through price premiums while more effectively meeting their buyers' needs. By increasing perceptions of the differences between selling and internal reference price through various promotional activities, sellers can further encourage purchase.

Third, sellers must understand that buyers are aware of their own time, money and energy costs and seller actions toward them and that they weigh those actions as cost components offsetting the benefits anticipated from a purchase. By eliminating or simplifying specific elements such as term contracts or complex automated answering systems or by projecting an image of stability, sellers can reduce buyers' assessment of total costs thereby increasing the likelihood of purchase.

There are several limitations to this study. Auto insurance was selected as the subject product/service to test the NTV model. Auto insurance was selected due to (1) its perceived importance across demographic groups to ensure a high level of buyer involvement; and (2) its wide variety of features, pricing levels and sellers to allow for variation in beliefs and feelings about policies and insurers. However, auto insurance is an *evergreening* product. This means that a policyholder typically renews their insurance after its term has expired with minimal pro-action on their part. As a result, currently insured buyers faced with policy renewal/repurchase may not assess alternative sellers or policies in the same way as buyers of other products or services.

Pre-existing scales were utilized for three of the five variables assessed in this study. However, AC and TC scales were developed for use in this study drawing from the marketing literature and theory. Both scales display adequate reliability and validity. In addition, two pilot studies purified these scales (Churchill 1979). Nevertheless, it may well be that modifications to these scales could better capture the theoretical natures of AC and TC.

This study has undertaken an ambitious task to explain and describe buyer decision-making. Given the breath of this area of marketing and of the NTV model, it offers a wealth of opportunities for future research.

Each benefit and cost component of the NTV model is comprised of a number of dimensions or sub-components. For example, TC is comprised of transaction duration, uncertainty, and transaction-specific investments. Studies manipulating or assessing perceptions of different levels of the various dimensions or sub-components of any of these benefit or cost components could deepen the understanding as to the contribution of each of these dimensions or sub-components to the overall component.



Phenomena such as the correlation between AU and TU and the results of a previous study (Grewal et.al 1998) showing a possible mediating relationship between them provide an opportunity to better understand how the various benefit and cost components relate to each other. A future study might attempt to clarify the relationship between any or all of these benefits and cost components.

This study has focused on auto insurance as the basis for the test of the NTV model. The model should be tested using other product or service categories to understand whether both product and service decisions are made in similar or different ways, or if purchases of new-to-the-world offerings are assessed in the same way as those for more mature products and services. Further, this research studied consumer-buying, future research should also study organizational buying

Theoretically, a version of the NTV model could be developed and tested for purchase decisions under different levels of involvement. Sheth and Mittal (2004) state that the hierarchy of cognition, affect and conation occurs in different orders depending on levels and types of buyer involvement. They specify three levels: (1) high involvement learning; (2) high involvement emotion; and (3) low involvement hierarchies. This study has focused on their high involvement learning hierarchy. Two additional models could be developed and tested to confirm the remaining decision hierarchies.

In the aggregate, buyers make billions of purchase decisions every day. This study has explored the process buyers go through in making high involvement purchase decisions. It shows that buyers offset the benefits anticipated from purchase with any non-price costs the seller may impose on them. Sellers can use these results to improve their own marketing efforts.

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