

MEASUREMENT OF CONSUMER INTRINSIC MOTIVATION: EXPLORATORY ASSESSMENT OF ITS TWO PRIMARY DIMENSIONS AND THEORETICAL BASES

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Although considerable conceptual attention has been given to intrinsic motivation within the social sciences, it has not been systematically measured in marketing. This research measures intrinsic motivation for use in consumer contexts based on two well-established concepts, competence and enjoyment. The findings provide evidence that the measured dimensions, and the intrinsic motivation construct, contribute to future scholarly and applied research in marketing.

INTRODUCTION

Considerable attention had been given to the concept of intrinsic motivation even prior to Berlyne's (1973) week-long retreat with leading psychologists to examine the concept. Intrinsic motivation, defined as the engagement in activity for "its own sake" (Lepper and Greene 1978; Deci and Ryan 1985), has been important to most areas of the social sciences. The reward of intrinsic motivation is the process of the activity and not an end result. Intrinsic motivation theory has been indispensable to those involved in education and learning, employee productivity, and sports psychology and the will to conquer optimal challenge.

Within marketing, intrinsic motivation has been given very little attention. Most of the social sciences have utilized intrinsic motivation research to solve pressing human problems and satisfy urgent human desires. The quintessential purpose of marketing is to satisfy desires. Thus, it is perplexing that intrinsic motivation has received little scholarly or applied inquiry in marketing research.

Consumer investigators have, however, examined concepts that are related to intrinsic motivation.

Among the most studied concepts have been variety-seeking tendency and optimum stimulation levels (Raju 1980; Steenkamp and Baumgartner 1992; Trijp, Hoyer and Inman 1996; Ratner, Kahn, and Kahneman 1999), and positive affect and hedonism (Batra and Ahtola 1991; Babin, Darden, and Griffin 1994; Shiv and Fedorikhin 1999; Dhar and Wertenbroch 2000). However, as explained more fully below, intrinsic motivation makes important theoretical contributions to marketing that expands beyond these concepts and may serve to integrate them. Indeed, it is the integrative ability of intrinsic motivation, according to such leading social scientists as Amabile (2001), Ryan and Deci (2000), and Lepper (1998) that has contributed to the influential status of the concept across diversely different disciplines.

Therefore, this research develops a measure for use in consumer behavior and evaluates the relationships of alternative dimensions. As explained below, intrinsic motivation has its origins in two different psychological theories. Given that very little attention has been given to intrinsic motivation in marketing, the two theories, and their associated measurement dimensions, are initially discussed. In addition, this research develops alternative measurement models of intrinsic motivation that are based on the possible relationships that may exist between the intrinsic motivation dimensions.

Once the relationships are examined, two different forms of validity assessment are used to evaluate the dimensions. Initially, different types of extrinsic motivation are used to assess the construct validity of each intrinsic motivation dimension. Extrinsic motivation is viewed to be the acquisition of rewards or avoidance of punishment. In addition, a number of actual consumer and shopping behaviors are used to evaluate the predictive validity of the intrinsic motivation dimensions. Although this must be regarded as a preliminary measurement study, a concept of intrinsic motivation has been important to other disciplines and the determination of its appropriate measurement dimensions in marketing appears to be central to enhanced consumer theory.

ALTERNATIVE THEORIES AND CONSTRUCT DIMENSIONS

Within the social sciences, intrinsic motivation is based on two classical theories. Both of the theories are essential to understanding why social scientists have devoted considerable scholarly attention to intrinsic motivation. However, in marketing, the psychological bases that stimulated general interest in the concept are not well understood. These theories are briefly discussed below, and their implications for marketing theory are considered. The dimensions that measure the concept, as well as their possible interrelationships, follow from these theories.

Enjoyment Dimension and Optimal Level of Arousal as a State of Intrinsic Motivation

The origins of intrinsic motivation can be traced to Berlyne (1960) and others (i.e., Dember and Earl 1957; Fiske and Maddi 1957), who developed "optimal level of arousal theories" to explain humans' innate desire for exploration and satisfaction of curiosity. Previously, drive theories of motivation prevailed. These earlier theories emphasized that the role of motivation was to reduce discomforting arousal and incongruity caused by aversive biological drives (Weiner 1985). However, Berlyne (1960) and others extended drive theory and took the position that individuals were also motivated to increase arousal to an optimal level out of the inherent

enjoyment involved in exploration to satisfy curiosity. This theory assumes that individuals seek an optimal level of arousal because they are curious and desire challenge and, up to this optimal level, arousal is consciously equated with states of positive affect and enjoyment. The desire for curiosity and attainment of an optimal level of arousal is a momentary state and it competes with other needs and environmental stimuli (Berlyne 1960).

An "optimal level of arousal" and positive affect explanation of intrinsic motivation continues to have widespread direct and indirect acceptance. Notably, Csikszentmihalyi's (1990) concept of "enjoyment flow" has been given considerable attention in different social sciences, and it has been used in marketing (e.g., Lutz and Guiry 1994; Hoffman and Novak 1996) to describe the inherent and transcending enjoyment of intrinsically motivating activity. Csikszentmihalyi's (1990) state of enjoyment flow is based on optimal level of arousal theory. Enjoyment flow exists during moments when challenge is in balance with an individual's skills. According to his theory, inadequate challenge is boring and excess challenge causes anxiety. In addition, Izard (1977), Zuckerman (1979), and Mehrabian (1990), developed more recent theories of intrinsic motivation which have "optimal level of arousal" origins and emphasize positive affect and enjoyment. Most current theoretical definitions and scales of intrinsic motivation, whether from Vallerand (1997), Amabile (e.g., Amabile, et al., 1994) and her associates, or Lepper (e.g., Lepper, Kearney and Drake 1996) directly consider the concept to involve enjoyment, because positive affect and an optimal level of arousal state are causally related.

Perceived Competence Dimension as an Enduring Intrinsic Motivation Trait

A second theory of intrinsic motivation has received contemporary popularity through White's (1963) concept of "effectance motivation." Through psychoanalytic theory, he emphasized the importance during childhood of demonstrating effectiveness and mastery in the development of

later adult personality. White argued that one's desire to be competent is an "independent ego energy," or innate and enduring motivational disposition.

White's position that individuals have a pervasive desire to perceive that they are competent in their environment has shaped most contemporary intrinsic motivation theories. The most influential recent intrinsic motivation investigators have been Deci and Ryan (1985), and they directly take White's position about the motivational importance of a learned and innate disposition to be competent and demonstrate causality. Deci and Ryan (1985) argued that the general definition of intrinsic motivation "is based in innate, organismic needs for competence and self-determination (p. 32)." Harter (1986) and Bandura (1986) are among others who developed rich alternative explanations of the enduring trait role of perceived competence and self-efficacy.

A dimension of perceived competence is also included in most scales of intrinsic motivation and implicitly involved in most contemporary intrinsic motivation theories. Deci and Ryan (1985) argued that intrinsic motivation involves self-determined perceptions of competence and not mere perceptions of competence. Unquestionably, though, intrinsically motivated activity is widely believed to be based on underlying, stable, and learned perceptions of competence which stem from successful experience with the activity over time (e.g., Bandura 1977; Harter 1978; Deci and Ryan 1985). In Deci and Ryan's (1985) influential organismic integration theory, they explain that "it is not particularly controversial (p.143)" that competence underlies internalized dispositions of intrinsic motivation.

Two Perspectives as Different Explanations of Intrinsically Motivated Consumer Behavior

Certainly, dimensions other than enjoyment and perceived competence have been used to measure intrinsic motivation. However, enjoyment and perceived competence are central measurement constructs of the two intrinsic motivation perspectives. According to Pittman and Baggiano (1992), for example, individuals can be intrinsically

motivated to increase arousal to an optimal level out of the inherent enjoyment and entertainment of exploration and satisfaction of curiosity. However, they recognize that the desire for "effectance," or perceived competence, is the other founding theory of intrinsic motivation. Psychologically, enjoyment and competence dimensions have complementary meaning. When individuals experience optimal arousal, feelings of enjoyment would tend to be a momentary state. However, perceived competence is generally regarded to characterize a relatively stable and permanently developed trait of "effectance motivation" which is inherent in the task itself. Without question, feelings of enjoyment can become stable dispositions of learned intrinsically motivating experience (Deci and Ryan 1985; Vallerand 1997). For example, Deci and Ryan (1985) argue that positive affect and enjoyment are momentary, or state, measures of intrinsic motivation and perceptions of competence and self-determination are enduring measures.

However, the distinction between an enjoyment "state" and competence "trait" is important to study in marketing because these two dimensions may suggest different implications about the nature of intrinsically motivated consumer behavior. An enjoyment-only theory of consumer intrinsic motivation appears to best explain a momentary and exploratory interest in consumer behavior to experience a situational desire for curiosity and challenge. For example, a consumer may wish to reduce boredom from other life activity and seek the enjoyment of shopping which is associated with an optimal level of arousal. Currently, in consumer behavior research, attention is given to enjoyment and hedonism forms of consumer and shopping behavior (i.e., Batra and Ahtola 1991; Babin, Darden and Griffin 1994), and to a general consumer desire for optimum stimulation and variety-seeking (Raju 1980; Ratner, Kahn, and Kahneman 1999). Although these measures are at times measured as general consumer behavior traits, they tend to emphasize the momentary and "experiential" interest in shopping, as opposed to a true innate or intrinsic desire. For example, Babin, Darden, and Griffin (1994) validated their hedonism shopping scale by examining the number of

spontaneous impulse purchases that were made by respondents. Westbrook and Black (1985) developed an inventory of shopping motives, and included a "stimulation" dimension, which they argued, tapped an experiential desire to shop.

In contrast, a perceived competence dimension would appear to be more concerned with the innate and ongoing desire to consume "for its own sake," as opposed to mere boredom or interest in diversion. In consumer behavior very little attention is given to perceived competence or self-efficacy. Regardless, a perceived competence explanation of intrinsically motivated behavior appears to rely on enduring consumer beliefs and not momentary desires such as those related to reducing boredom.

Summary: Alternative General Models of Consumer Intrinsic Motivation

Given the limited research in marketing on perceived competence in particular, and on the comparison of enjoyment with competence, the precise roles of these two dimensions in consumer behavior are unclear. Furthermore, no systematic research has been conducted about the measurement of intrinsic motivation in marketing. This research specifically examines the two central dimensions that have the most promise for later and more advanced investigation.

Without doubt, some individuals have an innate interest in consumer behavior because of their earlier learned perceptions about the enduring utility of being a competent consumer, such as those developed through childhood socialization and parental influence (Moschis 1985; Ward, Klees and Wackman 1991). However, Kassarian (1978), among others, have argued that consumer behavior is not a very important life role. Therefore, it also appears likely that some intrinsic motivation in consumer behavior is concerned with the enjoyment of meeting momentary desires for curiosity and diversion.

As a result, a model of correlated competence and enjoyment dimensions appears to be most consistent with these different perspectives. This is the

hypothesized model of intrinsic motivation in consumer behavior and it is shown in Figure 1.1. Such a model hypothesizes that the dimensions of perceived competence and enjoyment should be measured as independent sub-scales because both the enduring trait of perceived competence and state of task enjoyment for momentary challenge appear to be possible explanations of intrinsically motivated consumer behavior in different instances.

Regardless, the two dimensions reflect different theoretical perspectives, and the possible relationships between competence and enjoyment are indeed extremely important, but not understood, in the specific context of consumer behavior. Therefore, the alternative models in Figure 1.1 are also measured: a higher order model which assumes that both dimensions jointly define intrinsic motivation; an uncorrelated model of competence and enjoyment; and, a single factor of inseparable dimensions. Given the particularly limited attention in marketing to intrinsic motivation, the different models provide useful information about the manner in which eventual dimensions should be measured and the appropriate theoretical orientation of the concept in consumer contexts.

VALIDITY ASSESSMENTS OF INTRINSIC MOTIVATION DIMENSIONS

Once different models of intrinsic motivation are examined, two forms of variables are used for measurement assessment. Specifically, different types of extrinsic motivation, and actual consumer and shopping behaviors are used to evaluate the intrinsic motivation dimensions. These are shown in Figure 1.2. The relevance of the different forms of extrinsic motivation and consumer and shopping behaviors to intrinsic motivation is described below.

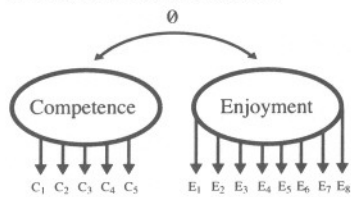
Types of Extrinsic Motivation

Extrinsic motivation is the engagement in activity as a means to an end and not for "its own sake." In other words, it is conducted for a goal that can be distinguished from an inherent interest in the task. Deci and Ryan (1985) have identified different

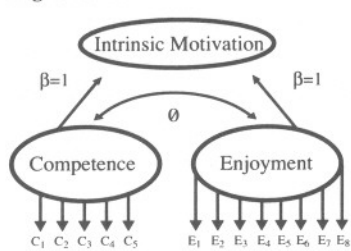
FIGURE 1
ALTERNATIVE INTRINSIC MOTIVATION MODELS AND VALIDITY ASSESSMENTS

Figure 1.1: Alternative Models of Intrinsic Motivation

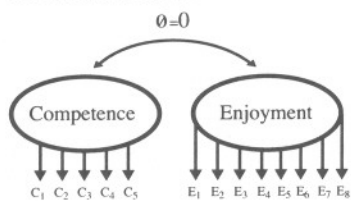
Correlated Dimension Model



Higher Order Model



Uncorrelated Model



Single Factor Model



Figure 1.2: Validity Assessment Variables

Types of Extrinsic Motivation

- Amotivation
- External Regulation
- Identified Regulation

Reported Shopping Trip and Product Purchasing Frequencies at:

- The Gap
- Revco
- Lazarus
- Elder Beerman
- JC Penney
- Kroger
- Value City
- The Limited
- perfume/cologne
- fine jewelry
- dress shoes
- business clothes
- tapes/CDs
- shampoo
- cosmetics
- casual sportswear

forms of extrinsic motivation which reflect varying intensities of "reduced inherent interest." A number of researchers have adopted these types of extrinsic motivation in research that assesses the nature of intrinsic motivation (see Vallerand 1977).

The most extreme form of extrinsic motivation, "amotivation," is the absolute lack of motivation to be involved in a task. An individual has no intentional desire and is involved only when the activity is necessary. A less extreme type, "external regulation," refers to tasks that are controlled by external sources, such as by others (Deci and Ryan 1985). A consumer who experiences external regulation may make purchases for the extrinsic desire to please others. The least extreme type, "identified regulation," is when an individual is interested in a task out of personal choice. However, the task is conducted for extrinsic reasons, such as for its utility or to accomplish personal goals. For example, a consumer may feel that shopping provides useful information to make better purchase decisions. This consumer identifies with a reward of shopping (that it provides useful information). However, the focus of identified regulation, according to Deci and Ryan (1985) is the outcome of the task and not the task purely for itself. The shopper has a personal desire to shop to acquire useful information to achieve the task outcome, to make a better purchase decision, as opposed to having an innate interest in the process of the task itself. Researchers have developed measures of amotivation, external regulation, and identified regulation, and used them to assess the construct validity of intrinsic motivation scales through their different degrees of association with intrinsic motivation (e.g., Pelletier and Vallerand 1996).

Real World, or Actual Consumer and Shopping Behaviors

Furthermore, a variety of actual consumer and shopping behaviors are also used to assess the intrinsic motivation dimensions. Nunnally (1978) takes a strong position about assessing a construct by utilizing multiple "real world," or actual/observed behaviors. The use of a number of actual behaviors is a useful contribution in this study because most

intrinsic motivation investigators examine phenomena with single-item measures.

MEASURE DEVELOPMENT AND ANALYSIS PLAN

Figure 1.1 describes the different models of consumer intrinsic motivation and Figure 1.2 represents the extrinsic motivation variables and consumer behaviors which assist in the assessment of the construct. The consumer intrinsic motivation models, as defined by the structures shown in Figure 1.1, are assessed below. Then, findings about the relationships of different forms of extrinsic motivation and behaviors (Figure 1.2) are examined.

Considerable psychometric effort was devoted to developing good indicators to measure the intrinsic motivation dimensions. Therefore, before findings are discussed, the procedures to select intrinsic motivation indicators and the validation items are briefly described below.

Selection of Intrinsic Motivation Dimension Indicators

Two different iterations of psychometric analyses and data collection phases are utilized to determine indicators for each dimension. First, an exploratory study was conducted to measure competence and enjoyment intrinsic motivation. In this exploratory study, expert judges (faculty, previous marketing research students) developed a large number of enjoyment and competence statements according to their consistency with concept definitions. During the initial data collection stage, adults rated the numerous competence and enjoyment statements on a seven-point Likert-format scale. A quota convenience sample of 220 respondents from a Midwestern American city of 250,000, reflecting the demographic composition of the population, was utilized. Conventional internal consistency and factor clarity considerations were used on split-half samples for initial selection. Over half of the items were removed and the items found to measure each dimension are shown in Appendix 1.

Later, a cluster probability sample was collected from the adult population of the same community. Ten homogeneous neighborhoods were randomly selected and assessed to insure that individuals meaningfully reflected adults who were from the community. Through personal interviews, individuals in the cluster probability sample rated each of the competence and enjoyment items. (The eventual completion rate exceeded 99 percent of all individuals who were contacted.) Diagnostic demographic statistics indicated that individuals who were interviewed were characteristic of the population. The statistical analyses of the models of consumer intrinsic motivation, and enjoyment and competence dimensions, are based on this second, refined, data collection. As reported in the findings section, these items have very good internal consistencies and are good indicators of their respective competence and enjoyment dimensions.

Measurement of Types of Extrinsic Motivation

Furthermore, Appendix 1 lists the items which measure the three types of extrinsic motivation: amotivation, external regulation, and identified regulation. The items are selected on the basis of face validity: they follow from Deci and Ryan's (1985) theoretical discussion of each dimension and appear to be similar to items in published scales, such as Pelletier and Vallerand (1996). When items from the three dimensions are combined, they have good factor clarity; and, exploratory analyses appear to suggest that the dimensions are promising indicators for this and other intrinsic and extrinsic motivation research.

Measurement of Consumer and Shopping Behaviors

In the final study, individuals were asked the actual number of times they shopped at specific stores and bought different products during the previous year. Two years earlier, a different study was conducted by one of the investigators, using another cluster probability sample of respondents from the same community. In both the current and earlier studies, individuals provided frequencies of shopping/purchasing for the same stores and

products. Appendix 1 lists the products and stores examined. Approximately the same frequencies and standard deviations of purchases and shopping trips were reported in both studies. A diversity of stores and products were selected. The use of a wide range of actual behaviors is a unique contribution of the research, regardless of discipline, that has studied intrinsic motivation.

Note that actual consumer behavior frequencies follow a negative binomial distribution (e.g., Ehrenberg 1975), as opposed to a normal distribution. Therefore, conventional statistical tests of assessment tend to accept the null hypothesis (non-association) more readily than do tests that only involve normal distributions. Given Nunnally's concern that the only meaningful way to assess validity instruments is through the use of multiple "real world," or actual behaviors, the predictive ability of consumer intrinsic motivation is examined with the shopping and consumer behaviors listed in the appendix.

FINDINGS

Evaluation of Consumer Intrinsic Motivation Models

The enjoyment and competence sub-scales are reliable measures (with alphas of .87 and .91, respectively). It was anticipated earlier that the enjoyment and competence dimensions are related to each other, and indeed, different individual enjoyment items are correlated with competence items. Therefore, initially, the findings of alternative intrinsic motivation models (Figure 1.1) are discussed.

LISREL (Joreskog and Sorbom 1989) is used to assess the correlated dimension model of consumer intrinsic motivation (Figure 1.1), with the other versions. As explained earlier, the correlated model appears to be most appropriate. Feelings of enjoyment and perceptions of competence are based on different theories of intrinsic motivation and not anticipated a priori to be inseparable dimensions of intrinsically motivated consumer behavior. However, the entire set of models is examined

because they are different possible competing alternatives.

As an introductory comment, in conventional confirmatory analysis and according to each of the models tested in Figure 1.1, individual enjoyment and competence items are assumed to relate only to their hypothesized dimensions, and to not be correlated with other items. Explained above, enjoyment and competence items are actually correlated with each other. Indeed, an exploratory factor analysis of these items revealed that most items have loadings of between .20 to .30 on their non-hypothesized factors, and loadings of .67 to .84 on hypothesized factors. Amabile, Hill, Hennessey and Tighe (1994) found, through their *Work Preference Inventory*, that items had clear relationships on more than one factor. When using structural equations modeling, some investigators have used added-up measures of sub-scales (Vallerand 1997). However, the position of this article is that the two dimensions and items may have theoretically explained relationships, and correlated errors or other considerations are not used to improve model fits.

Table 1 reports overall fit statistics of the different models and their improvements in fit over a null hypothesis model. The Chi-square/d.f., GFI, AGFI, and error residual assessments provide evidence that the correlated and higher order models are acceptable and, not surprisingly, that the single factor and uncorrelated models are unacceptable. While the correlated and higher order models' Chi-square/d.f. statistic of about 3 is acceptable (e.g., McIver and Carmines 1981), modification indices reported, as anticipated, that far improved overall fits would be achieved if items were allowed to vary on non-hypothesized factors. Other indices are fully appropriate. Maximum likelihood relationships of the correlated and higher order models are similar (except for specific higher order restrictions shown in Figure 1.1) and both models have the same standardized coefficients.

However, the correlation between the two dimensions, in either correlated or higher order model, appears necessary. When the correlation in

the higher order model is constrained to one (an alternative version of the single factor model), overall fits are unacceptable. Table 2 reports component relationships, t-values, and error variances for the correlated and restrictive single factor model. Neither the correlated or single factor models have disappointing component relationships. Indeed, according to Table 1, the single factor model is superior to the uncorrelated model.

A complementary means to assess the appropriateness of models is to examine their improvement in fit with a null hypothesis model. A good null hypothesis model in this research is one in which each of the items represent thirteen independent and uncorrelated measures. Such a model assumes that no form of multi-item factor structure exists. Bentler and Bonnett's (1980) normed index is often used to determine the amount of improvement of alternative models with a null version. The normed index improvement of both correlated and higher order models (Table 1) is at least .88, and therefore, less than 12 percent improvement (1 - normed index) can be achieved by a different model. A common rule-of-thumb of adequate normed index improvement is about .90 (e.g., Bagozzi 1994). Both correlated and higher order models are close to .90 and common sense indicates that the primary source of improvement, allowing items to vary on non-hypothesized dimensions, is unnecessary with such moderate loadings. The normed indices of .77 and .67, of the single factor and uncorrelated models, are inadequate. In summary, all overall assessments demonstrate that the dimensions are *clearly* related but not identical and they should be measured as sub-scales. As explained later, it is refreshing that, in the specific consumer behavior context, the higher order model findings are almost as good as are the ones for the correlated model.

Assessments with Types of Extrinsic Motivation

LISREL is also used to evaluate the roles of competence and enjoyment on the types of extrinsic motivation and behaviors. Using Figure 1.2 as a guide, the different forms of extrinsic motivation are

TABLE 1
OVERALL MODEL ASSESSMENTS

	χ^2	d.f.	GFI	AGFI	RMSR	Normed Index
Null Model	2025.91	78	.25	.12	.466	
Hypothesized Correlated Model	195.54	64	.90	.86	.045	.833
Higher Order Model	193.52	62	.90	.85	.045	.880
Single Factor Model	384.25	65	.77	.67	.076	.772
Uncorrelated Model	539.85	67	.74	.65	1.100	.670
d.f. indicates degrees of freedom GFI Goodness of Fit AGFI Adjusted Goodness of Fit RMSR Root Mean Square Residual ^a Bentler and Bonnett (1980) popularized the use of indices which assess the improvement in fit of models based on their $\chi^2/\text{d.f.}$ although different versions have been used, they conventionally compare the $\chi^2/\text{d.f.}$ of a target with hypothesized model through: $(\chi^2_t/\text{d.f.}_t - \chi^2_h/\text{d.f.}_h) / (\chi^2_t/\text{d.f.}_t)$ where t and h are target and hypothesized values of models. Often, investigators examine target models as "null hypothesis" models in which all variables are mutually independent "targets," to be compared with (loosely stated) hypothesized or potentially superior models. Such a form exploratory model assessment is common. In this research adequate theory exists to dismiss consideration of a null hypothesis restricted independent indicator target model. The normed improvement in fit indices above report the percentage improvement of the correlated model $\chi^2/\text{d.f.}$ fits our other target models.						

TABLE 2
COMPARISON OF THE CORRELATED AND SINGLE FACTOR MODELS

Indicator	Correlated Model				Single Factor Model			
	Standardized Coefficient	T-value	SMC	Standardized Errors	Standardized Coefficient	T-value	SMC	Standardized Errors
C ₁	.71	12.3	.51	.058	.57	— ^a	.68	— ^a
C ₂	.70	12.1	.49	.058	.59	7.6	.58	.137
C ₃	.84	15.8	.71	.053	.71	8.7	.79	.146
C ₄	.69	11.9	.48	.058	.58	7.6	.57	.137
C ₅	.80	14.6	.64	.055	.70	8.6	.68	.145
E ₁	.84	16.0	.70	.052	.80	9.3	.38	.153
E ₂	.85	16.3	.72	.052	.80	9.3	.35	.153
E ₃	.65	11.3	.43	.058	.64	8.0	.24	.140
E ₄	.71	12.5	.50	.058	.70	8.5	.30	.144
E ₅	.80	14.8	.63	.054	.77	9.1	.34	.150
E ₆	.72	12.8	.52	.056	.72	8.7	.45	.146
E ₇	.83	15.9	.69	.052	.85	9.6	.62	.157
E ₈	.65	11.2	.42	.058	.65	8.1	.29	.141
φ ₁₂	.74	20.7						
^a Coefficient was set to 1.0 to establish scale for the construct								

compared with enjoyment and competence dimensions of intrinsic motivation.

The *levels* of component relationship between amotivation, external regulation, and internalized regulation causation, are examined with both the enjoyment and competence dimensions. The standardized LISREL relationships of enjoyment are, respectively, -.73, .27, and .39 with amotivation, external regulation, and internalized regulation. The relationships of competence with these forms of extrinsic motivation are -.55, .19, and .36. The clear and consistent relationships of both enjoyment and competence dimensions with the different forms of extrinsic motivation provide good support for the underlying theoretical bases for the enjoyment and competence dimensions as measures of intrinsic motivation.

In addition, it is important to note that amotivation is an extremely strong and negative affect form of extrinsic motivation. Although enjoyment and competence are based on different theories of intrinsic motivation, the two dimensions were found in the earlier section to be strongly related to each other (+.74) in the correlated dimension model and highly negatively related to amotivation, suggesting further that enjoyment and competence are very similar in consumer behavior contexts. Furthermore, the indicators of identified regulation used in this study (and shown in Appendix 1) are focused on the personal desire to shop because it has utility. Of interest, perceived competence in shopping is much more related to shopping enjoyment than to identified regulation, perceptions of desired utility. Although coefficients of the six analyses are not reported, in all cases they are extremely high and

provide clear evidence of the reliability of the different measures. The relationships of the types of extrinsic motivation with enjoyment and competence appear to support the construct validity of both intrinsic motivation dimensions.

Continuing with Figure 1.2, LISREL is used to assess the predictive validity of the dimensions with sixteen consumer behaviors. Such stores and products as Kroger, J. C. Penney, cosmetics, video tapes/cds, and business clothes, were selected which presumably represent a wide degree of situational and enduring motives. As with the types of extrinsic motivation, both intrinsic motivation scales were initially examined as single dimensions and correlated with the single dimension of store and product behaviors. Given the uniqueness in this study of using actual reported behaviors, all conventional LISREL prediction findings are reported in Table 3 between behaviors and intrinsic motivation dimensions. The different behaviors are not (theoretically) intended to reflect a single dimension. However, it is of interest that enjoyment and competence retained their good structures. Most importantly, competence and enjoyment convincingly predict the stores and products, overall (.43, *t*-value of 7.1, for enjoyment, and .35, *t*-value of 5.4, for competence). Most individual stores and products have significant correlations with the dimensions. This is particularly rewarding, given that actual consumer and shopping behavior tends to be negatively binomially distributed (Ehrenberg 1975). According to Ehrenberg (1975), such "actual behavior" distributions as these produce artificially low correlations with variables, and yet the findings in this section are very encouraging.

It is of interest that enjoyment predicts the different consumer and shopping behaviors. However, the high relationships of the general consumer competence trait with actual behaviors are perhaps even more intriguing. Some products and stores (such as Value City and business clothes) are superior predictors of competence than of enjoyment. More generally, the findings about the *consistency* of strong relationships of enjoyment and competence with each other, as well as with types of extrinsic motivation and the large number of

products and stores, is extremely encouraging. Although perceived competence and enjoyment are not empirically identical, they are strongly related, both through general theoretical bases and with specific behaviors.

DISCUSSION

The different assessments represent fruitful avenues of investigation. Given that such extended conceptual consideration has been given to intrinsic motivation and related concepts, psychometric measurement of consumer intrinsic motivation appears to be a natural extension of inquiry about an important concept. Despite several limitations, discussed below, findings from this study deserve to be given further attention.

In summary, both the baseline correlated and higher order models of consumer intrinsic motivation and individual indicators are found to have good measurement support. Regardless of model, the scales are correlated and not perfectly related. Therefore, following Vallerand (1997) and others, enjoyment and competence should at this point be regarded to be independent sub-scales when measuring intrinsic motivation.

Of theoretical significance, the dimensions predict the three types of extrinsic motivation in anticipated manners. Furthermore, a number of different actual reported consumer *and* shopping behaviors are associated with consumer intrinsic motivation.

The findings are relevant because very little attention has been given to a concept of intrinsic motivation in marketing. Intrinsic motivation, or the initiation of a task for its own sake, shares conceptual underpinnings with such consumer concepts as store and brand loyalty, satisfaction, and involvement. However, intrinsic motivation has richer interdisciplinary theorization than does virtually any concept used in marketing. Indeed, many intrinsic motivation theorists trace their work to Wundt (1874) and his original theories of psychological motivation. Even if the measurement model failed to predict any consumer or shopping behaviors, the concept would nonetheless deserve theoretical

TABLE 3
COMPARISON OF BEHAVIORS WITH ENJOYMENT AND BEHAVIORS
WITH COMPETENCE MODELS

	Behaviors with Enjoyment			Behaviors with Competence		
Indicator	Standardized Coefficient	T-value	Correlation with Enjoyment	Standardized Coefficient	T-value	Correlation with Competence
B ₁ (The Gap) ^d	.28	4.1	.18 ^a	.27	4.1	.14 ^b
B ₂ (Revco)	.51	8.0	.20 ^a	.51	8.1	.21 ^a
B ₃ (Lazarus)	.40	6.2	.24 ^a	.41	6.2	.26 ^a
B ₄ (Elder Beerman)	.57	9.1	.30 ^a	.57	9.2	.31 ^a
B ₅ (JC Penny)	.52	8.2	.23 ^a	.52	8.2	.16 ^a
B ₆ (Kroger)	.56	9.0	.19 ^a	.56	9.0	.17 ^a
B ₇ (Value City)	.44	6.7	.18 ^a	.44	6.8	.21 ^a
B ₈ (The Limited)	.56	9.0	.30 ^a	.57	9.1	.28 ^a
B ₉ (Perfume/Cologne)	.66	10.9	.21 ^a	.65	10.8	.14 ^b
B ₁₀ (Fine Jewelry)	.37	5.7	.13 ^b	.38	5.7	.18 ^a
B ₁₁ (Dress Shoes)	.43	6.5	.21 ^a	.43	6.5	.22 ^a
B ₁₂ (Business Clothes)	.37	5.6	.21 ^a	.37	5.7	.22 ^a
B ₁₃ (Tapes/CDs)	.55	8.7	.16 ^a	.54	8.6	.06 ^c
B ₁₄ (Shampoo)	.44	6.7	.16 ^a	.43	6.7	.03 ^c
B ₁₅ (Cosmetics)	.58	9.4	.23 ^a	.58	9.2	.19 ^a
B ₁₆ (Casual Sportswear)	.68	10.8	.18 ^a	.64	10.6	.12 ^b
E ₁	.85	16.4				
E ₂	.86	16.8				
E ₃	.65	11.3				
E ₄	.70	12.3				
E ₅	.80	14.8				
E ₆	.71	12.7				
E ₇	.64	11.0				
E ₈	.81	15.3				
C ₁				.72	12.5	
C ₂				.71	12.2	
C ₃				.84	15.5	
C ₄				.79	14.2	
C ₅				.69	11.8	
C ₁₂	.43	7.1		.35	5.4	

^ap = .01
^bp = .05
^cp = .05
^dAs indicated in the manuscript, the behaviors are reported frequencies of yearly purchases or shopping trips.
 The specific stores and products are listed here because of the uniqueness of using a number of actual consumer behaviors.

examination in marketing. However, the research presented in study has good predictive support for various stores and purchases. Therefore, evidence is provided about the need for investigators to introduce measures of intrinsic motivation and use them in a wide variety of scholarly and applied consumer studies.

When applying intrinsic motivation to marketing, the fundamental findings of this research appear to be concerned with the strong relationships between enjoyment and competence. The validation assessments provided complementary evidence about the similarity of enjoyment and competence.

Investigators have tended to emphasize either enjoyment or competence theories in their general conceptions of intrinsic motivation. The foundations of intrinsic motivation theories are based on two different perspectives. One perspective has emphasized the momentary desire for curiosity and search for an optimal level of arousal and positive affect, while the other has suggested that individuals have a stable and underlying need to be competent and have mastery over their environment. However, the strong relationships between enjoyment and perceived competence, by themselves and with validation variables, open two important possibilities. First, a concept of intrinsic motivation, when applied to consumer behavior, may both be a stable underlying trait and important state. In addition, intrinsic motivation appears to integrate a number of concepts and theories that are often used in marketing but are yet to have rich grounding.

A stable and underlying trait of intrinsically motivated consumer behavior is based on the almost uni-dimensional relationship of perceived competence with enjoyment and the impressive linkages of competence with the different validation variables. In the social sciences, Bandura (1990), Deci and Ryan (1985), Harter (1985), and Markus and Wurf (1987) are among those who explained that perceptions of self-efficacy and perceived competence are fundamental underpinnings of psychological motivation. Loevinger (1976) declared that a desire for competence is the indispensable dependent variable of human behavior.

Although the desire to be competent has received such extensive attention as an underlying component of motivation and intrinsic motivation, it has been given little attention in marketing. The findings, in this article within the context of consumer behavior, that perceived competence and feelings of enjoyment share such convincing interrelationships together and with other variables, is evidence that further and more causal research needs to be conducted on perceived competence.

The concepts of "consumer enjoyment," as hedonism (Babin, Darden and Griffin 1994), variety-seeking and optimum stimulation, (Raju 1980; Steenkamp and Baumgartner 1992); enjoyment flow (Hoffman and Novak 1996), and an experiential desire to shop (Westbrook and Black 1985) have received considerable published attention. Unquestionably, these areas of "consumer enjoyment" have made useful contributions. However, these concepts and theory about an innate "enjoyment" are hardly integrative when compared to existing psychological theory of intrinsic motivation. Both the founding optimal level of arousal theories and desire for perceived competence, in psychology, may have joint relevance in consumer behavior. As explained earlier, it appears possible that consumers may have simultaneous desires for momentary curiosity and enduring competence. An understanding about the relationships of both sets of desires may assist investigators to deepen their understanding about an issue of obvious importance: why individuals enjoy consumer behavior.

Although a concept of intrinsic motivation appears to be very important to marketing, a variety of research limitations in this study are obvious and important to consider. Intrinsic motivation scales have rarely been developed in any discipline. Although several phases of scale development were involved, all based on good samples of adult consumers and utilizing conventional psychometric procedures, the dimensions selected and items measured in any initial study are of course problematic. Other dimensions of intrinsic motivation have also been proposed in psychology and they need to be examined in the consumer behavior context along with these two concepts. As

an initial study, the two basic theories and concepts have been selected as a setting for the future investigation of more complex models. The two dimensions of this study have in a sense "more" than strong theoretical support--each dimension represents the major competing psychological theory of intrinsic motivation. This research suggests that both theories and dimensions have merit in consumer behavior. It appears appropriate for future consumer research to introduce added intrinsic motivation variables from these two areas of theory.

However, a more important question suggested from the research is "why" are both dimensions important shared contributors of variation? Do different "types" of consumers reflect one theory versus the other? Perhaps of more relevance, can a causal explanation be developed that supports the simultaneous existence of both theories? A future theory-based examination about the causes of similarity between these fundamental intrinsic motivation theories would appear to assist consumer behavior and the other social sciences. Some readers may believe that this research asks "more questions than it answers." If so, such questions about the important concept of intrinsic motivation are in themselves worthy "to be asked."

More generally, replication is clearly necessary; however, this study provides evidence that far more research about intrinsic motivation, across different consumer situations and for different buyer processes, should be conducted in marketing. When even classical knowledge about intrinsic motivation is considered, its relationship to the meaning of childhood play and work should open vistas of understanding about why people make purchases.

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Appendix 1

Derived Scale Items to Measure Research Constructs

Item Directions: "By using the scale below, put a number in the blanks according to how much you agree that shopping formerchandise" (1=strongly disagree/7=strongly agree)

Intrinsic Motivation ConstructsCompetence

- C₁ = is one of the things I do best
 C₂ = is something I have knack for doing
 C₃ = is one of my specialities
 C₄ = is something I really know how to do
 C₅ = is my area of expertise

Enjoyment

- E₁ = is fun
 E₂ = is a "pleasant escape"
 E₃ = is something I love to do
 E₄ = pleasantly stimulates me
 E₅ = is interesting
 E₆ = is a satisfying experience
 E₇ = is really invigorating
 E₈ = is fascinating

Types of Extrinsic MotivationAmotivation

- Am₁ = is disliked
 Am₂ = is painful to do again
 Am₃ = is something I quit
 Am₄ = is avoided
 Am₅ = is no longer on my mind

External Regulation

- ER₁ = I often buy the product people expect me to buy
 ER₂ = I identify with others by buying the same products they do
 ER₃ = is important that others like the products I buy

Identified Regulation

- IR₁ = allows me to learn a great deal about merchandise
 IR₂ = increases my knowledge about merchandise variety
 IR₃ = allows me to seek out the best available sources of information
 IR₄ = allows me to seek out the best available merchandise
 IR₅ = increases my information about whether there are enough employees

Actual Reported Consumer or Shopping Behaviors times shopped/purchased per year

- B₁ = The Gap
 B₂ = Revco
 B₃ = Lazarus
 B₄ = Elder Beerman
 B₅ = JC Penny
 B₆ = Kroger
 B₇ = Value City
 B₈ = The Limited
 B₉ = Perfume/Cologne
 B₁₀ = Fine Jewelry
 B₁₁ = Dress Shoes
 B₁₂ = Business Clothes
 B₁₃ = Tapes/CDs
 B₁₄ = Shampoo
 B₁₅ = Cosmetics
 B₁₆ = Casual Sportswear