

Exploring Factors that Affect Purchase Intention of Athletic Team Merchandise

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Abstract

The purpose of this study was to test a structural model to determine which psychosocial constructs affected the purchase intention of athletic team merchandise (ATM). Results from the analyses indicated that the twelve-factor ATM model fit the data from collegiate athletic events well, explaining the various impact factors that lead to purchase intention of athletic team merchandise among sports consumers. Based on values theory, identity theory, attitude theory, and satisfaction theory that influence product consumption, this study suggests that consumer intentions to purchase athletic team merchandise are significantly associated with *personal values, team identification, brand/product attitude, product attributes, expectancy, previous purchase, and satisfaction*. Given the finding that team identification had marginal impact on attitude toward brand and/or product in general, it is suggested that sport marketers should select appropriate brands for the products that represent their team or athletic department. Fitness of brand image may suggest an alternative explanation for future studies.

Key words: values, team merchandise

Trends in the Sport Merchandise Industry

Estimates of the total production and consumption of sporting goods and services reached \$560 billion at the end of the 1990s (Howard & Crompton, 2004). During the same time period, Howard and Crompton (2004) also estimated direct sales of team merchandise within stadiums and arenas to be approximately \$9 billion. More recently, Brochstein (2006) indicated that this market trend has continued to grow as it reached \$13 billion in 2005. Increased evidence of team merchandise sales has been seen at various levels of sports including minor league baseball (e.g. the 2004 merchandise sales were close to \$40 million; Broughton, 2005). The sales of sporting goods have continued to grow, as it has become a \$76 billion industry by the end of 2010 (U.S. Census Bureau, 2010). By the same token, Lee and Trail (2012) indicated that wearing athletic team merchandise by fans during events and on non-event days as leisure wear has become very common. As such, sales of athletic team merchandise have become a lucrative and synergistic business for sport franchises.

Limitations in the Literature

We recognized several issues related to limitations that were involved in this study. First, there are few research findings that explain specific consumption activities such as athletic team merchandise purchasing. Second, existing studies fail to provide quantifiable information that systematically explains what triggers individuals to consume athletic team merchandise. More specifically, those studies tended to focus on narrow topics

by accounting for only a few constructs, which often resulted in explaining only a small amount of variance (Lee & Trail, 2012). For example, personal values are a common construct used to explain consumption behavior because they are central to one's thought processes and are typically enduring. As a result, they are less likely to be affected by other external sources (e.g. specific consumption situations like retail shopping). However, personal values have not explained a large amount of variance in licensed merchandise consumption behavior (amount of variance explained was about 10% in Lee & Trail's 2011a study). For instance, personal values may not be immediate antecedents of behavior due to their conceptual abstractness, suggesting the need for additional research to study potential mediation or moderation functions that may explain the structural relationships better.

Review of Relevant Literature

Values theory. This theory elaborates on relationships among a diverse range of values that affect human behavior. Personal values are defined as "established beliefs that result in a specific mode of behavior or end-state of existence [that] is preferred to an opposite mode of behavior or end-state" (Rokeach, 1973a, p. 25). Schwartz (1992) extended the values study and proposed 11 motivational types of values, which were represented by higher dimensions. For example, stimulation (a motivational type) was represented by three values (i.e., an exciting life, a varied life, and daring). Values have further been identified as influential factors for domain specific behaviors. Homer and Kahle (1988) suggested that attitudes mediate the relationships between personal values and actual behaviors. Other researchers have completed values studies across the domains of media preferences, leisure activities, or shopping behaviors to determine how values lead to attitudes and in turn to specific behaviors (Beatty, Kahle, Homer, & Misra, 1985; Kahle, Beatty, & Homer, 1986).

Identity theory. Identity plays an important role in people's behaviors in that "internalized role expectations" provide a guideline for interpreting life experiences (Stryker & Burke, 2000, p. 286). As a result, an individual may develop one or multiple identities based on the types of roles in which they find themselves (Stryker & Burke, 2000). Therefore, any roles with which an individual identifies will then define who they are (e.g. sports fan). The influence of identity on actual behaviors has been supported by additional empirical research findings. For example, Stryker and Serpe (1994) found that identity salience explained 3% to 8% of the variance in time spent in various role-related behaviors (e.g. an extracurricular role or an athletic role). Boninger, Krosnick, and Berent (1995) indicated that identification is an antecedent of attitude importance. How consumers identify themselves in a particular role may influence their respective attitudes and therefore their subsequent consumption behaviors.

Attitude theory. Attitude is defined as "a learned predisposition to respond in a consistently favorable or unfavorable manner

with respect to a given object” (Fishbein & Ajzen, 1975, p. 6). Eagly and Chaiken (1993) indicated that an attitude is cognitively learned through direct sources such as information related to a specific brand as well as indirect sources such as information obtained from the media. Affective responses resulting from cognitive learning portray how consumers evaluate product attributes. An evaluation process may actually take place when an individual encounters classes of stimuli (e.g. product features or attributes) either directly or indirectly which may result in different attitudinal consequences. As such, an attitude may be derived from past behavioral responses to a stimulus. In these circumstances, previous experience may supply sources of information that act as a reference benchmark for future evaluation of a product and subsequent purchasing intention. Affective dimensions such as like (dislike) or favorable (unfavorable) tend to indicate signs of attitude (Ajzen & Fishbein, 1977). Past empirical findings in the general marketing industry support the influence of attitude toward brand on purchase intention (e.g. purchase of toothpaste; Lutz, MacKenzie, & Belch, 1983).

Homer and Kahle (1988) indicated that there is conceptual flow from personal values to attitudes to behaviors. In their research, personal values explained about 33% of the variance in attitude while attitude explained about 31% of the variance in behaviors. However, it is worth noting that when a direct link from personal values to behaviors was measured, the amount of variance explained dropped to a mere 2%. Fazio, Powell, and Williams’ (1989) research supported the influence of attitude on actual product consumption (i.e., general products such as candy bars and soft drinks) and established a significant correlation between attitude and behavior.

Satisfaction theory. Oliver (1997) explains the process of consumer satisfaction in that previous experience sets an expectation, and the confirmation of that expectation mediates the level of satisfaction. Consequently, such a confirmation process affects the formation of an attitude, which in turn affects one’s intention to consume products. Leeuwen, Quick, and Daniel (2002) indicated that one’s satisfaction with a product is determined when relative product attributes are compared and appraised in accordance with one’s prior experience with the product. The expectancy confirmation or disconfirmation in a purchase situation may indicate that the meaning of the product may vary depending on one’s preexisting expectation because the expectation becomes a threshold for consumers to evaluate the product attributes (Oliver, 1980, 1981). An individual may develop an expectation of a product from either direct (e.g. past personal experience) or indirect information (e.g. word of mouth, media, product attributes).

Oliver and Linda’s (1981) research findings supported these relationships in that disconfirmation of expectancies explained 21% (for male consumers) and 30% (for female consumers) of the variance in satisfaction with general products (e.g. sleeping apparel). In the same study, satisfaction explained a large amount of variance (71% for male and 67% for female) regarding intention to purchase.

Rationalization for the Current Research

Within the context of sport, external factors such as promotions,

facilities, and other types of environmental sources have frequently been recognized as influential factors of game attendance (Zhang, Smith, Pease, & Jambor, 1997). In addition, internal factors such as motivation and identification have been recognized as influential factors for sport consumption (Branscombe & Wann, 1991; Cialdini, et al., 1976; Laverie & Arnett, 2000; Sutton, McDonald, Milne, & Cimperman, 1997; Trail, Fink, & Anderson, 2003; Trail & James, 2001; Wann, 2002; Wann & Branscombe, 1993). However, there may be other variables that influence the aforementioned external and internal factors that impact behaviors among sport consumers including the purchasing intention of consumers. To address these questions, a theoretical framework has been proposed that incorporates multiple psychological constructs such as personal values, identity, attitudes, satisfaction, personal involvement, attributes, and intention (refer to Lee & Trail, 2011b and the Overview of the ATM Model section for detailed information of the framework). Homer and Kahle’s (1988) value-attitude-behavior hierarchy may explain the overall flow of relationships in that values may influence behaviors through the mediating role of attitudes. Therefore, the primary objectives of this study were to (1) statistically examine the structural relationships among the constructs (i.e., personal values, attitudes, team identification, satisfaction, expectancy, product attributes, and previous purchase) within the proposed model, and (2) provide relevant management and/or marketing implications especially to identify the psychosocial constructs affecting the purchase intention of athletic team merchandise (ATM).

Model Development

Various theories have been applied to explain different criterion variables (e.g. identification, attitude, satisfaction, game attendance, product consumption, and media consumption) within the context of sport. For example, researchers within the context of sport frequently indicate that team identification and behavioral intention are two common factors that have disparate effects on sport consumption (Madrigal, 2001; Trail, Anderson, & Fink, 2000, 2005; Wann & Robinson, 2002). As well, attitude has been studied as an influential factor for sport consumption (Cunningham & Kwon, 2003; Mahony & Howard, 1998; Mahony & Moorman, 1999). Several researchers investigated mediating functions of attitude on various sport behaviors and included televised game watching (Mahony & Howard, 1998; Mahony & Moorman, 2000), sponsored product purchases (Irwin, Lachowetz, Cornwell, & Clark, 2003; Kuzma, Veltri, Kuzma, & Miller, 2003; Roy & Graeff, 2003) and game attendance (Cunningham & Kwon, 2003). Numerous researchers (Laverie & Arnett, 2000; Leeuwen et al., 2002; Madrigal, 1995; Trail, Anderson et al., 2005; Zhang, Smith, Pease, & Lam, 1998) also studied satisfaction to explain game attendance. Other variables studied have included behavioral intention that has been frequently reported as a consumption behavior in the sport domain (Cornwell & Coote, 2005; Cunningham & Kwon, 2003; Mahony & Moorman, 1999). Another example that may explain athletic team merchandise purchasing behavior would be attributes such as the price, aesthetic appearance, or quality of a product that influence a consumers’ choice of one product over another (Lee, Trail, Kwon, & Anderson, 2011). Likewise, there could be many factors that have either direct or indirect (mediated by

other factors) influence on actual sport behaviors and subsequent product consumption.

Overview of the Athletic Team Merchandise (ATM) Model

The ATM model consists of two major parts. First, the model explains the latent structural relationships flowing from values to attitudes to behavioral intention (i.e., purchase intention toward product and brand). Second, the model explains the influence of satisfaction (i.e., the disconfirmation or confirmation of expectancies about the purchase and satisfaction with the purchase) and perceived product attributes (i.e., perceived benefits of products) on the formation of an attitude.

In the former premise, one’s attitude about the athletic team merchandise was further classified into two aspects: attitude toward the brand and attitude toward the product. The model posits that the influence of personal values on the formation of attitudes toward the product may be mediated by both identification with a team and attitude toward the brand. Four values, patriotism, ambition, hedonism, and conservatism, were particular selected to present value construct because they were significantly related with sport merchandise purchases in Lee and Trail’s (2011a) study. In the latter premise, it was further hypothesized that an individual may have a perception about a product’s attributes based on satisfaction with a prior purchase. The perception about product attributes was hypothesized to influence the formation of attitudes toward the brand and the product and in turn, influence purchasing intention of products.

Bagozzi and Warshaw (1990) argued that situational contingencies such as scarce supply, scarce resources, time constraints, lack of willpower, and unconscious habits might prevent one from consuming a product. However, the proposed model purposefully excludes the impact of contingency factors on behavior because the ultimate consumption behavior this study focuses on is deliberate action. In other words, this study has been developed based on an assumption that a purchase behavior takes place even if situational contingencies may exist to deter or prevent individuals from the purchasing action.

Methods

Sample Population

A convenience sample of 80 undergraduate students in sport administration classes was used for pilot testing and a convenience sample from the general population of athletic event attendees was used for the main data analysis. To determine the sample size to test the theoretical model, four factors were considered as suggested by Hair, Anderson, Tatham, and Black (1998; pp. 604-605): (1) model misspecification, (2) model size, (3) departures from normality, and (4) estimation procedure. Considering the number of potential items, a sample size of approximately 300 was desired for the main study. The analyses were conducted on the final sample of 358 Division I collegiate athletic game attendees in the Mid-Atlantic region. The majority of the final sample consisted of the following: male (77.6%), White (82.2%), and mean age of 23.51 (SD = 6.94).

Data Collection Procedures

Prior to data collection, Institutional Review Board (IRB) approval was obtained. Brief instructions were given to the

respondents about the purpose of the study, voluntary participation, and confidentiality of the information to be collected. Three graduate students were recruited for data collection and took research-training sessions. The time to complete the questionnaire was approximately 15 minutes.

Measurement Scales

To measure latent constructs, we borrowed measurement scales used in Lee and Trail’s (2012) study. The scales were designed to ask about athletic team merchandise in particular. Through two stages of pilot testing, Lee and Trail (2012) concluded that the scales were equipped with good psychometric properties to measure various impact factors for the purchase intention of athletic team merchandise. They reported model fit indices of the following: RMSEA = .053, CFI = .901, SRMR = .065, and $\chi^2/df = 1.92$. The following is a description of each scale. A seven-point Likert-type scale was used to measure all items ranging from (1) strongly agree to (7) strongly disagree. The only exception was the expectancy scale that used the following: (1) worse than expected to (7) better than expected. Refer to Table 1 for the questionnaire statements and psychometric properties of the overall scales.

Table 1. Means, Standard Deviations, and Factor Loadings

Item	M	SD	β
Personal Values			
<i>Patriotism</i>			
Loyalty to country is an important value to me	5.84	1.24	.887
Patriotism is an important value to me	5.59	1.30	.890
Devotion to my country is an important value to me	5.61	1.31	.875
<i>Ambition</i>			
Ambition is an important value to me	5.80	1.20	.587
Competition is an important value to me	5.89	1.14	.553
Aspiring to greatness is an important value to me	5.98	1.09	.807
Aggressively pursuing my goals is an important value to me	5.95	1.15	.761
<i>Hedonism</i>			
Self-indulgence is an important value to me	4.54	1.51	.722
Sensuous gratification is an important value to me	5.06	1.19	.662
Hedonism is an important value to me	4.39	1.31	.631
Intense pleasure is an important value to me	5.26	1.40	.643
<i>Conservatism</i>			
Conventionality is an important value to me	4.85	1.17	.598
Conformity is an important value to me	4.39	1.66	.762
Social norm is an important value to me	4.66	1.46	.742
Team Identification			
I consider myself to be a “real” fan of the team	6.10	1.33	.743
I would experience a loss if I had to stop being a fan of the team	5.37	1.69	.742
Being a fan of the team is very important to me	5.88	1.27	.900
Attitude toward Brand			
I think that the <i>brand</i> is good	5.74	1.09	.775
I think that the <i>brand</i> is desirable	5.66	1.14	.800
My feelings toward the <i>brand</i> are positive	5.67	1.13	.849
Attitude toward Product			
I like the piece of team licensed merchandise I purchased	6.16	.98	.658
I think that the team licensed merchandise I purchased is good	5.82	1.01	.779
I think that the team licensed merchandise I purchased is desirable	5.73	1.10	.729
My feelings toward the team licensed merchandise are positive	5.66	1.04	.725
Product Attributes			
In general, what I get from team licensed merchandise is worth the cost	5.22	1.28	.696
All things considered (price, time, and effort), team licensed merchandise is a good buy	5.40	1.19	.753
In general, compared to other products, team licensed merchandise is a good value for the money	5.00	1.29	.705
In general, team licensed merchandise consistently performs better than other products	5.05	1.30	.697
In general, compared to other products, team licensed merchandise is of very high quality	5.36	1.19	.756
In general, team licensed merchandise is aesthetically pleasing	5.61	1.13	.644
Expectancy			
The overall quality of the team licensed merchandise was	5.27	.99	.738
The overall performance of the team licensed merchandise was	5.21	.97	.741
The attributes of the team licensed merchandise were	5.22	1.04	.789
The benefits of the team licensed merchandise were	5.13	1.07	.762
Satisfaction			
I was satisfied with my decision to buy the team licensed merchandise	5.91	.99	.746
My choice to buy the team licensed merchandise was a wise one	5.64	1.12	.761
I think that I did the right thing when I decided to buy the team licensed merchandise	5.67	1.08	.789
Intention to Purchase of Brand			
In the future, I intend to purchase more of the same brand of team licensed merchandise	5.83	1.21	.777
In the future, I am likely to purchase more team licensed merchandise of the same brand	5.39	1.29	.814
In the future, I intend to purchase more team licensed merchandise of the same brand	5.62	1.21	.850
Intention to Purchase of Product			
In the future, purchasing team licensed merchandise is something I plan to do	5.83	1.29	.657
In the future, I intend to purchase more licensed merchandise representing the team	5.74	1.27	.792
In the future, I am likely to purchase more of that team’s licensed merchandise	5.78	1.30	.798

Note. Statistical method: descriptive statistics (SPSS) and structural equation modeling (EQS).

Personal values. Four personal values (i.e., *Conservatism, Ambition, Hedonism, and Patriotism*) were measured. An example item that represents the *Ambition* value included the following: “Competition is an important value to me.” In previous studies, Cronbach’s alphas ranged from .60 to .91, and AVE values ranged from .37 to .78 (Lee & Trail, 2011).

Team identification. The Team Identification Index (TII) developed by Trail and James (2001) was used to measure the level of identification towards a specific sport team. An example item included the following: “I consider myself to be a ‘real’ fan of the team.” The TII has shown good reliability across many studies (e.g. $\alpha = .87$ in Trail, Anderson et al., 2005 and $.85$ in Lee & Trail, 2012).

Brand attitude and product attitude. Two aspects of attitude were measured: attitude toward brand and attitude toward product. An example item that represented *Brand attitude* included the following: “My feelings toward the brand are positive.” Oliver (1980) claimed reliability and validity for the scale in the text but did not report any values. This scale was internally consistent in other studies (e.g. $\alpha = .85$ in Hagger, Chatzisarantis, & Biddle, 2001) and Lee and Trail’s (2012) study ($\alpha = .87$).

Intention to purchase. Two sets of purchase intention items were used: intention to purchase brand and intention to purchase product. An example item that represented *Purchase Intention of Brand* included the following: “In the future, I intend to purchase more team licensed merchandise of the same brand.” This scale was internally consistent in Hagger et al.’s (2001) study ($\alpha = .77$) and Lee and Trail (2012; $\alpha = .86$).

Past experience. The magnitude of the respondent’s team merchandise consumption (i.e., dollar amount spent in the previous year) was measured. It was a single item in ratio type.

Expectancy (dis)confirmation. Respondents were asked whether their expectation was met with a previous experience of athletic team merchandise they purchased. More specifically, the items in the scale evaluated participants’ expectation on product attributes or benefits to the extent that it was better, equal, or worse than expected. Alpha reliability was .91 in Trail, Anderson et al.

(2005) and $.85$ in Lee and Trail (2012).

Satisfaction. The respondents were asked to express their general level of satisfaction with previously purchased athletic team merchandise. More specifically, the items measured the respondents’ satisfaction with their decision to buy the products. An example item included the following: “I was satisfied with my decision to buy the team licensed merchandise.” Cronbach’s alpha was $.79$ in Lee and Trail (2012).

Perceived product attributes. To measure perceived value of product attributes, six attributes were measured that included: worth for the time, value for the money, consistent performance, effort to buy, overall product quality, and aesthetic appeal. The items were reliable as evidenced in the Cronbach’s alpha of $.75$ in Lee and Trail (2012).

Data Analysis

To examine the structural relationships among the latent constructs within the theoretical model, we conducted structural equation modeling (SEM). Using the multivariate software EQS, the robust maximum likelihood method using a direct estimation process was employed to estimate the theoretical model. The assumptions of multivariate normality and linearity were evaluated through descriptive statistics using SPSS and CFA using EQS 6.1. To check normal data distribution, both skewness and kurtosis values were examined. The following indices are suggested to meet the criteria for good fit: $\chi^2/df < 3.0$; RMSEA $< .08$; SRMR $< .10$; CFI $> .90$ (Bollen, 1989; Hair, Black, Babin, & Anderson, 2010; Kline, 2010).

Results

Normality Check

Skewness and kurtosis values for the manifest variables ranged from $|0.131|$ to $|1.891|$ and $|0.011|$ to $|2.621|$, respectively, which are within the range of two standard deviations (SPSS, program manual). The only exception was team identification 1, which had a kurtosis value of $|3.581|$. The frequency distribution of the residual covariances appeared to be symmetric in that approximately 90%

Table 2. Inter-Factor Correlations, Cronbach's Alpha, and AVE Values

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Conservatism</i> (1)	1	.85	.46	.35	.40	.43	.39	.59	.47	.42	.45	.46
<i>Hedonism</i> (2)		1	.41	.53	.45	.39	.41	.58	.49	.40	.44	.44
<i>Patriotism</i> (3)			1	.56	.39	.39	.38	.35	.37	.27	.44	.44
<i>Ambition</i> (4)				1	.59	.63	.66	.57	.60	.45	.61	.57
<i>Team Identification</i> (5)					1	.52	.73	.64	.71	.44	.57	.82
<i>Attitude toward Brand</i> (6)						1	.85	.77	.73	.58	.86	.62
<i>Attitude toward Product</i> (7)							1	.90	.98	.68	.83	.89
<i>Product Attributes</i> (8)								1	.88	.68	.77	.77
<i>Satisfaction</i> (9)									1	.68	.78	.85
<i>Expectancy</i> (10)										1	.54	.54
<i>Intention to Purchase Brand</i> (11)											1	.84
<i>Intention to Purchase Product</i> (12)												1
Cronbach’s Alpha	.73	.76	.91	.76	.84	.87	.86	.88	.83	.85	.88	.83
AVE	.50	.44	.78	.47	.64	.65	.52	.50	.59	.57	.66	.57

Note. Statistical method: confirmatory factor analysis (EQS). All correlations significant at .05 level.

of the residuals centered around zero.

Psychometric Properties of the Scales

Reliability. The AVE values were close to or exceeded the .50 cut-off level (Fornell & Larcker, 1981; Hair et al., 2010) in all latent variables. The only exception was *Hedonism* (.44). Cronbach’s alpha for the latent variables ranged from .73 to .91. Overall factor loadings, AVE values, and Cronbach’s alphas met the suggested criteria (see Tables 1 and 2).

Discriminant validity. An initial discriminant validity check showed that 5 out of 66 inter-factor correlations in the hypothesized model did not exceed .85 (Kline, 2010). Six latent variables failed Fornell and Larcker’s (1981) more stringent level of discriminant validity (i.e., discriminant validity is evident when the squared correlations between one factor and any others are lower than the AVE for each factor; see Table 2). These issues indicate that there may be multicollinearity problems among some of the variables. However, this is not surprising as many of the constructs were created to measure aspects that should have good predictive validity. This will be discussed more in a later section.

Model Estimation

After reexamining psychometric properties of the ATM model [$\chi^2/df = 1.83$, *RMSEA = .048 (90% CI for *RMSEA = .044, .052), *CFI = .899, and SRMR = .051], the current study pursued the next level that included estimation of structural relationships. To increase generalizability of the results, a more general sample was used in the current study. Because the normalized estimate of 62.90 is a possible indication of non-normality in data distribution (Bentler, 2005, indicated values greater than 5 are indicative of non-normal distribution), as suggested by Byrne (2006), we used Satorra-Bentler’s (S-B) robust fit statistics to estimate the structural model. Goodness-of-fit statistics were as follows (see Table 3): [S-B $\chi^2_{(880)} = 1942.59$; $\chi^2/df = 2.20$, *RMSEA = .06 (90%

CI for *RMSEA = .056, .063), *CFI = .820, and SRMR = .183]. Both the chi-square per degrees of freedom and RMSEA values met the suggested criteria while both SRMR and CFI did not meet the criteria although the values were close to the threshold. Based on the review of the overall results, we concluded that the ATM model fit the data moderately well.

Discussion

Focus of the Study

The primary objective of this study was to develop a model that explains consumption of athletic team merchandise. The ATM model consisted of 12 latent factors that were derived from values theory (Rokeach, 1973a), identity theory (Stryker, 1968), attitude theory (Fishbein & Ajzen, 1975), satisfaction theory (Oliver, 1980), and several other specific concepts (i.e., perceived product attributes) that have been publicized to influence consumer behavior. In the model, it was originally hypothesized that the latent structural relationships flow from Personal Values to Attitudes (toward the product and the brand) to Purchase Intention (represented by intention to purchase a brand and/or product). Further, it was hypothesized that the impact of Satisfaction (i.e., expectancy disconfirmation about the purchase and satisfaction with the purchase) and Perceived Product Attributes (i.e., past expenditure and perceived value of product attributes) on the formation of Attitudes influenced Purchase Intention toward a Brand and Product. The model was then statistically examined in terms of its structural relationships among the constructs within the model.

Overview of the Significant Findings

Informed by the measurement model test in Lee and Trail (2012), the structural relationships in the ATM model were examined using a general population sample in the current study. Results from the analyses indicated that the 12-factor ATM model fit the data from collegiate athletic events well and explained the various impact factors that led to purchase intention of athletic team merchandise among sports consumers. In the model, the four first-order latent variables, *Hedonism*, *Patriotism*, *Conservatism*, and *Ambition*, were all significantly associated with the second-order latent variable, *Personal Values* (PV; the average of 57% of the commonality was explained by the four first-order latent variables). The *Personal Values* construct was also significantly associated with *Team Identification* (TI) and explains approximately 32% of the variance. *Personal Values*, *Team Identification*, and *Satisfaction* (SA) were significantly associated with *Attitude toward Brand* (AB), collectively explaining a little over 53% of the variance. *Team Identification*, *Attitude toward Brand*, *Product Attributes* (PA), and *Satisfaction* were significantly associated with *Attitude toward Product* (AP), collectively explaining 98% of the variance. *Team Identification*, *Previous Purchase* (PP), and *Satisfaction* were significantly associated with *Product Attributes*, collectively explaining nearly 78% of the variance. *Expectancy* (EX) was significantly associated with *Satisfaction*, explaining approximately 50% of the variance. *Attitude toward Product* and *Satisfaction* were significantly associated with *Intention to Purchase* (IP), explaining close to 86% of the variance.

Table 3. Summary of Model Fit Indices

Model	χ^2/df	RMSEA _{(CI)*}	CFI	SRMR
Measurement model test	1.83	0.048 _(0.044; 0.052)	0.899	0.051
Structural model test	2.20	0.06 _(0.056; 0.063)	0.820	0.183

Note: CI = Confidence Interval.

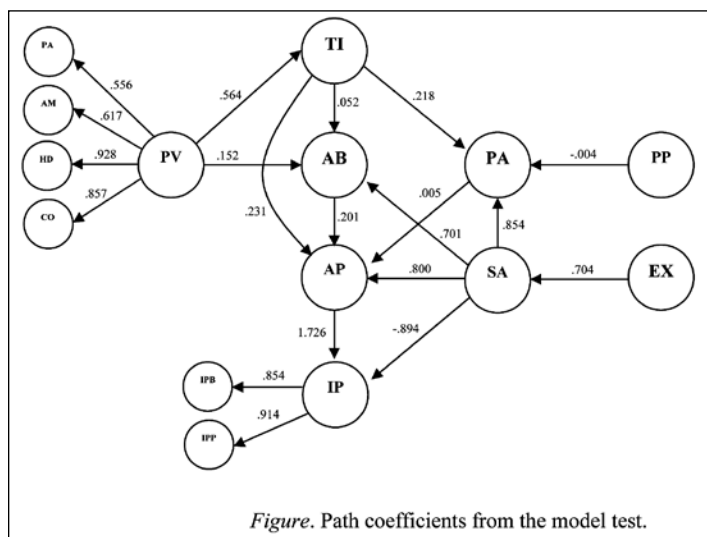


Figure. Path coefficients from the model test.

Comparison with the Existing Literature

This section discusses supporting theories for the tested structural relationships. The results of the SEM in the current study were generally consistent with prior studies. The literature supports the premises in this study that many conceptualizations lead to sports product consumption. Some of these theories include values theory (Rokeach, 1973a, 1973b), identity theory (Stryker, 1968), attitude theory (Fishbein & Ajzen, 1975), and satisfaction theory (Oliver, 1980), and other related information for perceived product attributes.

In the current study, PV explained 32% of the variance in TI. This finding supports Lee and Trail's (2011a) results, in that they found ambition, patriotism, conservatism, and hedonism were all significantly correlated with TI (correlations ranged from .16 to .39). While Lee and Trail's study (2011a) may be one of a few studies that have investigated the relationship between personal values and team identification in the context of sport, there are very few empirical findings that allow us to compare the results of the current study with the existing literature. This signifies the need for further studies that empirically explore the relationship between PV and TI.

In the current study, PV, TI, and SA explained 53% of the variance in AB. In addition, TI, AB, PA, and SA explained nearly 98% of the variance in AP. The influence of TI on the formation of AB and/or AP partially supports the existing literature in brand equity. More specifically, Gladden and colleagues (Gladden, Irwin, & Sutton, 2001; Gladden & Milne, 1999; Gladden, Milne, & Sutton, 1998) argued that consumers' attitude toward a brand constitutes brand association, which is derived from the concept of team identification. In the current study, SA contributed the most to the formation of AB. Also, this finding was the same for AP. This finding partially supports Oliver and Linda's (1981) argument that satisfaction (with a product, specifically sleeping apparel) mediates the relationship between expectancy (dis)confirmation and attitude (toward a product, again, sleeping apparel) or intention. In Oliver and Linda's (1981) study, satisfaction explained up to 4% of the variance in attitude. The finding that SA contributes to the formation of AB and AP is also consistent with Madrigal's (2003) finding that performance satisfaction explained 15% of the variance in optimism about the team's future performance. This is an equivalent concept to attitude because Madrigal's (2003) study used affect to represent the optimism.

TI, PP, and SA explained 78% of the variance in PA in the current study. Out of the three factors, SA contributed the most to PA, while the influence of TI was weak, and PP's influence was nonexistent. This finding is somewhat inconsistent with Kwon, Trail, and James's (2007) study in which they tested three models (direct effect, partially mediated, and fully mediated) explaining relationships among team identification, perceived value of product attributes, and purchase intention. Kwon et al. (2007) indicated that team identification influenced purchase intention of licensed-sport apparel, which was mediated by a consumers' perceived value of product attributes. Team identification explained a fair amount of variance (13.2%) in perceived value, but in the current study, the influence of TI on PA was relatively weak.

In the current study, it was also found that EX explained 50% of the variance in SA. This result is consistent with previous

studies in that numerous researchers have found that expectancy disconfirmation often explained a large amount of variance in satisfaction for competitive running (Caro & Garcia, 2006), general sport fan satisfaction (Madrigal, 1995) and spectators' game satisfaction (Trail, Fink, & Anderson, 2003; Leeuwen, Quick, & Daniel, 2002). Leeuwen et al. (2002) argued that disconfirmation of preexisting expectations is directly associated with customer satisfaction. The influence of EX on SA in the current study was also consistent with Oliver and Linda's (1981) study in that EX explained a large amount of variance (21% and 30% for male and female consumers, respectively) in satisfaction with general products (i.e., sleeping apparel).

AP and SA collectively explained 86% of the variance in IP in the present study. These results are somewhat consistent with previous findings in that Matsuoka, Chelladurai, and Harada (2003) showed that satisfaction influenced intention to attend future games (satisfaction with performance explained 26% of intention to attend future games). The influence of product attributes on purchase intention was also found in previous studies in that perceived value of product attributes explained 42.6% of the variance in purchase intention (Kwon et al., 2007). The influence of satisfaction on purchase intention was also found in previous studies in that attitudes explained 8% of the variance in intention to attend a hockey game (Cunningham & Kwon, 2003).

Practical Implications

Although many of the discussed theories have been applied to explain a form of sport consumption (frequent game attendance), it is crucial to develop a model that incorporates various independent constructs within the context of ATM consumption. Comprehensiveness of such a model would allow scholars and researchers to develop theories that explain various commonly occurring consumption activities at a domain level such as athletic product purchasing. In turn, this research effort will enable retailers to effectively communicate with sport product consumers, which could consequently increase the overall sales of ATM.

The findings of this study reveal whether each of the proposed theoretical constructs contributes to elucidate a specific consumption activity that results in purchasing ATM. Given the influence of merchandise sales on the overall sport industry as well as its continued growth trends, marketers of ATM should continue to search for ways to study and incorporate psychosocial constructs that influence consumption behaviors. These constructs include personal values, team identification, attitudes toward brand/product, satisfaction of consumers, perceived attributes of products, and purchase intention. More specifically, the finding that personal values impact team identification and brand attitude is helpful for sport marketers to develop effective marketing strategies. For instance, we now know that sport consumers who purchase ATM tend to be patriotic, ambitious, conservative, and hedonistic, and that these personal values influence a higher level of team identification as well as a strong brand loyalty. It is evident that the sport industry is being globalized (e.g. Olympic Games, soccer World Cup, World Baseball Classic), and as a result, billions of dollars are being spent on ATM within the international market (Foster, Greyser, & Walsh, 2006). Thus, utilization of a personal value such as patriotism in developing a marketing plan

is prudent and necessary. It is further evident that promoting ATM that represents one's own country by emphasizing the value of patriotism is a common modern sport business trend.

Given the information that the impact of team identification on attitudes toward brands was very minimal, it is reasonable to assume that when an individual displays low identification with a team, it would be more likely for the consumer to have a stronger attitude towards a brand (e.g. Under Armor). In this circumstance, sport marketers will need to emphasize the equity of the brand (strong and positive) to promote increased product consumption rather than persistently appealing to team identification. In contrast, if an individual displays high identification with a team, it would be an effective strategy for sport marketers to take advantage of team identification rather than spending marketing dollars to create new attitudes towards brands and/or products.

Previous research has indicated that it is helpful for sport marketers to understand the importance of perception of product attributes in purchase decisions (Lee et al., 2011). Surprisingly, in this data set, there was no significant relationship between product attributes and attitude toward the product. It has been noted previously that consumers often consider various product attributes such as price, craftsmanship, aesthetics (e.g. color/design), nostalgia, and prestige/status as important features when making product purchase decisions. Thus, due to the inconsistency with these prior results and the current data, sport marketers should determine if emphasizing these features when manufacturing products makes sense. Sport marketers would be even more effective if they knew which factors influence the formation of one's perception about product attributes. It is also worth noting that satisfaction contributed most of the variance in perceived product attributes in the current study. Satisfaction with previous purchases is a powerful impact factor that influences not only consumers' perception of product attributes but also brand attitude and intention to purchase a brand and product. Therefore, sport marketers will constantly need to monitor the level of fan satisfaction and gather information about consumers' experiences with a product. The following section discusses some limitations we have identified and recommendations for future study.

Limitations and Recommendations for Future Study

Nonsymmetrical distribution of residuals was found among the results of the current study. The frequency distribution of the residual covariances should be symmetric because nonsymmetrically distributed residuals in the frequency distribution may signal a poor-fitting model (Tabachnick & Fidell, 2001). To reduce negative influence of these results, multiple fit indices were carefully examined to estimate the model in each step. Eliminating a few cases that contribute large residual values may be considered.

Multicollinearity issues were evident in this data set through the high correlations of some of the constructs and a standardized path coefficient that exceeded 1.0. As Jöreskog (1999) notes "if the factors are correlated (oblique), the factor loadings are regression coefficients and not correlations and as such they can be larger than one in magnitude" (p. 1). He goes on to note that this suggests that there is probably a high degree of multicollinearity in the data. In our data set this is not surprising as the wording of the items in all of the constructs that had high correlations included

the wording "team licensed merchandise." In hindsight, the items in the Satisfaction scale and the Attitude toward the Product scale were probably too similar. Although the concepts of satisfaction and attitude are distinct and satisfaction should lead to attitude, many respondents to the survey probably did not make a distinction between "I think that I did the right thing when I decided to buy the team licensed merchandise" (Sat3) and "I think that the team licensed merchandise I purchased is good" (AP2). Thus in the future, these scales probably need to be adapted to make sure that they are distinct, although, both satisfaction and attitude have affective (emotional) components and thus should always have high correlations.

Summary and Conclusion

The purpose of this study was to test a structural model to determine which psychosocial constructs resulted in the purchasing of athletic team merchandise (ATM). This study reviewed the various theories that are specific to psychosocial constructs that influence consumption activity such as behavioral characteristics related to personal values, identity, attitudes, satisfaction, product attributes, and intention. The model explains the latent structural relationships that develop as consumers move from values to attitudes and finally to behavioral intentions to purchase a product and/or brand. Second, the model explains the influence of satisfaction about the purchase and perceived benefits of the product(s) on the formation of a consumer's attitude related to the purchased product or brand.

Results from the analyses indicated that the twelve-factor ATM model fit the data from collegiate athletic events well and explained the various impact factors that lead to purchase intention of athletic team merchandise among sports consumers. Based on values theory, identity theory, attitude theory, satisfaction theory, and other concepts that influence product consumption, this study suggests that consumer intentions to purchase athletic team merchandise is significantly affected by various factors including *personal values*, *team identification*, *brand/product attitude*, *product attributes*, *previous purchase*, *expectancy*, and *satisfaction*.

Given the influence of merchandise sales on the overall sport industry, marketers of ATM should continue to search for ways to develop a better understanding of various psychosocial constructs that affect purchasing behaviors. These constructs include personal values, team identification, attitudes toward brand/product, satisfaction of consumers, perceived attributes of products, and purchase intention. More specifically, the finding that personal values impact team identification and brand attitude is helpful for sport marketers to develop effective marketing strategies. As previously mentioned, we now know that sport consumers who purchase ATM tend to be patriotic, ambitious, conservative, and hedonistic, and that these personal values influence the level of team identification as well as a strong brand attitude. Knowledge of how these traits along with an individual's personal values, identification with a team, their learned attitudes about a brand and/or product as well as an understanding of their satisfaction levels and expectations for a product were significant. For example, a significant finding was that team identification impacts attitude toward brand and/or product. This provides useful information for sport marketers to select appropriate brands for the products

that represent their team or athletic department. Researching appropriate brands using potential fans and consumers may be a critical factor in developing and maintaining fan identification and subsequent purchasing of athletic team merchandise. The importance of consumer satisfaction on the perceived product attributes, attitude formation, as well as purchase intention was also confirmed in the current study. Service providers will need to monitor consumer satisfaction with ATM on a consistent basis. The structural model used in the current study further provides researchers with a reliable and valid tool that measures consumers' purchase of athletic team merchandise.

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