INFLUENCE OF MATERIALISM ON LIFE SATISFACTION

UTJECAJ MATERIJALIZMA NA ZADOVOLJSTVO ŽIVOTOM

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SAŽETAK

Ovaj se rad nastavlja na Sirgyjevu teoriju materijalizma, koju proširuje ugradnjom izloženosti materijalističkom oglašavanju i društvenom utjecaju u opsežniji model. Podaci prikupljeni u Bosni i Hercegovini pokazuju da izloženost materijalističkom oglašavanju i društvenom utjecaju pridonosi materijalizmu, a on pri donošenju sudova o životnom standardu dovodi do korištenja svih vrsta standarda za usporedbu (afektivnih i kognitivnih očekivanja). Kako se

ABSTRACT

This paper builds on Sirgy's[1] theory of materialism by integrating exposure to materialistic advertising and social influence into a more comprehensive model. The data collected in Bosnia-Herzegovina showed that exposure to materialistic advertising and social influence contributes to materialism. Materialism, in turn, leads to the use of all types of standards of comparison (affective- and cognitive-based expectations) to make judgments about the standard of living. As the

povećava korištenje ovih standarda usporedbe, tako ljudi svoj standard počinju ocjenjivati negativnije, a negativna ocjena životnog standarda dovodi do nezadovoljstva životom.

use of these standards of comparison increases, people start to evaluate their standard of living more negatively and these negative evaluations of the standard of living lead to a dissatisfaction with life.

1. INFLUENCE OF MATERIALISM ON LIFE SATISFACTION

Materialism, defined as "the importance ascribed to the ownership and acquisition of material goods in achieving major life goals or desired states",[2] has been studied extensively in the past 20 years. Several studies demonstrated that more materialistic people are less satisfied with their lives than their less materialistic counterparts because more materialistic people believe that any given level of possessions is inadequate to meet their living standards.[3] For instance, Belk[4] found that the aspects of materialism (i.e. possessiveness, non-generosity and envy) were negatively related to happiness and life satisfaction. Similarly, Richins and Dawson[5] found a negative correlation between life satisfaction and three subdimensions of materialism (centrality, success and happiness). Sirgy, Lee, Larsen and Wright[6] also were able to demonstrate that materialistic people are less satisfied with their material possessions and less satisfied with life than non-materialistic people. However, these findings did not explain the negative relationship between materialism and life satisfaction. To address this issue, Sirgy[7] advanced an explanation to account for this negative relationship. The gist of the explanation is that materialistic people have inflated expectations of their standard of living, whereas non-materialistic people have realistic expectations. These inflated expectations cause materialistic people to evaluate their standard of living negatively. The negative effect spills over to judgments of life overall, making materialistic people feel dissatisfied with life. Thus, one goal of this paper is to test that explanation in a formal way.

Our second goal is to further develop the research tying TV viewership to materialism.[8] For instance, Sirgy et al.[9] were able to empirically demonstrate that TV viewership contributes to materialism, which in turn plays an important role in negative evaluations of the standard of living and life dissatisfaction. How? We designed our study to help answer this question. Specifically, we believe that TV viewership affects materialism through exposure to materialistic advertising. That is, exposure to the ads that link consumer goods and services with status and prestige is hypothesized to be the key factor influencing the development of materialism.[10]

2. HOW DOES MATERIALISM LEAD TO LIFE DISSATISFACTION?

Sirgy[11] developed a theory which explains how materialism leads to life dissatisfaction. He reasoned that, in evaluating the standard of living, materialistic people tend to employ affective-based expectations (e.g. ideal, deserved and need-based expectations) rather than cognitive-based expectations (e.g. past, predictive and ability-based expectations). Affective-based expectations are value-laden and they lead to experiencing intense emotions. These emotions can be positive feelings of elation, joy and pride as well as negative feelings of anger, envy and possessiveness. In contrast, cognitive-based expectations generate cognitive elaboration in the evaluations of one's standard of living.

There are at least three types of affective-based expectations. The first type is *ideal expectations*. Ideal expectations are the standards of comparison based on remote referents rather than situational ones. For example, an ideal expectation of becoming "filthy rich" is remote in the sense that it is cultivated by adopting the standards and goals of people who are imaginary, distant and based on vicarious experiences not grounded in the reality of one's situation. Materialistic people are more likely to compare their own standard of living with the people who are "filthy rich", making them feel dissatisfied with their own standard of living. That ideal image of being "filthy rich" may be an image cultivated from watching too much television and seeing the lives of the rich and famous—remote referents. The second type

of affective-based expectations is *deserved expectations*. This type of expectations reflects the tendency to make equity-based comparisons, involving income and work. Materialistic people, compared to their non-materialistic counterparts, tend to think that they work harder than others but earn less. These equity-based comparisons generate feelings of injustice, anger or envy. Lastly, *minimum-need expectations* of the standard of living reflect spending money to meet minimum (basic) needs. Materialistic people believe that they need more money to make ends meet. That is, their basic needs tend to be much more inflated than those of non-materialistic people.

In contrast to materialistic people, people who are not materialistic are more likely to use cognitive-based expectations in evaluating their standard of living. For instance, they may compare their standard of living with their *past* (their past material possessions). That is, non-materialistic people evaluate their income by assessing how far they have come along—compared to last year, a couple of years ago or further back in time. Alternatively, non-materialistic people tend to evaluate their standard of living by using *predictive expectations* (expected future wealth). Another type of cognitive-based expectations reflects the perceptions of *ability* to achieve a certain standard of living in one's lifetime. That is, non-materialistic people use the perception of their ability to achieve a certain amount of wealth based on their education and occupational skills in evaluating their standard of living.

Overall, affective-based expectations can be viewed as unrealistic and inflated goals that result in dissatisfaction with one's standard of living, whereas cognitive-based expectations are more realistic and non-inflated goals. The evaluations of the standard of living based on cognitive-based expectations are not likely to lead to the feelings of dissatisfaction with one's standard of living.

Based on the preceding discussion, our study will test the following hypotheses with respect to the relationships between materialism and the use of specific types of expectations in evaluating one's standard of living:

H1a: Materialistic people are more likely to use ideal expectations in evaluating their standard of living than non-materialistic people.
H1b: Materialistic people are more likely to use deserved expectations in evaluating their standard of living than non-materialistic people.
H1c: Materialistic people are more likely to use minimum-need expectations in evaluating their standard of living than non-materialistic people.
H1d: Non-materialistic people are more likely to use past expectations in evaluating their standard of living than materialistic people.
H1e: Non-materialistic people are more likely to use predictive expectations in evaluating their standard of living than materialistic people.
H1f: Non-materialistic people are more likely to use ability expectations in evaluating their standard of living than materialistic people.

Furthermore, our study will test the following hypotheses with respect to the relationships between the frequency of using certain types of expectations of the standard of living and satisfaction with the standard of living:

H2a: The greater the frequency of evaluating the standard of living based on ideal expectations, the lower the satisfaction with the standard of living.
H2b: The greater the frequency of evaluating the standard of living based on deserved expectations, the lower the satisfaction with the standard of living.
H2c: The greater the frequency of evaluating the standard of living based on minimum-need expectations, the lower the satisfaction with the standard of living.
H2d: The greater the frequency of evaluating the standard of living based on past expectations, the higher the satisfaction with the standard of living.
H2e: The greater the frequency of evaluating the standard of living based on predictive expectations, the higher the satisfaction with the standard of living.

H2f: The greater the frequency of evaluating the standard of living based on ability expectations, the higher the satisfaction with the standard of living.

Feelings of satisfaction or dissatisfaction with one's standard of living plays an important role in the evaluation of life overall. There is huge literature and much empirical evidence in the quality-of-life literature to suggest that life satisfaction is a judgment made by evaluating a variety of life domains, such as leisure life, social life, work life, family life, spiritual life and material life. This last (material life) reflects one's overall feelings related to one's standard of living. Thus, life satisfaction is determined mostly by the evaluations of important life domains, including material life (see Diener[12] and Diener et al.[13] for a review of that literature). Based on the preceding discussion, our study will test the following hypothesis:

H3: The higher the satisfaction with the standard of living the higher the satisfaction with life.

3. HOW DOES TV VIEWERSHIP AFFECT MATERIALISM?

One of the most examined antecedents of materialism is *TV viewership*.[14] For instance, Sirgy et al.[15] were able to empirically demonstrate that TV viewership contributes to materialism, which in turn plays an important role in negative evaluations of the standard of living and life dissatisfaction. However, *exposure to materialistic advertising* might mediate the relationship between TV viewership and materialism. In other words, TV viewing might lead to exposure to materialistic advertising, which, in its turn, augments materialism. Therefore, exposure to the ads that link consumer goods and services with status and prestige is hypothesized to be a key factor influencing materialism.[16] Therefore, our study will test the following hypotheses:

H4a: The greater the materialism the higher the exposure to materialistic advertising.
H4b: The higher the exposure to materialistic advertising the greater the TV viewership.

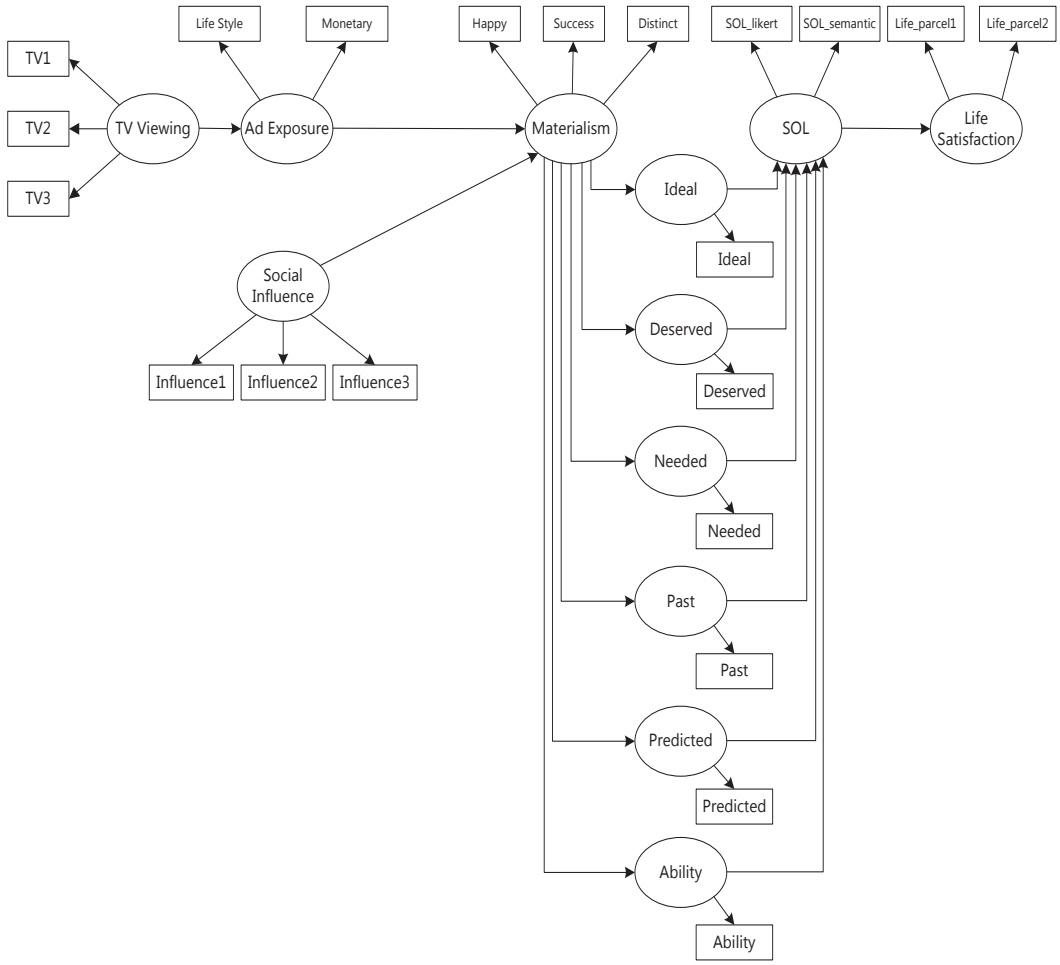
Social influence has also been found to be an antecedent of materialism.[17] Social influence, in this context, can be defined as the impact of family and peers on consumer behavior. Moschis and Moore,[18] for instance, found that family communication structures influence adolescents' materialism levels. Similarly, Churchill and Moschis[19] found that materialism levels of children tended to increase as the frequency of communication with peers increased. Therefore, based on previous studies, it can be said that there is a positive relationship between materialism and social influence. Formally stated:

H5: The stronger the materialism the greater the social influence.

4. OVERALL HYPOTHESIZED MODEL

Our overall hypothesized model builds on Sirgy's[20] theory of materialism by integrating TV viewership, exposure to materialistic advertising and social influence into a more comprehensive model. Specifically, it is hypothesized that TV viewership contributes significantly to the exposure to materialistic advertising. Exposure to materialistic advertising, in addition to the social influence on buying behavior, contributes significantly to materialism. Materialism, in turn, contributes to setting affective-based (inflated and unrealistic) expectations of the standard of living. Materialism and inflated, unrealistic expectations are negatively related to the satisfaction with the standard of living (SOL). Satisfaction with SOL, on the other hand, contributes to life satisfaction. The conceptual model depicting these hypothesized relationships is shown in Figure 1.

Figure 1: The conceptual model linking TV viewership with life satisfaction method



To test the conceptual model depicted in Figure 1, a consumer survey was conducted in a major city in Bosnia-Herzegovina. First, consistent with Anderson and Gerbing's[21] 2-step method, the measurement model was estimated in the first step. Then, in the second step, the structural model was estimated and modified. LISREL 8.80[22] was used to analyze the covariance matrices in all analyses.

5. SAMPLE

The data were collected from 301 adults in Bosnia-Herzegovina in 2007. Cluster sampling technique was used to collect the data. Specifically, the city was divided into neighborhoods and these neighborhoods were categorized as high-, medium- and low-income. After selecting two sample neighborhoods from each category, the researcher used the systematic random sampling to collect survey data. Once a potential respondent agreed to complete the questionnaire, the researcher made arrangements to pick up the questionnaires 4-7 days later. One hundred and one, 100 and 100 questionnaires were collected from low-, medium- and high-income neighborhoods, respectively. Of 301 respondents, 120 (39.9%) were men, 180 (59.8%) were women and gender was missing for one participant. The age of respondents

ranged from 18 to 84, with a mean of 36.36. The percentage of missing data was less than 5% for each variable, with the missing data randomly distributed. Therefore, it was handled by using the maximum likelihood estimation.

5.1. Measures

TV viewership. To measure TV viewership, three questions were adapted from Churchill and Moschis.[23] Two questions assessed how many hours per day respondents spent watching television during week days and at the week-end. The response sets included 17 responses, ranging from 0 to 16+ hours. The third question assessed how many hours in total they watched television per week and the response set included seven categories.

Exposure to materialistic advertising. Participants were instructed to think about their image of most of the ads they had noticed about consumer goods and services in the previous few weeks. Then, they were asked to describe their images of those ads along the following attributes on a 7-point scale: high status/low status; affluent/non-affluent; high prestige/low prestige; high class/low class; extraordinary/ordinary; glamorous/non-glamorous; luxurious/non-luxurious; expensive/not-expensive; for the rich/for the poor; and snobbish/non-snobbish. The first five attributes reflect lifestyles while the second half reflects the monetary values of goods/services. Therefore, this construct was considered a two-factor correlated construct. Indeed, an exploratory factor analysis and a confirmatory factor analysis verified the 2-factor structure (Satorra-Bentler scaled $\chi 2$ (34, N = 301) = 67.17, $p < .001$; CFI = .99; SRMR = .044; and RMSEA = .057).

Social influence. Social influence was conceptualized as the impact of friends and family on buying behavior. It was measured by three questions adapted from Churchill and Moschis[24] on five-point scales (1=all the time, 5=never). These items assessed whether participants talked with their friends and family about buying things and whether they learnt from them what to look for when buying things.

Materialism. Materialism was measured by using nine items[25] with 5-point scales (1=strongly agree, 5=strongly disagree). Materialism was conceptualized as a 3-factor construct: happiness (the belief that material possessions bring happiness to life; e.g. "Having luxury items is important to a happy life."), success (the belief that possessions symbolize achievement and success; e.g. "I feel good when I buy expensive things. People think of me as a success.") and distinctiveness (the belief that possessions make people feel distinctive from others; e.g. "I usually buy expensive things that make me look distinctive.").

Standards of comparison (affective and cognitive-based expectations of the standard of living). We developed the measure of standards of comparison for this study. Respondents were provided with the following prompt: "Most people have strong feelings about their standard of living because they compare their family's current financial situation with different types of standards of comparisons. The questions below are designed to capture the standard of comparison you use in evaluating your family's standard of living." Single items were used to measure each of the six standards of comparison in evaluating the standard of living on ten-point scales, where 1 means "no, my feelings about my standard of living are not based on this standard of comparison" and 10 means "yes, my feelings about my standard of living are based on this standard of comparison."

Satisfaction with the standard of living (SOL). Two sets of questions were developed to measure satisfaction with SOL. The first set included two Likert-type questions. One of the questions asked respondents to describe the current financial situation of their immediate family (1=very poor; 5=very healthy) while the other question probed the feelings of respondents about their family's current financial situa-

tion (1=very bad; 5=very good). The second set included five semantic differential items.[26] Specifically, participants were asked to report their feelings about the things their family owns, their family's standard of living and their family's financial situation overall on a seven-point scale (happy/angry; good/bad; elated/tense; contented/frustrated; fulfilled/disappointed; and pleased/displeased.

Life satisfaction. To measure life satisfaction, a short version of the Campbell, Converse and Rodgers[27] scale was used. Participants were asked to rate their life on the following seven items by using seven-point scales: boring/interesting; enjoyable/miserable; useless/worthwhile; full/empty; discouraging/helpful; disappointing/rewarding; and brings the best in me/doesn't give me much chance.

Item parceling: Before conducting the analyses, parceling was used on the four sets of measures: exposure to materialistic advertising, materialism, satisfaction with SOL and life satisfaction. Based on Bagozzi and Heatherton's[28] advice, at least two parcels were created for each construct to account for measurement error. Since exposure to materialistic advertising is considered as a two-factor construct, the indicators of each factor were summed to develop two parcels. Similarly, each dimension of materialism constituted a parcel. That is, materialism was represented by three parcels. Satisfaction with SOL, on the other hand, was represented by two parcels. One parcel included Likert-type items while the other parcel included six semantic differential items. To develop the item parcels for life satisfaction and goal orientation, these two measures were subjected to the one-factor model separately. Then, the items were rank ordered based on their loadings on this factor, and assigned to one of the two groups to provide the item-to-construct balance.[29] That is, the average loadings of each item parcel on the factor were approximately equal. These item parcels were used in subsequent analyses.

6. RESULTS

6.1. Measurement Model Results

Prior to conducting the CFA, normality of the observed variables was examined. Some of the variables had high skewness and kurtosis values. Even though the maximum likelihood (ML) estimation method is considered to be very robust even with highly skewed/kurtosis data, West, Finch and Curran[30] argue that ML produces a too high chi-square statistic and leads to rejecting too many true models when the variables are highly non-normal. To deal with this problem, the Satorra-Bentler[31] correction was reported in all analyses.

To estimate the measurement model, the constructs were modeled as freely correlated first-order factors with their respective indicators. The Anderson and Gerbing[32] convention was followed to fix the loadings and measurement errors of the item parcels. First, composite reliabilities for each item parcel were computed. Then, the highest composite reliability for a given construct was chosen. For instance, materialism had three parcels (i.e. happiness, success and distinctiveness) and composite reliabilities for each of these parcels were .899, .924 and .929, respectively. Because distinctiveness had the highest value, the loading of distinctiveness on materialism was set equal to the square root of its composite reliability. Lastly, the measurement error of distinctiveness was set to one minus its composite reliability. The same procedure was followed for exposure to materialistic advertising, satisfaction with SOL and life satisfaction. For the constructs with single indicators (i.e. standard of comparison constructs), the loadings were set to unity and measurement errors were set to .25, which was the smallest measurement error value found for the other, estimated error variances.[33]

The Satorra-Bentler scaled chi-square value was 306.83 with 163 degrees of freedom and it was

significant at .001. Even though the chi-square statistic was significant, other goodness of fit statistics suggested a close fit to the data, with the root mean square error of approximation (RMSEA[34]) = .054 (confidence interval = .045 - .063, PCLOSE = .22), Bentler's[35] comparative fit index (CFI) = .96 and standardized root mean square residual (SRMR[36]) = .051. Therefore, it was decided that fit was adequate.

The summary of the tests related to the convergent validity (internal consistency) of the constructs and item parcels is included in Table 1. According to Fornell and Larcker,[37] the average variance extracted (AVE) by each construct should be greater than .50 and the composite reliability of a factor should be equal to or greater than .60 to verify convergent validity. As Table 1 shows, the only construct that had AVE of less than .50 was social influence and its AVE was .49. All other AVE values ranged from .55 to .87. Composite reliabilities were greater than .60, with a range of .74 to .94. Similarly, coefficient alphas were high and ranged from .73 to .93, with a mean of .83. Furthermore, all factor loadings were significant at the .05 level. All these results imply that the convergent validity (internal consistency) of the constructs was satisfactory.

To test for discriminant validity, the squares of correlations between any two constructs were compared with the AVE estimates of those two constructs.[38] Because the AVE for each construct was greater than its squared correlation with any other construct, discriminant validity was supported.

Table 1: Internal consistency results (n=301)

	Coefficient Alpha	Composite Reliability	AVE
TV Viewership	0.792	0.839	0.643
Social Influence	0.732	0.737	0.490
Materialistic Ad Exposure		0.843	0.735
Parcel 1: Lifestyles	0.888	0.902	0.650
Parcel 2: Monetary Values	0.868	0.874	0.580
Materialism		0.863	0.683
Parcel 1: Happiness	0.866	0.899	0.750
Parcel 2: Success	0.891	0.924	0.803
Parcel 3: Distinctiveness	0.892	0.929	0.813
Satisfaction with SOL		0.827	0.715
Parcel 1: Likert type questions	.642*	0.900	0.810
Parcel 2: Semantic differential	0.932	0.940	0.730
Life Satisfaction		0.898	0.815
Parcel 1	0.745	0.794	0.563
Parcel 2	0.800	0.826	0.545

Notes. AVE = Average variance explained.
Composite reliability and AVE values for the parcels were calculated from separately conducted confirmatory factor analyses; composite reliability and AVE values for the latent constructs were calculated from the final confirmatory factor analysis that included all constructs.
* Pearson correlation for two items

6.2. Structural Model Results

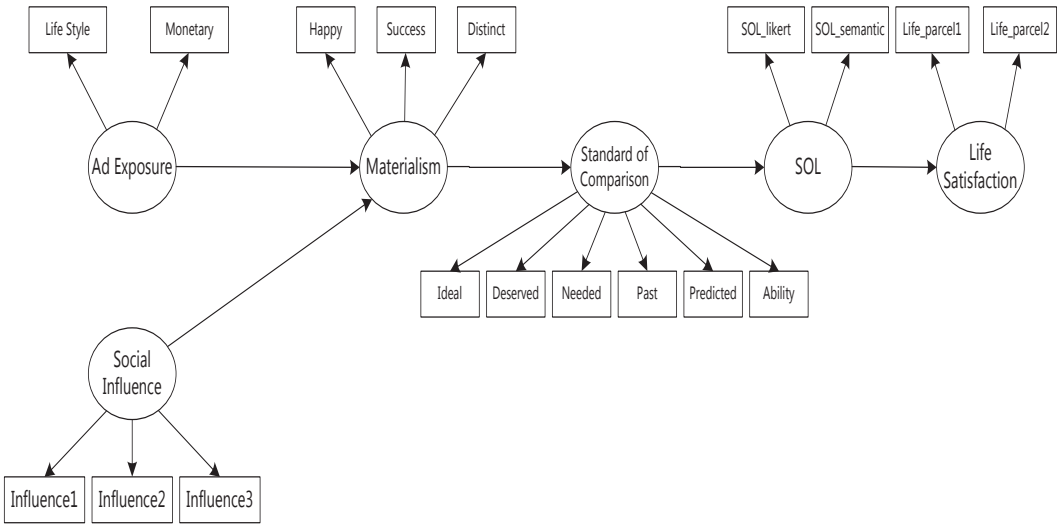
Table 2 presents the results for the original model as shown in Figure 1. As can be seen from the table, the fit of the model to the data was not adequate. The Satorra-Bentler scaled chi-square value was significant and other fit indices were not in acceptable ranges. The results showed that the path from TV viewership to exposure to materialistic advertising was non-significant. Indeed, only 1% of the variance in exposure to materialistic advertising was explained. Therefore, this path was dropped from the analysis by removing the TV viewership construct from the model. As stated in the methods section, standards of comparison constructs were represented by single indicators. An inspection of modification indices revealed that these indicators are interrelated. Moreover, the standardized residuals between these single indicators were large (greater than 2.58), meaning that those residuals were correlated. Furthermore, modification indices for the *psi* matrix (the matrix that includes structural residuals) showed that the residuals of the standard of comparison constructs are correlated. All these findings implied that the constructs have something in common. Indeed, they are all types, or standards, of comparison that people can use to evaluate their standard of living. Theoretically, one can propose that materialistic people use all kinds of comparisons more often than non-materialistic people do. Actually, the signs of the path coefficients from

Table 2: Structural model results

Model Tested	χ^2	df	p	CFI	SRMR	RMSEA (C.I.)
Original Model	867.56	183	.001	.820	.110	.112 (.110 - .112)
Modified Model	355.02	134	.001	.920	.097	.074 (.065 - .084)

Notes. χ^2= Satorra-Bentler Scaled Chi-Square; CFI = Comparative Fit Index; SRMR = Standardized Root Mean Square Residual; RMSEA (C.I.) = Root Mean Square Error of Approximation (Confidence Interval); N=301

Figure 2: Modified model



materialism to each of these standards of comparison were positive. Therefore, it was decided to include a single construct called the standard of comparison in the model and use six types of comparison as indicators of this construct. This model is shown in Figure 2.

The modified model fit the data better with the Satorra-Bentler scaled $\chi 2$ (134, N = 301) = 355.02. Even though the chi-square was significant, it was to be expected given the relatively large sample size. Other goodness of fit statistics were in acceptable ranges: CFI = .92, SRMR = .097 and RMSEA = .074.

Table 3 shows non-standardized parameters with standard deviations, standardized parameters, the critical ratios that were calculated by dividing non-standardized parameters by the estimates of corresponding standard errors and the level of significance (p values) for the parameters. As expected, materialism was affected significantly by both exposure to materialistic advertising and social influence. Approximately, 11% of the variance in materialism was explained by these two variables. Materialism, in turn, explained 10% of the variance in the standard of comparison. The positive path coefficient between these two constructs suggests that as materialism increases, the use of the standards of comparison increases. The standard of comparison, on the other hand, influenced satisfaction with SOL negatively. That is, as people use the standards of comparison to evaluate their SOL more often, they become increasingly dissatisfied with their SOL. Eleven percent of the variance in satisfaction with SOL was explained by the standard of comparison. As predicted, satisfaction with SOL contributed to life satisfaction positively. Twenty-six percent of the variance in life satisfaction was explained by satisfaction with SOL. Overall, general support was found for the modified model.

7. DISCUSSION

Two goals guided the current study. The first goal was to test the theoretical explanation of the negative relationship between materialism and life satisfaction, as provided by Sirgy.[39] After modifying the original model, the results provided a moderately good fit to the data. As expected, all relationships between variables were significant. The study findings did not support Sirgy's explanation but the same findings shed new light on a possible different explanation: the more materialistic people are, the more they seem to use all types of standards of comparison (affective- and cognitive-based expectations) to make judgments about their standard of living. And the more they use these standards of comparison (irrespective of whether the expectations are affective or cognitive), the more they judge their standard of living negatively. The more negative their evaluations of their standard of living, the more dissatisfied they feel with their lives. Of course, we expected that the more materialistic people use affective-based standards of comparison (ideal-, deserved- and mini-

Table 3: Parameter estimates

Path	ML Estimates (Std. Dev.)	Std. ML Estimates	C. R.	p values
Materialistic Ad Exposure → Materialism	0.06 (0.02)	.15	3.00	0.003
Social Influence → Materialism	1.23 (0.29)	.30	4.24	0.001
Materialism → Standard of Comparison	0.26 (0.06)	.31	4.33	0.001
Standard of Comparison → Satisfaction with SOL	-0.53 (0.24)	-.16	-2.21	0.027
Satisfaction with SOL → Life Satisfaction	0.34 (0.05)	.51	6.80	0.001

Notes. ML = Maximum likelihood; Std. Dev. = standard deviation; C.R. = critical ratio

mum-need expectations), the more likely they would be to evaluate their standard of living negatively. But we did not expect the fact that the more they use cognitive-based expectations, the more likely they are to make negative evaluations about their standard of living. We expected the opposite. Perhaps the reality is that the more materialistic people are, the more they preoccupy themselves with all kinds of thoughts related to the standard of living. These thoughts are likely to conjure up all kinds of expectations, both cognitive- and affective-based expectations. And the more they think about their standard of living, the more inflated and unrealistic their expectations become. This may be one explanation for our study findings. Another explanation may be that our standard-of-comparison measures were not sensitive enough to force respondents to make distinctions between cognitive- versus affective-based expectations. Yet another methodological explanation may be a response bias effect. Respondents were biased by the way these measures captured their expectations, and responded in the same manner across all six items designed to capture these expectations. Future research should explore this issue further and conduct studies using more sensitive expectation measures. The expectation measures should be captured with multiple indicators and the placement of these measures should be varied in the survey questionnaire to minimize response bias.

The second goal of this study was to test the explanation that materialism is not directly affected by TV viewership but through exposure to materialistic advertising (controlling for the effects of social influence). The study findings showed that materialism can indeed be predicted significantly by exposure to materialistic advertising and social influence. However, the same data failed to show that TV viewership has any predictive effect on exposure to materialistic advertising. Why did our study fail to replicate previous studies linking TV viewership with materialism? Is it possible that this finding is idiosyncratic (i.e. an outlier)? That is, could it be that television advertising in Bosnia-Herzegovina is significantly different from advertising in other countries (e.g. U.S.) that the frequency of television watching may not influence consumers' recall of recent advertising as being status-oriented? Future research should explore this issue by collecting data across different countries (including Bosnia-Herzegovina) and conduct a cross-cultural analysis.

There are additional study limitations that should be aired. First, all variables were measured concurrently. Therefore, the statistical relationships among the constructs may not reflect causation. Future research should conduct longitudinal studies and perhaps experimental studies, too. Another limitation may be related to the sample. The percentage of females participating in this study was higher than that of males. The study should be replicated with equal percentages of males and females. In addition, all analyses were conducted on a single sample. The findings should be replicated with a new sample. Lastly, the data were collected in Bosnia-Herzegovina, a collectivist country. A cross-validation of results is needed across different cultures so as to include both individualistic and collectivist cultures.

LITERATURE

1. Anderson, J.J., Gerbing, D.W.: Structural equation modeling in practice: A review and recommended two-step approach, **Psychological Bulletin**, Vol. 103, No. 3, 1988, pp. 411-423.
2. Bagozzi, R.P., Heatherton, T.F.: A general approach to representing multifaceted personality constructs: Application to state self-esteem, **Structural Equation Modeling**, Vol. 1, No. 1, 1994, pp. 35-67.

3. Bentler, P.M.: Comparative fit indexes in structural models, **Psychological Bulletin**, Vol. 107, 1990, pp. 238-246.
4. Bentler, P.M.: **EQS structural equations program manual**, Multivariate Software, Encino, CA, 1995.
5. Browne, M.W., Cudeck, R.: Single sample cross-validation indices for covariance structures, **Multivariate Behavioral Research**, Vol. 24, 1989, pp. 445-455.
6. Buijzen, M., Valkenburg, P.M.: The effects of television advertising on materialism, parent–child conflict and unhappiness: A review of research, **Journal of Applied Developmental Psychology**, Vol. 24, No. 4, 2003, pp. 437-456.
7. Campbell, A., Converse, P.E., Rodgers, W.L.: **The quality of American life**, McGraw-Hill Book Company, New York, NY, 1976.
8. Churchill, G.A.Jr., Moschis, G.P.: Television and interpersonal influences on adolescent consumer learning, **Journal of Consumer Research**, Vol. 6, No. 1, 1979, pp. 23-35.
9. Clark, P.W., Martin, C.A., Bush, A.J.: The effect of role model influence on adolescents' materialism and marketplace knowledge, **Journal of Marketing Theory and Practice**, Vol. 9, No. 4, 2001, pp. 27-36.
10. Diener, E., Suh, E., Lucas, R., Smith, H.: Subjective well-being: Three decades of research, **Psychological Bulletin**, Vol. 125, 1999, pp. 276-302.
11. Diener, E.: Subjective well-being, **Psychological Bulletin**, Vol. 75, No. 3, 1984, pp. 542-575.
12. Fornell, C., Larcker, D.F.: Evaluating structural equation models with unobservable variables and measurement errors, **Journal of Marketing Research**, Vol. 18, 1981, pp. 39-50.
13. Goldberg, M.E., Gorn, G.J.: Some unintended consequences of TV advertising to children, **Journal of Consumer Research**, Vol. 5, No. 1, 1978, pp. 22-29.
14. Greenberg, B.S., Brand, J.E.: Television news and advertising in schools: The "Channel One" controversy, **Journal of Communication**, Vol. 43, No. 1, 1993, pp. 143-151.
15. Gurel-Atay, E., Sirgy, M.J.: **Developing a new measure of materialism**, Poster session presented at the annual meeting of the North American Conference of the Association for Consumer Research, Memphis, TN, 2007.
16. Hoyle, R.H. (ed.): **Structural Equation Modeling: Concepts, Issues and Applications**, Sage, Thousand Oaks, CA, 1995.
17. Joreskog, K., Sorbom, D.: **Lisrel 8.80 User's Guide**, Scientific Software International, Lincolnwood, IL, 2006.
18. Kinnear, T.F., Arbor, A. (eds.): **Advances in Consumer Research**, Association of Consumer Research, Vol. 11, 1984.
19. la Barbera, P.A., Gurhan, Z.: The role of materialism, religiosity and demographics in subjective well-being, **Psychology & Marketing**, Vol. 14, No. 1, 1997, pp. 71-97.
20. Little, T.D., Cunningham, W.A., Shahar, G., Widaman, K.F.: To parcel or not to parcel: Exploring the question, weighing the merits, **Structural Equation Modeling**, Vol. 9, No. 2, 2002, pp. 151-173.
21. Moschis, G.P., Moore, R.L.: A longitudinal study of television advertising effects, **Journal of Consumer Research**, Vol. 9, No. 3, 1982, pp. 279-286.
22. Moschis, G.P., Moore, R.L.: Decision making among the young: A socialization perspective, **Journal of Consumer Research**, Vol. 6, No. 2, 1979, pp. 101-112.
23. Ogden, H.J., Venkat, R.: Social comparison and possessions: Japan vs. Canada, **Asia Pacific Journal of Marketing and Logistics**, Vol. 13, No. 2, 2001, pp. 72-84.

24. Pine, K.J., Nash, A.: Dear Santa: The effects of television advertising on young children, **International Journal of Behavioral Development**, Vol. 26, No. 6, 2002, pp. 529-539.
25. Rahtz, D., Sirgy, M.J., Meadow, H.L.: Correlates of television orientation among the elderly, **Journal of Advertising**, Vol. 18, No. 1989, pp. 9-20.
26. Richins, M.L., Dawson, S.: A consumer values orientation for materialism and its measurement: Scale development and validation, **Journal of Consumer Research**, Vol. 19, No. 3, 1992, pp. 303-316.
27. Richins, M.L.: The material values scale: Measurement properties and development of a short form, **Journal of Consumer Research**, Vol. 31, No. 1, 2004, pp. 209-219.
28. Russell, D.W., Kahn, J.H., Spoth, R., Altmaier, E.M.: Analyzing data from experimental studies: A latent variable structural equation modeling approach, **Journal of Counseling Psychology**, Vol. 45, No. 1, 1998, pp. 18-29.
29. Satorra, A., Bentler, P.M.: Scaling corrections for chi-square statistics in covariance structure analysis, **Proceedings of the Business and Economic Statistics**, American Statistical Association, Alexandria, VA, 1988.
30. Sirgy, M.J., Lee, D-J., Kosenko, R., Meadow, H.L., Rahtz, D., Cicic, M., Jin, G.X., Yarsuvat, D., Blenkhorn, D., Wright, N.D.: Does television viewership play a role in the perception of quality of life?, **Journal of Advertising**, Vol. 27, No. 1, 1998, pp. 125-142.
31. Sirgy, M.J., Lee, D-J., Larsen, V., Wright, N.D.: Satisfaction with material possessions and general well-being: The role of materialism, **Journal of Consumer Satisfaction/Dissatisfaction and Complaining Behavior**, Vol. 11, 1998, pp. 103-118.
32. Sirgy, M.J.: Materialism and quality of life, **Social Indicators Research**, Vol. 43, 1998, pp. 227-260.
33. Steiger, J.H., Lind, J.C.: Statistically based tests for the number of factors, **Annual spring meeting of the Psychometric Society**, Iowa City, IA, 1980.

References

1 Sirgy, M.J.: Materialism and quality of life, **Social Indicators Research**, Vol. 43, 1998, pp. 227-260.
2 Richins, M.L.: The material values scale: Measurement properties and development of a short form, **Journal of Consumer Research**, Vol. 31, No. 1, 2004, pp. 210.
3 Ia Barbera, P.A., Gurhan, Z.: The role of materialism, religiosity and demographics in subjective well-being, **Psychology & Marketing**, Vol. 14, No. 1, 1997, pp. 71-97.
4 Belk, R.W.: Three scales to measure constructs related to materialism: Reliability, validity and relationships to measure of happiness - In: Kinnear, T.F., Arbor, A. (eds.): **Advances in Consumer Research**, Association of Consumer Research, Vol. 11, 1984, pp. 291-297.
5 Richins, M.L., Dawson, S.: A consumer values orientation for materialism and its measurement: Scale development and validation, **Journal of Consumer Research**, Vol. 19, No. 3, 1992, pp. 303-316.
6 Sirgy, M.J., Lee, D-J., Larsen, V., Wright, N.D.: Satisfaction with material possessions and general well-being: The role of materialism, **Journal of Consumer Satisfaction/Dissatisfaction and Complaining Behavior**, Vol. 11, 1998, pp. 103-118.

7 Sirgy, M.J.: op. cit., pp. 227-260.
8 Goldberg, M.E., Gorn, G.J.: Some unintended consequences of TV advertising to children, **Journal of Consumer Research**, Vol. 5, No. 1, 1978, pp. 22-29.; Greenberg, B.S., Brand, J.E.: Television news and advertising in schools: The "Channel One" controversy, **Journal of Communication**, Vol. 43, No. 1, 1993, pp. 143-151.; Rahtz, D., Sirgy, M.J., Meadow, H.L.: Correlates of television orientation among the elderly, **Journal of Advertising**, Vol. 18, No. 1989, pp. 9-20.
9 Sirgy, M.J., Lee, D-J., Larsen, V., Wright, N.D.: op. cit., pp. 103-118.
10 Moschis, G.P., Moore, R.L.: A longitudinal study of television advertising effects, **Journal of Consumer Research**, Vol. 9, No. 3, 1982, pp. 279-286.; Buijzen, M., Valkenburg, P.M.: The effects of television advertising on materialism, parent–child conflict and unhappiness: A review of research, **Journal of Applied Developmental Psychology**, Vol. 24, No. 4, 2003, pp. 437-456.; Pine, K.J., Nash, A.: Dear Santa: The effects of television advertising on young children, **International Journal of Behavioral Development**, Vol. 26, No. 6, 2002, pp. 529-539.
11 Sirgy, M.J.: op. cit., pp. 227-260.
12 Diener, E.: Subjective well-being, **Psychological Bulletin**, Vol. 75, No. 3, 1984, pp. 542-575.
13 Diener, E., Suh, E., Lucas, R., Smith, H.: Subjective well-being: Three decades of research, **Psychological Bulletin**, Vol. 125, 1999, pp. 276-302.
14 Goldberg, M.E., Gorn, G.J.: op. cit., pp. 22-29.; Greenberg, B.S., Brand, J.E.: op. cit., pp. 143-151.; Rahtz, D., Sirgy, M.J., Meadow, H.L.: op. cit., pp. 9-20.
15 Sirgy, M.J., Lee, D-J., Larsen, V., Wright, N.D.: op. cit., pp. 103-118.
16 Moschis, G.P., Moore, R.L.: op. cit., pp. 279-286.; Buijzen, M., Valkenburg, P.M.: op. cit., pp. 437-456.; Pine, K.J., Nash, A.: op. cit., pp. 529-539.
17 Churchill, G.A.Jr., Moschis, G.P.: Television and interpersonal influences on adolescent consumer learning, **Journal of Consumer Research**, Vol. 6, No. 1, 1979, pp. 23-35.; Clark, P.W., Martin, C.A., Bush, A.J.: The effect of role model influence on adolescents' materialism and marketplace knowledge, **Journal of Marketing Theory and Practice**, Vol. 9, No. 4, 2001, pp. 27-36.
18 Moschis, G.P., Moore, R.L.: Decision making among the young: A socialization perspective, **Journal of Consumer Research**, Vol. 6, No. 2, 1979, pp. 101-112.
19 Churchill, G.A.Jr., Moschis, G.P.: op. cit., pp. 23-35.
20 Sirgy, M.J.: op. cit., pp. 227-260.
21 Anderson, J.J., Gerbing, D.W.: Structural equation modeling in practice: A review and recommended two-step approach, **Psychological Bulletin**, Vol. 103, No. 3, 1988, pp. 411-423.
22 Joreskog, K., Sorbom, D.: **Lisrel 8.80 User's Guide**, Scientific Software International, Lincolnwood, IL, 2006.
23 Churchill, G.A.Jr., Moschis, G.P.: op. cit., pp. 23-35
24 Ibid.
25 Gurel-Atay, E., Sirgy, M.J.: **Developing a new measure of materialism**, Poster session presented at the annual meeting of the North American Conference of the Association for Consumer Research, Memphis, TN, 2007.
26 Ogden, H.J., Venkat, R.: Social comparison and possessions: Japan vs. Canada, **Asia Pacific Journal of Marketing and Logistics**, Vol. 13, No. 2, 2001, pp. 72-84.
27 Campbell, A., Converse, P.E., Rodgers, W.L.: **The quality of American life**, McGraw-Hill Book Company, New York, NY, 1976.
28 Bagozzi, R.P., Heatherton, T.F.: A general approach to representing multifaceted personality constructs: Application to state self-esteem, **Structural Equation Modeling**, Vol. 1, No. 1, 1994, pp. 35-67.
29 Little, T.D., Cunningham, W.A., Shahar, G., Widaman, K.F.: To parcel or not to parcel: Exploring the question, weighing the merits, **Structural Equation Modeling**, Vol. 9, No. 2, 2002, pp. 151-173.;

Russell, D.W., Kahn, J.H., Spoth, R., Altmaier, E.M.: Analyzing data from experimental studies: A latent variable structural equation modeling approach, **Journal of Counseling Psychology**, Vol. 45, No.1, 1998, pp. 18-29.

30 West, S.G., Finch, J.F., Curran, P.J.: Structural equation models with nonnormal variables: problems and remedies - In: Hoyle, R.H. (ed.): **Structural Equation Modeling: Concepts, Issues and Applications**, Sage, Thousand Oaks, CA, 1995, pp. 56-75.

31 Satorra, A., Bentler, P.M.: Scaling corrections for chi-square statistics in covariance structure analysis, **Proceedings of the Business and Economic Statistics**, American Statistical Association, Alexandria, VA, 1988.

32 Anderson, J.J., Gerbing, D.W.: op. cit., pp. 411-423.

33 Ibid.

34 Steiger, J.H., Lind, J.C.: Statistically based tests for the number of factors, **Annual spring meeting of the Psychometric Society**, Iowa City, IA, 1980; Browne, M.W., Cudeck, R.: Single sample cross-validation indices for covariance structures, **Multivariate Behavioral Research**, Vol. 24, 1989, pp. 445-455.

35 Bentler, P.M.: Comparative fit indexes in structural models, **Psychological Bulletin**, Vol. 107, 1990, pp. 238-246.

36 Bentler, P.M.: **EQS structural equations program manual**, Multivariate Software, Encino, CA, 1995.

37 Fornell, C., Larcker, D.F.: Evaluating structural equation models with unobservable variables and measurement errors, **Journal of Marketing Research**, Vol. 18, 1981, pp. 39-50.

38 Ibid.

39 Sirgy, M.J.: op. cit., pp. 227-260.

Remark: