

## **Study of social influence of publicity with Principal Components Analysis**

**Sofia D. Anastasiadou**

University of Western Macedonia  
30 km Florinas Nikis, 53100, Florina, Greece  
E-mail: sanastasiadou@uowm.gr, Phone: 00302310416056

**Thanasis Vafeiadis**

Aristotle University of Thessaloniki  
Greece  
E-mail: thanosb@math.auth.gr

### **Abstract**

*Most models of consumer behaviour referred to the social influence of advertising as a key factor in the decision regarding the purchase of goods. "Advertising is a communication tool and its basic objective is to inform the public of goods, services, opinions or ideas. The presentation and disclosure of all the above to the public can happen through a media which is paid by the advertiser" (Gillian, 1982). The purpose of this investigation for the study of social influence of advertising is to examine how the social reality can be determined, to integrate the consumer into a rich and complex web of social prestige and symbolic meanings (Jually, 1997) and contributes the perpetuation and reproduction of the social status quo. For the purpose of the survey distributed to students at the TEI of Thessaloniki questionnaire was validated for both reliability and its validity. The analysis of survey data, we used the Principal Components Analysis. The results show that when the social dimensions incorporated into ads, these can be more effective. This is the reason why this work attempts to analyze in depth the implications of the influence of social context on consumer behaviour.*

### **1. Presentment of the issue**

Advertising is a form of communication intended to persuade an audience (viewers, readers or listeners) to purchase or take some action upon products, ideals, or services. It includes the name of a product or service and how that product or service could benefit the consumer, to persuade a target market to purchase or to consume that particular brand. These brands are usually paid for or identified through sponsors and viewed via various media. Advertising can also serve to communicate an idea to a mass amount of people in an attempt to convince them to take a certain action, such as encouraging 'environmentally friendly' behaviors, and even unhealthy behaviors through food consumption, video game and television viewing promotion, and a "lazy man" routine through a loss of exercise. Modern advertising developed with the rise of mass production in the late 19th and early 20th centuries.

Mass media can be defined as any media meant to reach a mass amount of people. Several types of mass media are television, internet, radio, news programs, and published pictures and articles. These brands are usually paid for or identified through sponsors and viewed via various media. Advertising can also serve to communicate an idea to a mass amount of people in an attempt to convince them to take a certain action, such as encouraging 'environmentally friendly' behaviors, and even unhealthy behaviors through food consumption, video game and television viewing promotion, and a "lazy man" routine through a loss of exercise. Modern advertising developed with the rise of mass production in the late 19th and early 20th centuries. Mass media can be defined as any media meant to reach a mass amount of people. Several types of mass media are television, internet, radio, news programs, and published pictures and articles (<http://en.wikipedia.org/wiki/Advertisement#References>). According to Gillian (1982), "Advertising is a communication tool, with main objective to inform the public for goods, services, opinions or ideas.

The presentation and disclosure of all this is to the public takes place through some mass media which is paid by the advertiser ". Konstantopoulou (1995), refers that today the power of advertising is such an extent that not only presents a product to the general public, but also affects significantly public opinion by creating models, ideologies, models and requires a common way of life. For this reason, this research aims to detect beliefs, opinions, perceptions and attitudes of students taking into account the effects created by the advertising and promotional messages to specific social systems. Also, aims to measure the effects of advertisement on social structures as creation of symbols, stereotypes, patterns, trends, classes, values, and also ideologies.

Moreover, measures other social aspects in conjunction with advertisement influences like the creation of negative stereotypes for the female gender, the quality of social relations, the promotion of a common and verifiable social culture, the alignment and the integration of people and groups into a specific stereotype and the creation of false bliss due to multiple needs. Some other aspects that are measured are the satisfaction of students on purchasing requirements to determine the level of prosperity and their social class, the perpetuation and reproduction of the social status quo and finally the promotion of social competition.

## **2. Purpose of the study**

This study has the following objectives.

1. The Attitudes toward social influence of publicity consists of 5 factors-domains (A factor of a latent economic bliss, A perpetuator and reproduction factor of the social status quo, A factor that create negative stereotypes of the female gender and values and standards, A social control factor, A informative communication factor).
2. Could students' attitudes towards social influence of publicity be influenced by gender?
3. Can the department of studies have a substantial effect on students' attitudes toward social influence of publicity?
4. Can the year of studies have a substantial effect on students' attitudes toward social influence of publicity?
5. Can the place of origin of students have a serious effect on students' attitudes toward social influence of publicity?
6. Can the parents' level of education have a serious influence on students' attitudes toward of social influence of publicity?
7. Can the parents' occupation have a serious influence on students' attitudes toward of social influence of publicity?

## **3. Hypotheses**

Additionally, the research project also examined the following 8 hypotheses:

- H1: Attitudes toward social influence of advertisement are not influenced by gender.  
 H2: Attitudes toward social influence of publicity are not influenced by the studies department.  
 H3: Attitudes toward social influence of publicity are not influenced by the year of studies.  
 H4: Attitudes toward social influence of publicity are not influenced by the place of origin.  
 H5: Attitudes toward social influence of publicity are not influenced by father' occupation.  
 H6: Attitudes toward social influence of publicity are not influenced by mother' occupation.  
 H7: Attitudes toward social influence of publicity are not influenced by father' level of education.  
 H8: Attitudes toward social influence of publicity are not influenced by mother' level of education.

## **4. The sample of research**

313 students of the Technological Institute of Thessaloniki in Greece participated in the research. From the 313 asked students, the 146 (46.6%) were boys and the 167 (53.4%) were girls. 57 students (18.2%) study at computer department, 152 (48.6%) at logistics department, 22(7%), at nursery department 44(14.1) commercial and publicity department and 38 (12.1%) fitikis production. 121 (38.7%) are in the first years of studies, 88 (28.1%) are in the second, 73 (23.3%) in the third year and finally 31 (9.9%) in the fourth year of studies. Regarding the residency of students, 29 (9.3%) have permanent residence in Athens and Thessaloniki, 60 (19.2%) in a capital district, 121 (38.7%) in suburban areas and finally 103 (32.9%) in rural areas.

In the factor of father's profession 26 students (8.3%) reported that their father is a freelance - scientist, 98 (31.3%) is a civil servant, 41 (13.1%) is a private employee, 54 (17.3%) a freelance - craftsman, 15 (4.8%) a merchant, 25 (8%) labour and 54 (17.3%) a farmer.

In the factor of mother's profession 15 students (4.8%) reported that their mother is a freelance - scientist, 31 (9.9%) that is a civil servant, 146 (46.6%) is a private employee, 22 (7%) a freelance - craftsman, 3 (1%) a merchant, 6 (1.9%) labour and 90 (28.8%) a farmer.

Regarding the educational level of the father, 1 (0.3%) student reported that his father graduated from elementary, 136 (43.5%) reported that are graduates from secondary school, 87 (28.7%) that their father is a graduate from high level education ( eg TEI, etc.), 88 (28.1%) had higher education and finally 1 (0.3%) that holds a postgraduate degree. Regarding the educational level of the mother, 173 (55.3%) students reported that their mother are graduates from secondary school, 124 (39.6%) that their mother is a graduate from high level education (eg TEI, etc.) and 16 (5.1%) reported that their mother had higher education.

## **5. The Questionnaire**

The SATSIP (The Students' Attitude toward social influence of publicity) questionnaire is intercultural, meaning that it can be applied in different cultural environments, provided that it is not revoked by local cultural peculiarities.

It consists of a total of 41 questions, 33 of which are related to the attitudes of students and the other 8 are of demographic and informational character. Each item of the 30 is rated on a seven-point Likert scale ranging from 'strongly disagree' through 'neither disagree nor agree' to 'strongly agree'. The authors identified a wide range of attitudes relevant to social influence of publicity and then identified five dimensions into which they could be classified:

- 1) A factor of a latent economic bliss (8 items), (e.g. Advertisement is a communication tool, which is essential to inform the public about different opinions or ideas.),
- 2) A perpetuator and reproducer factor of the social status quo (8 items), (e.g. Advertisement points public to specific lifestyles).
- 3) A factor that create negative stereotypes of the female gender and values and standards (10 items), (e.g. Advertisement helps in creation of negative stereotypes for the female sex),
- 4) A social control factor, (5 items) (e.g. Advertisement is a reflection of society), and
- 5) A informative communication factor (2 items) (e.g. communication tool, which has as main purpose to inform the public about various services).

## 6. Research Methodology

*Principal Components Analysis:* The sample was 313 Greek students from the region of Western Macedonia. The sample size is very satisfactory since it is more than ten times the number of questions in the questionnaire (Hair et al., 1995; Coakes et al., 1999). Principal Components Analysis (Kim et al., 1978, Norusis 1992) was applied in order to test the factorial validity (Carmines et al., 1979, Bryant 2000) of the structure or construction of the proposed measurement scale. Axes rotation was carried out by using the Varimax method (maximum variance rotation) (Siardos, 1999). This means that the factors (components) that were extracted are linearly uncorrelated. The criterion of the eigenvalue or characteristic root (Eigenvalue)  $\geq 1$  was used to determine the number of factors that were maintained (Sharma 1996, Hair et al., 1995). Principal components analysis (PCA) with Varimax rotation was employed in order to determine whether the factors agree with the theoretical model.

The following measures of sampling adequacy were used: a) Kaiser-Meyer-Olkin (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) (KMO) measures in order to test whether the data were adequate to undergo factor analysis, and b) Bartlett's test of sphericity (Bartlett's test of Sphericity), which tests whether the correlation matrix of the variables participating in the analysis presents significant differences, in terms of statistics, compared to the unit matrix, and therefore data analysis would be useful.

S.P.S.S. version 11.5 was used for the statistical processing of the research data. In all analyses the significance level was set at 5%, namely level  $p=0.05$ , except in the test of sphericity, where the significance level was set at 1%, namely level  $p=0.01$ . In order to determine whether the construction of the measurement tool actually follows the theoretical model, three criteria are taken into consideration (Anastasiadou, 2001, Triporas et al., 2000):

Questions with high factor loadings are taken into consideration upon the construction and interpretation of axes.

Questions with factor loadings over 0.30 are used and taken into consideration upon the construction and interpretation of axes.

Questions with high factor loadings on two factors are excluded.

## 7. Results

$KMO=0.867 > 0.60$  measure of sampling adequacy showed that the sample data were adequate in order to undergo factor analysis and Bartlett's test of sphericity ( $sign < 0.01$ ) also showed that principal components analysis (Bartlett) is useful. Through this analysis the data were grouped based on the correlation between them, with the aim of indicating those factors that more fully describe students' attitudes for the scope of the research. More specifically, the scree plot (see Figure 1), shows the representation of the eigenvalues and points to the identification of trustworthy agents. Also, shows that there is a distinct break between the steep slope of factors with high prices and the almost smooth segment of factors with much lower prices. The nonlinear part of the curve of eigenvalues competes the linear part in the fifth factor. Thus, taking into account the eigenvalues, which for all five factors is more than one (7.508, 2.399, 2.092, 1.467 and 1.394 for the 1st, 2nd, 3rd, 4th and 5th, respectively), it is clear that the data be interpreted satisfactorily, which also means that we have a five factor model (see Table 1). In particular, in Table 1 shows that each variable in the cluster of the corresponding factor should be loaded on it more than 0.50 and each factor has more than two variables. Moreover, the joint factorial variations (Communalities) of variables, which are quite large, seem to have great offer in factorial model. Thus, based on the analysis (see Table 1 and Figure 1), 5 uncorrelated factors occurred, which explain 90.9% of the total data inactivity, and which are described separately further on.

**Insert Figure (1) about here**

The coefficient of reliability (Crobach's  $\alpha$ ) is statistically significant and equals to 79.03%, 78.51%, 73.72%, 75.36% and 68.27% for 1o, 2o, 3o, 4o and 5o factorial axis, respectively. Lastly, the values of common factor variance (Communality) for each question show us that most have a value greater than 0.50, a fact that indicates the satisfactory quality of measurements by the component model – three-factor model (Hair et al., 1995). Specifically, factor analysis reveals that the first axis (F1 factor) explains, after Varimax rotation, that the 28.5% of total variance is loaded mainly by the questions Q3, Q18, Q10, Q24, Q11, Q7, Q25 and Q16. The F1 factor reflects the views of students regarding the social influence of advertising. According to F1 factor advertising is a communication tool, which is essential to inform the public about different views or ideas, is closely tied to cultural urbanization and the ability to satisfy a consumer need (which sets both prosperous and social class). In addition, the students answer reveal that advertising is inextricably linked to competition from producers, determines the social reality, treat the product to a social model through the creation of stereotypes, and helps to create a latent economic bliss. Thus, F1 factor indicates advertising as a communication tool of a latent economic bliss. The reliability of this factor is  $\alpha = 0.7903$  and that is quite satisfactory.

The second axis (F2 factor), which explains the 19.3% of total variance, is loaded mainly by the questions Q6, Q5, Q8, Q4, Q29, Q12, Q30 and Q9. The F2 factor also reflects the views of students regarding the social influence of advertising. According to that, students generally believe that advertising can point to a common way of life, affects significantly public opinion by creating ideologies contributes to the perpetuation and reproduction of the social status quo. Also affects public opinion by creating standards and clearly is not independent from social system and moreover is inextricably linked to globalization, creates cultures that influence the social structure and finally is inseparable from the development of industrial production. The reliability of this factor is  $\alpha = 0.7851$  and that is also satisfactory.

The third axis (F3 factor), which explains the 17.6% of total variance, is loaded mainly by the questions Q20, Q22, Q28, Q21, Q27, Q14, Q26, Q15, Q17 and Q23. F3 factor refers to the students' views on whether the social influence of advertising act decisively in the consumer behaviour. According to F3 factor, students believe that advertising helps to create negative stereotypes of the female gender and also affects the quality of social relationships because it makes reckless exploitation of the female body for commercial purposes. In addition, incorporates the consumer in a rich and complex web of social recognition, and using gender stereotypes is quite effective (the use of stereotypes is related to the effectiveness of advertisement). Also, the students argue that not only advertisement contributes to the increase of competition but also creates groups with common attitudes, values and standards. Thus, this factor is named negative stereotypes of the female gender and values and standards factor. The reliability of this factor is  $\alpha = 0.7372$  and that is also satisfactory.

The fourth axis (F4 factor), which explains the 13.3% of total variance, is loaded mainly by the questions Q33, Q32, Q31, Q13 and Q19. F4 factor outlines the views of students about the impact of the influence of advertisement on society. According to these views, advertisement is a reflection of society and a means to reconstruct the mirror. The social structure affects the culture of advertising and turns it into a tool of social control in order to create fictitious needs to people. This factor is named a social control factor. The reliability of this factor is  $\alpha = 0.7536$  and that is also satisfactory. The fifth and final axis (F5 factor), which explains the 11.2% of total variance, is loaded only by the questions Q1 and Q2. F5 factor refers to the positive role of advertisement. Thus, advertisement is classified as a communication tool, which has as main purpose to inform the public about various services and goods.

Table 1

## 8. Hypothesis Tests

For the purpose of the hypothesis tests, we performed a MANOVA (MANOVA-Multivariate Analysis of Variance) (Hair et al. 1995, Sharma 1996), followed by univariate analysis of variance (ANOVA-Analysis of Variance) in the framework of the General Linear Models (Kirk 1995, Mendenhall et al., 1996, Kuehl 2000).

### 8.1. Attitudes toward social influence of publicity and gender

The analysis showed that there is a statistically significant difference, at a significance level of  $\alpha=0.05$ , between the attitudes toward social influence of publicity experienced by the two sexes in the F1 factor ( $F=16.174$ ,  $p=0.016 < \alpha=0.05$ ), namely advertising is a factor of a latent economic bliss, the F2 factor ( $F=10.957$ ,  $p=0.016 < \alpha=0.05$ ), namely perpetuator and reproducer factor of the social status quo, the F3 factor ( $F=8.655$ ,  $p=0.015 < \alpha=0.05$ ), namely negative stereotypes of the female gender and values

and standards factor, the F4 factor ( $F=8.654, p=0.016 < \alpha=0.05$ ) namely social control factor, as well as in the F5 factor ( $F=10.456, p=0.014 < \alpha=0.05$ ), namely informative and communicative tool factor.

### **8.2. Attitudes toward social influence of publicity and studies department**

The analysis showed that there are statistically significant differences between the categories of studies department for factor F1 ( $F=13.432, p=0.000 < \alpha=0.05$ ), which refers to the Attitudes toward the role of advertising as a factor of a latent economic bliss, for factor F2 ( $F=11.543, p=0.001 < \alpha=0.05$ ), which refers to the Attitude toward the perpetrator and reproducer factor of the social status quo, for factor F3 ( $F=12.543, p=0.001 < \alpha=0.05$ ), which refers to the Attitude toward negative stereotypes of the female gender and values and standards that are created by advertisement, for factor F4 ( $F=14.321, p=0.001 < \alpha=0.05$ ), which refers to the Attitude toward advertisement as social control factor and as finally for factor F5 ( $F=13.745, p=0.001 < \alpha=0.05$ ), which refers to the Attitude toward advertisement as an informative communication tool.

### **8.3. Attitudes toward social influence of publicity and year of studies**

The analysis showed that there are statistically significant differences between the categories of year of studies, at a significance level of  $\alpha=0.05$ , between the attitudes toward social influence of publicity for the F1 factor ( $F=16.174, p=0.016 < \alpha=0.05$ ), namely advertising is a factor of a latent economic bliss, the F2 factor ( $F=10.957, p=0.016 < \alpha=0.05$ ), namely the perpetrator and reproducer factor of the social status quo, for the F3 factor ( $F=8.655, p=0.015 < \alpha=0.05$ ), namely negative stereotypes of the female gender and values and standards factor, the F4 factor ( $F=8.654, p=0.016 < \alpha=0.05$ ) namely social control factor, as well as in the F5 factor ( $F=10.456, p=0.014 < \alpha=0.05$ ), namely informative and communicative tool factor.

### **8.4. Attitudes toward social influence of publicity and hometown-residence**

The analysis showed that there are statistically significant differences between the categories hometown-residence for factor F1 ( $F=12.625, p=0.001 < \alpha=0.05$ ), which refers to the role of advertising as a factor of a latent economic bliss, for factor F2 ( $F=13.975, p=0.012 < \alpha=0.05$ ), which refers to the Attitude toward perpetrator and reproducer factor of the social status quo, for factor F3 ( $F=8.754, p=0.012 < \alpha=0.05$ ), which refers to the Attitude toward negative stereotypes of the female gender and values and standards that are created by advertisement, for factor F4 ( $F=10.675, p=0.001 < \alpha=0.05$ ), which refers to social control factor and finally for factor F5 ( $F=11.104, p=0.001 < \alpha=0.05$ ), which refers to the Attitude toward advertisement as an informative communication tool.

### **8.5. Attitudes toward social influence of publicity and father' level of education**

The analysis showed that there are statistically significant differences between the categories of father' level of education for factor F1 ( $F=13.736, p=0.000 < \alpha=0.05$ ), which refers to the Attitudes toward the role of advertising as a factor of a latent economic bliss, for factor F2 ( $F=12.619, p=0.000 < \alpha=0.05$ ), which refers to the Attitude toward the perpetrator and reproducer factor of the social status quo, for factor F3 ( $F=11.083, p=0.000 < \alpha=0.05$ ), which refers to the Attitude toward negative stereotypes of the female gender and values and standards that are created by advertisement, for factor F4 ( $F=10.382, p=0.001 < \alpha=0.05$ ), which refers to the Attitude toward advertisement as social control factor and finally for factor F5 ( $F=13.693, p=0.000 < \alpha=0.05$ ), which refers to the Attitude toward advertisement as an informative communication tool.

### **8.6. Attitudes toward social influence of publicity and mother' level of education**

The analysis showed that there are statistically significant differences between the categories of mother' level of education for factor F1 ( $F=14.618, p=0.000 < \alpha=0.05$ ), which refers to the Attitudes toward the role of advertising as a factor of a latent economic bliss, for factor F2 ( $F=10.624, p=0.013 < \alpha=0.05$ ), which refers to the Attitude toward perpetrator and reproducer factor of the social status quo, for factor F3 ( $F=9.345, p=0.012 < \alpha=0.05$ ), which refers to the Attitude toward negative stereotypes of the female gender and values and standards that are created by advertisement, for factor F4 ( $F=14.535, p=0.001 < \alpha=0.05$ ), which refers to the Attitude toward advertisement as social control factor and finally for factor F5 ( $F=10.624, p=0.001 < \alpha=0.05$ ), which refers to the Attitude toward advertisement as an informative communication tool.

### **8.7. Attitudes toward social influence of publicity and father' occupation**

The analysis showed that there are statistically significant differences between the categories of father' occupation for factor F1 ( $F=10.548, p=0.012 < \alpha=0.05$ ), which refers to the Attitudes toward the role of advertising as a factor of a latent economic bliss, for factor F2 ( $F=11.684, p=0.001 < \alpha=0.05$ ), which refers to the Attitude toward the perpetrator and reproducer factor of the social status quo. for factor F3 ( $F=13.812, p=0.001 < \alpha=0.05$ ), which refers to the Attitude toward negative stereotypes of the female gender and values and standards that are created by advertisement, for factor F4 ( $F=12.864, p=0.001 < \alpha=0.05$ ), which refers to the Attitude toward advertisement as social control factor and finally for factor F5 ( $F=9.543, p=0.012 < \alpha=0.05$ ), which refers to the Attitude toward advertisement as an informative communication tool.

### 8.8. Attitudes toward social influence of publicity and mother' occupation

The analysis showed that there are statistically significant differences between the categories of mother' occupation for factor F1 ( $F=14.754$ ,  $p=0.001 < \alpha=0.05$ ), which refers to the Attitudes toward the role of advertising as a factor of a latent economic bliss, for factor F2 ( $F=15.735$ ,  $p=0.001 < \alpha=0.05$ ), which refers to the Attitude toward the perpetrator and reproducer factor of the social status quo, for factor F3 ( $F=12.624$ ,  $p=0.001 < \alpha=0.05$ ), which refers to the Attitude toward negative stereotypes of the female gender and values and standards that are created by advertisement, for factor F4 ( $F=13.976$ ,  $p=0.001 < \alpha=0.05$ ), which refers to the Attitude toward advertisement as social control factor and finally for factor F5 ( $F=13.643$ ,  $p=0.001 < \alpha=0.05$ ), which refers to the Attitude toward advertisement as an informative communication tool.

### 9. Conclusions

This paper investigated the reliability and factorial validity of a research tool concerning students attitudes toward social influence of publicity which was created by Anastasiadou and Vafeiadis for the purpose of this paper and which was constructed in order to examine the sources these attitudes of students at the Technological Institute of Thessaloniki in Greece with the aid of Principal Components Analysis. The research findings show that Principal Components Analysis confirms the factorial validity of the research tool. Thus, we can claim that attitudes toward the social influence of publicity experienced by students of Technological Institute of Thessaloniki in Greece can be categorised into five domains: (1) a factor of a latent economic bliss, (2) a perpetrator and reproducer factor of the social status quo, (3) a factor that create negative stereotypes of the female gender and values and standards, (4) a social control factor and (5) a informative communication factor.

This fact proves that students of Technological Institute of Thessaloniki attitudes toward the social influence of publicity are made up of 5 factors (constitutes a five-factor structure). Also, Cronbach's  $\alpha$  (reliability coefficient), which is equal to 81.7%, showed that the question scale presents high reliability (Cronbach, 1984). The Multivariate Analysis of Variance of the data showed the first hypothesis (H1) in our research, stating that attitudes toward social influence of publicity are not affected by gender in factors F1, F2, F3, F4 and F5 was not confirmed. The studies department appears to be a cause for the existence of specific attitudes of the students' toward the social influence of publicity. Thus the second hypothesis (H2), which claims that students' attitudes toward the social influence of publicity are not influenced by the studies department, is rejected for the five the social influence of publicity attitudes factors. The year of studies appears to be a cause for the existence of specific attitudes of the students' toward the social influence of publicity. Thus the third hypothesis (H3), which claims that students' attitudes toward the social influence of publicity are not influenced by the year of studies, is rejected (for the five the social influence of publicity attitudes factors).

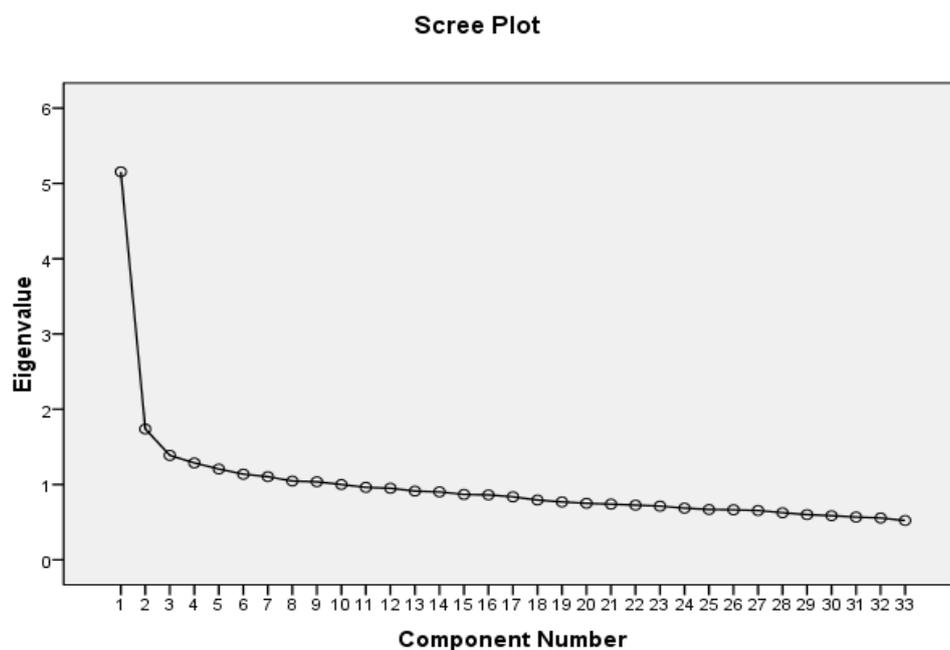
The location of home (origin) appears to be a cause for the existence of specific attitudes of the students' toward the social influence of publicity. Thus the fourth hypothesis (H4), which claims that students' attitudes toward the social influence of publicity physics are not influenced by the place of home, is rejected for the social influence of publicity attitudes factors, F1, F2, F3, F4 and F5. The following hypothesis (H5), according to which attitudes toward social influence of advertisement is not influenced by father' occupation is not accepted since statistically significant differences were detected for all of five social influences of advertisement attitudes factors. In addition, the sixth hypothesis (H6) which claims that attitudes toward social influence of advertisement are not influenced by mother' occupation is not confirmed, since statistically significant differences were detected for F1, F2, F3, F4 and F5 social influence of publicity attitudes factors. Hypothesis (H7), according to which attitudes toward social influence of advertisement is not influenced by father' level of education is not accepted since statistically significant differences were detected for all of the five social influences of advertisement attitudes factors.

Moreover, mothers' education level has a significant effect on students' attitudes. Consequently the eighth hypothesis (H8) in our research which states that attitudes toward social influence of advertisement are not influenced by mother' level of education in factors for all the five social influence of advertisement attitudes factors was not confirmed. The analysis of questionnaires shows that the results are consistent with the theoretical framework and the views of respondents are not conflict with scientists and research. In particular, students believe that advertising is a communication tool, which is essential to inform the public for goods, services, and different views or ideas. So, there is an agreement between the theoretical framework and researchers. The percentage of respondents who comes in agreement with the investigations and believes that advertising significantly affects public opinion by creating standards and imposing ideologies and lifestyles to the public is even greater. Almost equal are the percentages of those who believe that advertising defines social reality with those who doesn't and several more are those who consider that advertising contributes to the perpetuation and reproduction of the social status quo.

Moreover, the percentage of those are consistent with the view that the advertisement is inextricably linked with the development of industrial, cultural urbanization, the competition of producers and the globalization of the market and also defines a tool of social control, it is very large. Still, respondents strongly believe that advertising contributes to the development of competition, the creation of a latent economic bliss, encouraging groups of people with shared values, attitudes and standards and that it's an essential tool of capitalism, as stated in the introduction. These results are set up in accordance with Pechmann & Knight (2002) and Pechmann & Shih (1999) who believe that advertisements depicting consumer behaviour that are widely regarded as risky or unhealthy typically use favourable stereotypes to imply that those who engage in such behaviours are attractive, successful, and healthy. It is important to mention that almost all students responded that advertising creates fictitious needs to people, and even more are those who agreed that advertising creates negative stereotypes about the female sex and integrate consumers into a rich and complex web of social prestige. Finally, it appears that respondents believe that advertising promotes material eudemonism, treat the product in a social model through the creation of stereotypes and make reckless exploitation of the female body and is also a reflection of society. It is encouraging that our results come in accordance with the theoretical frame work of this issue.

### References

- Coakes, S., and Steed, L. (1999). *SPSS Analysis without Anguish*. Singapore: John Willey & Sons.
- Croanbach, L. J. (1984). *Essentials of psychological testing* (4<sup>th</sup> ed.). New York: Harper & Row.
- Hair, J., Anderson, R., Tatham, R. and Black, W. (1995). *Multivariate Data Analysis With Readings*, p.373. USA: Prentice-Hall International, Inc.
- Gillian D. (1982): *Advertising as Communication*. London: Routledge
- Kaiser, H, F. (1960). The application of electronic computers to factors analysis. *Educational and Psychological Measurement*, 20, 141-151.
- Kaiser, H.F. (1974). An index of factorial simplicity. *Psychometrika*, 39, 31-36.
- Kostantopoulou X., 1995. *Themes Meta-modern Connection*, Eds. Kiriakidi Thessaloniki, Greece
- Norusis M. (1992). *SPSS for Windows. Professional statistics*. Vhicago, II:SPSS
- Nunnally, C. Jum. (1978). *Psychometric Theory*. New York: McGraw Hill Book Co.
- Pechmann, Cornelia and Susan J. Knight. 2002. An Experimental Investigation of the Joint Effects of Advertising and Peers on Adolescents' Beliefs and Intentions about Cigarette Consumption. *Journal of Consumer Research*, 29 (June): 5-19.
- Pechmann, Cornelia and Chuan-Fong Shih. 1999. Smoking Scenes in Movies and Antismoking Advertisements Before Movies: Effects of Youth. *Journal of Marketing*, 63 (July): 1-13.



**Figure 1: Scree Plot**

**Table 1: Principal Components Analysis Results**

Questions	Factors					Communality
	F1	F2	F3	F4	F5	
Q3: Advertisement is a communication tool, which is essential to inform the public about different opinions or ideas.	0.823					0.743
Q18: Advertisement is the main weapon of capitalism.	0.788					0.716
Q10: Advertisement is hardly connected to cultural urbanization.	0.765					0.709
Q24: The ability to satisfy consumers need, determines the level of prosperity and a high degree of social class	0.753					0.693
Q11: Advertising is hardly connected to the producers' competition.	0.735					0.681
Q7: Advertisement can identify the social reality.	0.729					0.673
Q25: Advertisement can turn the product into social model through the creation of stereotypes	0.694					0.669
Q16: Advertisement helps to create a latent economic bliss.	0.648					0.632
Q6: Advertisement points public to specific lifestyles.		0.782				0.732
Q5: Advertisement significantly affects public opinion by creating ideologies.		0.762				0.724
Q8: Advertisement contributes to the perpetuation and reproduction of the social status quo.		0.758				0.727
Q4: Advertisement significantly affects public opinion by creating models.		0.703				0.708
Q29: Advertisement is not independent from the social system.		0.696				0.637
Q12: Advertisement is hardly connected to the globalization of the market.		0.658				0.628
Q30: Advertisement creates cultures that influence the social structure.		0.658				0.616
Q9: Advertisement is hardly connected to the development of industrial production.		0.643				0.612
Q20: Advertisement helps in creation of negative stereotypes for the female sex.			0.771			0.713
Q22: Advertisement affects the quality of social relations.			0.752			0.698
Q28: Advertisement makes use of the female body for commercial purposes.			0.743			0.693
Q21: Advertisement leads the consumer into a rich and complex web of social prestige.			0.724			0.682
Q27: Advertisement that uses the stereotypes of sex is effective.			0.718			0.675
Q14: Advertisement leads the consumer into a rich and complex web of social prestige.			0.702			0.656
Q26: The exploitation of stereotypes is directly related to the effectiveness of advertisement.			0.696			0.643
Q15: Advertisement contributes to the increase of competition.			0.675			0.639
Q17: Advertisement forms groups with common attitudes, values and standards			0.654			0.628
Q23: Advertisement promotes the physical eudaimonismo			0.643			0.621
Q33: Advertisement is a reflection of society.				0.693		0.624
Q32: Advertisement is a way of reorganizing society.				0.675		0.621
Q31: The social structure affects the culture of advertisement.				0.649		0.619
Q13: Advertisement is a tool of social control.				0.632		0.605
Q32: Advertisement can create fictitious needs to people.				0.612		0.596
Q2: Advertisement is a communication tool, which has as main purpose to inform the public about various services.					0.654	0.639
ER1: Advertisement is a communication tool, which has as main purpose to inform the public about goods.					0.639	0.621
Eigenvalue	3.301	2.905	2.818	1.393	1.205	
Variance Explained (%)	28.5	19.3	17.6	14.3	11.2	
Cronbach's $\alpha$ (%)	79.03	78.51	73.72	75.36	68.27	
Total Variance Explained (%)	90.9					
Total Reliability Cronbach's $\alpha$ (%)	81.7					
Mean score per Factor	2.987	3.126	3.564	3.672	2.896	
Standard Deviation per Factor	3.842	2.963	3.097	3.865	1.206	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.867 Bartlett's Test of Sphericity: $\chi^2=7238.364$ , $df=528$ , $p=0.000$						