

**GENDER DIFFERENCES IN MONEY ATTITUDES AMONG UNIVERSITY STUDENTS
IN THE REPUBLIC OF MACEDONIA**

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Abstract

The purpose of this study is to ascertain students' attitudes toward money and debt and to identify gender differences in money and debt attitudes in Macedonia. Attitudes toward money have been examined by employing factor analysis. The respondents were required to complete a 20 item money attitude scale. By employing factor analysis, 3 dimensions of the money attitude scale were identified (power-prestige, anxiety and distrust). Furthermore, t-test and chi-square test were employed to see if male and female students differ significantly in their attitudes toward money on the dimensions of the money attitude scale and in their general attitudes toward debt. Results of the t-test confirmed the existence of gender differences in power-prestige and anxiety dimensions of money attitudes. Results of chi-square test showed no statistically significant relationship between male and female students in their general attitudes toward debt/credit. Recommendations may help financial institutions and other companies in designing appropriate marketing strategies.

Key words: *attitudes, money, debt, gender*

1. INTRODUCTION

Money is important in a modern society especially to students as a population preoccupied with money issue. In favor of this conclusion goes the fact that students want to be highly educated as a precondition to earn more money in the future. Besides seeing money as medium of exchange that has objective functions (Furnham and Argyle, 1998), money has subjective and affective meanings as well. People develop attitudes and behavioral tendencies toward it. (Michell and Mickel, 1999, p.568). Different people perceive, value, and treat money differently. Wernimont and Fritzpatrick (1972) claimed that money have a symbolic value and means different things to different people.

Interest among researchers for money and attitudes toward money appeared long time ago. So far topic of money have been analysed from different perspectives such as impact of money on the people perceptions (Beutler, Beutler, McKoy, 2008), factors influencing money attitudes (Du, Tang, 2005; Norvilitis *et al.*, 2006), individual differences perspectives (Michell and Mickel, 1999), money as pay and how pay affects motivation, job attitudes and action (Tang, 1995), relationship between self-esteem and money attitudes (Harley and Wilhelm, 1992), relationship between materialism and money (Watson, 2003; Durvasula and Lysonski, 2010) etc. The topic of money attitude and the topic of debt/credit attitude also received lot of attention so far.

Although the findings from money and debt analysis contribute to better understanding of the topic regarding money, there are limited studies that focus on determining the demographic differences on different components of attitudes toward money and attitudes toward debt/credit. Thus, the first aim of this paper is to investigate the attitudes toward money and general attitudes toward debt in the

Republic of Macedonia. The paper further explores the influence of gender on the components of money attitudes and on the general attitudes toward debt. In addition, as the attitudes toward money have been widely examined on student population in different countries in the world, the present study advances the knowledge on this subject by focusing on the student population in the Macedonian context, thus contributing to a better understanding of attitudes toward money in developing countries. Regarding Macedonia, this study is the first attempt to explore attitudes toward money by relying on MAS (money attitude scale) adjusted on student population (developed by Roberts and Jones, 2001).

Accordingly, this study is aimed at answering the following research questions: (1) what are the underlying dimensions of attitudes toward money?; (2) what are the general attitudes toward debt? and 3) are there differences between males and females in their attitudes toward money and debt?

2. LITERATURE REVIEW

In this, section, the literature review on money attitudes and the influence of gender on money and debt/credit attitudes will be presented.

2.1. Money attitudes

In 1970-ies and 1980-ies several researchers tried to develop scale for measuring attitudes toward money. In 1972, Wernimont and Fritzpatrick (1972) analysed the differences in meaning of money and values of money among different groups of people and identified seven factors. Yamauchi and Templer (1982) developed 29-item Money attitude scale (MAS). On the basis of 62 items they identified 5 factors: power-prestige, retention-time, distrust, quality and anxiety. In designing the final instrument they decided not to include items from quality factor since quality and power prestige dimensions did not seem to be motivationally different. As a result, final form of MAS was developed consisting of 29 items with 4 dimensions identified: power-prestige, retention-time, distrust and anxiety. In 1984, Furnham (1984) developed a useful multifaceted instrument to measure money beliefs and behaviour called Money Beliefs and Behavior Scale (MBBS) and identified five final factors: obsession, power-spending, retention, security-conservative and inadequate. Forman (1987) developed so called Money Madness Scale and identified five types of people regarding their money attitudes: miser, spendthrift, tycoon, bargain hunter and gambler. By using money madness scale, Furnham (1996) identified six types of money madness similar to those identified by Forman (1987): money sanity, miser, spendthrift, tycoon, bargainer and gambler. Tang (1990, 1992) developed Money Ethic Scale (MES) comprised of 30-items and examined the meaning of money in a sample of full-time employees. By employing factor analysis he identified 6 factors: good, evil, respect, budget, and freedom/power. Consequently it can be concluded that attitudes toward money can be categorised into three components: the affective component (good and evil), the cognitive component (achievement, respect and freedom/power) and behavioural component (budget). Later, 12-item Money Ethic Scale (short Money Ethic Scale) was developed for measuring people's attitudes toward money (Tang, 1995). The author identified three factors: success, budget, and evil. By using MAS, Gresham and Fontenot (1989) found four dimensions of money attitudes: power-prestige, distrust-anxiety, retention-time, and quality. The same factors were identified in the study of Medina *et al.* (1996). Roberts and Sepulveda (1999) revealed five factors on the basis of MAS: power-prestige, retention-time, distrust, anxiety and bargain-conscious/compulsive. Baker and Hagedorn (2008) identified 4 dimensions of attitudes toward money by using original MAS: power-prestige, frugality/distrust, planning/saving, anxiety. Li *et al.* (2009) found three underlying dimensions of money attitudes: power-prestige, retention-time and quality.

Roberts and Jones (2001) modified the Yamauchi and Templer's original 29-item MAS to fit to the student context. Their new MAS adjusted to the student population consisted of 20 items. They identified three factors: power-prestige, anxiety and price sensitivity (distrust). Moore and Carpenter (2009) in their research on money attitudes and their impact on credit responsibility among undergraduate students revealed the same dimensions of money attitudes (anxiety, distrust, power-prestige). All these findings confirmed that attitudes toward money are multidimensional.

2.2. Attitudes toward debt and gender differences

According to the Financial Stability Report for the Republic of Macedonia published by the National bank of the Republic of Macedonia in 2010, household debt grew at a significantly faster pace (seven times higher annual growth rate) comparing to 2009, which is result of the relaxation of credit conditions by banks, recovery of domestic economy and the relaxation of monetary policy in 2010. Loans from banks represent the largest share of total household debt. The largest part of the total indebtedness of households to the banks (of 72.1%), refers to the debt for consumption (consumer loans, car loans, current accounts, credit cards and other loans). The household debt is 18.7% of GDP leaving Macedonia at the bottom of the list of European countries in terms of household debt. Despite the relatively low level of debt, low living standard in Macedonia (the share of the basket for food and beverages in the average net-wage in Macedonia is much higher comparing to the most of the European countries, (in December 2011 - 59.2%)) may have significant effects on the ability to timely servicing of debt and on the potential for further debt increase. The low level of households' debt leads to the conclusion that Macedonian people are very careful when taking credit and living in debt.

The growth of debt is result of various factors among which attitudes toward borrowing and debt are very important (Godwin, 1997; Park, 1993). Previous studies investigating the influence of gender on debt report different research findings. According to Yieh (1996) households headed by individuals who were female and married, were more likely to have a negative attitude toward installment borrowing. Xiao *et al.* (1995) revealed that male students had more positive attitude toward credit cards than female students. Davies and Lea (1995) found that men are more likely to be in debt than women. On the other hand, Norvilitis *et al.* (2006) found that gender is a demographic variable that is not predictive of debt. Also, Watson (2003) found that individuals with high levels of materialism scored higher on the spending tendency scale and they had more favorable attitudes toward borrowing money than individuals with low level of materialism, but found no significant relationship between materialism (importance of possessions and acquisition, their role in the pursuit of happiness and their role as an indicator of success) and gender.

2.3. Gender differences in attitudes toward money

Wernimont and Fritzpatrick (1972) found that sex influences people attitudes toward money. Furnham (1984) found that comparing to females, men are more likely to be obsessed with money while females are more concerned about retaining money for future use. Lynn (1991) analyzed national differences in money attitudes in 43 countries claiming that males tend to give more value to money than females. The same conclusion was made (Lynn, 1993) in the research about valuation of money in 20 countries. Furnham and Argyle (1998) claimed that men are obsessed with money regarding power-prestige outcome. Bonsu (2008) came to similar conclusions. He claimed that men and women in Ghana differ significantly in their attitudes toward money on two dimensions (power-prestige and distrust) of the four dimensions of the MAS. He found that men have a higher tendency to use money as an expression of influence, power and status, as well as they tend to have a lower sense of confidence in their market-related decisions comparing to women (p.175). Oleson (2004) also claimed that there are gender differences for some attitudes toward money particularly obsession, power,

budget and achievement. The research of Tang (1993) based on Money ethic scale (MES) showed significant sex differences among students in some of the components of attitudes toward money (achievement and respect). Men, as compared with women, generally think of themselves as being charitable, they are likely to associate money and possessions as symbols of status and power, and they want to have a control over their finances. Du and Tang (2005) revealed no sex differences in the attitudes toward money in China. Baker and Hagedorn (2008, p.1812) claimed that gender is strongly related to either anxiety or planning-saving factors, but females scored significantly lower on power-prestige and on frugality-distrust. Li *et al.* (2009) found significant difference between males and females only on power-prestige money attitudes dimension.

3. RESEARCH METHODOLOGY

The research presented in this paper relies on the money attitude scale (MAS) developed by Roberts and Jones (2001) who adapted Yamauchi and Templer's (1982) original scale for the college student context. The survey instrument used consisted of two parts. The first part gathered information about gender, age and general attitudes toward debt, and the second part included 20 five-point Likert statements related to money attitudes ranging from "strongly disagree" to "strongly agree". The general attitude toward debt was analysed by asking SCF (US Survey of Consumer Finances) question: "Do you think it is a good idea or a bad idea for people to buy things on the installment plan?". The twenty statements related to money attitudes reflect the different dimensions of money attitudes. In total, the questionnaire used in the paper consisted of 23 statements.

The sample for this study comprises 170 respondents aged from 18 to 22. Respondents were university students enrolled at the largest University in Macedonia (Faculty of Economic), who study economy and business. They were informed about the purpose of the research and asked to complete the questionnaire. Of 180 received responses, 10 questionnaires were rejected because of incomplete data and were removed from the data set, leaving a total 170 participants (94.4%). Among the 170 people who gave exploitable responses, 43% were male students and 57% were female students reflecting the gender structure of the student population at the Faculty of Economic in the Republic of Macedonia (in 2011 36% were males and 64% were females). The sample size is above the recommended minimum level of at least five times as many observations as the number of variables to be analyzed. (Hair *et al.*, 2006).

Given the fact that the average household debt in Macedonia is low, and the propensity to take credits among young people is higher than among the old people, (Yieh, 1996), the sample for this research consists of young people from Macedonia. The profile of the sample is presented in the table below.

	(%)
Male	43
Female	57
Age (average years)	20.3

Respondents profile, N=170

4. DATA ANALYSIS AND RESULTS

4.1 Factor analysis

Responses to the 20 item money attitude scale were subject to axis factoring analysis with Oblimin rotation. There were three factors, with 63.2% of explained variance.

items	Factor		
	1	2	3
<i>power-prestige</i>			
item 1	0,796	0,002	-0,069
item 2	0,786	0,053	-0,027
item 3	0,675	0,016	-0,072
item 4	0,815	-0,027	-0,070
item 5	0,747	-0,058	-0,051
item 6	0,775	0,024	0,106
item 7	0,652	0,034	0,254
<i>anxiety</i>			
item 8	-0,169	0,095	0,755
item 9	-0,070	-0,053	0,873
item 10	-0,053	-0,014	0,785
item 11	0,214	-0,014	0,752
item 12	0,225	-0,010	0,630
item 13	-0,083	-0,003	0,575
<i>distrust</i>			
item 14	-0,077	0,604	0,143
item 15	-0,015	0,511	0,054
item 16	0,167	0,864	-0,140
item 17	0,138	0,824	-0,021
item 18	0,113	0,764	-0,068
item 19	-0,065	0,801	-0,018
item 20	-0,165	0,749	-0,029

Factor analysis results, factor loadings.

Reliability of scales was assessed using Cronbach alpha coefficients. Table below shows the results of reliability analysis.

No.	Subscales	Cronbach's alpha
1	power-prestige	0,898
2	anxiety	0,870
3	distrust	0,887
	overall reliability	0,820

Reliability of the subscales: Cronbach's alpha

Cronbach's coefficient alpha for the overall scale was 0.820, whereas subscale reliability measures for dimensions 1, 2 and 3 were 0.898, 0.87 and 0.888, respectively. All reliability measures are above the recommended minimum level of 0.60 (Hair *et al.*, 2006). Cronbach alpha coefficients of the power-prestige, anxiety and distrust dimensions of the money attitudes and overall reliability coefficient indicate high internal reliability of the data collected.

As shown in the table above, three factors were extracted. The number of factors was obtained from a scree plot which showed that three factors had eigen values of 1 or higher. The factors are interpreted as: power prestige (7 items), distrust (7 items) and anxiety (6 items). Factor 1 accounts for 24% of the total explained variance and consists of 7 variables which relate to status and superiority that money provides. Factor 2 accounts for 20.4% of the total explained variance and refers to nervousness and concerns regarding money. Factor 3 accounts for 18.8% of the total explained variance and consists of 6 variables which relates to the doubts, mistrust and insecurity that people have regarding money.

The conclusions regarding multidimensionality of MAS and particularly about three constituent attitude dimensions are in line with the conclusions regarding the dimensions identified by Moore and Carpenter (1999) and by Roberts and Jones (2001).

4.2 Gender differences in attitudes toward money and debt

To reveal the gender differences among students on factors (dimensions) of money attitudes previously identified through factor analysis, t-test was used. First, the mean score for males and females were calculated for each dimension of MAS. Then, t-test was used to compare the mean scores for males and females on three dimensions of MAS. The gender was independent variable and money attitude was dependent variable. Table below shows gender comparison of money attitude scale (means, standard deviation and t-test)

	sample			males			females			t-statistics		
	mean	SD	n	mean	SD	n	mean	SD	n	t	df	sig
power-prestige	2,37	1,07	170	3,20	0,98	73	1,75	0,64	97	11,806	168	0,000
distrust	2,73	0,80	170	2,67	0,93	73	2,77	0,70	97	-0,754	168	0,452
anxiety	3,04	0,92	170	3,30	0,86	73	2,85	0,93	97	3,193	168	0,002

SD=standard deviation

Gender differences in money attitudes

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The t-test showed that there are significant differences between males and females ($p < 0.05$) on 2 factors (power-prestige and anxiety). Therefore, we can conclude that the attitudes toward money vary according to gender regarding power-prestige dimension and anxiety dimension of MAS.

Males show above average concern on power-prestige and anxiety aspects of money, whereas females show below average level of concern on those dimensions and slight above average distrust. Comparing to females, males have a higher tendency to use money as a sign of prestige and success, as a basis for showing respect toward others, and as mean for influencing other people to do things as they (males) desire. Males agree more that money is ultimate symbol of success, and consequently they use money to show that by purchasing things to impress others. These findings are consistent with Bonsu's (2008, p.175) findings that "men have a higher tendency to use money as an expression of influence, power and status", and with findings of Furnham (1984); Lynn (1991); Furnham and Argyle (1998); Tang (1993); Li *et.al.* (2009). Regarding anxiety dimension of MAS, males show above average concern about being financial secure, they worry more about the future finances, spend more on things that make them feel better and surprisingly they are more bargain and sale hunters comparing to females. Regarding the distrust dimension of MAS, results show that there are no statistically significant differences between males and females, meaning that both males and females have equal sense of confidence in spending money. Males and females don't differ in terms of their tendency to be suspicious when buying things, to make complaints regarding the price of the products bought, and cost made for purchasing the products, as well as in their tendency to express worrisome behavior when it comes to money. These findings are contrary to the findings of Bonsu (2008) who found significant differences in attitudes toward money on distrust dimension and no significant differences in money attitudes on anxiety dimension.

Regarding gender differences in attitudes toward debt, research showed that 42% of the respondents said that it is a good idea to buy things on installment plan, 26% answered that it is bad idea to buy things on credit and the rest of 32% said it is good in some way and bad in others. Respondents who answer "good idea" and "bad idea" are classified as having favorable and unfavorable attitudes towards credit use respectively, while respondents who answer "good in some way, bad in others" are classified as having neutral attitudes. Thus, general attitude included three categories: favorable, neutral and unfavorable (Chien and DeVaney, 2001, p.170). To see if gender influences the attitudes toward debt, chi-square test was employed.

Gender	debt attitude							Chi-Square test p value
	favorable	%	neutral	%	unfavorable	%	Total	
male	37	50.7	18	24.7	18	24.7	73	0,088
female	34	35.1	37	38.1	26	26.8	97	
Total	71	41.8	55	32.4	44	25.9	170	

Gender differences in debt attitudes

In general, students have more positive attitudes toward money. The number of students with favorable attitudes (41.8%) is bigger than the number of students with neutral (32.4%) and unfavorable attitudes toward money (25.9%). More females have neutral and favorable attitudes toward debt (73%) comparing to males who mostly have favorable attitudes toward debt. (50.7%) The chi square test results show that there is no significant gender differences in attitudes toward debt ($p < 0.05$).

5. CONCLUSIONS

This paper investigated the attitudes toward money among university students in Macedonia. The factor analysis revealed that money attitude scale was highly reliable instrument for measuring attitudes toward money in the Republic of Macedonia. The results of the analysis showed three dimensions of money attitudes named as power-prestige, distrust and anxiety and all three had high Cronbach alpha coefficients indicating the satisfactory reliability. The three identified dimensions of attitudes toward money in the Republic of Macedonia were previously identified in studies conducted in different countries. Consequently, it can be concluded that the results of this research regarding dimensions of money attitudes are largely consistent with the results of other studies and dimensions identified by other authors. Nevertheless, these studies identified some additional factors not revealed in this study. This discrepancy can be explained by different cultural, demographic and psychographic characteristics of the people, as well as by the time period of the studies.

The findings from this study indicate that gender showed differences in two of the three components of the money attitudes. Gender displayed the differences in terms of power-prestige and anxiety dimensions of attitudes toward money. Additionally, the results showed that there are no significant gender differences in attitudes toward debt.

Financial and non-financial institutions should take advantage of the fact that people from different gender have different attitudes toward money. For example, since gender groups differ in terms of their attitudes toward money, if the bank/financial institution wants to create more positive attitudes toward money among females, it can use messages to convince females to become more relaxed and avoid nervousness regarding money pointing out that banks/financial institutions are always there for them. Retailers for example, can decrease postpurchase tension (anxiety) about past decision by stressing the positive sides of the decisions made and by providing more information to assist the application and use of the product bought. Regarding males, it will be useful for financial institutions to stress power/prestige aspects of money use in their marketing activities directed toward males. Additionally, retailers can use appropriate marketing activities in postpurchase phase in order to convince [buyers](#) that the right choice regarding money spending has been made since a state of psychological tension or postpurchase doubt may be experienced by the consumers after making a purchase decision. This tension often leads the consumer to attempt to reduce it by seeking supportive information which can be provided in this case by various retailers.

The research has several limitations which are important to be recognized. Concerning the sample, changes can be made regarding using general adult population and not just university students who study business. Regarding the questionnaire, and especially if the sample comprises of general adult population, MES (money ethic scale) or MBBS (Money Beliefs and Behavior Scale) instead of MAS (money attitude scale) adjusted to student context might be used, although the Love of Money Scale (LOM) as a subset of MES has already been used in Macedonia in studying unethical behaviour intentions (Sardžoska and Tang, 2009). Future research can investigate the differences among people on the basis of other demographic as well as socio-economic and behavioural characteristics of the

people. As there is a difference between general debt attitudes and specific debt attitudes, future research could focus on investigating specific debt attitudes regarding borrowing money for different purposes and for buying different products. Also, future research could focus on finding gender and other types of differences in specific attitudes toward debt.

Appendix

1	Although I should judge the success of people by their deeds, I am more influenced by the amount of money people have
2	People who know me tell me I place too much emphasis on the amount of money people have, as a sign of their success
3	I use money to influence other people to do things for me
4	I seem to find that I show more respect to those who have more money than I have
5	I behave as money were the ultimate symbol of success
6	I must admit that I purchase things because I know they will impress others
7	In all honesty, I own nice things in order to impress others
8	I show signs of nervousness when I don't have enough money
9	I show worrisome behavior when it comes to money
10	I worry that I will not be financially secure
11	I spend money to make myself feel better
12	I am bothered when I have to pass up a sale
13	It is hard for me to pass up a bargain
14	I automatically say, "I can't afford it, whether I can or not
15	When I make a major purchase, I have a suspicion that I have been taken advantage of
16	When I buy something, I complain about the price I paid
17	I argue or complain about the cost of things I buy
18	I hesitate to spend money even on necessities
19	After buying something, I wonder if I could have gotten the same for less elsewhere
20	It bothers me when discover I could have gotten the same for less elsewhere.

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