The Relationship of Income And Money Attitudes To Subjective Assessment of Financial Situation

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Abstract
This paper examines a model of economic status satisfaction (money satisfaction) that controls attitudes toward money, income level and gender. Money attitudes were measured with SPP scale (Gąsiorowska, 2003), fully developed in Polish environment, and better adjusted to Polish conditions than other money attitudes scales. In the first study, path analysis showed that gender is the strong moderator of money attitudes - money satisfaction relationship. Money attitudes presented by females do not influence significantly their economic status satisfaction, while in case of males, financial anxiety and power connected with money explained 13% of variance of dependent variable. In the second study, in addition to the previous, income data were also collected. In the group of females, income was found to be a better predictor of financial situation assessment than money attitudes, and the anxiety dimension of money attitudes was slightly mediating income - financial situation relationship. In the group of males, the effect of money attitudes in predicting financial assessment is primarily additive to the effect of income.

Keywords: Consumer psychology; income level; money attitudes

PsycINFO classification: 3920, 2229

JEL classification: D12, D13, D31

The majority of the research on financial satisfaction has focused on the causal relationship between objective indicators, like income, assets or the level of debt, and ultimate satisfaction (see Wilhelm, Varcoe, Huebner Fridrich, 1993). The results of these studies clearly indicate that relationship between actual money and evaluations of financial satisfaction does exist, but definitely is not perfect. For example, the correlation between income level and satisfaction with one's financial situation and income satisfaction in the biggest Polish research on social condition varies between 0.313 and 0.370 (based on the data from Czapiński, Panek, 2007). On the other hand, the average net income in Poland between year 2000 and 2007 increased by 17% in real terms (without inflation effect), and the indicator of financial satisfaction also increased by this number, while the amount of people who declared that they could not afford fulfilling their basing needs decreased from 45.5% to 31.6% (Czapiński, Panek, 2007). Czapiński and Panek (2007) present also data on objective and subjective assessment of one's poverty. According to these data, the percentage of their respondents who experienced objective poverty decreased between 2005 and 2007 by 3.2%, but, at the same time, the percentage of respondents who experienced subjective poverty increased by 8.75%. These data might be quite puzzling if we do not take into consideration some psychological factors that might influence our perception of money we have. As it was noted by Tang and his colleagues *"Rich or poor is a state of mind. People may be financially poor but psychologically rich and vice versa"* (Tang, Luna-Arocas, Sutarso, Tang, 2004, p.119). In other words, some people are happy with the money they earn, even if they are not very rich, some people have a lot of money, but they are still not satisfied with it.

Factors influencing money satisfaction

There is no doubt that some psychological factors must moderate the relationship between objective indicators of welfare and its subjective assessment. One factor may be connected with temperamental traits, as some people have disposition leading to more positive evaluations of the reality (e.g., Lykken, Tellegen, 1996). Also, positive emotional experiences in certain domain may lead to higher satisfaction. Nevertheless, the most popular theory of satisfaction with life domains is the relative standards model, suggesting that people evaluate their success in each domain on the base of standards such as social comparisons, desires, and comparisons with the past (Solberg et al., 2002). Study conducted by Solberg et al. (2002) showed, that relation between income and subjective evaluation of this income depends on one's material desires – if these desires are fulfilled, person is more satisfied with his or her income. In other words, people's satisfaction with their income and material goods depends on the discrepancies between what they possess and what they desire (Solberg at al., 2002). The size of such a discrepancy might be related to trait materialism (Richins, 1994; Richins, Dawson, 1992), which, in turn, is related to money attitudes (Shafer, 2000; Gąsiorowska, 2003). Furthermore, money attitudes seem to have stronger association with income and financial satisfaction than materialism, which is more connected to possessions than to earnings.

Measurement of Money Attitudes

In the area of economic psychology, quite a few research studies that have been done intended to obtain some estimate of people's attitudes or beliefs about money. The literature on money attitudes really consists of three general categories (see Mickel, Mitchell, Danin, Gray, 2002). The first category is composed of measures based on money utility or marginal utility, as it is understood in prospect theory (e.g. Brandstätter, Brandstätter, 1996). The second category consists of "idiosyncratic" scales, that were used only once, constructed without appropriate theoretical background, not anchored with the state of art in psychology of money, and of unknown psychometric background (e.g. Wernimont, Fitzpatrick, 1972; Prince, 1993; Rubinstein, 1981). The third category of measures consists of scales that have been developed more carefully and used more systematically. Three scales may be included in this category, that is *Money Attitude Scale* by Yamauchi and Templer (1982), *Money Beliefs and Behaviour Scale* by Furnham (1984) and Money Ethic Scale by Tang (1992), recently transformed into the *Love of Money Scale* (Tang, 2007; Tang, Chiu, 2003; Luna-Arocas, Tang, 2004). These scales were developed in specific cultural contexts, and perform rather poorly in Polish conditions (see Gąsiorowska, 2003). As a consequence of lack of scales fitting Polish cultural context, two original Polish scales were developed and successfully used for research in this cultural environment: *Attitudes Towards Money* Scale (Wąsowicz-

Kiryło, 2008) and *SPP Money Attitudes Questionnaire* (Gąsiorowska, 2003; Bajcar, Gąsiorowska, 2004; Gąsiorowska, 2008).

SPP has satisfactory internal validity and reliability and is better adjusted to Polish conditions than other money attitudes scales, like MAS (Yamauchi, Templer, 1982) or MES (Tang, 1995). SPP consists of 63 items grouped in seven subscales:

- *Control and planning* (Cronbach's α from 0.80 to 0.88): thriftiness, carefulness and prudence in situations and decisions connected with money, and a kind of conservative attitude in money management, high financial planning and budgeting. It concerns both present and future financial decisions. Nevertheless the study conducted by Bajcar and Gasiorowska (2004) showed that among young people it is more connected with current monitoring of finances than with farsighted, effective money management. This factor is broader that *Retention/time* from Yamauchi and Templer's MAS (1982, see Gasiorowska, 2002), but more closer to *Security/Conservative* from Furnahm's MBBS (1984).
- ***Power*** (Cronbach's α from 0.78 to 0.85): people scoring high on this factor perceive and use money as a tool for making impression on influencing others, tool of power, prestige and respect, and a measure of life success. Also, they believe than money ensures appropriate time organisation, particularly in the situation of time pressure, control of reality and social influence. This dimension seems to be determined partly biologically and temperamentally (Bajcar, Gasiorowska, 2004), and partly learnt from parents (Gasiorowska, 2008).
- ***Anxiety*** (Cronbach's α from 0.74 to 0.8): hesitation, distrust, suspiciousness and doubt in situation connected with money, anxiety and negative emotion associated with money, caused mainly by one's cognitive activity and low determination together

with intolerance for ambiguity. People scoring high on this scale often believe that money means power and is evil at the same time.

- ***Debt aversion*** (Cronbach's α from 0.64 to 0.72) – reluctance to borrowing money. High scorers do not like assuming financial obligations, no matter if it comes from family, friends or financial institutions, and when they are forced to do so, they want to repay them as soon as possible. People with debt aversion perceive this attitude as very reasonable and cautious.
- ***Occasion seeking*** **–** inclination to search for and exploit special occasions connected with money, especially with earning money. It is related to effective planning and organisation of one's activity, that allows for monitoring and exploiting sudden, lucrative financial occasions, both expected and unexpected. Also, high scorers are quite satisfied with their financial success (if they reached it), and they treat searching for occasions as exciting and stimulating. This dimension is quite similar to *bargain conscious/compulsive* from modified MAS (see Roberts, Sepulveda, 1999a, 1999b).
- ***Money as evil*** (Cronbach's α from 0.61 to 0.7) – negative emotional aspects of money. Person scoring high on this factor perceives money as something useless, needless and coercible, as a root of all evil in everyday life, and believes that people concentrated on money are contemptible. This attitude is connected with closed, dogmatic perception of reality, including financial reality.
- ***Cash*** (Cronbach's α from 0.7 to 0.75) preference for liquid form of money. High score holders prefer cash than check-books or credit cards, and choosing storing money at home then investing them in banks or other financial institutions.

Money attitudes and money satisfaction

This article focuses especially on how psychological and symbolical aspects of money contribute to subjective assessment of one's financial situation. This area is rather unrecognized, as there are really only few studies concerning money attitudes and money satisfaction (Wilhelm, Varcoe, Huebner Fridrich, 1993). Most of them were performed by Tang and his colleagues (e.g. Tang, Tillary, Lazarewski, Luna-Arocas, 2003; Tang, Luna-Arocas, Sutarso, Tang, 2004; Tang, Chiu, 2003; Tang, Tang, Homaifar, 2006). In these studies, assessment of financial situation was operationalized as pay satisfaction, one domain of work satisfaction.

The results of these studies are quite puzzling. Tang, Tillary, Lazarewski, and Luna-Arocas (2003) found that high score on budget dimension is the only attitudinal factor associated with pay satisfaction. Tang, Luna-Arocas, Sutarso, and Tang (2004) found that in the sample of American and Spanish professors, the love of money serve as moderator of relationship between income and pay satisfaction, i.e. this relation is stronger for people loving money than for people rejecting it. Also, in this study, the love of money is positively related to income and to pay satisfaction. Tang, Tang, and Homaifar (2006) found that income significantly increased the importance of the love of money for African-Americans and females, but not for Caucasians and males. Also, this study showed that income was related to pay satisfaction for the whole sample, male and female employees, and Caucasians, but not for African-Americans, and that love of money was not related to pay satisfaction. On the contrary, Tang, and Chiu (2003) found negative relations between the love of money and pay satisfaction and between income and the love of money among Chinese from Hong-Kong. Thus, the direction of influence is different in various samples. One reason of this result may be the fact, that Tang uses various versions of his scale in these studies. Moreover, the fact that the love of money is treated as unidimensional construct is quite confusing, as the majority of researchers (including Tang in his earlier works, e.g. Tang, 1992, Tang, Gilbert, 1995; Tang, Kim, 1999) are convinced it is multidimensional (e.g. Furnham, 1994;

Yamauchi, Templer, 1982; Prince, 1993; Wernimont and Fitzpartick, 1972; Roberts, Sepulveda, 1999; Hanley, Wilhelm, 1992; Wąsowicz-Kiryło, 2008; Bajcar, Gąsiorowska, 2004; Gąsiorowska, 2003).

The most complex study on how specific money attitudes influence the relation between income and financial satisfaction was performed by Wilhelm, Varcoe and Huebner Fridrich (1993). They found that the influence of the objective indicators on financial well-being is not mediated by money beliefs, but for both men and women money attitudes are significant contributors in predicting assessment of financial satisfaction. Men who reported that they put a lot of effort in earning money, who believe that they deserve what they earn, and who are free from associating guilt when spending money, experienced higher level of financial satisfaction.

For women, in addition to these relationships, the belief that money can be used to feel good was also increasing the money satisfaction (Wilhelm, Varcoe and Huebner Fridrich, 1993).

Based on previously presented research the hypotheses for this study can be formulated as follows:

H1. Subjective evaluation of financial situation depends on objective income level and on money attitudes

H2: Gender moderates the relation between income and subjective evaluation of financial situation.

H3. Gender moderates the relation between money attitudes and subjective evaluation of financial situation.

Participants

The preliminary study has been conducted on the group of 349 participants (118 women, 231 men), living (at least temporarily) in Wroclaw, students of Wroclaw University of Technology, University of Wroclaw, and The Tadeusz Kosciuszko Land Forces Military Academy, but also employed and self-employed. Over the half of them (53.6%) had at least some job experience, mainly full time job. The average age was 25.07 years (SD 6.66).

The second study has been conducted on the group of 216 participants (130 women, 86 men). All of them were full time employees or enterprise owners and citizens of Poland. They were recruited with a snowball method via electronic communication (email, forums, groups). The average age was 33.08 years (SD 9.32).

Questionnaire and procedure

Money attitudes were measured with SPP Money Attitudes Questionnaire (Gasiorowska, 2003). Responses were recorded on a 5-point Likert-type scale with ‘‘definitely agree’’ and ‘‘definitely disagree’’ as end points. The instruction was to rate the extent to which each statement was an accurate description of common behaviour and opinion on the part of the respondent. In the first study, participants received a pencil-and-paper version of SPP with additional questions, and filled it in the presence of researcher. In the second study, data was collected using a web page, so participants were definitely more anonymous. This procedure was supposed to ensure, that participants would give the information about their income, which is often a taboo also in Polish culture.

The questionnaire included several other questions about participants’ financial situations and their attitudes about those situations. Using a scale from 1 to 5, with 1 indicating very bad and 5 – very good, they rated their own current financial situation, and this was used as an indicator of subjective assessment of financial situation. In second study, participants’ income was also measured by providing a series of polish zlotys ranges

(0 – 1 000zł, 1 001-2 000zł, 2 001-3 000zł, 3 001-4 000zł, 4 001-5 000zł, above 5 000zł[1]) and the respondent was asked which of the ranges reflected the appropriate monthly net income (also, they had the right to refuse to answer this question).

Results – study 1

The first step of the analysis was to compare women and men's money attitudes. In table 1 descriptive statistics as well as correlation between analysed variables are presented, separately for men and women.

Table 1 about here

Compared to women, men appear to perceive money as powerful tool for influencing others, and as a mean of success (t(347)=-2.365, p=0.019), definitely not as a source of an evil (t(327)=-2.781, p<0.01). They are more focused on searching and taking advantage of various occasion for earning money (t(347)=-4.581, p<0.001). Moreover, women appear to have lower level of financial planning and feeling of lower control over their money (t(347)=-1.876, p=0.061). They are slightly more anxious when dealing with money, and also believe that money might reduce their anxiety (t(347)=1.783, p=0.076). No significant differences were found in case of aversion towards debt and preference for cash. Men and women also do not differ in terms of subjective evaluation of financial situation.

Furthermore, data were analyzed with structural equitation modelling, using SPSS Amos 7.0 package. The main aim of those analyses was to check if there had been any significant influences of money attitudes on financial situation assessment. Two models were

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[1] During the time when data was collected, 1 Euro exchanging route ca. 3,5zł

constructed, separately for men and women, with money attitudes dimensions as independent variables, and subjective assessment of financial situation as dependent variable. These models are presented on figures 1 and 2.

All models were evaluated using criteria proposed by Vandenberg and Lance (2000): the lower bound for a good fit for Comparative Fit Index (CFI) and Tucker Lewis Index (TLI) is 0.9, CFI and TFI higher than 0.95 indicates excellent fit; the root-mean-square error of approximation (RMSEA) equal or lower then 0.8 indicates good fit, 0.06 or less – excellent fit. For testing the difference between models, the chi-square change ($\Delta\chi^2/\Delta df$)) and the fit index change (ΔCFI) are used - ΔCFI equal 0.01 or less indicates lack of differences between models, between 0.01 and 0.02 indicates some differences between models, and greater than 0.02 indicates definite differences between models definitelly exist) (see also Tang, 2007).

According to these criteria, both models are excellently fitted (for women: $\chi^2/df=1.021$, RMSEA=0.013, TLI=0.991, CFI=0.994; for men: $\chi^2/df=1.308$, RMSEA=0.037, TLI=0.949, CFI=0.967).

Figure 1 about here

Figure 2 about here

Participants who have strict control over finances, use planning and budgeting, perceive their financial situation as better. Also, those who experience high level of anxiety in financial situation, and who believe that money might help in coping with life anxiety, perceive their situation as worse. It is worth to notice that *control* dimension has both direct and indirect influence on dependent variable in the group of women – high control causes better assessment of financial situation, but also increases the level of anxiety and thus make this assessment worse. In the group of men, only direct influence of control on financial situation is found to be significant. Also, there is direct and indirect influence of *power* on financial situation assessment in this group –the more man associates money with power, success and prestige, the worse his financial situation assessment gets (direct effect), and the more anxious he is about money, which also causes negative evaluation of his financial status. On the other hand, for women, money attitudes explain only 6% of the variance of dependent variable (subjective evaluation of own financial situation), while for men it is 13%.

Results – second study

The first step of the analysis of these data was also to compare women's and men's money attitudes. Compared to women, men appear to perceive money as powerful tool for influencing others, and as a mean of success ($t(214)=-1.774$, $p=0.078$), definitely not as a root of an evil ($t(214)=-2.637$, $p<0.01$). They are more focused on searching and taking advantage of various occasion for earning money ($t(214)=-2.958$, $p<0.01$). Furthermore, women appear to have higher aversion to debt ($t(214)=1.941$, $p=0.054$). No significant differences were found in case of financial control and planning, anxiety when dealing with money and preference for cash. Men and women also do differ in terms of income ($t(214)= -2.396$, $p<0.05$), and subjective evaluation of financial situation ($t(214)=-1.815$, $p=0.071$) – men earn more and evaluate their financial situation as better. The correlation between income and assessment of financial situation is moderate both for women and men and not significantly different between groups (for women $r=0.465$, $p<0.01$, for men $r=0.505$, $p<0.001$, Z-difference test $Z=0.371$, $p>0.05$). In this study further analyses were also performed separately for men and women.

Table 2 about here

As previously, data were analyzed with structural equitation modelling. Two models were constructed, separately for men and women, with money attitudes dimensions and income as independent variables, and subjective assessment of financial situation as dependent variable. These models are presented on figures 3 and 4. According to criteria presented in the previous part, both models are well fitted (for women: χ^2=15.598, df=22, χ^2/df=0.709, RMSEA<0.001, TLI=1.082, CFI=1; for men: χ^2=23.404, df=24, χ^2/df=0.975, RMSEA<0.001, TLI=1.008, CFI=1).

Figure 3 about here

In the group of women, income together with money attitudes (*anxiety* and *control and planning*) accounted for 25% of money satisfaction variance. After setting paths representing money attitudes influence on dependent variable to zero, model was still fitted excellently (χ^2=21.164, df=24, χ^2/df=0.882, RMSEA<0.001, TLI=1.033, CFI=1), with no differences between models ($\Delta\chi^2(2)$=5.566, p>0.05; ΔCFI=0). Income explained 22% of money satisfaction variance, and standardised estimate for income to financial situation path increased to β=0.46. After setting income to money satisfaction path to zero, model was fitted well in terms of RMSEA, but not in terms of TLI and CFI (χ^2=39.777, df=23, χ^2/df=1.729, RMSEA=0.075, TLI=0.794, CFI=0.868) and differed significantly from full-path model ($\Delta\chi^2(2)$=24.179, p<0.001; ΔCFI=0.118), and money attitudes explained 10% of the dependent variable variance.

Additionally, as the structure of path model suggests that anxiety and control might mediate the effect of income of assessment of financial situation, mediation analyses using bootstrap procedure were performed. Control and planning is not mediating the effect of income on financial situation ($p=0.156$), while anxiety is mediating this relationship ($p=0.034$).

Figure 4 about here

In the group of men, income together with money attitudes (*anxiety*, *control*, *power*, *debt aversion*, *occasion seeking*) accounted for 50% of money satisfaction variance. After setting paths representing money attitudes influence on dependent variable to zero, model was not fitted well anymore ($\chi^2=51.765$, $df=27$, $\chi^2/df=1.917$, RMSEA=0.104, TLI=0.718, CFI=0.789), and significant differences between models were found ($\Delta\chi^2(3)=28.361$, $p<0.001$; $\Delta CFI=0.211$) and income explained 25% of money satisfaction variance. After setting income to money satisfaction path to zero, model also was not fitted well ($\chi^2=60.005$, $df=23$, $\chi^2/df=2.609$, RMSEA=0.138, TLI=0.506, CFI=0.684) and differed significantly from full-path model ($\Delta\chi^2(2)=30.601$, $p<0.001$; $\Delta CFI=0.316$), and money attitudes dimensions accounted for 20% of money satisfaction variance.

Discussion

The aim of this study was to investigate the impact of gender and money attitudes on the relation between income level and subjective assessment of financial situation. First of all, the result confirms hypothesis H1, and shows, that subjective evaluation of financial situation depends not only on objective income level, but also on money attitudes.

Both for men and women, income explains c.a. 25% of financial situation variance, and the correlation between these variables is not significantly different. Thus, hypothesis H2 must be rejected, as gender does not moderate the influence of income level on money satisfaction.

Men and women differ in terms of their money attitudes. Compared to women, men seems to perceive money as tool for making impression on influencing others, tool of power, prestige and respect, and a measure of life success, and also they do not concentrate on negative emotional aspects of money. Also, they like searching and exploiting special occasions connected with money, especially with earning money, and they treat searching for occasions as exciting and stimulating. This result is consistent with previous studies on gender differences in money attitudes (e.g. Tang, 1993; Tang, Gilbert, 1995; Roberts, Sepulveda, 1999a; Du, Tang, 2005; Gąsiorowska, 2003).

Probably the most important result of this study is that contribution made by money beliefs to predict financial progress is different for men and women. It shows that gender does moderate this relationship, which confirms hypothesis H3.

For women, the effect of income on financial satisfaction is definitely stronger than effect of money attitudes, and the latter might be omitted with no consequences for the fit of path model. However, one aspect of money attitudes, i.e. anxiety connected with money, is found to be slightly mediating the effect of income on financial satisfaction. High income reduces negative emotions and fear in the situation connected with money, which in turn increases the level of satisfaction. This is quite consistent with the results of study presented by Wąsowicz-Kiryło (2008), that the dimension of *Money as a Source of a Sense of Guilt* (similar to anxiety dimesion) seems to be mediating the influence of one's income on his/her psycho-economic well-being.

In the group of men, the effect of money attitudes is primarily additive. For men, income together with money attitudes explains financial satisfaction. When a man is not prudent with money, spend a lot of time looking for special financial occasions, believes that money gives power and respect, uses it as an indicator of success, he might experience big discrepancies between what he possesses and what he would like to have, what leads to anxiety, and, all together, to lower perception of own financial situation, or lower money satisfaction, no matter how much he earns.

These results are dissimilar from Wilhelm et al. (1993), especially for women. One explanation might be that Wilhelm and her colleagues (2003) examined "family financial managers" and focused on the objective indicators and subjective assessment of the whole family, and not its member. It is very probable, that when females are assessing their financial situation, they take into consideration also the income their spouse/partner, but when males do so, they concentrate on their own situation, as they are socially perceived as "head of family" and breadwinners.

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