Notes on the Big Money Test data-set

Mark Fenton-O'Creevy, Open University Business School, February 2017.

The data were collected as part of a broader UK-wide omnibus survey of attitudes to money and financial affairs conducted in collaboration with the BBC television public broadcaster. The survey was designed by Mark Fenton-O'Creevy (Open University) and Adrian Furnham (University College London), with input from Martin Lewis. The online survey was publicized on a primetime BBC 1 consumer affairs television program Watchdog, on several regional radio programs and through the BBC website. Data were collected through the online survey between 14th April 2011 and 31st October 2011 (The majority of participants took part in April). Date and time of participation are given in the Registered Date field. Participants were told that by participating they would help scientists understand how and why different people think and feel about money in different ways. As an incentive for participation they were offered (automated) video and web feedback on key self-reported financial capability measures, and their score on a financial knowledge test on completion of the online questionnaire, followed by a video of a television presenter offering them tips on personal financial management.

The first screen of the survey gave details of the study, anonymization of the data, the procedure for withdrawing consent and the use of the data in research. The survey required indication of informed consent before proceeding.

Question text is provided in the file as variable labels. Response categories are given as value labels. The demographic variables are largely self-explanatory.

Many of the questions are derived or adapted from existing scales and these are as follows:

Q18 to Q42: Money Sanity scale, see: -

Furnham, A. (1996). Attitudinal correlates and demographic predictors of monetary beliefs and behaviours. *Journal of Organizational Behavior*, 375-388.

(see also Furnham, A., Von Stumm, S., & Fenton-O'Creevy, M. (2015). Sex differences in money pathology in the general population. *Social indicators research*, *123*(3), 701-711.)

Q43 to q58: A 16 item money attitudes scale – representing emotional relationships to money:

money as love, money as freedom, money as power and money as security. Whilst this scale has

good explanatory power in terms of financial outcomes, factor analysis suggests it does not scale

entirely as originally intended.

See: -

 Furnham, A., Wilson, E., & Telford, K. (2012). The meaning of money: The validation of a short money-types measure. *Personality and Individual Differences*, *52*(6), 707-711.

Furnham, A., Von Stumm, S., & Fenton-O'Creevy, M. (2015). Sex differences in money pathology in the general population. *Social indicators research*, *123*(3), 701-711.

Q59 – Q68: Emotion Regulation Questionnaire: -

Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: implications for affect, relationships, and well-being. *Journal of personality and social psychology*, *85*(2), 348.

Q69 – Q 98 are adapted from the Mainz Coping Inventory which measures habitual vigilant and cognitive avoidant responses to threat. The inventory asks respondents to respond yes or no (to describe whether the behavior applies to them for a series of responses which can be classified as vigilant or avoidant. Situation 1 and Situation 2 (job interview and mistake on the job), and the responses, are two of the 'ego threat scenarios from the original inventory. Scenario 2 has been created to describe a financial threat (major unanticipated costs).

See: Krohne, H. W., Egloff, B., Varner, L. J., Burns, L. R., Weidner, G., & Ellis, H. C. (2000). The assessment of dispositional vigilance and cognitive avoidance: Factorial structure, psychometric properties, and validity of the Mainz Coping Inventory. *Cognitive Therapy and Research*, *24*(3), 297-311.

Q99 – Q108 are a financial knowledge test developed by Martin Lewis (of the Moneysavingexpert website) – scored as the sum of correct answers (see table below).

Money Knowledge			
ITEM	**ID**	**RESPONSE**	**SCORE**
TV on sale -	1149637 78563	£30 Off*	1
		10% off	0
		They are the same	0
APR –	1149878 95811	Annual Percentage Rate	1
		Average Percentage Rate	0
		Alternative Percentage Rate	0
		Acceptable Price Rate	0
Expensive to get foreign currency –	1150088 67331	Airport	1
		Online	0
		At your bank	0

		At the Post Office	0
Where to make financial complaint –	1150298 38851	Financial Ombudsman Service	1
		The Office of Fair Trading	0
		The Financial Services Authority	0
		Citizens Advice Bureau	0
Method of payment –	1150508 10371	Paying by credit card	1
		Paying in cash	0
		Paying by cheque	0
		Paying by debit card	0
Cash ISA -	1150717 81891	1000	1
		Nothing	0
		2000	0
		5100	0
EHIC –	1150927 53411	Treatment in a state-run at same price local would pay	1
		Exactly the same as a commercially available single trip European travel insurance policy	0
		Free treatment in a state-run hospital	0
		Free prescriptions on visits to a GP	0
Worst pound for pound deal –		40% Extra Free	1
		Buy two get one free	0

		Get a third (33%) off the price	0
		They are the same	0
Bought a dress –		Nothing Unless It Was Bought Online	1
		Nothing, unless you told them it was bought as a gift	0
		Offer you a credit note	0
		Allow you to change the size	0
£5000 credit card –		60 Years And 3 Months	1
		2 years and 4 months	0
		15 years and 6 months	0
		It will never be paid off	0

Q109 – Q128: Behavioural Inhibition and Behavioural Approach Scales, see: -

Carver, C. S., & White, T. L. (1994). Behavioral inhibition, behavioral activation, and affective responses to impending reward and punishment: The BIS/BAS Scales. *Journal of personality and social psychology*, *67*(2), 319.

Q129 – Q133 Shortened (five items with highest factor loadings) of the Rook and Fisher Impulsive Buying scale $(\text{Alpha} = 0.90)$[1]: -

Rook, D. W., & Fisher, R. J. (1995). Normative influences on impulsive buying behavior. *Journal of consumer research*, *22*(3), 305-313.

Q134/q135 financial knowledge questions based on the following exhibit

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[1] The shortened scale shows a censored normal distribution so it is important to take account of this in analysis, by for example using Tobit regression.

Showcard N1

Looking at this example of a bank statement, please can you tell me how much money was in the account at the end of February?

MS J BLOGGS

Bristol Bank
Green Street
Forest Glade
RR9 5AT

Sheet 008 Account Number 02-82-03 47493555

DATE		DETAILS	PAID OUT	PAID IN	BALANCE
01-Feb-05		BALANCE BROUGHT FORWARD			25.00
01-Feb-05		BACS TRANSFER SALARY		1000.00	
01-Feb-05	DD	ELECTRICITY BOARD	30.00		995.00
02-Feb-05	DD	CAR INSURANCE	50.00		
02-Feb-05	ATM	XXX BANK FOREST GLADE HIGH STREET	150.00		795.00
04-Feb-05	CHQ	100009	35.00		760.00
06-Feb-05	DD	XXX MOBILE PHONE COMPANY	30.00		730.00
10-Feb-05	DD	XXX MORTGAGE BANK	200.00		530.00
12-Feb-05	ATM	XXX BANK FOREST GLADE HIGH STREET	120.00		410.00
15-Feb-05	SO	NEW BUILDING SOCIETY	50.00		360.00
20-Feb-05	CHQ	100010	300.00		60.00
28-Feb-05	CR	NET INTEREST		1.00	61.00
28-Feb-05		BALANCE CARRIED FORWARD			61.00

KEY TO ABBEVIATIONS

DD	DIRECT DEBIT
ATM	ATM CASH WITHDRAWAL
CHQ	CHEQUE
SO	STANDING ORDER
CR	AUTOMATED CREDIT

Q136 – Q141: Propensity to plan for money: long run – see :

Lynch, J. G., Netemeyer, R. G., Spiller, S. A., & Zammit, A. (2010). A generalizable scale of propensity to plan: the long and the short of planning for time and for money. *Journal of Consumer Research*, *37*(1), 108-128.

Q142 – Q144: created by Mark Fenton-O'Creevy as a short measure of financial social capital (access to financial advice from professionals, friends or family).

Q145 – Q151 Index of adverse financial life events

Study participants were asked if they had experienced any of the following adverse financial life events in the last five years: bankruptcy, repossession of house; repossession of car, repossession of other goods bought on credit, missing one or more payments on a loan or

mortgage, denial of credit, unexpected overdraft (1 – 'yes', 0- 'no'). Mokken analysis was used to estimate a latent scale underlying the index. H score = 0.69, (reliability rho=0.67). Item H scores ranged from .46 to .69; indicating a good fit to the Mokken assumptions. Mokken scaling is a probabilistic version of Guttman scaling, which assumes items follow a hierarchy as in Guttman scaling with those highest in the hierarchy implying the truth of the items below. However, in Mokken scaling, if an item is true, items lower in the hierarchy are assumed to be 'probably' true. The H score is a measure of the extent of violations of the hierarchical structure with a higher H score indicating fewer violations. The index has a non-normal distribution typical of count data which should be accounted for in analysis approach (eg negative binomial regression).

Q152 – Q157: Occurrence of life events likely to affect financial wellbeing.

Q169 – Q189: Four financial capabilities were assessed by sets of three to ten questions each spanning multiple-choice and Likert-type items. These scales are based on the FSA Financial Capability Baseline Survey. A limited number of items were chosen from the factors identified by Atkinson et al, 2006); items were chosen as high loading and focused on behaviors rather than attitudes. Capabilities included "making ends meet" (do you struggle with the money you have?); "keeping track" (how much are you aware or the status of your personal finances?); "planning ahead" (are you financially planning the next two months?); and "staying informed" (do you keep track of financial and economic developments?). Unit-weighted composites had coefficient alpha values of .77 for making ends meet (n = 3); .93 for planning ahead (n = 6); .82 for keeping track (n = 3); .44 for 'choosing products' (n=3) and .59 for staying informed (n = 3).

The data set includes a number of variables at the end pre-calculated from these scales but users are advised to calculate their own versions to be certain of the interpretation of results.

Publications from the dataset include:

http://www.bbc.co.uk/science/0/21360144

http://www.friendsprovidentfoundation.org/wp-content/uploads/2013/10/Open-University-Analysing-the-Big-Money-Test-Summary.pdf

Furnham, A., Von Stumm, S., & Fenton-O'Creevy, M. (2015). Sex differences in money pathology in the general population. *Social indicators research*, *123*(3), 701-711.

Von Stumm, S., O'Creevy, M. F., & Furnham, A. (2013). Financial capability, money attitudes and socioeconomic status: Risks for experiencing adverse financial events. *Personality and Individual Differences*, *54*(3), 344-349.

Fenton-O'Creevy, M., Furnham, A., Dibb, S., & Davies, G. (2012). Antecedents and consequences of impulsive buying: can impulsive buying be understood as dysfunctional emotion regulation?. (Working paper, Open University)