# PROJECT INFORMATION "INCOME AND PRICE ELASTICITIES OF HOUSEHOLD EXPENDITURES ON GOODS AND SERVICES" (ECB3OKVECO)

Shortened/new title: Determinants of household expenditures

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### **Content:**

- 1. The aim of the project
- 2. Expected skills
- 3. Expected report
- 4. The economic literature
- 5. The data

References

Appendix 1: Derivation of the income elasticity

Appendix 2: Budget Survey data description

Appendix 3: STATA commands & do-file

Appendix 4: Description variables BO7804.dta

### 1. The aim of the project

An empirical investigation of the determinants of households' expenditures, e.g.,

- variation in the expenditures on goods and services by household characteristics or consumption/expenditures patterns over the life-cycle;
- income elasticities & price elasticities of expenditures on goods and services, and possible variation in these by household characteristics.
- Any other economics-topic investigated with the data for this project is allowed and appreciated. For instance, issues related to inequality or employment.
- Also, *Applied data science* students can apply their acquired techniques to see if they can 'beat' standard economics models.

# 2. Expected skills

Being able to carry out the project requires skills developed in first year microeconomics, mathematics, and statistics, and second year econometrics courses. This includes being able to work with the computer application Stata for data analysis.

### 3. Expected report

See course manual. In short,

- 1. Read the literature and start forming ideas of which questions you wish to answer. Feasibility of answering the questions is discussed (one week);
- 2. Formulate a research question. Hereby keeping in mind the economics literature, the available data, and possible policy-relevance of the question (one week);
- Carry out empirical research to provide an answer to the research question (several weeks);
- 4. Write a research paper (several weeks);
- 5. Present it at the end of the course (one week).

The weekly meetings are for feedback and discussions.

A general point: To empirical answer an at first sight simple research question, often turns out to be challenging enough.

### 4. The economic literature

Expenditures on goods and services of households, i.e., how much they spend on items such as food, clothing or electricity, depends on their income (or their household budget), prices, and their characteristics such as the number of children they have.

In microeconomics this has been formalized and it is often referred to as consumer theory (Deaton & Muellbauer, 1980). For instance, a so-called Engel curve describes how household expenditure on a certain good or service varies with household income (Engel, 1895; Lewbell & Houtakker, 2017). This can be formalized for the purpose of an empirical analysis and is referred to as a budget share equation:

$$\frac{y}{x} = \beta_0 + \beta_1 \cdot \ln(x) + \varepsilon$$

where x is the budget of a household (total expenditures),  $\ln(.)$  is a natural logarithm,  $\frac{y}{x}$  is the share of the budget spend on a particular item (e.g., electricity) and  $\varepsilon$  is an error term that captures unobserved determinants of y. The income elasticity is a function of  $\beta_1$ . An empirical analysis is concerned with estimating the parameters of the budget equation using linear regression techniques and data on household expenditures.

Next, the income elasticity  $e_y$  can be estimated based on the derivation  $e_y = 1 + \beta_1 \cdot \left(\frac{y}{x}\right)^{-1}$  (see Appendix 1). This makes it also possible to determine, e.g., whether the good is an inferior, normal, or luxury good. Furthermore, the demand for a good is likely to depend on prices, i.e., price elasticities can play a role (CORE, 2024). Some goods react stronger to a price change than others. Finally, Engel curves can depend on demographic variables and other household characteristics (Banks, Blundell, & Tanner, 1998; Blundell, Pashardes, & Weber, 1993; Kalwij, Alessie, & Fontein, 1998; Ray, 1983).

In short, consumer theory provides a solid basis for empirical work on the determinants of households' expenditures.

Of course, equations other than the one discussed above can be suitable for answering a research question.

### 5. The data

The data used for this project are the Dutch Consumer Budget Surveys (Budgetonderzoek; CBS, 2012). The dataset is called BO7804.dta (on Blackboard), henceforth referred to as the BO-data. Appendix 4 shows the description/labels of the variables included in this dataset. The data has been used to answer a variety of economics-related policy and research questions (e.g., De Ree & Alessie, 2009; Kalwij, Alessie, & Fontein, 1998; Kalwij, Alessie, Gardner, Ali, 2018; Kalwij & Salverda, 2007; Knoef, Hussem, Soede, & de Bresser, 2014).

The BO-data provides detailed information on household expenditures on certain groups of commodities (goods and services). For one entire year, households keep a daily record of all expenses above a certain threshold amount per item. The threshold amount for the daily records varied over the years between about €11 and €16. Expenditures below the threshold amount per item are recorded for a short period of time and that information is used to construct yearly expenses. This period was initially one month but was reduced to about half a month in the late 1980s and further reduced to 7 or 8 days towards the end of the survey period. Vacation expenditures are recorded in a separate diary. Also, following the official guidelines of Statistics Netherlands, mandatory health insurance premiums are not considered expenditures and are also deducted from net income. This is referred to as disposable income and we refer to Kalwij and Salverda (2007) for details. Finally, the BO-data also contains information on household characteristics, such as family size and composition, age of all household members, income and socioeconomic status.

The Budget Survey was not conducted in 2001 and 2002; surveys after 2004 used a different methodology and were not available for this research. Therefore, the data are available for the years 1978-2000, 2003 and 2004.

The selection of the composite commodity groups – hereafter referred to as goods – was influenced primarily by the availability of price information (see below). The following fourteen goods categories are defined:

- 1. food and non-alcoholic beverages,
- 2. food out (cafes and restaurants),
- 3. alcoholic beverages,
- 4. tobacco,
- 5. clothing and footwear,
- 6. housewares and appliances (furniture, cooking utensils, gardening tools, etc.),

- 7. utilities (heating and electricity),
- 8. rent for renters and
- 9. rental value for homeowners,
- 10. transportation (including fuel),
- 11. personal care (e.g., toothpaste and soap),
- 12. medical care (not covered by health insurance),
- 13. leisure activities (education and recreation, including vacations),
- 14. miscellaneous (mainly financial goods and services).
- '0. Total expenditures' is the sum over these 14 goods. The expenditures are measured in (real) 2012 euros, as is household disposable income.

Also available are the Consumer Price Index, CPI, published by Statistics Netherlands (cbs.nl). The CPI is a Laspeyres index and does not take substitution effects between goods into account. The CPI includes the items rent for renters and rental value of a home for homeowners. In the Budget Surveys the rental value is based on, for instance, appraisals by real estate experts of what the rent would be if the premises were rented out. In line with the calculation of the CPI by Statistics Netherlands, we consider the rental value of a house to be an expenditure and add it as well to net income. Price information is obtained for the goods categories listed above from the price statistics published by Statistics Netherlands. These price indices are based on retail prices of the goods and services on which the aggregate good is based and do not take into account that the quality of goods may have changed. In addition, the baskets of goods may change over time as some products or no longer available while other have been introduced.

Although households may participate in the survey for at most three years, panel identifiers are not made available, and the survey is used as a series of cross-sections. The average annual sample size over the years was 2,260 households (56,571 observations over 25 years). There was only about a 1 percent reduction due to missing values on all the variables. The final sample consisted of 55,962 household-year observations over the 1978-2004 period. For the labelling of variables, the term 'head-of-household' is often used. This is the person who filled in the questionnaires for the budget survey; this person is not literally the head of household.

Table A.1 of Appendix 2 shows the average budget shares for each of these goods by age. The budget share is defined as the expenditure on a good divided by total expenditures. Figure A.1 of Appendix 2 shows information on household characteristics by age and year of birth. Figure A.2 shows the price changes over this period relative to the CPI for all goods.

### References

- Banks, J., Blundell, R., and S. Tanner, 1998. Is there a retirement puzzle? *The American Economic Review*, 88, 4, 769-788.
- Blundell, R., Pashardes, P., and G. Weber, 1993. What do we learn about consumer demand patterns from micro data? *The American Economic Review*, 83, 3, 570-597.
- CBS, 2012. <a href="http://www.cbs.nl/nl-NL/menu/methoden/dataverzameling/budgetonderzoek-bo.htm">http://www.cbs.nl/nl-NL/menu/methoden/dataverzameling/budgetonderzoek-bo.htm</a>
- CORE (2024). The Economy. Economics for a changing world. https://www.core-econ.org/
- De Ree, J., and R. Alessie, 2009. Explaining the hump in life cycle consumption profiles, *De Economist*, 157, 107-120
- Deaton, A., and J. Muellbauer, 1980. *Economics and Consumer Behaviour*. Cambridge University Press, Cambridge, UK.
- Engel, E. 1895. Die Lebenskosten Belgischer Arbeiter Familien Fruher and jetzt. *International Statistical Institute Bulletin*. 9: 1–74.
- Kalwij, A. S., Alessie, R. J. M., and Fontein, P. F. (1998). Household commodity demand and demographics in The Netherlands: A microeconometric analysis. *Journal of Population Economics*, 11(4), 551-577.
- Kalwij, A., Alessie, R., Gardner, J., and A.A. Ali. 2018. Inflation experiences of retirees. Journal of Pension Economics and Finance. 17(1): 85-109
- Kalwij, A.S., and W. Salverda, 2007. The Effects of Changes in Household Demographics and Employment on Consumer Demand Patterns. *Applied Economics*, 39, 11, 1447-1460.
- Knoef, M., Hussem, A., Soede, A., and J. de Bresser, 2014. Pensioen, consumptiebehoeften en ouderenzorg (Retirement, consumption needs and elder care). *Netspar Design Paper 31*.
- Lewbel, A., and Houthakker, H.S. (2008). Engel Curve. In: The New Palgrave Dictionary of Economics. Palgrave Macmillan, London. https://doi.org/10.1057/978-1-349-95121-5 525-2
- Ray, R. (1983). Measuring the Costs of Children. *Journal of Public Economics*, 22:89-102.
- Siermann, C., van Teeffelen, P., and L. Urlings, 2004. Equivalentiefactoren 1995-2000: Methode en belangrijkste uitkomsten (Equivalence factors, 1995-2000: Methodology and major findings). *Sociaal-economische trends*, 3, 63-66.

## Appendix 1: Derivation of the income elasticity

Use the definition of an elasticity and rewrite a bit:

$$e_y = \frac{d \ln(y)}{d \ln(x)} = \frac{1}{y} \cdot \frac{dy}{d \ln(x)} = \frac{x}{y} \cdot \frac{1}{x} \cdot \frac{dy}{d \ln(x)}$$

Next, note that:

$$\frac{d\frac{y}{x}}{d\ln(x)} = \frac{1}{x} \frac{dy}{d\ln(x)} + y \frac{d\frac{1}{x}}{d\ln(x)} = \frac{1}{x} \frac{dy}{d\ln(x)} + y \frac{d\frac{1}{x}}{dx} \frac{dx}{d\ln(x)}$$
$$= \frac{1}{x} \frac{dy}{d\ln(x)} + y \left(-\frac{1}{x^2}\right) \left(\frac{1}{x}\right)^{-1} = \frac{1}{x} \frac{dy}{d\ln(x)} - \frac{y}{x}$$

Hence,

$$\frac{1}{x}\frac{dy}{d\ln(x)} = \frac{d\frac{y}{x}}{d\ln(x)} + \frac{y}{x}.$$

Substitute the latter result in the  $e_y$ -expression:

$$e_y = \frac{x}{y} \cdot \left( \frac{d\frac{y}{x}}{d\ln(x)} + \frac{y}{x} \right).$$

The budget equation (i.e.,  $\frac{y}{x} = \beta_0 + \beta_1 \cdot \ln(x) + \varepsilon$ ) provides  $\frac{d\frac{y}{x}}{d\ln(x)} = \beta_1$ , which is also substituted in the obtain  $e_y$ -expression:

$$e_y = \frac{x}{y} \cdot \left(\beta_1 + \frac{y}{x}\right).$$

Simplify to get the income elasticity in terms of the model's parameters and the budget share:

$$e_y = 1 + \frac{\beta_1}{v/x}.$$

# Appendix 2: Some data descriptions (source: Kalwij, Alessie, Gardner,& Ali, 2018)

Table A.1 Average budget share by goods (commodities) and age

							50-						
Age group	18-24	25-29	30-34	35-39	40-44	45-49	954	55-59	60-64	65-69	70-74	75-79	+086
Food	0.13	0.13	0.15	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.16
Food out	0.07	0.05	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.03	0.02
Alcoholic													
beverages	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Tobacco	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Leisure													
activities	0.19	0.15	0.14	0.15	0.15	0.15	0.14	0.13	0.12	0.11	0.1	0.1	0.08
Clothing	&												
Footwear	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.06	0.06	0.05
Housewares &	&												
appliances	0.1	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.14	0.13	0.13	0.13	0.13
Rent for renters	0.18	0.18	0.18	0.17	0.17	0.18	0.17	0.18	0.19	0.22	0.24	0.25	0.27
Rental value for													
homeowners	0.16	0.16	0.16	0.16	0.16	0.15	0.16	0.17	0.19	0.2	0.22	0.23	0.25
Utilities	0.06	0.05	0.06	0.05	0.05	0.05	0.06	0.06	0.07	0.07	0.08	0.09	0.09
Transportation	0.14	0.15	0.14	0.13	0.13	0.13	0.14	0.13	0.12	0.11	0.1	0.08	0.07
Personal care	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.07
Medical care	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Miscellaneous	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02



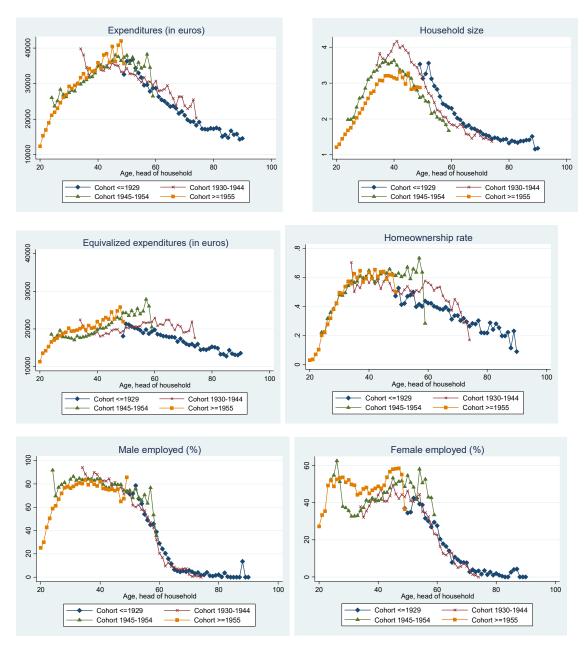
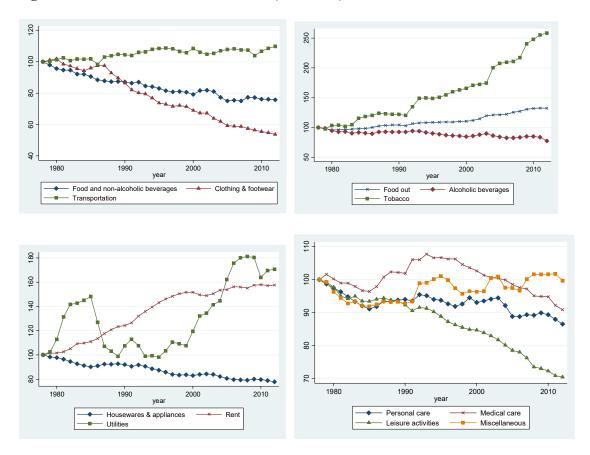


Figure A.2 Price indices relative to CPI (1978=100)



Source: Statistics Netherlands, statline.cbs.nl.

### Appendix 3: STATA commands & do-file

The statistical software package STATA is available on your UU workspace: <a href="https://solisworkspace.uu.nl/">https://solisworkspace.uu.nl/</a>.

- B1 Background material
- a) https://www.stata.com/bookstore/statistics-with-stata/
- b) Use command *help/search* of STATA.

E.g. command: Search tabulate

- This can be done interactively, by clicking "help" and "search"
- Alternatively, this can be done by typing "search tabulate" or "help tabulate" in the command screen.
- d) STATA data file
  - Extension.dta (e.g. dowjones.dta)
  - Contains sample information on (random) variables.

### **B2.** Nine steps to get STATA running

- Step 1 Create a folder in your MyWorkPlace-environment, e.g. U:\statistics. In this folder you can store data-files. Also, do-file and corresponding log-file are usually stored here (see step 4)
- Step 2 Go to Blackboard (from MyWorkPlace/Google Chrome) -> statistics -> datasets.

  Download the files (=save them to the folder created in step 1. For instance, the file: plywood.dta is used for example of Topic Video 12 and you can replicate it.
- Step 3 Open STATA (Start -> programs -> Stata)
- Step 4 Create a log-file. This is a file that will keep track of all your actions and results. In stata press the buttons: File -> log -> begin. Now change the extension (default is ".scml") into .log. Enter a file name, e.g. output1.log, and save it into the folder created in step 1.
- Step 5 In the command window (bottom of the screen), you may increase the memory capacity. For instance, type "set memory 25m".
- Step 6 Open your data set: File -> open -> (look-up the folder created in step 1 and open, for instance) dowjones.dta
- Step 7 You can now type STATA commands to obtain descriptive statistics or run regressions. Some of these commands are in C3 (below).
- Step 8 Do not forget when you are finished with what you planned to do to CLOSE the logfile. This saves all actions and output to the folder created in step 1 in the file named in step 4. File -> log -> close
- Step 9 You can open your log file using a text-editor, notepad for instance. Edit it a bit or clean it up, print it and bring it to the tutorial

These steps apply to all computer exercises/exercises that come with state dataset. You only need to change the names of log-file in order not to overwrite previous results unintendly.

#### B3 – Some STATA commands

There is 'help' button in STATA that explains the command. Below variables are X and Y but there can be many more. All variables in the dataset are selected using, e.g., command "des \*".

### **Descriptive Statistics**

<u>des</u>cribe provides the labels for all the variables

codebook Produces a codebook describing the contents of data (inc. labels)

sum Summary statistics of all variables (min, max, mean, n)

sum X Y Summary statistics of the variables X and Y

sum X, detail Extensive overview of summary statistics of variable X list X Y in 1/20 List values of variables X and Y of the first 20 cases

tabulate X One-way table of the variable X of frequencies

tabulate X Y Two-way table of X and Y of frequencies

corr X Y Correlation matrix between the variables X and Y corr X Y, covar Covariance matrix between the variables X and Y

pwcorr X Y, sig Pairwise correlation coefficient, including standard errors

### Manipulations of variables

drop X Eliminate variable X

keep X keeps only variables X and Y

generate Create new variable, for example "gen LX = ln(X)" creates a new

variable LX that is the natural logarithm of X

replace Change contents of existing variable

egen Extensions to generate (ways of aggregating over observations)

sort Sort

Regression analysis

Regress Y X Linear regression  $Y=\beta_0+\beta_1X+e$ , OLS estimator

predict yhat  $Yhat=b_0+b_1X$ 

predict ehat, residual ehat = Yhat- $(b_0+b_1X)$ 

Graphs

twoway (scatter Y X) Plot (X,Y) coordinates for the whole sample

twoway (lfit Y X) Plot the regression line of Y on X twoway (scatter Y X) (lfit Y X) Line and coordinates in one graph

twoway (scatter Y X) (lfitci Y X) Line and coordinates in one graph & confidence bands

A graph can be saved as a file by right-clicking on the graph & save.

# B4 – Example of a so-called "do-file"

Example of a do-file (should be a standard text-file) that contains some STATA commands.

\_\_\_\_\_

cap log c					
set more off	/* Stata executes commands with no pause*/				
log using BOproject, replace text	/* any name is OK */				
clear	/* removes any previously used data */				
use BO7804.dta	/* load dataset: BO7804.dta (on BB) */				
des	/* Shows the variables in the dataset */				
sum	/* sample mean, std.dev,, min., max */				
corr Y X	/* sample correlation coefficient [Y X to be replaced with variable names */				
pwcorr Y X, sig	/* t-test statistic of H0: rho=0 */				
reg Y X	/* linear regression */				
twoway (scatter Y X) (lfit Y X)	/* scatter plot & fitted regression line */				
log cl					

\_\_\_\_\_

# Provided (on Blackboard): BO example.do

- This files contains some of the syntax listed above, for the dataset provided;
- This example do-file can be the starting point for your project's do-file;
- A do-file needs to be handed in at the end of the course (together with your research paper).

Appendix 4: Description variables BO7804.dta (command in Stata : 'des')

Contains data from BO7804.dta

obs: 55,962 vars: 101

.....

storage display value					
		label variable label			
h992 year woman hhtype couple singleparent widowed age hhage17_19 hhage20_24 hhage30_34 hhage35_39 hhage40_44 hhage45_49 hhage55_59 hhage60_64	long %12.0g int %9.0g byte %9.0g	Weights for making the sample representative Survey year 1978-2004, excl. 2001 & 2002 1 if head-of-household is a woman, 0 otherwise Household type 1 for two-adult/couple household, 0 otherwise 1 for a single-parent, 0 otherwise 1 for a widowed single-person, 0 otherwise Age, head of household Head-of-household age17_19 Head-of-household age20_24 Head-of-household age25_29 Head-of-household age30_34 Head-of-household age35_39 Head-of-household age40_44 Head-of-household age45_49 Head-of-household age55_59 Head-of-household age55_59 Head-of-household age60_64			
hhage65_69 hhage70_74	byte %9.0g	Head-of-household age65_69 Head-of-household age70_74			
hhage80_ hhagecat	byte %9.0g byte %9.0g byte %9.0g	Head-of-household age75_79 Head-of-household age80_ hhagecatl Age category, head-of-household  Year of birth head of household			
child0_3 child4_16	int %9.0g byte %9.0g byte %9.0g byte %9.0g	Year of birth, head-of-household Number of children aged 0-3, in the household Number of children aged 4-16, in the household Number of children aged 17+ (& unmarried), in the household			
	byte %9.0g byte %9.0g				
parents otherper	byte %9.0g byte %9.0g	(in-law) (grand)parents present Other persons in the household			
nage0_3 nage4_16	byte %9.0g byte %9.0g	Number of people aged 0-3 (excl.hohh) Number of people aged 4-16 (excl.hohh)			
nage17_19 nage20_24	byte %9.0g byte %9.0g	Number of people aged 17-19 (excl.hohh)  Number of people aged 20-24 (excl.hohh)			
nage25_29 nage30_34 nage35_39	byte %9.0g byte %9.0g byte %9.0g	Number of people aged 25-29 (excl.hohh) Number of people aged 30-34 (excl.hohh) Number of people aged 35-39 (excl.hohh)			
nage40_44 nage45_49 nage50_54	byte %9.0g byte %9.0g byte %9.0g	Number of people aged 40-44 (excl.hohh) Number of people aged 45-49 (excl.hohh) Number of people aged 50-54 (excl.hohh)			

```
nage55 59
              byte
                    %9.0g
                                     Number of people aged 55-59 (excl.hohh)
nage60 64
              byte
                     %9.0g
                                     Number of people aged 60-64 (excl.hohh)
nage65 69
                    %9.0g
                                     Number of people aged 65-69 (excl.hohh)
              bvte
nage70 74
              byte
                     %9.0g
                                     Number of people aged 70-74 (excl.hohh)
nage75 79
              byte
                    %9.0g
                                     Number of people aged 75-79 (excl.hohh)
                    \%9.0g
nage80
              bvte
                                     Number of people aged 80+ (excl.hohh)
                   %9.0g
hhsize
              byte
                                   Household size (number of people in the household)
equisc
              float %9.0g
                                  Household equivalence scale (sqrt(A+0.8*C) SIERMAN)
              byte %40.0g
                                        Level of education, head of household
educa
                               educal
peduca
              byte %40.0g
                               educal
                                      Level of education, partner of head of household
               byte %9.0g
                                     Head of household employed=1
hhemployed
                     byte %9.0g
pemployed
                                       Number of other employed persons in the household
hhretired
              byte %9.0g
                                     Head of household in retirement=1
pretired
              byte %9.0g
                                    Number of other persons in the household in retirement
              float %9.0g
hhinc
                                    Household disposable income, in (real) 2012 euros,
              byte %9.0g
                                     Household rents the home
renter
               byte %9.0g
                                      Household owns the home
homeowner
              float %9.0g
expenditures
                              0. Total expenditures
              float %9.0g
                              1.Food and non-alcoholic beverages expenditures
food
              float %9.0g
                              2. Cafes and restaurants expenditures
foodout
              float %9.0g
                              3. Alcoholic beverages expenditures
alcohol
              float %9.0g
                              4. Tobacco expenditures
tobacco
              float %9.0g
                              5. Clothing and footwear expenditures
clothing
housing
           float %9.0g
                              6. Furniture, upholstery and household appliances expenditures
utility
           float %9.0g
                              7. Heating and electricity expenditures
          float %9.0g
                              8.Rent
rent
              float %9.0g
rentalvalue
                              9. Rental value (based on WOZ value)
              float %9.0g
transport
                              10. Transport (incl.fuel) expenditures
perscare
              float %9.0g
                              11.Personal care expenditures
              float %9.0g
medicare
                              12. Medical care expenditures
              float %9.0g
                              13. Education, recreation and package holidays expenditures
leisure
other
              float %9.0g
                              14. Other expenditures
              float %9.0g
                                    1.Budget share of Food and non-alcoholic beverages
sfood
              float %9.0g
                                    2.Budget share of Food out
sfoodout
              float %9.0g
salcohol
                                    3. Budget share of Alcoholic beverages
stobacco
              float %9.0g
                                    4. Budget share of Tobacco
              float %9.0g
                                    5. Budget share of Clothing & footwear
sclothing
shousing
              float %9.0g
                                    6.Budget share of Housewares & appliances
sutility
              float %9.0g
                                    7.Budget share of Utilities
srent
              float %9.0g
                                    8. Budget share of Rent
                                    9. Budget share of Rental value
             float %9.0g
srentalvalue
              float %9.0g
stransport
                                    10. Budget share of Transport
              float %9.0g
sperscare
                                    11.Budget share of Personal care
             float %9.0g
smedicare
                                    12. Budget share of Medical care
              float %9.0g
sleisure
                                    13. Budget share of Leisure activities
sother
              float %9.0g
                                    14. Budget share of Miscellaneous
              float %9.0g
pfood
                                    1. Price index of Food and non-alcoholic beverages
              float %9.0g
pfoodout
                                    2. Price index of Food out
palcohol
              float %9.0g
                                    3. Price index of Alcoholic beverages
ptobacco
              float %9.0g
                                    4. Price index of Tobacco
```

pclothing	float	%9.0g	5. Price index of Clothing & footwear
phousing	float	%9.0g	6.Price index of Housewares & appliances
putility	float	%9.0g	7. Price index of Utilities
prent	float	%9.0g	8. Price index of Rent
prentalvalue	float	%9.0g	9. Price index of Rental value
ptransport	float	%9.0g	10.Price index of Transport
pperscare	float	%9.0g	11. Price index of Personal care
pmedicare	float	%9.0g	12.Price index of Medical care
pleisure	float	%9.0g	13. Price index of Leisure activities
pother	float	%9.0g	14.Price index of Miscellaneous