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#### absent

#### Data on labor absenteeism

# Decription

Workfile generated artificially to explain the labor absenteeism in a company.

# Variables

absent: absenteeism in the firm measured in days.
wage: wage expressed in thousands of euros per year.
age: age expressed in years.
tenure: years in the company
bluecoll: dummy variable indicating that the person is a manual worker (the reference category is white collar worker).
male: dummy variable that takes the value 1 if the worker is male.

#### Sample size: 48

Used in example 3.1, example 5.7 and example 6.1.

#### Sources and references

Workfile generated artificially by Ezequiel Uriel.

# advincen

#### Sales, advertisement and incentives

#### **Decription**

Workfile generated artificially as a function of expenditures in advertisement and incentives to the salesmen.

## Variables

*sales*: sales, expressed in of thousands of dollars. *advert*: expenditures in advertisement, expressed in of thousands of dollars. *incent*: incentives to the salesmen, expressed in of thousands of dollars.

#### Sample size: 18

Used in: example 4.8.

# Sources and references

Workfile generated artificially by Ezequiel Uriel.

## airqualy

## Data on air quality and its determinants

Data on air quality and its determinants for 30 Standard Metropolitan Statistical Areas (SMSA's) in California.

#### Variables

airqual: weight in µg/m<sup>3</sup> of suspended matter. coast: dummy variable that takes 1 for SMSA's on the coast, 0 otherwise. density: density population per square mile of area. electr: electricity consumed by industrial manufacturers (megawatt hours).

*fueloil*: thousands of barrels of fuel oil consumed in industrial manufacturing. *indestab*: number of industrial establishments with 20 or more employees.

medincm: medium per capita income in dollars.

popln: population in thousands.

*poverty*: the percentage of families with income less than poverty levels. *rain*: rain fall in inches.

valadd: value added by industrial manufactures in 1972 in thousands of dollars.

Sample size: 30

Used in exercise 4.8 and exercise 6.8.

## Sources and references

Data compiled by Susan Wong are for 1970-72. Reference: R: Ramanathan: *Introductory Econometrics with applications*. Fifth edition.

# bolmad11 Data from Bolsa de Madrid in 2011

#### **Decription**

This data set contains information dated in 2011 on the market value, the book value and other characteristics of the companies. It has been used to analyze the relation between the market capitalization and the book value.

# Variables

name: listed company.

- *bookval*: book value or net worth of the company. The book value is calculated as the difference between a company's assets and its liabilities.
- *services, consump, energy, industry* and *itc* (information technology and communication) are dummy variables. Each of them takes the value 1 if the corporation is classified in this sector in Bolsa de Madrid. The category of reference is *finance*.
- *ibex35*: Dummy variable, takes value 1 if the stock is included in this selective index.
- *marktval*: is the value the market puts on a company. It is calculated by multiplying the price of the stock by the number of stocks issued.
- Data on marktval and bookval are expressed in millions of euros.

## Sample size: 92

Used in example 5.2 and exercise 5.17.

#### Sources and references

Data from 92 Companies Listed on November 15, 2011, compiled by Ezequiel Uriel.

# bolmad95

## Data from Bolsa de Madrid in 1995

#### **Decription**

This data set contains information dated in 1995 on the market value and the book value.

## Variables

name: Listed company.

- *bookval*: book value or net worth of the company. The book value is calculated as the difference between a company's assets and its liabilities.
- *marktval*: is the value the market puts on a company. It is calculated by multiplying the price of the stock by the number of stocks issued.

Data on marktval and bookval are expressed in millions of pesetas.

#### Sample size: 161

Used in example 2.8, example 2.10, example 6.7 and example 6.9.

# Sources and references

Data from Bolsa de Madrid (Madrid Stock Exchange) on August 18, 1995 compiled by Ezequiel Uriel.

# bolmadef Study on the Madrid Stock Exchange

# Decription

This data set contains daily information on Bolsa de Madrid during 1992. It has been used to analyze of market efficiency of this market.

# Variables

*denominacion*: Stock exchange trading days. *ibmad92*: general index of prices of the Stock Madrid. *rmad92*: rate of return on the Madrid Stock Exchange.

Sample size: 02/01/1992 at 31/12/1992 (irregular), 249.

Used in example 4.5, example 6.4 and example 6.11.

# Sources and references

Data from Bolsa de Madrid (Madrid Stock Exchange) on 1992, compiled by Ezequiel Uriel.

# ceoforbes

# Wage prediction for CEO's

# **Decription**

This file contains data on 447 CEOs of America's 500 largest corporations. (52 of the 500 firms were excluded because of missing data on one or more variables. Apple Computer was also excluded since Steve Jobs, the acting CEO of Apple in 1999, received no compensation during this period.)

## Variables

age: age of CEO's. assets: total assets of firm in millions of dollars. bonuses: bond issued by the companies. profits: benefits of companies in millions of dollars. roa: is the ratio profits/assets expressed as a percentage. salary: annual compensation in thousands of dollars. sales: business sales. tenure: number of years as CEO in the company. totcomp: salary + bonuses

## Sample size: 447

*Used in* exercise 3.14, example 4.14, example 4.15, exercise 4.27 and exercise 6.9.

## Sources and references

Company data come from Fortune magazine and are referred to 1999; CEO data come from Forbes magazine and are referred to 1999 too. Data set compiled by Ezequiel Uriel.

#### ceosal1

#### Wages according to sales

#### Decription

Analysis of the dependence of the salaries of CEO's with company performance. A random sample of data reported in the May 6, 1991 issue of *Businessweek*, taken by Wooldridge.

# Variables

consprod: dummy variable, 1 if consumer product firm finance: dummy variable, 1 if the company is dedicated to finance. indus: dummy variable, 1 if industrial. pcroe: % change roe, 88-90. pcsalary: % change salary, 88-90. roe: return on equity (in percent form), ros: return on the firm's stock (in percent form): rosneg: dummy variable, 1 if. the CEO's firm had a negative return on its stock. salary: annual compensation in thousands of dollars. sales: business sales. utility: dummy variable, 1 if service.

#### Sample size: 209.

#### Used in example 4.11.

## Sources and references

Jeffrey M. Wooldridge (2003): *Introductory Econometrics. A Modern Approach.* Third edition. Thomson. United States.

#### ceosal2

#### Salary and tenure

#### **Decription**

Analysis of the dependence of the salaries of CEO's with years of seniority. Data compiled by Wooldridge. In this version of the data set, more information about the CEO, rather than about the company, is included.

## Variables

age: age of CEO's. ceoten: number of years in the company as CEO. college: dummy variable, 1 if attended college. comten: years in the company grad: dummy variable, 1 if attended graduate school. mktval: market value in millions \$, end 1999. profits: benefits of companies in millions of dollars. profmarg: profits as % of sales. salary: annual compensation in thousands of dollars. sales: business sales.

#### Sample size: 177

Used in example 3.5.

#### Sources and references

Jeffrey M. Wooldridge (2003): *Introductory Econometrics. A Modern Approach.* Third edition. Thomson. United States.

# coffee1

# Decription

Conduct a marketing study to explain the sales of coffee per week as a function of its price.

# Variables

*coffpric*: price of coffee. *coffqty*: quantity sold of coffee per week.

Sample size: 12

Used in example 2.7

# Sources and references

A. C. Bemmaor and D. Mouchoux, "Measuring the Short-Term Effect of In-Store Promotion and Retail Advertising on Brand Sales: A Factorial Experiment', Journal of Marketing Research, 28 (1991), 202–14.

# coffee2

# Coffee prices, sales advertisment

# **Decription**

. Data coming from other marketing experiment to determine the role played by advertising in the sale of coffee.

## Variables

*advert*: dummy variable that takes value 1 if there is advertising in this week and 0 if there is not.

*coffpric*: takes three values: 1, for the usual price, 0.95 and 0.85. *coffqty*: quantity sold of coffee per week.

## Sample size: 18

Used in exercise 5.15.

## Sources and references

A. C. Bemmaor and D. Mouchoux, "Measuring the Short-Term Effect of In-Store Promotion and Retail Advertising on Brand Sales: A Factorial Experiment', Journal of Marketing Research, 28 (1991), 202–14.

## consumsp

# Consumption function

## Decription

Data of consumption and disposable income for the Spanish economy in the period 1954-2010.

# Variables

*conspc*: consumption is expressed in constant euros per capita, taking 2008 as reference year.

*incpc*: disposable income is expressed in constant euros per capita (using consumer price index as deflactor), taking 2008 as reference year..

y1986: dummy variable, 1 if year  $\geq$  1986.

y2002: dummy variable, 1 if year  $\geq$  2002.

## Sample size: 57

*Used in* exercise 2.24, exercise 3.19, exercise 4.23, exercise 4.33, exercise 5.23 and exercise 6,16.

## Sources and references

Times series built by Ezequiel Uriel using data of National Accounts for the Spanish economy in the period 1954-2010. National Statistical Office of Spain (Instituto Nacional de Estadística).

## costfunc

#### Cost function

# Decription

Data set to study of the marginal effect in cost function based on data from pulp mills.

#### Variables

*output*: the production of pulp in thousands of tons. *cost*: total cost in millions of euros.

#### Sample size: 11

Used in example 3.6.

## Sources and references

Workfile generated artificially by Ezequiel Uriel.

# demand Engel curve

## Decription

Data set built to estimate Engel curves. An Engel curve shows the relationship between various quantities of a good a consumer is willing to purchase at varying income levels.

## Variables

alcohol: expenditure on alcoholic drinks. bread: expenditure on bread. coffee: expenditure on coffee. dairy: expenditure on dairy products. eggs: expenditure on eggs. *fish*: expenditure on fish. foodtot: expenditure on total food. *fruit*: expenditure on fruit. *hhsize*: number of members of the household. inc: disposable income. *meat*: expenditure on meat. nonalch: expenditure on non-alcoholic drinks oil: expenditure on oil. othfood: expenditure on other food products. punder5: proportion of children under five in the household. secstud: dummy variable, 1, if individual has completed secondary studies. sugar: expenditure on sugar. supstud: dummy variable, 1 if individual hascompleted tertiary studies. urban: dummy variable takes the value 1 if the family lives in an urban area vegetabl: expenditure on vegetables.

The data on expenditures and income are expressed in thousands of euros per month.

## Sample size: 40

*Used in* annex 2.1, example 3.7, example 4.4, example 5.3, example 5.13 and exercise 4.2.

## Sources and references

Workfile generated artificially by Ezequiel Uriel.

# elecsp

## Electricity consumption in Spain

## Decription

Data file built to evaluate whether the consumption of electricity in Spain is detremined by the gross domestic product.

#### Variables

*conselec*: electricity consumption in Spain. *gdp*: gross domestic product at 1986 market prices.

Sample size: 1954-2009, 56 observations.

## Used in exercise 6.35.

## Sources and references

Quarterly Bulletin of energy situation. Evolution of final energy consumption in Spain. (Boletín trimestral de coyuntura energética. Evolución del consumo de energía final en España.) (1973-2009).

## fishdem Testing the hypothesis of homogeneity

## Decription

Time series to estimate a demand function and test the hypothesis of homogeneity.

## Variables

*cons*: total consumption at constant prices. *fish*: fish expenditure at constant prices. *fishpr*: price of fish. *meatpr*: price of meat.

Sample size: 28

Used in example 4.9 and exercise 6.12.

## Sources and references

E. Uriel, M. L. Moltó and V. Cucarella (1995): *Contabilidad Nacional de España* enlazada 1954 1993. IVIE

# HDR2010

# Data on human development

# Description

This file contains indicators on human development.

Variables	Description variables			
Country	Name of the c	Name of the country (169 countries)		
ddevelop	Developed countries	Developed countries dummy variable		
deuroas	Euroasia	dummy variab	le	
dafrica	Africa	dummy variab	le	
dDECD	OECD countries	dummy variab	le	
dNODECD	Non-OECD countries	dummy variab	le	
dArab	Arab States	dummy variab	le	
dEastAsia	East Asia and the Pacific	dummy variab	le	
dEurCnAs	Europe and Central Asia	dummy variab	le	
dLatAm	Latin America and the Caribbean	dummy variab	le	
dSthAsia	South Asia	dummy variab	le	
dSubSah	Sub-Sahara Africa	dummy variab	le	
HDI	Human Development Index (HDI)	value	2010	
lifexpec	Life expectancy at birth	(years)	2010	
school	Mean years of schooling	(years)	2010	
expschl	Expected years of schooling	(years)	2010	
GNI	Gross national income (GNI) per capita	(PPP US\$ 2008)	2010	
GNIrank	GNI per capita rank minus HDI rank		2010	
HDInoinc	Non-income HDI value		2010	
HDIineq	Inequality-adjusted HDI	Value	2010	
lifexpinq	Inequality-adjusted life expectancy at birth index	Value	2010	
educinq	Inequality-adjusted education index	Value	2010	
GNIinq	Inequality-adjusted income index	Value	2010	
ginicoef	Income Gini coe	efficient	2000-2010	
gendinqr	Gender Inequality Index	Rank	2008	
gendinqv	Gender mequanty mdex	Value	2008	
matmort	Maternal mortal	ity ratio	2003-2008	
adolfert	Adolescent ferti	lity rate	1990–2008	
femparla	Seats in parliament (%)	Female	2008	
secndfem	Population with at least secondary	Female	2010	
secndmal	education (% ages 25 and older)	Male	2010	
partifem		Female	2008	
malpart	Labor force participation rate (%)	Male	2008	
contrcept	(% of married women a		1990–2008	

Variables	Description variables		
antnatal	Antenatal coverage of at least one visit	(%)	1990–2008
birthatt	Births attended by skilled health personnel	(%)	2000–2008
mulpovin	Multidimensional Po	overty Index	2000-2008
mulpovcn	Population in multidimensional poverty: Headcount	(%)	2000–2008
mulpovis	Population in multidimensional poverty: Intensity of deprivation	(%)	2000–2008
mulpovrk	Population at risk of multidimensional poverty	(%)	2000–2008
depreduc	Population with at least one severe deprivation in Education	(%)	2000–2008
deprhlth	Population with at least one severe deprivation in Health	(%)	2000–2008
deprlive	Population with at least one severe deprivation in Living standards	(%)	2000–2008
popbe125	Population below PPP US\$1.25 a day	(%)	2000–2008
popbenpv	Population below national poverty line	(%)	2000–2008
satfree	Satisfaction with freedom of choice	Total	2009
satfreef	(% satisfied)	Female	2009
democrcy	Democracy	Score (0–2)	2008
humrghvi	Human rights violations	Score (1–5)	2008
presfrdm	Press freedom	(index)	2009
jourimpr	Journalists imprisoned	(number)	2009
corruvict	Corruption victims	(% of people who faced a bribe situation in the last year)	2008
democdec	Democratic decentralization	Score (0–2)	2008
polengag	Political engagement	(% of people who voiced opinion to public officials)	2008
savingad	Adjusted net savings	(% of GNI)	2008
ecolosup	Ecological footprint of consumption	(hectares per capita)	2006
fossfuel	Fossil fuels	(%)	2007
renewasrc	Renewable sources	(%)	2007
cadiox90	Carbon dioxide emissions por canita	(toppos)	1990
cadiox06	Carbon dioxide emissions per capita	(tonnes)	2006

File: *HDR2010* (Cont.)

Variables	Description variables		
protarea	Protected area	(% terrestrial area)	2009
popdglnd	Population living on degraded land	(%)	2010
popnowat	Population without access to improved services water	(%)	2008
popnosan	Population without access to improved services sanitation	(%)	2008
deathpoll	Deaths due to indoor and outdoor air and water pollution	(per million people)	2004
popafdis	Population affected by natural disasters	(average per year, per million people)	2000–2009
armsexp	Conventional arms trai	nsfers Exports	2008
armsimp	Conventional arms trai	nsfers Imports	2008
refugees	Refugees by country of origin	(thousands)	2008
disppeop	Internally displaced persons	(thousands)	2008
civwarfa	Civil war Fatalities	(average per year of conflict per million inhabitants)	1990/2008
civwarin	Civil war Intensity	Score (0–2)	2008
unrnour90	Durandan as af an damaani damaat	(0) of total accordation)	1990–1992
unrnour04	Prevalence of undernourishment	(% of total population)	2004-2006
deprfd90		(average % shortfall in	1990/1992
deprfd04	Intensity of food deprivation	minimum dietary energy requirements)	2004/2006
stsfglo	Overall life satisfaction	Total	2006-2009
stsfglof	(0, least satisfied, 10, most satisfied)	Female	2006-2009
stsfjob	Satisfaction with personal dimensions of wellbeing: Job	(% of employed respondents who are satisfied)	2006–2009
stsfhlth	Satisfaction with personal dimensions of wellbeing: Personal health	(% of all respondents who are satisfied)	2006–2009
stsflive	Satisfaction with personal dimensions of wellbeing: Standard of living	(% of all respondents who are satisfied)	2006–2009
purplif	Elements of happiness (% answering "yes" to having the element):	Total	2006–2009
purpliff	Purposeful life	Female	2006-2009
respect	Elements of happiness (% answering	Total	2006–2009
respectf	"yes" to having the element): Treated with respect	Female	2006–2009

File: HDR2010 (Cont.)

Variables	Description variables		
socsupp	Elements of happiness (% answering	Total	2006-2009
socsuppf	"yes" to having the element): Social support network	Female	2006–2009
negatexp	Negative experience index	(0, most negative, 100, least negative)	2006–2009
homicrat	Homicide rate	(per 100,000 people)	2003–2008
robbrate	Robbery rate	(per 100,000 people)	2003–2008
assaulvi	Assault victims	(% reporting having been a victim)	2006–2009
safetper	Perception of safety	(%)	2006-2009
stsfcom	Satisfaction with measures of w Communi	rell being (% satisfied): ty	2006–2009
stsfhous	Satisfaction with measures of w Affordable ho	rell being (% satisfied): busing	2006–2009
stsfhlth	Satisfaction with measures of well care quali	being (% satisfied): Health ty	2006–2009
stsfeduc	Satisfaction with measures of well being (% satisfied): Education system and schools		2006–2009
stsfairq	Satisfaction with measures of well being (% satisfied): Air quality		2006–2009
stsfwatr	Satisfaction with measures of well being (% satisfied): Water quality		2006–2009
pop1990			1990
pop2010	Population: Total	(millions)	2010
pop2030			2030
pop9095g	Domulation: Average approal growth	(0/)	1990–1995
pop1015g	Population: Average annual growth	(%)	2010-2015
urban90	Dopulation: Lishan	(0) of total)	1990
urban10	Population: Ofban	(% 01 total)	2010
popage90	Domulations Madian age	(110.000)	1990
popage10	Population: Median age	(years)	2010
deprat90	Dependency ratio	(per 100 people ages 15-	1990
deprat10		64)	2010
fertil90	Total fertility rate	(hirths per woman)	1990–1995
fertil10		(on this per woman)	2010-2015
sexrat90	Sev ratio at hirth	(male births per 100 female	1990
sexrat10		births)	2010

File: *HDR2010* (Cont.)

Variables	Description variables		
emprat91		(0) of population	1991
emprat08	Employment to population ratio	ages 15–64)	2008
empform	Earned anglesses	(% of total employment)	2000–2008
empformf		Ratio of female to male rates	2000–2008
empvul		(% of total employment)	2000–2008
empvulfm	Vulnerable employment	Ratio of female to male rates	2000–2008
empsm125	Employed people living on less than US\$ 1.25 a day	(% of total employment)	2000–2008
unempri	Unemployment rate by level of education	Primary or less	2000–2008
unemsec	(% of labor force with given level of attainment)	Secondary or above	2000–2008
childlab	Child labor	(% of children ages 5–14)	1999–2007
matleave	Mandatory paid maternity leave	(calendar days)	2007-2009
literate	Adult literacy rate	(% ages 15 and older)	2005-2008
popsec	Population with at least secondary education	(% ages 25 and older)	2010
enrprigrs	Primary enrolment ratio	Gross	2001-2009
enrprinet	(% of primary school-age population)	Net	2001-2009
enrsecgrs	Secondary enrolment ratio	Gross	2001-2009
enrsecnet	(% of secondary school-age population)	Net	2001-2009
enrtergrs	Tertiary enrolment ratio (% of tertiary school-age population)	Gross	2001–2009
droprate	Dropout rate, all grades	(% of primary school cohort)	2005–2008
reperate	Repetition rate, all grades	(% of total primary enrolment in previous year)	2005–2008
pupteacr	Pupil-teacher ratio	(number of pupils per teacher)	2005–2008
teachtra	Primary school teachers trained to teach	(%)	2005–2008
healthex	Expenditure on health	Per capita (PPP US\$)	2007
physicn	Physician	$(\operatorname{por} 10000 \operatorname{poon} 1_0)$	2000 2000
hospbeds	Hospital beds	(per rooto people)	2000-2009

# File: HDR2010 (Cont.)

Variables	Description variables		
DTP	Infants lacking immunization against DTP	(0) of one open olde)	2008
measles	Infants lacking immunization against Measles	(% of one-year-olds)	2008
HIVythf	$\mathbf{U}\mathbf{V}\mathbf{V}\mathbf{outh}\left(0\right)=\cos\left(15,24\right)$	Female	2007
HIVythm	Hiv Touul (% ages 13-24)	Male	
HIVadult	HIV Adult (% ages 15-49)	Total	
deathinf	Infant deaths	(por 1000 live hirths)	2008
deathun5	Under-five deaths	(per 1000 live bittis)	2008
mortfem	Mortality Adults (per 1,000	Female	2008
motmal	people)	Male	2008
deathnoc	Age-standardized death rates from non-communicable diseases	(per 100000 people)	2004
expeduc	Public expenditure (% of GDP)	Education	2000-2007
exphlth		Health	2000-2007
exprd	Public expenditure (% of GDP)	Research and development	2000-2007
expmilit		Military	2008
debtgni	Debt service	(% of GNI)	2008
taxgdp	Tax revenue	(% of GDP)	2008
gfcfgdp	Gross fixed capital formation	(% of GDP)	2008
forinvtes	Foreign direct investment: Net inflows	(% of GDP)	2008
assdeto	Official development assistance: Total	(% of GNI)	2008
assdevpc	Official development assistance: Per capita	(US\$)	2008
assdeso	Official development assistance: Allocated to social sectors	(% of total aid)	2008
remittot	Remittance inflows: Total	(% of GDP)	2008
remitpc	Remittance inflows: Per capita	(US\$)	2008
gdp		(US\$ billions)	2008
gdpppp	GDP	(PPP US\$ billions)	2008
gdppc		(US\$)	2008
gdppcgr	GDP per capita	Average annual growth rate (%)	1970–2008
cpi	Consumer price index	Average annual change (%)	2000–2008
roaddens	Road density	(km of road per sq. km of land area)	2004–2007

File: HDR2010 (Cont.)

Variables	Description variables		
railline	Rail lines	(km)	2004-2008
airtrans	Air transport (freight)	(million tonnes per km)	2005–2008
elcnocov	Population without electricity	(% of population)	2008
newspapr	Daily newspapers	(per thousand people)	2004
radiocov	Radio coverage	(% of population)	2005
tvcovr	Television coverage	(% of population)	2005
mobphopc	Mobile and fixed-line phone subscriptions	(per 100 people)	2008
mobphogr		(% growth, population- based)	2000–2008
mobcov	Population covered by mobile phone network	(%)	2008
internet	Usars	(per 100 people	2008
interngr		(% growth, population- based)	2000–2008
broadban	Broadband subscriptions	(per 100 people)	2008
perscomp	Personal computers	(per 100 people)	2006–2008
mobcharg	Mobile phone connection charge	(US\$)	2006-2008
phofixch	Fixed-line phone connection charge	(US\$)	2006-2008
call3mpr	Price of a 3-minute local fixed-line phone call	(US cents)	2006–2008

# File: HDR2010 (Cont.)

## Sample size: 169

*Used in* example 4.2, exercise 2.20, exercise 3.18, exercise 4.31, exercise 5.19 and exercise 5.21.

## Sources and references

Compiled by E. Uriel using Human Development Report <u>http://hdr.undp.org/en/2018-update</u>.

# hedcarsp

# A hedonic regression for cars

## **Decription**

The model hedonic price measurement is based on the assumption that the value of a property dependent on the value of their different characteristics. This data set allows estimating hedonic price equations of cars in Spain and covers the years 2004 and 2005.

## Variables

*price*: price in pesetas. *cid:* performance displacement (CID, cubic inch displacement).

*hpweight*: (ratio horsepower/weight)\*100. *volume* : length x width x height. *length*: length in cm. width: width in cm. *height* : height in cm. weight: weight in kg. *ndoors*: number of doors. autom: automatic gear (dummy variable). assisted: power assisted steering (dummy variable). *fuel\_cons*: consumption in litters per 100 km. fueleff: litters per 100 km/horsepower. minivan: minivan (dummy variable). aircond: air conditioning (dummy variable). climcon: climate control (dummy variable). elecwin: electric windows (dummy variable). diesel: diesel (dummy variable). absbrake: Antilock Braking System (ABS) (dummy variable). Brands (dummy variables): Alfar, Audi, Austin, Bmw, Chrysler, Citroen,

Daewoo, Fiat, Ford, Honda, Hyundai, Kia, Lancia, Mazda, Mercedes, Mitsubishi, Nissan, Opel, Peugeot, Renault, Rover, Saab, Skoda, Talbot, Toyota, Volvo, Volks.

#### Sample size: 214

Used in example 3.3, exercise 3.16, exercise 4.29 and exercise 4.35.

## Sources and references

Data selected by E. Uriel using the dataset compiled by A. Matos and J. L. Raymond (2009): Hedonic prices for cars: an application to the Spanish car market, 1981-2005, *Applied Economics*, vol 41, n°22, 2009, pags 2887-2904. The prices and characteristics of the car models were obtained from specialist magazines. The price used thus corresponds to list prices, as is often the case in hedonic analysis. In addition, the car price include value added tax (VAT) and special car tax.

## hostel

#### Demand for hostel services

#### **Decription**

Data set to estimate an econometric model for determining hotel services.

#### Variables

*hhsize*: number of members of the household *hostel*: spending on hotel services. *inc*: disposable income. *secstud* and *terstud* are two dummies that take the value 1 if individuals have completed secondary and tertiary studies respectively.

urban: dummy variable, 1 if the family lives in an urban area.

#### Sample size: 40

Used in example 3.2, example 6.8 and example 6.10.

#### Sources and references

Workfile generated artificially by Ezequiel Uriel.

#### housecan

## Prices of houses in Canada

#### Description

This file contains 546 observations on sales prices of houses sold during July, August and September, 1987, in the city of Windsor, Canada.

#### Variables

price: sale price of a house. lotsize: the lot size of a property in square feet. bedrooms: number of bedrooms. bathrms: number of full bathrooms. stories: number of stories excluding basement. driveway: dummy, 1 if the house has a driveway. recroom: dummy, 1 if the house has a recreational room. fullbase: dummy, 1 if the house has a full finished basement. gashw: dummy, 1 if the house uses gas for hot water heating. airco: dummy, 1 if there is central air conditioning. garagepl: number of garage places. prefarea: dummy, 1 if located in the preferred neighborhood of the city.

#### Sample size: 546

Used in exercise 3.13 and exercise 4.26.

#### Sources and references

Paul Anglin, P,. and R. Gencay, (1996):"Semiparametric Estimation of a Hedonic Price Function", Journal of Applied Econometrics, Vol. 11, No. 6, *1996*, pp. 633-648. Verbeek, M.(2000): A Guide to Modern Econometrics. Wiley.

# hprice2

# Hedonic Housing Prices and the Demand for Clean Air

## Description

The file contains data on the housing price in 506 communities in the Boston area. It is used to study the incidence of crime rate in a district on the price of houses in community.

#### Variables

*crime*: crimes committed per capita in the community. *dist*: weighted distance to 5 employment centers *lowstat*: percentage of people of "lower status" in the community. *nox*: nitrous oxide, parts per 100 million. *price*: median housing price, \$. *proptax*: property tax per \$1000. *radial*: accessibility index to radial highways. *rooms*: average number of rooms per house. *stratio*: average student-teacher ratio.

## Sample size: 506

Used in example 4.3 and exercise 4.1.

## Sources and references

D. Harrison and D.L. Rubinfeld (1978), "Hedonic Housing Prices and the Demand for Clean Air," by Harrison, D. and D.L.Rubinfeld, *Journal of Environmental Economics and Management* 5, 81-102.

# *importsp* Imports in Spain

## **Decription**

Data set built to explain imports of goods in Spain during the period 1971-1997. Annual data.

# Variables

*gdp*: gross domestic product at market prices at constant prices (reference 2008).

*gdpcur*: gross domestic product at market prices at current prices. *imp*: import of goods at constant prices (reference 2008). *impcur*: import of goods at current prices (reference 2008). *pgdp*: price of *gdp* (reference 2008). *pgdp* =*gdpcur/gdp*. *pimp*: price of *imp* (reference 2008). *pimp* =*impcur/imp rpimp*: relative prices *imports/gdp*: rimp= ratio pimp/pgdp

Sample size: 1971-1997. 27 observations.

Used in exercise 6.3, exercise 6.21 and exercise 6.34.

## Sources and references

Times series built by Ezequiel Uriel using data of National Accounts. National Statistical Office of Spain (Instituto Nacional de Estadística) for the Spanish economy in the period 1971-1997.

## madtok

#### Rate of return of the Madrid Stock Exchange

#### **Decription**

Data set used to study the transmission of effects between the Tokyo Stock Exchange and the Madrid Stock Exchange in 1992. This data set includes the general indices of the Madrid Stock Exchange and the Tokyo Stock Exchange during the days both exchanges were open simultaneously 1n 1992. That is, it was eliminated observations for those days when any one of the two stock exchange was closed. In total, the number of observations is 234, compared to the 247 and 246 days the Madrid and Tokyo Stock Exchanges were open.

## Variables

*itok*92: Madrid stock market index.*imad*92: Tokyo stock market index.*rtok*92: the rate of return Tokyo Stock Exchange in period *t*.*rmad*92: rate of return Madrid Stock Exchange in period *t*.

Sample size: 236

Used in example 4.6.

## Sources and references

Data set compiled by Ezequiel Uriel.

# mbatui10

# MBA tuition and salary for MBAs in 2010

## Decription

Data from the 50 best American business schools.

#### Variables

school: names of american business schools.

- *corppoll*: rank based on surveys of MBA recruiters and contributes 45 percent to final ranking in 2010.
- *gradpoll*: rank based on surveys of MBA grads and contributes 45 percent to final ranking in 2010.
- *intellec*: rank based on review of faculty research published over 5-year period in 20 top academic journals and faculty books reviewed in *The New York Times*, *The Wall Street Journal*, and *Bloomberg Businessweek* over the same period; this last rank contributes 10 percent to final ranking in 2010. *rank2010*: the rank of each business school in 2010.

*rank2008*: the rank of each business school in 2008.

*indexnum*: To help determining how close the schools came to a higher or lower ranking, we've added an index number is calculated. This index number represents the sum total of all three factors used to calculate the final ranking in 2010 (*rank2010*).

*joboffer*: Percentage of job-seeking 2010 MBA graduates reporting at least one job offer within 3 months of graduation. Self-reported by schools.

salmbagr: median annual salary of an MBA graduate in 2010 in \$.

salmbapr: median annual salary for incoming class of 2010 in \$.

selectiv: percentage of applicants admitted

*tuition*: tuition fees in \$. It includes tuition and all required fees for entire program, but excludes living expenses.

#### Sample size: 50

Used in exercise 2.22 and exercise 4.24.

#### Sources and references

Data Bloomberg Businessweek, Cambria Consulting. Compilation by E. Uriel

# phillipsp

#### Inflation, unemployment and Phillips curve

#### Decription

Data set of the Spanish economy for the period 1970-2010 containing inflation rate and the unemployment rate. This data set is used to estimate the Phillips curve.

#### Variables

*year*: year of observation. *inf*: rate of inflation. *unempl*: unemployment rate.

Sample size: 1970-2010. 41 observations.

Used in exercise 6.36 and exercise 6.37.

# Sources and references

*Unemployment*: Baiges, Molinas and Sebastian until 1977; EPA (Instituto Nacional de Estadística of Spain) later. The *inflation* rate is the rate of the CPI in December each year.

# pinkham

#### **Decription**

This dataset was used by Kristian S. Palda in his doctoral thesis published in 1964, entitled The Measurement of Cumulative Advertising Effects, to analyze the cumulative effects of advertising expenditures in the case of the company Lydia E. Pinkham. This case has been the basis for research on the effects of advertising expenditures.

# Variables

- *sales*: sales of an herbal extract from this company (expressed in thousands of dollars).
- advert: advertising expenditures in thousands of dollars.
- d1, d2, d3: three time dummy variables. These dummy variables encompass the various situations happened in the company. Thus, d1 takes 1 in the period 1907-1914 and 0 in the remaining periods, d2 takes 1 in the period 1915-1925 and 0 in other periods, and finally, d3 takes 1 in the period 1926 1940 and 0 in the remaining periods.

#### Sample size: 54

Used in example 3.4, example 5.5, example 5.17, example 6.13 and example 6.15.

#### Sources and references

Kristian S. Palda (1964): *The Measurement of Cumulative Advertising Effects*. Englewood Cliffs, N.J., Prentice-Hall.

# prodmet

#### Constant returns to scale

#### **Decription**

This data set contains information about of 27 companies in the primary metals industry. It used to analyze whether there are constant returns to scale in this sector.

#### Variables

*capital*: gross value of plant and equipment. *labor*: measure of labor input. *output*: gross value added.

## Sample size: 27

Used in example 4.7 and example 4.12.

#### Sources and references

Data are per establishment, labor is a measure of labor input, and capital is the gross value of plant and equipment. A scale factor used to normalize the capital figure in the original study has been omitted. Further details on construction of the data are given in D.J. Aigner, C. A. K. Lovell and P. Schmidt (1977): "Formulation and estimation of stochastic frontier production function models". *Journal of econometrics*, 6, pp.21-37; and in G. H Hildebrand and T. Liu (1957): "Manufacturing production functions in the United States, 1957: an interindustry and interstate comparison of productivity". *Cornell studies in industrial and labor relations*; 15.

# prodsp

# Changes in the productive structure of Spanish regions

# **Decription**

This file contains information on the gross value added in million euros, employment in thousands of jobs and productive capital in millions of euros for each of the Spanish regions in 1995 and 2008.

# Variables

*region*: Spanish region. *captot*: capital productive in millions of euros. *gva*: gross value added in millions of euros *labor*: occupation in thousands of jobs. *y2008*: dummy variable, which takes the value 1 if the year is 2008 and 0 if the year is 1995.

# Sample size: 34

Used in example 5.14.

# Sources and references

Regional Accounts of Spain. National Statistical Office of Spain. (Contabilidad regional de España. Instituto Nacional de Estadística).

# qnatacsp

# Quaterly National Accounts of Spain

# **Decription**

Data from quarterly national accounts in Spain in the period 2000-TI to 2012-TI.

Variables	Explanation
chainvcu	Changes in inventories at current prices (reference 2008)
consdh	Domestic final consumption expenditure of households at current prices (reference 2008)
consdh01	Domestic final consumption expenditure of households at constant prices (reference 2008)
consfg	Final consumption expenditure of government at constant prices (reference 2008)
consfgcu	Final consumption expenditure of government at current prices (reference 2008)
consfh	Final consumption expenditure of households at constant prices (reference 2008)
consfhcu	Final consumption expenditure of households at current prices (reference 2008)
consfn	Final consumption expenditure of households of NPISH at constant prices (reference 2008)
consfncu	Final consumption expenditure of households of NPISH at current prices (reference 2008) at constant prices (reference 2008)
consfp	Domestic final consumption expenditure of households and NPISH
consfpcu	Domestic final consumption expenditure of households and NPISH at current prices (reference 2008)
consft	Final consumption expenditure at constant prices (reference 2008)

Variables	Explanation
consftcu	Final consumption expenditure at current prices (reference 2008)
expg	Exports of goods at constant prices (reference 2008)
ехрдси	Exports of goods at current prices (reference 2008)
expgs	Exports of goods and services at constant prices (reference 2008)
expgscu	Exports of goods and services at current prices (reference 2008)
exps	Exports of services at constant prices (reference 2008)
expscu	Exports of services at current prices (reference 2008)
gcf	Gross capital formation (GCF) at constant prices (reference 2008)
gcfcu	Gross capital formation (GCF) at current prices (reference 2008)
gdp	Gross domestic product at market prices at constant prices (reference 2008)
gdpcu	Gross domestic product at market prices at current prices (reference 2008)
gfcf	Gross fixed capital formation (GFCF) at constant prices (reference 2008)
gfcfcu	Gross fixed capital formation (GFCF) at current prices (reference 2008)
impgcu	Imports of goods at current prices (reference 2008)
impgcu01	Imports of goods at constant prices (reference 2008)
impgs	Imports of goods and services at constant prices (reference 2008)
impgscu	Imports of goods and services at current prices (reference 2008)
imps	Imports of services at constant prices (reference 2008)
impscu	Imports of services at current prices (reference 2008)
pgdp	Price of <i>gdp</i>
pturimp	Price of <i>pturimp</i>
rpturimp	Relative prices ( <i>pturimp/pgdp</i> )
turexp	Expenditure non-residents households at constant prices (reference 2008)
turexpcu	Expenditure non-residents households at current prices (reference 2008)
turimp	Expenditure of resident households in the rest of the world at constant prices (reference 2008)
turimpcu	Expenditure of resident households in the rest of the world at current prices (reference 2008)

#### File: qnatacsp (Cont.)

# Sample size: 49

## Used in example 6.14.

#### Sources and references

Quarterly National Accounts of Spain. National Statistical Office. (Contabilidad Nacional Trimestral de España. Instituto Nacional de Estadística).

# rdspain Research and Development intensity in Spain

#### **Description**

This data set is based in a survey, which, on an annual basis, provides information of the industrial sector's evolution over time by means of multiple data concerning business development and company decisions. This survey is also designed to generate microeconomic information that enables econometric models to be specified and tested.

## Variables

exponsal: exports as a percentage of sales.

- *medtech* and *hightech* are two dummy variables which reflects if the firm belongs to a medium or a high technology sector. The reference category corresponds to the firms with *lowtech* technology.
- *rd*: expenditure on research and development (R&D)
- *rdintens*: expenditure on research and development (R&D) as a percentage of sales.

*sales*: measured in millions of euros. *workers*: number of workers.

#### Sample size: 1983

Used in exercise 2.21, exercise 3.15, exercise 4.28 and exercise 5.18.

## Sources and references

Survey of Entrepreneurial Strategies (Encuesta sobre Estrategias Empresariales) produced by the Spain Ministry of Industry. Data set compiled by Pilar Beneito (Universidad de Valencia).

# *timuse309 Time use in Spain for 2002-2003 and 2009-2010*

#### **Description**

The file contains information on the time spent per day to sleep, personal care, paid work / unpaid, leisure, etc. and variables on socioeconomic characteristics of the people. Data are a random subsample of 2000 observations extracted from the time use surveys for Spain carried out in the periods 2002-2003 and 2009-2010.

Variables	Explanation
age	age in years
careprov	time in minutes devoted daily to caregiving
carself	time in minutes devoted daily to care self
child35	number of children from 3 to 5 years
child515	number of children from 5 to 15 years
childu15	number of children up to 15 years
childup3	number of children up to 3 years
childup5	number of children up to 5 years
chrondis	dummy variable, 1 if chronically ill
clothprv	time in minutes spent daily to clothing care
educ	years of education completed
employee	dummy variable, 1 if the employee
female	dummy variable, 1 if female
flexschd	dummy variable, 1 if flexible hours
foodprov	time in minutes devoted daily to provide food
fulltime	dummy variable, 1 if full time
goodhlth	dummy variable, 1 if good health
helpothf	time in minutes devoted daily to help to other households
hhinc	household income per month in euros
hhsize	number of household members
hobbies	time in minutes devoted daily to hobbies

File:	timuse309 (	(Cont.)	)
		/	

Variables	Explanation
homemnt	time in minutes devoted daily to home maintenance
houswife	dummy variable, 1 if house wife
labforce	dummy variable, 1 if in labor force
medtime	time in minutes devoted daily to means of communication
nonresdom	dummy variable, 1 if. the household have nonresident domestics
paidwork	time in minutes devoted daily to paid work
persinc	personal income per month in euros
privempl	dummy variable, 1 if private employee
pubempl	dummy variable, 1 if public employee
region	region of Spain
resdmstc	dummy variable, 1 if. the household have resident domestics
retired	dummy variable, 1 if retired
saturday	dummy variable, 1 if the interview was conducted in Saturday
sleep	time in minutes devoted daily to sleep
soclife	time in minutes devoted daily to social life
spaniard	dummy variable, 1 if Spaniard
sport	time in minutes devoted daily to sport
study	time in minutes devoted daily to study
sunday	dummy variable, 1 if the interview was conducted in Sunday
unempl	dummy variable, 1 if unemployed
watchtv	time in minutes spent watching television
weekdomh	total weekly hour worked by domestics
weekwrkh	weekly working hours
workday	dummy variable, 1 if the interview was conducted in a workday
worknopr	time in minutes devoted daily to unpaid work
y2009	dummy variable, 1 if the year 2009

# Sample size: 2000

Used in exercise 5.22.

## Sources and references

Time use surveys. (*Encuestas de empleo del tiempo* in 2002-2003 and 2009-2010.) Instituto Nacional de Estadística de España. Data set compiled by Ezequiel Uriel.

# timuse03

## Time use in Spain for 2002-2003

## **Decription**

The file contains information on the time spent per day to sleep, personal care, paid work / unpaid, leisure, etc. and variables on socioeconomic characteristics of the people. Data are a random subsample of 1000 observations extracted from the time use surveys for Spain carried out in the period 2002-2003

Variables	Explanation
sleep	time in minutes devoted daily to sleep
careself	time in minutes devoted daily to care self
paidwork	time in minutes devoted daily to paid work
foodprov	time in minutes devoted daily to provide food
homemnt	time in minutes devoted daily to home maintenance

File: *timuse03* (Cont.)

Variables	Explanation
clothprv	time in minutes devoted daily to clothing care
careprov	time in minutes devoted daily to caregiving
worknopr	time in minutes devoted daily to unpaid work
helpothf	time in minutes devoted daily to help to other households
soclife	time in minutes devoted daily to social life
sport	time in minutes devoted daily to sport
hobbies	time in minutes devoted daily to hobbies
medtime	time in minutes devoted daily to means of communication
study	time in minutes devoted daily to study
female	dummy variable, 1 if female
age	age in years
educ	years of education
spaniard	dummy variable, 1 if Spaniard
goodhlth	dummy variable, 1 if good health
chrondis	dummy variable, 1 if chronic sick
labforce	dummy variable, 1 if in labor force
unemplyd	dummy variable, 1 if unemployed
employee	dummy variable, 1 if employee
privemplo	dummy variable, 1 if private employee
pubempl	dummy variable, 1 if public employee
houswife	dummy variable, 1 if house wife
retired	dummy variable, 1 if retired
fulltime	dummy variable, 1 if full time
flexsched	dummy variable, 1 if flexible hours
weekwrkh	weekly working hours
persinc	personal income per month in euros
hhsize	number of household members
childup3	number of children up to 3 years
childup5	number of children up to 5 years
childu15	number of children up to 15 years
resdomstc	dummy variable, 1 if. the household have resident domestics
noresdom	dummy variable, 1 if. the household have nonresident domestics
weekdomh	total weekly hour worked by domestics
hhinc	household income per month in euros
workday	dummy variable, 1 if the interview was conducted in a workday
saturday	dummy variable, 1 if the interview was conducted in Saturday
sunday	dummy variable, 1 if the interview was conducted in Sunday
houswork	= foodprov + homemnt + clothprv + careprov
volwork	= worknopr + helpothf
unpaidwk	= houswork + volwork
totalwrk	= paidwork + unpaidwk
leisure	= careself + hobbies + medtime + soclife + sport + study

# Sample size: 1000

*Used in* example 6.3, exercise 2.19, exercise 3.11, exercise 3.17, exercise 4.30, exercise 4.34, exercise 5.16 and exercise 5.20.

#### Sources and references

Random sample of size 1000 extracted from Time use survey. National Statistical Office of Spain (*Encuesta de empleo del tiempo 2002-2003*, Instituto Nacional de Estadística). Data set compiled by Ezequiel Uriel.

#### tradocde

#### Foreign trade in OECD countries

#### **Decription**

This data set contain information on imports, exports, gross domestic product and population in OECD countries en 2009.

#### Variables

*country*: OECD country. *export*: exports in the OECD countries. *gdi*: gross domestic product at market prices. *impor*: imports in OECD countries. *popul*: population of each country.

#### Sample size: 34

Used in exercise 6.22.

# Sources and references

OECD: National Accounts Statistics (database). Data set compiled by Ezequiel Uriel.

#### wage2

# Wage, experience, tenure and age

#### **Decription**

This data set is a sample of employees, indicating their age, experience, years worked in the company and other socioeconomic factors.

# Variables

age: age in years.
black: dummy variable, 1 if black.
brthord: birth order
exper: years of work experience.
feduc: years of father education.
hours: weekly hours worked.
iq: IQ score
kww: knowledge of world work score.
meduc: years of mother education.
sibs: numbers of brothers and sister.
south: dummy variable, 1 if live in south.
tenure: years with current employer.
urban: dummy variable, 1 if live in urban area.
wage: monthly earnings in \$.

#### Sample size: 935

Used in example 4.10.

# Sources and references

M. Blackburn and D. Neumark (1992), "Unobserved Ability, Efficiency Wages, and Interindustry Wage Differentials," *Quarterly Journal of Economics* 107, 1421-1436. Wooldridge.

# wage02sp Structural Survey of Wages for Spain in 2002

#### **Decription**

The Wage Structure Survey of Spain for 2002 wages are collected in the questionnaire individually, and with them a host of variables related to the worker.

Variables	Explanation
age	age in years
andaluc	dummy variable, 1 if region is Andalucía
aragon	dummy variable, 1 if region is Aragón
asturias	dummy variable, 1 if region is Asturias
baleares	dummy variable, 1 if region is Baleares
busiserv	dummy variable, 1 if sector is business services
canarias	dummy variable, 1 if region is Canarias
cantabr	dummy variable, 1 if region is Cantabria
castleon	dummy variable, 1 if region is Castilla y León
castmanc	dummy variable, 1 if region is Castilla La Mancha
catalun	dummy variable, 1 if region is Cataluña
ceutaym	dummy variable, 1 if region is Ceuta y Melilla
chemical	dummy variable, 1 if sector is chemical
cno2	Occupational category according the National Classification of Occupations
commerce	dummy variable, 1 if sector is commerce
construc	dummy variable, 1 if sector is construction
educ	years in education
electro	dummy variable, 1 if sector is electronic
energy	dummy variable, 1 if sector is energy
extract	dummy variable, 1 if sector is extractive industries
extremad	dummy variable, 1 if region is Extremadura
female	dummy variable, 1 if female
finanzas	dummy variable, 1 if sector is finance
food	dummy variable, 1 if sector is food
galicia	dummy variable, 1 if region is Galicia
health	dummy variable, 1 if sector is health
hostel	dummy variable, 1 if sector is hostel
large	dummy variable, 1 if the firm is large (more than 199 workers)
machiner	dummy variable, 1 if sector is industrial machinery

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Variables	Explanation
madrid	dummy variable, 1 if region is Madrid
manuf	dummy variable, 1 if sector is manufacturing
medium	dummy variable, 1 if firm size is medium (from 50 to to 199 workers)
metal	dummy variable, 1 if sector is metal
miscel	dummy variable, 1 if sector is miscellaneous manufacturing
murcia	dummy variable, 1 if region is Murcia
navarra	dummy variable, 1 if region is Navarra
nonmetal	dummy variable, 1 if sector is nonmetallic mineral
otheract	dummy variable, 1 if sector is other activities
paper	dummy variable, 1 if sector is paper
part	dummy variable, 1 if part time employee
pvasco	dummy variable, 1 if region is País Vasco
rioja	dummy variable, 1 if region is La Rioja
rubber	dummy variable, 1 if sector is rubber
small	dummy variable, 1 if firm size is small (up to 49 workers)
tempor	dummy variable, 1 if temporary contract
textil	dummy variable, 1 if sector is textile
transequ	dummy variable, 1 if sector is transport equipment
transpor	dummy variable, 1 if sector is transport
valencia	dummy variable, 1 if region is Comunidad Valenciana
wage	hourly wage in euros
wood	dummy variable, 1 if wood sector

## Sample size: 148551

*Used in* example 5.1, example 5.4, example 5.8, example 5.10, example 5.11, example 5.12, example 5.15 and example 5.16.

## Sources and references

National Statistical Office of Spain. Wage structure survey of Spain for 2002 (Instituto Nacional de Estadística: Encuesta de Estructura Salarial 2002).

# wage06sp Structural Survey of Wages for Spain in 2006

#### **Decription**

The Wage Structure Survey of Spain for 2006 wages are collected in the questionnaire individually, and with them a host of variables related to the worker.

# Variables

*age*: years. *educ*: years in education. *female*: dummy variable that takes the value 1 if the worker is female. *fulltime*: dummy variable, 1 if full time. *indefcontract*: dummy variable, 1 if indefinite contract. *large*: dummy variable, 1 if large. *male*: dummy variable that takes the value 1 if the worker is male. medium: dummy variable, 1 if medium.
partime: dummy variable, 1 if part time.
publiccontrol: dummy variable, 1 if public control.
small: dummy variable, 1 if small.
tenure: continuous variable reflecting the years in the company.
wage: expressed in thousands of euros per year.

#### Sample size: 18968

*Used in* example 5.6, example 5.9, example 6.1, exercise 2.23, exercise 3.12 and exercise 4.25.

# Sources and references

National Statistical Office of Spain. Wage structure survey of Spain for 2006 (Instituto Nacional de Estadística: Encuesta de Estructura Salarial 2006).