

User Guide

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Outline

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DATENSÄTZE \hookrightarrow Grundlagen

- Datensätze unterteilt in
 - ▶ H-Files
 - ▶ P-Files
 - ▶ D-Files
 - ▶ W-File
- Weitere Aufteilung in
 - ▶ H-File \rightarrow Core (H-File) und Non-Core (HN-File)
 - ▶ P-File \rightarrow Core (P-File) und Non-Core (PN-File)
- Ein Datenfile je Imputations Implicate
 - ▶ H-File \rightarrow H1.dta, H2.dta, H3.dta, H4.dta und H5.dta
 - ▶ P-File \rightarrow P1.dta, P2.dta, P3.dta, P4.dta und P5.dta
 - ▶ D-File \rightarrow D1.dta, D2.dta, D3.dta, D4.dta und D5.dta

DATENSÄTZE \leftrightarrow H-Files

H-Files enthalten alle erhobenen Haushaltsvariablen, wie

- Hauptwohnsitz und dessen Finanzierung (Variablen beginnend mit hb...)
- Weiterer Immobilienbesitz und dessen Finanzierung (Variablen beginnend mit hb...)
- Weiteres Sachvermögen (Variablen beginnend mit hb...)
- Weitere Verbindlichkeiten (Variablen beginnend mit hc...)
- Unternehmensbeteiligungen (Variablen beginnend mit hd...)
- Finanzvermögen (Variablen beginnend mit hd...)
- Einkommen auf Haushaltsebene (Variablen beginnend mit hg...)
- Erbschaften / Schenkungen (Variablen beginnend mit hh...)
- Konsum (Variablen beginnend mit hi...)
- Sparverhalten (Variablen beginnend mit hi...)

Non-Core-Datensätze enthalten je nach Land unterschiedliche national erhobene zusätzliche Variablen (spezifische Fragen, keine Informationen aus AT)

DATENSÄTZE ↔ P-Files

P-Files enthalten alle erhobenen Personenvariablenvariablen, wie

- Beziehungsstatus (pa0100)
- Bildung (pa0200)
- Beschäftigung (Variablen beginnend mit pe...)
- Altersvorsorge (Variablen beginnend mit pf...)
- Einkommen (Variablen beginnend mit pg...)
- Beziehung zum Kompetenzträger (ra0100)
- Geschlecht (ra0200)
- Alter (ra0300)
- Geburtsland (ra0400 und ra0500)

Non-Core-Datensätze enthalten je nach Land unterschiedliche national erhobene zusätzliche Variablen (spezifische Fragen, keine Information aus AT)

DATENSÄTZE \leftrightarrow D-Files

Aggregierte ("derived") Variablen

- Nettovermögen (dn3001)
- Bruttovermögen (da3001)
 - ▶ Sachvermögen (da1000)
 - ★ Hauptwohnsitz (da1110)
 - ★ Weiteres Immobilienvermögen (da1120)
 - ★ Fahrzeuge (da1130)
 - ★ Anderes Sachvermögen (da1131)
 - ★ Unternehmenseigentum (HH-Mitglied tätig im Unternehmen) (da1140)
 - ▶ Finanzvermögen (da2100)
 - ★ Spareinlagen (da2101) [in AT LV enthalten]
 - ★ Fonds (da2102)
 - ★ Anleihen (da2103)
 - ★ Stille Beteiligung (da2104)
 - ★ Aktien (da2105)
 - ★ Treuhänderisch verwaltete Konten (da2106)
 - ★ Geldschulden gegenüber dem Haushalt (da2107)
 - ★ Anderes Finanzvermögen (da2108)
 - ★ Freiwillige Altersvorsorge / Lebensversicherungen (da2109)

DATENSÄTZE \hookrightarrow D-Files (weiter)

- Verbindlichkeiten (dl1000)
 - ▶ Besicherte Verbindlichkeiten (dl1100)
 - ★ Mit Hauptwohnsitz besicherte Verbindlichkeiten (dl1110)
 - ★ Mit weiterem Immobilienvermögen besicherte Verbindlichkeiten (dl1120)
 - ▶ Unbesicherte Verbindlichkeiten (dl1200)

Flow Variablen

- Kreditrückzahlungen (Variablen beginnend mit dl2...)
- Einkommen (Variablen beginnend mit di...)

Haushaltsgröße (Variablen beginnend mit dh...)

DATENSÄTZE \hookrightarrow W-File

- Enthält 1.000 Replicate Weights (wr0001-wr1000)
- Nur ein File (keine Imputation)
- Verwendung: korrekte Varianzschätzung

ZUSATZINFORMATIONEN ↔ Identifikation

- sa0010: Haushaltsidentifikationsnummer
- ra0010: Personenidentifikationsnummer
- im0100: Nummer des Implicates (i.e. 1.-5. Implicate der Imputation)
- sa0100: Länderidentifikation
- (survey: Nummer für Welle des HFCS)
- id: Eindeutige Identifikations-ID, zusammengespielt aus
"sa0100surveysa0010im0100"

Aufbau eines Variablennamens

- Erste zwei Buchstaben: Indikator für Kapitel im Fragebogen (hb, hc, pe, usw.)
- Folgende drei Ziffern: Fragennummer im Fragebogen (z.B. Frage 2.36 im Fragebogen → hb360...)
- Letzte Ziffer: Indikator for Iteration in einer Schleife
 - ▶ Keine Schleifenvariable → "0"
 - ▶ Schleifenvariable → "1" bis "3"
- Allfälliger Buchstabe am Ende → Antwortmöglichkeiten bei Mehrfachantworten
- (Österreich spezifische Zusatzvariablen beginnend mit "a")

ZUSATZINFORMATIONEN ↔ Computerkapazitäten

- Datensatz im "wide" Format hat mehr als 5Gb (ohne Value Labels)
- Über 62.000 Haushalte pro Implicate
- Mehr als 3.500 Variablen
- Stata 12 setzt Memory on the Fly
- Stata 12 set `maxvar` je nach Voreinstellung notwendig
- Ältere Stata-Versionen → set `memory` und set `maxvar` notwendig
- Stata/IC und Small Stata → Lösche nicht benötigte Variablen

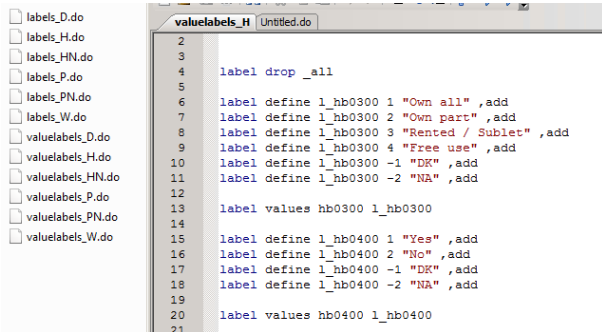
ZUSATZINFORMATIONEN \hookrightarrow Sub-Sample an HFCS Haushalten

In diesem Workshop benutzen wir ein **zufälliges** Sub-Sample (2%) der HFCS Daten

\implies Ergebnisse **nicht** aussagekräftig!!

ZUSATZINFORMATIONEN ↔ Labels

- Sub-Sample Files des Workshops sind gelabelt (sowohl Variablen als auch Werte)
- User Database eventuell ohne Label
- Aber Do-Files zum Benennen mitgeliefert



The image shows a file explorer on the left with a list of do-files: labels_D.do, labels_H.do, labels_HN.do, labels_P.do, labels_PN.do, labels_W.do, valuelabels_D.do, valuelabels_H.do, valuelabels_HN.do, valuelabels_P.do, valuelabels_PN.do, and valuelabels_W.do. To the right is a code editor window titled 'valueLabels_H Untitled.do' containing the following Stata code:

```
2
3
4 label drop _all
5
6 label define 1_hb0300 1 "Own all" ,add
7 label define 1_hb0300 2 "Own part" ,add
8 label define 1_hb0300 3 "Rented / Sublet" ,add
9 label define 1_hb0300 4 "Free use" ,add
10 label define 1_hb0300 -1 "DK" ,add
11 label define 1_hb0300 -2 "NA" ,add
12
13 label values hb0300 1_hb0300
14
15 label define 1_hb0400 1 "Yes" ,add
16 label define 1_hb0400 2 "No" ,add
17 label define 1_hb0400 -1 "DK" ,add
18 label define 1_hb0400 -2 "NA" ,add
19
20 label values hb0400 1_hb0400
21
```

MERGEN DER DATENSÄTZE \hookrightarrow Ablauf

- P-Files sind im "long" Format, i.e. eine Person eine Zeile
- Transformiere Datensatz zum "wide" Format (mit `reshape wide`)
- Speichere temporären Personendatensatz für jedes Implicate
- Zusammenspielen von H-File und temporärem Datensatz

\implies Ein File mit Haushalts- und Personenvariablen pro Implicate

- Zusammenspielen der Haushalts- und Personenvariablen mit den Aggregierten Variablen pro Implicate
- Aneinanderhängen von den Implicates

\implies Ein File mit Haushalts-, Personen- und aggregierten Variablen mit allen Implicates

MERGEN DER DATENSÄTZE \hookrightarrow Vorbereiten

```
forvalues i=1(1)5 {
  use "$hfcsdata\P'i'.dta", clear
  drop id hid survey
  foreach var of varlist sa0010- fra0500 {
    local 'var'lab: variable label 'var'
  }

  reshape wide ra0?0* fra0?0* p* fp* , i(sa0010 sa0100) j( ra0010)
  foreach j of varlist ra* fra* p* fp* {
    local last2car=substr("`j'", '=length("`j`")-1', 1)
    local last1car=substr("`j'", length("`j`"), 1)
    if "`last2car'=="1" {
      local firstcar=substr("`j'",1, '=length("`j`")-2')
      rename `j' `firstcar'_'last2car'_'last1car'
      label variable `firstcar'_'last2car'_'last1car' "'`firstcar'lab' - 'last2car'_'last1car'"
    }
    else {
      local firstcar=substr("`j'",1, '=length("`j`")-1')
      rename `j' `firstcar'_'last1car'
      label variable `firstcar'_'last1car' "'`firstcar'lab' - 'last1car'"
    }
  }
  save "$hfcsdata\P'i'_.temp.dta", replace
}
```

MERGEN DER DATENSÄTZE \hookrightarrow Zusammenspielen

```
forvalues i=1(1)5 {  
  use "$hfcsdata\H'i'.dta", clear  
  merge 1:1 sa0010 sa0100 im0100 using "$hfcsdata\P'i'_temp.dta", nogen  
  save "$hfcsdata\M'i'.dta", replace  
  erase "$hfcsdata\P'i'_temp.dta"  
}
```

*Merging the core with the derived variables

```
forvalues i=1(1)5 {  
  use "$hfcsdata\M'i'.dta", clear  
  merge 1:1 sa0010 im0100 sa0100 using "$hfcsdata\D'i'.dta"  
  save "$hfcsdata\temp'i'.dta", replace  
}
```

*Merging the implicates together(see note in the chapter!)

```
use "$hfcsdata\temp1.dta", clear  
forvalues j=2(1)5 {  
  append using "$hfcsdata\temp'j'.dta"  
}
```


MERGEN DER DATENSÄTZE ↪ Beispiel zweier Haushalte

| hb0300[4302] | | | | 1 | | | |
|--------------|--------|--------|--------|---------|--------|--------|--|
| sa0010 | sa0100 | im0100 | hb0300 | hb0800 | hb0900 | | |
| 4211 | 116510 | AT | 1 | Own all | 150000 | 200000 | |
| 4212 | 116510 | AT | 2 | Own all | 150000 | 200000 | |
| 4213 | 116510 | AT | 3 | Own all | 150000 | 200000 | |
| 4214 | 116510 | AT | 4 | Own all | 150000 | 200000 | |
| 4215 | 116510 | AT | 5 | Own all | 150000 | 200000 | |
| 4301 | 127601 | AT | 1 | Own all | 137189 | 300000 | |
| 4302 | 127601 | AT | 2 | Own all | 101079 | 300000 | |
| 4303 | 127601 | AT | 3 | Own all | 119716 | 300000 | |
| 4304 | 127601 | AT | 4 | Own all | 126916 | 300000 | |
| 4305 | 127601 | AT | 5 | Own all | 173143 | 300000 | |

MERGEN DER DATENSÄTZE ↪ Haushalte

```
. tab sa0100 im0100, missing
```

| Country | Implicate | | | | | Total |
|---------|-----------|--------|--------|--------|--------|---------|
| | 1 | 2 | 3 | 4 | 5 | |
| AT | 2,380 | 2,380 | 2,380 | 2,380 | 2,380 | 11,900 |
| BE | 2,327 | 2,327 | 2,327 | 2,327 | 2,327 | 11,635 |
| CY | 1,237 | 1,237 | 1,237 | 1,237 | 1,237 | 6,185 |
| DE | 3,565 | 3,565 | 3,565 | 3,565 | 3,565 | 17,825 |
| ES | 6,197 | 6,197 | 6,197 | 6,197 | 6,197 | 30,985 |
| FI | 10,989 | 10,989 | 10,989 | 10,989 | 10,989 | 54,945 |
| FR | 15,006 | 15,006 | 15,006 | 15,006 | 15,006 | 75,030 |
| GR | 2,971 | 2,971 | 2,971 | 2,971 | 2,971 | 14,855 |
| IT | 7,951 | 7,951 | 7,951 | 7,951 | 7,951 | 39,755 |
| LU | 950 | 950 | 950 | 950 | 950 | 4,750 |
| MT | 843 | 843 | 843 | 843 | 843 | 4,215 |
| NL | 1,301 | 1,301 | 1,301 | 1,301 | 1,301 | 6,505 |
| PT | 4,404 | 4,404 | 4,404 | 4,404 | 4,404 | 22,020 |
| SI | 343 | 343 | 343 | 343 | 343 | 1,715 |
| SK | 2,057 | 2,057 | 2,057 | 2,057 | 2,057 | 10,285 |
| Total | 62,521 | 62,521 | 62,521 | 62,521 | 62,521 | 312,605 |

```
.  
Command
```

MULTIPLE IMPUTATIONEN \hookrightarrow Ablauf

- Erstellen des nullten Implicate
- Verarbeitung von String-Variablen
- Erkennen der imputierten Werte
- Verarbeiten der imputierten Werte im nullten Implicate
- Importation der Imputationsstruktur in Stata

MULTIPLE IMPUTATIONEN \leftrightarrow Vorbereitung

```
*Create the zero implicate to simulate the original data
*Use one implicate of the data
use "$hfcsdata\temp1.dta", clear
*Replace the implicate number by "0" to simulate the original data
replace im0100=0
*Append all other implicates
append using "$hfcsdata\hfcs.dta"
```

```
*For some reason string variables do not play well with mi commands and need to be encoded into numeric
variables
foreach var of varlist hb* hc* hd* hg* hh* hi* pa* pe* pf* pg* ra* sa0100 sb1000 {
capture confirm numeric variable `var'
if _rc {
rename `var' `var'_string
encode `var'_string, gen(`var')
drop `var'_string
}
}
```

MULTIPLE IMPUTATIONEN \leftrightarrow Identifikation imputierter Werte

```
*Set as soft missing (".") in im0100==0 all values varying, and also those whose flags set them as imputed
global IMPUTEDVARS=""
foreach var of varlist hb* hc* hd* hg* hh* hi* pa* pe* pf* pg* ra* {
capture confirm numeric variable `var'
if !_rc {
tempvar sd count
quietly bysort sa0100 sa0010 : egen `sd'=sd(`var')
quietly bysort sa0100 sa0010 : egen `count'=count(`var')
quietly count if ( (`sd'>0 & `sd' <. ) | `count'<6 | (f`var'>4000 & f`var'<5000) ) & im0100==0
if r(N)>0 global IMPUTEDVARS "$IMPUTEDVARS `var'"
quietly replace `var'=. if ( (`sd'>0 & `sd' <. ) | `count'<6 | (f`var'>4000 & f`var'<5000) ) & im0100==0
drop `sd' `count'
disp "._", _continue
}
}

*Save the HFCS data
save "$hfcsdata\hfcs.dta", replace
```

MULTIPLE IMPUTATIONEN ↔ Importieren in Stata

```
*Import the imputation structure of the data into Stata
mi import flong, m(im0100) id(sa0100 sa0010) clear

*Register the variables that are imputed
mi register imputed $IMPUTEDVARS

*Check whether all imputed variables are registered
mi varying

*Save the HFCS-data with mi structure
save "$hfcsdata\hfcs.dta", replace
```

MULTIPLE IMPUTATIONEN \leftrightarrow Beispiel zweier Haushalte

| sa0010[5053] | | 116510 | | | | |
|----------------|--------|--------|--------|---------|--------|--------|
| sa1 Straphcode | sa0010 | sa0100 | im0100 | hb0300 | hb0800 | hb0900 |
| 5053 | 116510 | AT | 0 | Own all | 150000 | 200000 |
| 5054 | 116510 | AT | 1 | Own all | 150000 | 200000 |
| 5055 | 116510 | AT | 2 | Own all | 150000 | 200000 |
| 5056 | 116510 | AT | 3 | Own all | 150000 | 200000 |
| 5057 | 116510 | AT | 4 | Own all | 150000 | 200000 |
| 5058 | 116510 | AT | 5 | Own all | 150000 | 200000 |
| 5161 | 127601 | AT | 0 | Own all | . | 300000 |
| 5162 | 127601 | AT | 1 | Own all | 137189 | 300000 |
| 5163 | 127601 | AT | 2 | Own all | 101079 | 300000 |
| 5164 | 127601 | AT | 3 | Own all | 119716 | 300000 |
| 5165 | 127601 | AT | 4 | Own all | 126916 | 300000 |
| 5166 | 127601 | AT | 5 | Own all | 173143 | 300000 |

MULTIPLE IMPUTATIONEN ↔ Haushalte

```
. tab sa0100 im0100, missing
```

| Country | Implicate | | | | | | Total |
|---------|-----------|--------|--------|--------|--------|--------|---------|
| | 0 | 1 | 2 | 3 | 4 | 5 | |
| AT | 2,380 | 2,380 | 2,380 | 2,380 | 2,380 | 2,380 | 14,280 |
| BE | 2,327 | 2,327 | 2,327 | 2,327 | 2,327 | 2,327 | 13,962 |
| CY | 1,237 | 1,237 | 1,237 | 1,237 | 1,237 | 1,237 | 7,422 |
| DE | 3,565 | 3,565 | 3,565 | 3,565 | 3,565 | 3,565 | 21,390 |
| ES | 6,197 | 6,197 | 6,197 | 6,197 | 6,197 | 6,197 | 37,182 |
| FI | 10,989 | 10,989 | 10,989 | 10,989 | 10,989 | 10,989 | 65,934 |
| FR | 15,006 | 15,006 | 15,006 | 15,006 | 15,006 | 15,006 | 90,036 |
| GR | 2,971 | 2,971 | 2,971 | 2,971 | 2,971 | 2,971 | 17,826 |
| IT | 7,951 | 7,951 | 7,951 | 7,951 | 7,951 | 7,951 | 47,706 |
| LU | 950 | 950 | 950 | 950 | 950 | 950 | 5,700 |
| MT | 843 | 843 | 843 | 843 | 843 | 843 | 5,058 |
| NL | 1,301 | 1,301 | 1,301 | 1,301 | 1,301 | 1,301 | 7,806 |
| PT | 4,404 | 4,404 | 4,404 | 4,404 | 4,404 | 4,404 | 26,424 |
| SI | 343 | 343 | 343 | 343 | 343 | 343 | 2,058 |
| SK | 2,057 | 2,057 | 2,057 | 2,057 | 2,057 | 2,057 | 12,342 |
| Total | 62,521 | 62,521 | 62,521 | 62,521 | 62,521 | 62,521 | 375,126 |

Command

MULTIPLE IMPUTATIONEN \hookrightarrow mi describe

```
. mi desc

Style: flong
last mi update 17dec2012 13:15:09, 19 days ago

Obs.: complete      0
incomplete      62,521 (M = 5 imputations)
-----
total           62,521

Vars.: imputed: 1311; hb0100(10040) hb0100_b(517) hb0200(11302) hb0300(4) hb0400(61632) hb0410(62376) hb0500(61379) hb0600(36441) hb0700(26729) hb0800(41
hb0900(30308) hb1000(17927) hb1010(53403) hb1101(53475) hb1102(61075) hb1103(62246) hb1201a(53425) hb1201b(62068) hb1201c(62478) hb1201d(
hb1201e(62518) hb1201f(62521) hb1201g(62521) hb1201h(62521) hb1201i(62521) hb1202a(61066) hb1202b(62461) hb1202c(62514) hb1202d(62519) hb
hb1202f(62521) hb1202g(62521) hb1202h(62521) hb1202i(62521) hb1203a(62245) hb1203b(62517) hb1203c(62521) hb1203d(62521) hb1203e(62521) hb
hb1203g(62521) hb1203h(62521) hb1203i(62521) hb1301(53544) hb1302(61085) hb1303(62252) hb1401(54111) hb1402(61163) hb1403(62268) hb1501(5
hb1502(62035) hb1503(62476) hb1601(53672) hb1602(61101) hb1603(62260) hb1701(55009) hb1702(61293) hb1703(62294) hb1801(53875) hb1802(6111
hb1901(56906) hb1902(61549) hb1903(62331) hb2001(54197) hb2002(61210) hb2003(62282) hb2100(58342) hb2200(58380) hb2300(48645) hb2400(53)
hb2501(46598) hb2502(55656) hb2503(59301) hb2601(52942) hb2602(58827) hb2603(60917) hb2611(51303) hb2612(57007) hb2613(59801) hb2621(5344
hb2623(60407) hb2631(58333) hb2632(60723) hb2633(61703) hb2701(46485) hb2702(55443) hb2703(59150) hb2801(52999) hb2802(58734) hb2803(6088
hb3000(45758) hb3010(58693) hb3101(59240) hb3102(61811) hb3103(62304) hb3201a(58702) hb3201b(62440) hb3201c(62517) hb3201d(62521) hb3201e
hb3201f(62521) hb3201g(62521) hb3201h(62521) hb3201i(62521) hb3202a(61754) hb3202b(62509) hb3202c(62520) hb3202d(62520) hb3202e(62520) hb
hb3202g(62521) hb3202h(62521) hb3202i(62521) hb3203a(62291) hb3203b(62518) hb3203c(62521) hb3203d(62521) hb3203e(62521) hb3203f(62521) hb
hb3203h(62521) hb3203i(62521) hb3301(58877) hb3302(61814) hb3303(62311) hb3401(58993) hb3402(61820) hb3403(62315) hb3501(61451) hb3502(62
hb3503(62496) hb3601(58850) hb3602(61806) hb3603(62312) hb3701(59377) hb3702(61882) hb3703(62321) hb3801(58948) hb3802(61798) hb3803(6230
hb3902(62034) hb3903(62387) hb4001(59183) hb4002(61859) hb4003(62320) hb4100(62436) hb4200(62437) hb4300(15042) hb4310(33348) hb4400(2787
hb4510a(54762) hb4510b(59496) hb4510c(59471) hb4510d(60257) hb4510e(59614) hb4510f(59475) hb4600(54482) hb4700(11118) hb4710(51596) hb010
hb0110(61373) hb0200(11513) hb0210(49272) hb0220(59499) hb0300(26053) hb0310(45799) hb0320(60663) hb0400(134) hb0410(52348) hb0501a(52685
```

Aufbau eines Variablennames

- Vorbereitung W-File (Replicate Weights)
- Zusammenspielen W-File und hfcs.dta
- Setzen der Survey Struktur

SURVEY DESIGN ↔ Vorbereitung und Zusammenspielen

```
*Encode country indicator use "$hfcsdata\W.dta", clear
rename sa0100 sa0100_string
encode sa0100_string, gen(sa0100)
drop sa0100_string
save "$hfcsdata\Wtemp.dta", replace

*Using the HFCS data with mi structure
use "$hfcsdata\hfcs.dta", clear
*Merging the data with replicate weights
merge m:1 sa0100 sa0010 using "$hfcsdata\Wtemp.dta"
*Drop unnecessary variable and files
drop _merge
erase "$hfcsdata\Wtemp.dta"
```

SURVEY DESIGN \hookrightarrow Setzen der Survey Struktur

```
*Setting the appropriate survey structure using replicate weights
mi svyset [pw=hw0010], bsrweight(wr0001-wr1000) vce(bootstrap)

*Save the HFCS-data with mi svyset structure
save "$hfcsdata\hfcs.dta", replace
```

SURVEY DESIGN → mi svyset

```

. mi svyset
      pweight: hw0010
      VCE: bootstrap
      MSE: oof
      barweight: wr0001 wr0002 wr0003 wr0004 wr0005 wr0006 wr0007 wr0008 wr0009 wr0010 wr0011 wr0012 wr0013 wr0014 wr0015 wr0016 wr0017 wr0018 wr0019 wr0020 wr0021 wr0022
wr0023 wr0024 wr0025 wr0026 wr0027 wr0028 wr0029 wr0030 wr0031 wr0032 wr0033 wr0034 wr0035 wr0036 wr0037 wr0038 wr0039 wr0040 wr0041 wr0042 wr0043 wr0044
wr0045 wr0046 wr0047 wr0048 wr0049 wr0050 wr0051 wr0052 wr0053 wr0054 wr0055 wr0056 wr0057 wr0058 wr0059 wr0060 wr0061 wr0062 wr0063 wr0064 wr0065 wr0066
wr0067 wr0068 wr0069 wr0070 wr0071 wr0072 wr0073 wr0074 wr0075 wr0076 wr0077 wr0078 wr0079 wr0080 wr0081 wr0082 wr0083 wr0084 wr0085 wr0086 wr0087 wr0088
wr0089 wr0090 wr0091 wr0092 wr0093 wr0094 wr0095 wr0096 wr0097 wr0098 wr0099 wr0100 wr0101 wr0102 wr0103 wr0104 wr0105 wr0106 wr0107 wr0108 wr0109 wr0110
wr0111 wr0112 wr0113 wr0114 wr0115 wr0116 wr0117 wr0118 wr0119 wr0120 wr0121 wr0122 wr0123 wr0124 wr0125 wr0126 wr0127 wr0128 wr0129 wr0130 wr0131 wr0132
wr0133 wr0134 wr0135 wr0136 wr0137 wr0138 wr0139 wr0140 wr0141 wr0142 wr0143 wr0144 wr0145 wr0146 wr0147 wr0148 wr0149 wr0150 wr0151 wr0152 wr0153 wr0154
wr0155 wr0156 wr0157 wr0158 wr0159 wr0160 wr0161 wr0162 wr0163 wr0164 wr0165 wr0166 wr0167 wr0168 wr0169 wr0170 wr0171 wr0172 wr0173 wr0174 wr0175 wr0176
wr0177 wr0178 wr0179 wr0180 wr0181 wr0182 wr0183 wr0184 wr0185 wr0186 wr0187 wr0188 wr0189 wr0190 wr0191 wr0192 wr0193 wr0194 wr0195 wr0196 wr0197 wr0198
wr0199 wr0200 wr0201 wr0202 wr0203 wr0204 wr0205 wr0206 wr0207 wr0208 wr0209 wr0210 wr0211 wr0212 wr0213 wr0214 wr0215 wr0216 wr0217 wr0218 wr0219 wr0220
wr0221 wr0222 wr0223 wr0224 wr0225 wr0226 wr0227 wr0228 wr0229 wr0230 wr0231 wr0232 wr0233 wr0234 wr0235 wr0236 wr0237 wr0238 wr0239 wr0240 wr0241 wr0242
wr0243 wr0244 wr0245 wr0246 wr0247 wr0248 wr0249 wr0250 wr0251 wr0252 wr0253 wr0254 wr0255 wr0256 wr0257 wr0258 wr0259 wr0260 wr0261 wr0262 wr0263 wr0264
wr0265 wr0266 wr0267 wr0268 wr0269 wr0270 wr0271 wr0272 wr0273 wr0274 wr0275 wr0276 wr0277 wr0278 wr0279 wr0280 wr0281 wr0282 wr0283 wr0284 wr0285 wr0286
wr0287 wr0288 wr0289 wr0290 wr0291 wr0292 wr0293 wr0294 wr0295 wr0296 wr0297 wr0298 wr0299 wr0300 wr0301 wr0302 wr0303 wr0304 wr0305 wr0306 wr0307 wr0308
wr0309 wr0310 wr0311 wr0312 wr0313 wr0314 wr0315 wr0316 wr0317 wr0318 wr0319 wr0320 wr0321 wr0322 wr0323 wr0324 wr0325 wr0326 wr0327 wr0328 wr0329 wr0330
wr0331 wr0332 wr0333 wr0334 wr0335 wr0336 wr0337 wr0338 wr0339 wr0340 wr0341 wr0342 wr0343 wr0344 wr0345 wr0346 wr0347 wr0348 wr0349 wr0350 wr0351 wr0352
wr0353 wr0354 wr0355 wr0356 wr0357 wr0358 wr0359 wr0360 wr0361 wr0362 wr0363 wr0364 wr0365 wr0366 wr0367 wr0368 wr0369 wr0370 wr0371 wr0372 wr0373 wr0374
wr0375 wr0376 wr0377 wr0378 wr0379 wr0380 wr0381 wr0382 wr0383 wr0384 wr0385 wr0386 wr0387 wr0388 wr0389 wr0390 wr0391 wr0392 wr0393 wr0394 wr0395 wr0396
wr0397 wr0398 wr0399 wr0400 wr0401 wr0402 wr0403 wr0404 wr0405 wr0406 wr0407 wr0408 wr0409 wr0410 wr0411 wr0412 wr0413 wr0414 wr0415 wr0416 wr0417 wr0418
wr0419 wr0420 wr0421 wr0422 wr0423 wr0424 wr0425 wr0426 wr0427 wr0428 wr0429 wr0430 wr0431 wr0432 wr0433 wr0434 wr0435 wr0436 wr0437 wr0438 wr0439 wr0440
wr0441 wr0442 wr0443 wr0444 wr0445 wr0446 wr0447 wr0448 wr0449 wr0450 wr0451 wr0452 wr0453 wr0454 wr0455 wr0456 wr0457 wr0458 wr0459 wr0460 wr0461 wr0462
wr0463 wr0464 wr0465 wr0466 wr0467 wr0468 wr0469 wr0470 wr0471 wr0472 wr0473 wr0474 wr0475 wr0476 wr0477 wr0478 wr0479 wr0480 wr0481 wr0482 wr0483 wr0484
wr0485 wr0486 wr0487 wr0488 wr0489 wr0490 wr0491 wr0492 wr0493 wr0494 wr0495 wr0496 wr0497 wr0498 wr0499 wr0500 wr0501 wr0502 wr0503 wr0504 wr0505 wr0506
wr0507 wr0508 wr0509 wr0510 wr0511 wr0512 wr0513 wr0514 wr0515 wr0516 wr0517 wr0518 wr0519 wr0520 wr0521 wr0522 wr0523 wr0524 wr0525 wr0526 wr0527 wr0528
wr0529 wr0530 wr0531 wr0532 wr0533 wr0534 wr0535 wr0536 wr0537 wr0538 wr0539 wr0540 wr0541 wr0542 wr0543 wr0544 wr0545 wr0546 wr0547 wr0548 wr0549 wr0550
wr0551 wr0552 wr0553 wr0554 wr0555 wr0556 wr0557 wr0558 wr0559 wr0560 wr0561 wr0562 wr0563 wr0564 wr0565 wr0566 wr0567 wr0568 wr0569 wr0570 wr0571 wr0572
wr0573 wr0574 wr0575 wr0576 wr0577 wr0578 wr0579 wr0580 wr0581 wr0582 wr0583 wr0584 wr0585 wr0586 wr0587 wr0588 wr0589 wr0590 wr0591 wr0592 wr0593 wr0594
wr0595 wr0596 wr0597 wr0598 wr0599 wr0600 wr0601 wr0602 wr0603 wr0604 wr0605 wr0606 wr0607 wr0608 wr0609 wr0610 wr0611 wr0612 wr0613 wr0614 wr0615 wr0616
wr0617 wr0618 wr0619 wr0620 wr0621 wr0622 wr0623 wr0624 wr0625 wr0626 wr0627 wr0628 wr0629 wr0630 wr0631 wr0632 wr0633 wr0634 wr0635 wr0636 wr0637 wr0638
wr0639 wr0640 wr0641 wr0642 wr0643 wr0644 wr0645 wr0646 wr0647 wr0648 wr0649 wr0650 wr0651 wr0652 wr0653 wr0654 wr0655 wr0656 wr0657 wr0658 wr0659 wr0660
wr0661 wr0662 wr0663 wr0664 wr0665 wr0666 wr0667 wr0668 wr0669 wr0670 wr0671 wr0672 wr0673 wr0674 wr0675 wr0676 wr0677 wr0678 wr0679 wr0680 wr0681 wr0682
wr0683 wr0684 wr0685 wr0686 wr0687 wr0688 wr0689 wr0690 wr0691 wr0692 wr0693 wr0694 wr0695 wr0696 wr0697 wr0698 wr0699 wr0700 wr0701 wr0702 wr0703 wr0704
wr0705 wr0706 wr0707 wr0708 wr0709 wr0710 wr0711 wr0712 wr0713 wr0714 wr0715 wr0716 wr0717 wr0718 wr0719 wr0720 wr0721 wr0722 wr0723 wr0724 wr0725 wr0726
wr0727 wr0728 wr0729 wr0730 wr0731 wr0732 wr0733 wr0734 wr0735 wr0736 wr0737 wr0738 wr0739 wr0740 wr0741 wr0742 wr0743 wr0744 wr0745 wr0746 wr0747 wr0748
wr0749 wr0750 wr0751 wr0752 wr0753 wr0754 wr0755 wr0756 wr0757 wr0758 wr0759 wr0760 wr0761 wr0762 wr0763 wr0764 wr0765 wr0766 wr0767 wr0768 wr0769 wr0770
wr0771 wr0772 wr0773 wr0774 wr0775 wr0776 wr0777 wr0778 wr0779 wr0780 wr0781 wr0782 wr0783 wr0784 wr0785 wr0786 wr0787 wr0788 wr0789 wr0790 wr0791 wr0792
wr0793 wr0794 wr0795 wr0796 wr0797 wr0798 wr0799 wr0800 wr0801 wr0802 wr0803 wr0804 wr0805 wr0806 wr0807 wr0808 wr0809 wr0810 wr0811 wr0812 wr0813 wr0814
wr0815 wr0816 wr0817 wr0818 wr0819 wr0820 wr0821 wr0822 wr0823 wr0824 wr0825 wr0826 wr0827 wr0828 wr0829 wr0830 wr0831 wr0832 wr0833 wr0834 wr0835 wr0836
wr0837 wr0838 wr0839 wr0840 wr0841 wr0842 wr0843 wr0844 wr0845 wr0846 wr0847 wr0848 wr0849 wr0850 wr0851 wr0852 wr0853 wr0854 wr0855 wr0856 wr0857 wr0858
wr0859 wr0860 wr0861 wr0862 wr0863 wr0864 wr0865 wr0866 wr0867 wr0868 wr0869 wr0870 wr0871 wr0872 wr0873 wr0874 wr0875 wr0876 wr0877 wr0878 wr0879 wr0880
wr0881 wr0882 wr0883 wr0884 wr0885 wr0886 wr0887 wr0888 wr0889 wr0890 wr0891 wr0892 wr0893 wr0894 wr0895 wr0896 wr0897 wr0898 wr0899 wr0900 wr0901 wr0902
wr0903 wr0904 wr0905 wr0906 wr0907 wr0908 wr0909 wr0910 wr0911 wr0912 wr0913 wr0914 wr0915 wr0916 wr0917 wr0918 wr0919 wr0920 wr0921 wr0922 wr0923 wr0924
wr0925 wr0926 wr0927 wr0928 wr0929 wr0930 wr0931 wr0932 wr0933 wr0934 wr0935 wr0936 wr0937 wr0938 wr0939 wr0940 wr0941 wr0942 wr0943 wr0944 wr0945 wr0946
wr0947 wr0948 wr0949 wr0950 wr0951 wr0952 wr0953 wr0954 wr0955 wr0956 wr0957 wr0958 wr0959 wr0960 wr0961 wr0962 wr0963 wr0964 wr0965 wr0966 wr0967 wr0968
wr0969 wr0970 wr0971 wr0972 wr0973 wr0974 wr0975 wr0976 wr0977 wr0978 wr0979 wr0980 wr0981 wr0982 wr0983 wr0984 wr0985 wr0986 wr0987 wr0988 wr0989 wr0990
wr0991 wr0992 wr0993 wr0994 wr0995 wr0996 wr0997 wr0998 wr0999 wr1000

Single unit: missing
Strata 1: <none>
      SU 1: <observations>
      FFC 1: <zero>

```

NB

Reduktion der Replicate Weights zur Verringerung der Schätzdauer

```
mi svyset [pw=hw0010], bsrweight(wr0001-wr0200) vce(bootstrap)
```

Durchschnitt im Hauptwohnsitz (Achtung Teileigentümer!!)

```
mi estimate, esampvaryok vceok: svy: mean hb0900
```

ESTIMATION EXAMPLES \leftrightarrow Mittelwert: Ergebnis

```
. *Mean of current value of primary housing unit  
. mi estimate, esampvaryok vceok: svy: mean hb0900
```

```
Multiple-imputation estimates      Imputations      =           5  
Survey: Mean estimation           Number of obs    =          891  
  
Population size = 1668951.5  
Average RVI     =      0.0096  
Largest FMI     =      0.0096  
DF adjustment:  Large sample      DF:      min     =  44171.97  
                                           avg     =  44171.97  
Within VCE type:  Bootstrap       max     =  44171.97
```

| | Mean | Std. Err. | [95% Conf. Interval] | |
|--------|----------|-----------|----------------------|----------|
| hb0900 | 233695.5 | 11622.2 | 210915.8 | 256475.2 |

ESTIMATION EXAMPLES \leftrightarrow Mittelwert für Teilpopulation: Command

Durchschnitt im Hauptwohnsitz für die Teileigentümer

```
gen partowner=(hb0300==2)
mi estimate, esampvayok vceok: svy, subpop(partowner): mean hb0900
```

```
. tab partowner im0100
```

| partowner | Implicate | | | | | | Total |
|-----------|-----------|-------|-------|-------|-------|-------|-------|
| | 0 | 1 | 2 | 3 | 4 | 5 | |
| 0 | 1,224 | 1,224 | 1,224 | 1,224 | 1,224 | 1,224 | 7,344 |
| 1 | 27 | 27 | 27 | 27 | 27 | 27 | 162 |
| Total | 1,251 | 1,251 | 1,251 | 1,251 | 1,251 | 1,251 | 7,506 |

ESTIMATION EXAMPLES \leftrightarrow Mittelwert für Teilpopulation: Ergebnis Erklärung

| partowner[7046] | | 1 | | | | |
|-----------------|-------------|--------|--------|--------|-----------|--------|
| sa1 | Shareholder | sa0010 | sa0100 | im0100 | partowner | hb0900 |
| | 5179 | 129808 | AT | 0 | 1 | 350000 |
| | 5180 | 129808 | AT | 1 | 1 | 350000 |
| | 5181 | 129808 | AT | 2 | 1 | 350000 |
| | 5182 | 129808 | AT | 3 | 1 | 350000 |
| | 5183 | 129808 | AT | 4 | 1 | 350000 |
| | 5184 | 129808 | AT | 5 | 1 | 350000 |
| | 5209 | 134602 | AT | 0 | 1 | . |
| | 5210 | 134602 | AT | 1 | 1 | 130310 |
| | 5211 | 134602 | AT | 2 | 1 | 229804 |
| | 5212 | 134602 | AT | 3 | 1 | 235195 |
| | 5213 | 134602 | AT | 4 | 1 | 235787 |
| | 5214 | 134602 | AT | 5 | 1 | 109865 |
| | 6589 | 852370 | FI | 0 | 1 | . |
| | 6590 | 852370 | FI | 1 | 1 | . |
| | 6591 | 852370 | FI | 2 | 1 | . |
| | 6592 | 852370 | FI | 3 | 1 | . |
| | 6593 | 852370 | FI | 4 | 1 | . |
| | 6594 | 852370 | FI | 5 | 1 | . |
| | 7045 | 868840 | FI | 0 | 1 | . |
| | 7046 | 868840 | FI | 1 | 1 | . |
| | 7047 | 868840 | FI | 2 | 1 | . |
| | 7048 | 868840 | FI | 3 | 1 | . |
| | 7049 | 868840 | FI | 4 | 1 | . |
| | 7050 | 868840 | FI | 5 | 1 | . |

ESTIMATION EXAMPLES ↔ Weitere einfache Statistiken

*Proportions of owner/renter of primary housing unit
mi estimate, esampvaryok vceok: svy: proportion hb0300

*Ratio of current to acquisition value of primary housing unit
mi estimate, esampvaryok vceok: svy: ratio hb0900 hb0800

*Regression of current value of primary housing on acquisition value and year of acquisition
mi estimate, esampvaryok vceok: svy: regress hb0900 hb0800 hb0700

*Average level deposits according to gender of the first person
mi estimate, esampvaryok vceok: svy: mean da2101, over(ra0200.1)

ESTIMATION EXAMPLES \leftrightarrow Perzentile

Perzentile müssen für jedes Implicate einzeln erstellt werden, ein einfacher Befehl über alle Implicates liefert nicht korrekte Kategorien

\implies Jedes Implicate bildet die Population ab.

```
*Quintiles for net wealth
gen dn3001qui=.
forvalues i=1(1)5 {
  xtile dn3001q'i' = dn3001 [pw=hw0010] if im0100=='i', n(5)
  label variable dn3001q'i' "Quintile of net wealth in implicate 'i'"
  replace dn3001qui=dn3001q'i' if im0100=='i'
}
label variable dn3001qui "Quintile of net wealth"

*Dummies for quintiles
forvalues i=1(1)5 {
  gen dn3001qd'i'=(dn3001qui=='i')
  label variable dn3001qd'i' "Dummy for Quintile 'i' of var dn3001"
}
```

ESTIMATION EXAMPLES \leftrightarrow Perzentile

```
. tab dn3001qui [aw=hw0010] if im0100!=0
```

| dn3001qui | Freq. | Percent | Cum. |
|-----------|-------------|---------|--------|
| 1 | 1,262.3349 | 20.18 | 20.18 |
| 2 | 1,246.41931 | 19.93 | 40.11 |
| 3 | 1,247.60486 | 19.95 | 60.05 |
| 4 | 1,253.02957 | 20.03 | 80.09 |
| 5 | 1,245.6114 | 19.91 | 100.00 |
| Total | 6,255 | 100.00 | |

```
. tab dn3001qui [aw=hw0010], missing
```

| dn3001qui | Freq. | Percent | Cum. |
|-----------|-------------|---------|--------|
| 1 | 1,262.3349 | 16.82 | 16.82 |
| 2 | 1,246.41931 | 16.61 | 33.42 |
| 3 | 1,247.60486 | 16.62 | 50.04 |
| 4 | 1,253.02957 | 16.69 | 66.74 |
| 5 | 1,245.6114 | 16.59 | 83.33 |
| . | 1,251 | 16.67 | 100.00 |
| Total | 7,506 | 100.00 | |

ESTIMATION EXAMPLES ↔ Percentile

```
. tab dn3001q1 im0100 [aw=hw0010], missing col
```

| |
|-------------------|
| Key |
| frequency |
| column percentage |

| Quintile of net wealth in implicate | Implicate | | | | | | Total |
|--|-----------------|--------------------|-----------------|-----------------|-----------------|-----------------|-------------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | |
| 1 | 0 0.00 | 252.25958 20.16 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 252.25958 3.36 |
| 2 | 0 0.00 | 252.6744 20.20 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 252.6744 3.37 |
| 3 | 0 0.00 | 246.96962 19.74 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 246.96962 3.29 |
| 4 | 0 0.00 | 249.55861 19.95 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 249.55861 3.32 |
| 5 | 0 0.00 | 249.5378 19.95 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 249.5378 3.32 |
| . | 1,251 100.00 | 0 0.00 | 1,251 100.00 | 1,251 100.00 | 1,251 100.00 | 1,251 100.00 | 6,255 83.33 |
| Total | 1,251 100.00 | 1,251 100.00 | 1,251 100.00 | 1,251 100.00 | 1,251 100.00 | 1,251 100.00 | 7,506 100.00 |

Grafik der Verteilung des Nettovermögens

- Erzeuge Perzentile
- Erzeuge x-Achse
- Erstelle Grafik

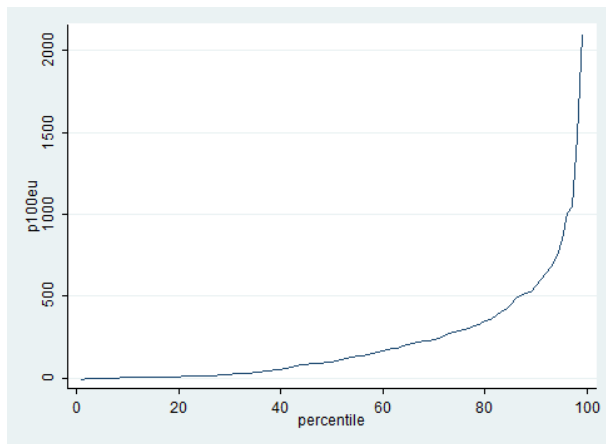
ESTIMATION EXAMPLES \leftrightarrow Grafik

```
*Generate Percentiles
forvalues i=1(1)5 {
  pctlile p100'i'eu = dn3001 [pw=hw0010] if im0100=='i', n(100)
}
gen p100eu= (p1001eu+p1002eu+p1003eu+p1004eu+p1005eu)/5000

*Generate x-axis
sort p100eu
gen percentile=_n if p100eu!=.

*Plot graph
tway line p100eu percentile
```


ESTIMATION EXAMPLES \hookrightarrow Grafik



MI ESTIMATE \leftrightarrow Deskriptive Statistiken

Folgende Schätzungen zu deskriptiven Statistiken können laut Stata Benutzerhandbuch mit `mi estimate` kombiniert werden

- Arithmetisches Mittel \rightarrow `mean` Estimate means
- Anteile \rightarrow `proportion` Estimate proportions
- Verhältnis \rightarrow `ratio` Estimate ratios
- Aggregat \rightarrow `total` Estimate totals

Folgende Regressionsmodelle können laut Stata Benutzerhandbuch mit `mi estimate` kombiniert werden

- Lineare Regression (`regress` Linear regression; `cnsreg` Constrained linear regression; `mvreg` Multivariate regression)
- Binäre Regressionen (`logistic` Logistic regression, reporting odds ratios; `logit` Logistic regression, reporting coefficients; `probit` Probit regression; `cloglog` Complementary log-log regression; `binreg` GLM for the binomial family)
- Count Regressionen (`poisson` Poisson regression; `nbreg` Negative binomial regression; `gnbreg` Generalized negative binomial regression)
- Ordinale und kategoriale Regressionen (`ologit` Ordered logistic regression; `oprobit` Ordered probit regression; `mlogit` Multinomial (polytomous) logistic regression; `mprobit` Multinomial probit regression; `clogit` Conditional (fixed-effects) logistic regression)
- Quantilsregressionen (`qreg` Quantile regression; `iqreg` Interquantile range regression; `sqreg` Simultaneous-quantile regression; `bsqreg` Bootstrapped quantile regression)
- Sonstige (`stcox` Cox proportional hazards model; `streg` Parametric survival models; `stcrreg` Competing-risks regression; `glm` Generalized linear models; `areg` Linear regression with a large dummy-variable set; `rreg` Robust regression; `truncreg` Truncated regression)

Zusätzlich Panelregressionen die im HFCS derzeit irrelevant sind