Analyseskript und zusätzliche Resultate zu:

Ben Jann und Sandra Hupka-Brunner: Warum werden Frauen so selten MINT-Fachkräfte? Zur Bedeutung der Differenz zwischen mathematischen Kompetenzen und Selbstkonzept

Software: Stata/MP 16.0
Zusatzmodule: `coefplot`, `colrspace`, `estout`, `fre`, `grstyle`, `moremata`, `oaxaca`, `palettes`

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Generiert mit `sttex`, 19sep2019

1 Setup

```
. // Allgemein
. about
Stata/MP 16.0 for Mac (64-bit Intel)
Revision 23 Aug 2019
Copyright 1985-2019 StataCorp LLC
Total physical memory:   16.00 GB
30-user 2-core Stata network perpetual license:
       Serial number:  501606206203
         Licensed to:  Ben Jann
                       UniBe
. version 16.0
. clear all
. set linesize 110
. set type double
.
. // Grafikeinstellungen
. set scheme s2mono
. grstyle init
. grstyle set plain, hor grid compact
. grstyle set color mono
. grstyle set color mono, opacity(60): p#bar
. grstyle set linewidth thin: xyline
. grstyle set lpattern dash: xyline
. grstyle set legend 10, inside nobox
```

2 Skript für MINT-Klassifikation

```
program mint08
    args mint isco08
    quietly {
    generate byte `mint' = 0 if `isco08'<.
    // Informatik
    // 1.1*: Informatik (Informatik, Informatik- und Softwareingenieurwesen, Wirtschafts- und
    //       Betriebsinformatik)
    replace `mint' = 11 if `isco08'==2500  // Akademische und vergleichbare Fachkräfte in der Informations-
                                           // und Kommunikationstechnologie, onA
    replace `mint' = 11 if `isco08'==2511  // Systemanalytiker
    replace `mint' = 11 if `isco08'==2512  // Softwareentwickler
    replace `mint' = 11 if `isco08'==2513  // Web- und Multimediaentwickler
    replace `mint' = 11 if `isco08'==2514  // Anwendungsprogrammierer
    replace `mint' = 11 if `isco08'==2529  // Akademische und vergleichbare Fachkräfte für Datenbanken und
                                           // Netzwerke, anderweitig nicht genannt
    replace `mint' = 11 if `isco08'==3514  // Webmaster
    // Technik
    // 1.2*: Elektrotechnik (Elektrotechnik und Elektroingenieurwesen)
    replace `mint' = 12 if `isco08'==2151  // Ingenieure im Bereich Elektrotechnik
    replace `mint' = 12 if `isco08'==3113  // Elektrotechniker
    // 1.3*: Maschinentechnik (Maschinentechnik und Maschineningenieurwesen, Aviatik, Automobiltechnik)
    replace `mint' = 13 if `isco08'==2144  // Maschinenbauingenieure
    replace `mint' = 13 if `isco08'==3115  // Maschinenbautechniker
    // 1.4*: Mikrotechnik (Elektronik und Elektroingenieurwesen, Mikrotechnik und Mikrotechnikingenieurwesen,
    //       Systemtechnik, Mechatronik, Kommunikationssysteme, Telekommunikationstechnik)
    replace `mint' = 14 if `isco08'==2152  // Ingenieure im Bereich Elektronik
    replace `mint' = 14 if `isco08'==3114  // Techniker im Bereich Elektronik
    replace `mint' = 14 if `isco08'==3510  // Techniker für den Betrieb von Informations- und
                                           // Kommunikationstechnologie und für die Anwenderbetreuung, onA
    replace `mint' = 14 if `isco08'==3521  // Techniker für Rundfunk und audiovisuelle Medien
```

```
replace `mint' = 14 if `isco08'==3522  // Telekommunikationstechniker
// 1.5*: Wirtschaftsingenieurwesen (Betriebs- und Produktionswissenschaften, Wirtschaftsingenieurwesen,
//       Medieningenieurwesen)
replace `mint' = 15 if `isco08'==2141  // Wirtschafts- und Produktionsingenieure
replace `mint' = 15 if `isco08'==3122  // Produktionsleiter bei der Herstellung von Waren
// 1.6*: Anderes aus Technik & IT (Materialwissenschaften, Holztechnik, Werkstoffe- und
//       Materialingenieurwesen, andere/fachrichtungsübergreifende Richtungen aus Technik & IT)
replace `mint' = 16 if `isco08'==2140  // Ingenieurwissenschaftler (ohne Elektrotechnik, Elektronik und
                                       // Telekommunikation), onA
replace `mint' = 16 if `isco08'==2149  // Ingenieure, anderweitig nicht genannt
replace `mint' = 16 if `isco08'==3110  // Material- und ingenieurtechnische Fachkräfte, onA
replace `mint' = 16 if `isco08'==3118  // Technische Zeichner
replace `mint' = 16 if `isco08'==3119  // Material- und ingenieurtechnische Fachkräfte, anderweitig nicht
                                       // genannt
// Bauwesen
// 2.1*: Bau (Bauingenieurwesen, Gebäudetechnik, Heizungs-, Lüftungs- und Klimaanlageningenieurwesen)
replace `mint' = 21 if `isco08'==2142  // Bauingenieure
replace `mint' = 21 if `isco08'==3112  // Bautechniker
replace `mint' = 21 if `isco08'==3120  // Produktionsleiter im Bergbau, bei der Herstellung von Waren und
                                       // im Bau, onA
replace `mint' = 21 if `isco08'==3123  // Bauleiter
replace `mint' = 21 if `isco08'==3132  // Steuerer von Verbrennungs- und Wasserbehandlungsanlagen
// 2.2 : Planung und Vermessung (Geomatik, Geodäsie, Vermessungsingenieurwesen, Umweltingenieurwesen,
//       Kulturechnik und Kulturingenieurwesen, Raum-, Landschafts-, Siedllungs- & Ortsplanung)
replace `mint' = 22 if `isco08'==2143  // Umweltschutzingenieure
replace `mint' = 22 if `isco08'==2160  // Architekten, Raum-, Stadt- und Verkehrsplaner,
                                       // Vermessungsingenieure und Designer, onA
replace `mint' = 22 if `isco08'==2164  // Raum-, Stadt- und Verkehrsplaner
replace `mint' = 22 if `isco08'==2165  // Kartografen und Vermessungsingenieure
// 2.3 : Architektur (Architektur)
replace `mint' = 23 if `isco08'==2161  // Architekten
replace `mint' = 23 if `isco08'==2162  // Landschaftsarchitekten
// 2.4 : Anderes aus Bauwesen (Andere / fachrichtungsübergreifende Richtungen aus dem Bauwesen)
// Chemie & Life Sciences
// 3.1*: Chemie (Chemie, Chemieingenieurwesen, Lebensmittelwissenschaften, Lebensmitteltechnologie,
//       Verfahrenstechnik)
replace `mint' = 31 if `isco08'==2113  // Chemiker
replace `mint' = 31 if `isco08'==2145  // Chemieingenieure
replace `mint' = 31 if `isco08'==3111  // Chemo- und Physikotechniker
replace `mint' = 31 if `isco08'==3116  // Chemiebetriebs- und Verfahrenstechniker
// 3.2 : Biotechnologie (Biotechnologie, Life Sciences, Molecular Life Sciences, Life Science
//       Technologies, Lebesnmittelwissenchaften, Lebensmitteltechnologie)
replace `mint' = 32 if `isco08'==3141  // Biotechniker (ohne medizinische Fachberufe)
// 3.3 : Gesundheit (Pharmazie, Pharmatechnologie, Medizinaltechnik, Medizinaltechnologie)
replace `mint' = 33 if `isco08'==3212  // Medizintechniker im Bereich Labor und Pathologie
replace `mint' = 33 if `isco08'==3213  // Pharmazeutisch-technische Assistenten
replace `mint' = 33 if `isco08'==3214  // Medizinische und zahnmedizinische Prothetiktechniker
replace `mint' = 33 if `isco08'==3255  // Physiotherapeutische Techniker und Assistenten
// 3.4 : Anderes aus C&LS (Andere / fachrichtungsübergreifende Richtungen aus C&LS)
// Andere MINT
// 4.1 : Geografie (Geografie, Umwelt(natur)wissenschaften, andere/fachrichtungsübergreifende
//       Richtungen aus den Geo- und Umweltwissenschaften)
replace `mint' = 41 if `isco08'==2114  // Geologen und Geophysiker
replace `mint' = 41 if `isco08'==2131  // Biologen, Botaniker, Zoologen und verwandte Berufe
replace `mint' = 41 if `isco08'==2133  // Umweltwissenschaftler
// 4.2*: Exakte Wissenschaften (Mathematik, Statistik, Physik, Astronomie,
//       andere/fachrichtungsübergreifende exakte Wissenschaften)
replace `mint' = 42 if `isco08'==2111  // Physiker und Astronomen
replace `mint' = 42 if `isco08'==2112  // Meteorologen
replace `mint' = 42 if `isco08'==2120  // Mathematiker, Versicherungsmathematiker und Statistiker
// 4.3 : Andere MINT (Agronomie, Forstwirtschaft, andere/kategorieübergreifende MINT-Fachrichtungen)
replace `mint' = 43 if `isco08'==2132  // Agrar-, Forst- und Fischereiwissenschaftler und -berater
replace `mint' = 43 if `isco08'==3142  // Agrartechniker
replace `mint' = 43 if `isco08'==3143  // Forsttechniker
}
// labels
lab def `mint' ///
    0 "nicht MINT" ///
```

```
        11 "MINT* 1.1: Informatik" ///
        12 "MINT* 1.2: Elektrotechnik" ///
        13 "MINT* 1.3: Maschinentechnik" ///
        14 "MINT* 1.4: Mikrotechnik" ///
        15 "MINT* 1.5: Wirtschaftsingenieurwesen" ///
        16 "MINT* 1.6: Anderes aus Technik & IT" ///
        21 "MINT* 2.1: Bau" ///
        22 "MINT  2.2: Planung und Vermessung" ///
        23 "MINT  2.3: Architektur" ///
        24 "MINT  2.4: Anderes aus Bauwesen" ///
        31 "MINT* 3.1: Chemie" ///
        32 "MINT  3.2: Biotechnologie" ///
        33 "MINT  3.3: Gesundheit" ///
        34 "MINT  3.4: Anderes aus C&LS" ///
        41 "MINT  4.1: Geografie" ///
        42 "MINT* 4.2: Exakte Wissenschaften" ///
        43 "MINT  4.3: Andere MINT", replace
    lab val `mint' `mint'
    fre `mint'
end
```

3 Datenaufbereitung

```
. use ../Data/1004_UGK16_Data_E_v1.0.0.dta
( )
```

3.1 Variablen generieren

```
. // math score; using weighted likelihood estimates (WLE)
. su wlem
```

Variable	Obs	Mean	Std. Dev.	Min	Max
wlem	22,141	-.0825861	1.396275	-5.709	5.214

```
.
. // mathematical self-concept; using provided scale
. d matcon*
```

variable name	storage type	display format	value label	variable label
matcon1	int	%8.0g	MATCON1	Get good marks in mathematics (Self-concept in mathematics)
matcon2	int	%8.0g	MATCON2	Mathematics one of best subjects (Self-concept in mathematics)
matcon3	int	%8.0g	MATCON3	Have always done well in mathematics (Self-concept in mathematics)
matcon_fs	double	%12.0g	MATCON_F	Math self-concept

```
. gen double matcon = matcon_fs if matcon_fs>-900
(230 missing values generated)
. su matcon
```

Variable	Obs	Mean	Std. Dev.	Min	Max
matcon	22,193	-.0171532	.964152	-1.705292	1.615017

```
.
. // mathematical self-efficacy; using simple average of sub-scales
. d selfeff*
```

variable name	storage type	display format	value label	variable label
selfeff01	int	%8.0g	SELFEFF0	Confidence calculating a 30 percent discount (Specific self-efficacy: algebra)
selfeff02	int	%8.0g	V1234_A	Confidence calculating square metres (Specific self-efficacy: numeracy)
selfeff03	int	%8.0g	V1235_A	Confidence calculate petrol consumption car (Specific

```
                                                  self-efficacy: numeracy)
selfeff04       int     %8.0g       V1236_A     Confidence find distance between places (Specific self-efficacy:
                                                  numeracy)
selfeff05       int     %8.0g       V1237_A     Confidence solving an equation like 3x+5= 17 (Specific
                                                  self-efficacy: algebra)
selfeff06       int     %8.0g       V1238_A     Confidence solve equation 2(x+3)=(x+3)(x-3) (Specific
                                                  self-efficacy: algebra)
selfeff07       int     %8.0g       V1239_A     Confidence simplifying expression 2a(5a-3b)^2 (Specific
                                                  self-efficacy: algebra)
selfeff08       int     %8.0g       V1240_A     Confidence solving equation like 2x-3=4x+5 (Specific
                                                  self-efficacy: algebra)
selfeff09       int     %8.0g       V1241_A     Confidence applying the Pythagorean theorem (Specific
                                                  self-efficacy: geometry)
selfeff10       int     %8.0g       SELFEFF1    Confidence construct perpendicular bisector (Specific
                                                  self-efficacy: geometry)
selfeff11       int     %8.0g       V1243_A     Confidence calculate area of a parallelogram (Specific
                                                  self-efficacy: geometry)
selfeff12       int     %8.0g       V1244_A     Confidence constructing centroid of triangle (Specific
                                                  self-efficacy: geometry)
selfeff13       int     %8.0g       V1245_A     Confidence probability throw six twice (Specific self-efficacy:
                                                  probability)
selfeff14       int     %8.0g       V1246_A     Confidence probability win lottery (Specific self-efficacy:
                                                  probability)
selfeff15       int     %8.0g       V1247_A     Confidence probability sweets same colour (Specific
                                                  self-efficacy: probability)
selfeff16       int     %8.0g       V1248_A     Confidence probability pupil same birthday (Specific
                                                  self-efficacy: probability)
selfeffa_fs     double  %12.0g      SELFEFFA    Specific self-efficacy: numeracy
selfeffb_fs     double  %12.0g      SELFEFFB    Specific self-efficacy: algebra
selfeffc_fs     double  %12.0g      SELFEFFC    Specific self-efficacy: geometry
selfeffd_fs     double  %12.0g      SELFEFFD    Specific self-efficacy: probability

. gen double selfeff = (selfeffa_fs + selfeffb_fs + selfeffc_fs + selfeffd_fs)/4 ///
>     if selfeffa_fs>-900 & selfeffb_fs>-900 & selfeffc_fs>-900 & selfeffd_fs>-900
(572 missing values generated)

. su selfeff
```

Variable	Obs	Mean	Std. Dev.	Min	Max
selfeff	21,851	-.048102	.7197313	-2.283963	1.474471

```
.
. // MINT classification of expected job at 30
. // (based on Gehrig et al. 2019)
. gen int isco08 = real(jobat30_isco08)

. replace isco08 = . if isco08<0
(5,985 real changes made, 5,985 to missing)

. mint08 MINT isco08

MINT
```

		Freq.	Percent	Valid	Cum.
Valid	0 nicht MINT	13846	61.75	84.23	84.23
	11 MINT* 1.1: Informatik	732	3.26	4.45	88.68
	12 MINT* 1.2: Elektrotechnik	65	0.29	0.40	89.08
	13 MINT* 1.3: Maschinentechnik	81	0.36	0.49	89.57
	14 MINT* 1.4: Mikrotechnik	55	0.25	0.33	89.91
	15 MINT* 1.5: Wirtschaftsingenieurwesen	7	0.03	0.04	89.95
	16 MINT* 1.6: Anderes aus Technik & IT	483	2.15	2.94	92.89
	21 MINT* 2.1: Bau	149	0.66	0.91	93.79
	22 MINT 2.2: Planung und Vermessung	76	0.34	0.46	94.26
	23 MINT 2.3: Architektur	465	2.07	2.83	97.09
	31 MINT* 3.1: Chemie	121	0.54	0.74	97.82
	32 MINT 3.2: Biotechnologie	12	0.05	0.07	97.90
	33 MINT 3.3: Gesundheit	130	0.58	0.79	98.69
	41 MINT 4.1: Geografie	104	0.46	0.63	99.32
	42 MINT* 4.2: Exakte Wissenschaften	80	0.36	0.49	99.81
	43 MINT 4.3: Andere MINT	32	0.14	0.19	100.00
	Total	16438	73.31	100.00	

```
Missing .                                          |      5985       26.69
Total                                              |     22423      100.00
```

```
. drop isco08
. gen byte MINT1 = inlist(MINT,11,12,13,14,15,16,21,31,42) if MINT<. // narrow (*)
(5,985 missing values generated)
. gen byte MINT2 = MINT>0 if MINT<.                                  // wide
(5,985 missing values generated)
. su MINT1 MINT2
```

Variable	Obs	Mean	Std. Dev.	Min	Max
MINT1	16,438	.1078598	.3102127	0	1
MINT2	16,438	.1576834	.364455	0	1

```
. replace MINT = 99 if inlist(jobat30_isco08,"-950", "-957", "-960", "-997", "-998", "-999")
(5,455 real changes made)
.     // not codable, houseman/housewife, not in list, refusal, don't know, no answer
. fre jobat30_isco08 if MINT==.
```

jobat30_isco08 — Expected job at 30 (ISCO-08 classification)

		Freq.	Percent	Valid	Cum.
Valid	-903	84	15.85	15.85	15.85
	-904	446	84.15	84.15	100.00
	Total	530	100.00	100.00	

```
.
. // personal characteristics
.
. // - gender; using self-reported gender
. fre sex
```

sex — Gender (self-reported)

		Freq.	Percent	Valid	Cum.
Valid	-999 No answer /missing [item]	12	0.05	0.05	0.05
	-903 Not administered [item]	84	0.37	0.37	0.43
	1 Female	10981	48.97	48.97	49.40
	2 Male	11346	50.60	50.60	100.00
	Total	22423	100.00	100.00	

```
. gen byte female = (sex==1) if sex>0
(96 missing values generated)
.
. // - immigration status
. fre immig
```

immig — Immigration status

		Freq.	Percent	Valid	Cum.
Valid	-999 No answer /missing [item]	184	0.82	0.82	0.82
	-904 Not administered [break-off]	3	0.01	0.01	0.83
	-903 Not administered [item]	84	0.37	0.37	1.21
	1 Native with 1+ Swiss parent	15863	70.74	70.74	71.95
	2 Second generation	4191	18.69	18.69	90.64
	3 First generation	2098	9.36	9.36	100.00
	Total	22423	100.00	100.00	

```
. replace immig = . if immig<0
(271 real changes made, 271 to missing)
.
. // - absenteeism
. d truancy*
              storage   display    value
```

```
variable name   type    format     label      variable label
------------------------------------------------------------------------------------------------------------------------
truancy1        int     %8.0g      TRUANCY1   Skip whole school day (Absenteeism (truancy))
truancy2        int     %8.0g      TRUANCY2   Skip classes (Absenteeism (truancy))
truancy3        int     %8.0g      TRUANCY3   Late for school (Absenteeism (truancy))
truancy_fs      double  %12.0g     TRUANCY    Absenteeism (truancy)
```

```
. gen double truancy = truancy_fs if truancy_fs>-900
(169 missing values generated)

. su truancy
```

Variable	Obs	Mean	Std. Dev.	Min	Max
truancy	22,254	-.0215044	.6989421	-.4945608	2.845646

```
.
. // - received extra math coaching
. replace coachmath = . if coachmath<0
(207 real changes made, 207 to missing)

. fre coachmath
```

coachmath — Mathematics (Private tutoring / learning support: frequency)

		Freq.	Percent	Valid	Cum.
Valid	1 No, never	16852	75.15	75.86	75.86
	2 Yes, sometimes	3677	16.40	16.55	92.41
	3 Yes, regularly	1687	7.52	7.59	100.00
	Total	22216	99.08	100.00	
Missing	.	207	0.92		
Total		22423	100.00		

```
.
. // - ever repeated a grade
. gen byte repeat = inlist(graderep,2,3) if graderep>0
(134 missing values generated)

. fre repeat
```

repeat

		Freq.	Percent	Valid	Cum.
Valid	0	18259	81.43	81.92	81.92
	1	4030	17.97	18.08	100.00
	Total	22289	99.40	100.00	
Missing	.	134	0.60		
Total		22423	100.00		

```
.
. // - grades in math
. gen grademath = markmath if markmath>0
(964 missing values generated)

. su grademath
```

Variable	Obs	Mean	Std. Dev.	Min	Max
grademath	21,459	4.616175	.7223925	1	6

```
.
. // - school type
. gen byte gym = schoolgym==1 if schoolgym>-904 // assigning "not administered [item]" to zero
(97 missing values generated)

. su gym
```

Variable	Obs	Mean	Std. Dev.	Min	Max
gym	22,326	.2252083	.4177288	0	1

```
.
. // family resources
.
. // - number of books    (transform to numeric scale?)
```

```
. fre books
books ── Number of books
```

		Freq.	Percent	Valid	Cum.
Valid	-999 No answer /missing [item]	53	0.24	0.24	0.24
	-904 Not administered [break-off]	5	0.02	0.02	0.26
	-903 Not administered [item]	84	0.37	0.37	0.63
	1 None	712	3.18	3.18	3.81
	2 1-10 books	2742	12.23	12.23	16.04
	3 11-50 books	5459	24.35	24.35	40.38
	4 51-100 books	4750	21.18	21.18	61.57
	5 101-250 books	3997	17.83	17.83	79.39
	6 251-500 books	2625	11.71	11.71	91.10
	7 More than 500 books	1996	8.90	8.90	100.00
	Total	22423	100.00	100.00	

```
. replace books = . if books<0
(142 real changes made, 142 to missing)

.
. // - highest occupational status
. d hisei88
              storage   display    value
variable name   type    format     label      variable label
------------------------------------------------------------------------------------------------------------------------
hisei88         int     %8.0g      HISEI88    Highest occupational code parents (ISEI-88 status)
. gen int isei = hisei88 if hisei88>0
(884 missing values generated)
. su isei
    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
        isei |     21,539    50.07271    16.08841         16         90

.
. // parents: labor market participation, MINT occupation, value of math
.
. // - mother works full 50% or more
. fre emplm
emplm ── Employment status mother
```

		Freq.	Percent	Valid	Cum.
Valid	-999 No answer /missing [item]	64	0.29	0.29	0.29
	-903 Not administered [item]	287	1.28	1.28	1.57
	1 Yes, full-time	5346	23.84	23.84	25.41
	2 Yes, part-time (50% or more)	7665	34.18	34.18	59.59
	3 Yes, part-time (less than 50%)	4500	20.07	20.07	79.66
	4 No, not working but looking for a job	759	3.38	3.38	83.04
	5 No, not working (e.g., homemaker, retiree, disability pensioner)	3802	16.96	16.96	100.00
	Total	22423	100.00	100.00	

```
. gen byte lfpm = inlist(emplm,1,2) if emplm>0
(351 missing values generated)
. su lfpm
    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
        lfpm |     22,072    .5894799    .4919393          0          1

.
. // - MINT occupation
. gen int isco08 = real(occupm_isco08)
. replace isco08 = . if isco08<0
(2,929 real changes made, 2,929 to missing)
. mint08 MINTm isco08
```

MINTm

		Freq.	Percent	Valid	Cum.
Valid	0 nicht MINT	18780	83.75	96.34	96.34
	11 MINT* 1.1: Informatik	70	0.31	0.36	96.70
	12 MINT* 1.2: Elektrotechnik	4	0.02	0.02	96.72
	13 MINT* 1.3: Maschinentechnik	7	0.03	0.04	96.75
	14 MINT* 1.4: Mikrotechnik	11	0.05	0.06	96.81
	15 MINT* 1.5: Wirtschaftsingenieurwesen	11	0.05	0.06	96.87
	16 MINT* 1.6: Anderes aus Technik & IT	131	0.58	0.67	97.54
	21 MINT* 2.1: Bau	24	0.11	0.12	97.66
	22 MINT 2.2: Planung und Vermessung	13	0.06	0.07	97.73
	23 MINT 2.3: Architektur	64	0.29	0.33	98.06
	31 MINT* 3.1: Chemie	110	0.49	0.56	98.62
	32 MINT 3.2: Biotechnologie	11	0.05	0.06	98.68
	33 MINT 3.3: Gesundheit	208	0.93	1.07	99.74
	41 MINT 4.1: Geografie	35	0.16	0.18	99.92
	42 MINT* 4.2: Exakte Wissenschaften	11	0.05	0.06	99.98
	43 MINT 4.3: Andere MINT	4	0.02	0.02	100.00
	Total	19494	86.94	100.00	
Missing	.	2929	13.06		
Total		22423	100.00		

```
. replace MINTm = 0 if isco08>=.  // no info => assume no MINT
(2,929 real changes made)
. drop isco08
. gen byte MINT1m = inlist(MINTm,11,12,13,14,15,16,21,31,42) if MINTm<. // narrow (*)
. gen byte MINT2m = MINTm>0 if MINTm<.                                  // wide
. su MINT1m MINT2m
```

Variable	Obs	Mean	Std. Dev.	Min	Max
MINT1m	22,423	.0169023	.1289083	0	1
MINT2m	22,423	.0318423	.175584	0	1

```
. gen int isco08 = real(occupf_isco08)
. replace isco08 = . if isco08<0
(2,489 real changes made, 2,489 to missing)
. mint08 MINTf isco08
```

MINTf

		Freq.	Percent	Valid	Cum.
Valid	0 nicht MINT	17141	76.44	85.99	85.99
	11 MINT* 1.1: Informatik	784	3.50	3.93	89.92
	12 MINT* 1.2: Elektrotechnik	130	0.58	0.65	90.57
	13 MINT* 1.3: Maschinentechnik	144	0.64	0.72	91.30
	14 MINT* 1.4: Mikrotechnik	66	0.29	0.33	91.63
	15 MINT* 1.5: Wirtschaftsingenieurwesen	57	0.25	0.29	91.91
	16 MINT* 1.6: Anderes aus Technik & IT	512	2.28	2.57	94.48
	21 MINT* 2.1: Bau	529	2.36	2.65	97.14
	22 MINT 2.2: Planung und Vermessung	59	0.26	0.30	97.43
	23 MINT 2.3: Architektur	193	0.86	0.97	98.40
	31 MINT* 3.1: Chemie	128	0.57	0.64	99.04
	32 MINT 3.2: Biotechnologie	2	0.01	0.01	99.05
	33 MINT 3.3: Gesundheit	53	0.24	0.27	99.32
	41 MINT 4.1: Geografie	50	0.22	0.25	99.57
	42 MINT* 4.2: Exakte Wissenschaften	34	0.15	0.17	99.74
	43 MINT 4.3: Andere MINT	52	0.23	0.26	100.00
	Total	19934	88.90	100.00	
Missing	.	2489	11.10		
Total		22423	100.00		

```
. replace MINTf = 0 if isco08>=.  // no info => assume no MINT
(2,489 real changes made)
```

```
. drop isco08
. gen byte MINT1f = inlist(MINTf,11,12,13,14,15,16,21,31,42) if MINTf<. // narrow (*)
. gen byte MINT2f = MINTf>0 if MINTf<.                                  // wide
. su MINT1f MINT2f
    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
      MINT1f |     22,423    .1063194    .3082529          0          1
      MINT2f |     22,423    .1245596    .3302262          0          1
.
. // - parents' math norms (only half of sample)
. d socnorm*
              storage   display    value
variable name   type    format     label      variable label
------------------------------------------------------------------------------------------------------------------------
socnormsm1      int     %8.0g      SOCNORMS   Important to learn math (Mother's social norms about
                                                mathematics)
socnormsm2      int     %8.0g      V1173_A    Important for career to learn math (Mother's social norms about
                                                mathematics)
socnormsm3      int     %8.0g      V1174_A    Likes math (Mother's social norms about mathematics)
socnormsm_fs    double  %12.0g     V1175_A    Mother's social norms about mathematics
socnormsf1      int     %8.0g      V1176_A    Important to learn math (Father's social norms about
                                                mathematics)
socnormsf2      int     %8.0g      V1177_A    Important for career to learn math (Father's social norms about
                                                mathematics)
socnormsf3      int     %8.0g      V1178_A    Likes math (Father's social norms about mathematics)
socnormsf_fs    double  %12.0g     V1179_A    Father's social norms about mathematics
. gen double socnormsm = socnormsm_fs if socnormsm_fs>-900
(11,576 missing values generated)
. gen double socnormsf = socnormsf_fs if socnormsf_fs>-900
(11,836 missing values generated)
. su socnormsm socnormsf
    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
   socnormsm |     10,847    .0727577     .873796  -2.337935   1.409555
   socnormsf |     10,587     .115669    .8854172  -2.400167   1.224326
. d expect*
              storage   display    value
variable name   type    format     label      variable label
------------------------------------------------------------------------------------------------------------------------
expectm1        int     %8.0g      EXPECTM1   Important to do well in science (Achievement expectations
                                                mother)
expectm2        int     %8.0g      EXPECTM2   Important to do well in mathematics (Achievement expectations
                                                mother)
expectm3        int     %8.0g      EXPECTM3   Important to do well in test language (Achievement expectations
                                                mother)
expectm4        float   %9.0g      EXPECTM4   Expected marks in mathematics (Achievement expectations mother)
expectm4_org    double  %12.0g     V1184_A    Expected marks in mathematics (Unedited original variable
                                                expectm4)
expectm_fs      double  %12.0g     EXPECTM    Achievement expectations mother
expectf1        int     %8.0g      EXPECTF1   Important to do well in science (Achievement expectations
                                                father)
expectf2        int     %8.0g      EXPECTF2   Important to do well in mathematics (Achievement expectations
                                                father)
expectf3        int     %8.0g      EXPECTF3   Important to do well in test language (Achievement expectations
                                                father)
expectf4        float   %9.0g      EXPECTF4   Expected marks in mathematics (Achievement expectations father)
expectf4_org    double  %12.0g     V1190_A    Expected marks in mathematics (Unedited original variable
                                                expectf4)
expectf_fs      double  %12.0g     EXPECTF    Achievement expectations father
expectp_fs      double  %12.0g     EXPECTP    Achievement expectations parents
. gen byte mathimpm = expectm2==4 if expectm2>0
(11,561 missing values generated)
. gen byte mathimpf = expectf2==4 if expectf2>0
(11,855 missing values generated)
```

```
. su mathimpm mathimpf // very important to do well in math
```

Variable	Obs	Mean	Std. Dev.	Min	Max
mathimpm	10,862	.4705395	.4991543	0	1
mathimpf	10,568	.5293338	.4991624	0	1

3.2 Selektion vollständiger Beobachtungen

```
. fre female
```

female

		Freq.	Percent	Valid	Cum.
Valid	0	11346	50.60	50.82	50.82
	1	10981	48.97	49.18	100.00
	Total	22327	99.57	100.00	
Missing	.	96	0.43		
Total		22423	100.00		

```
. drop if female>=.
(96 observations deleted)
. fre wlem, t(2)
```

wlem — Weighted likelihood estimates (WLE)

		Freq.	Percent	Valid	Cum.
Valid	-5.709	1	0.00	0.00	0.00
	-5.497	1	0.00	0.00	0.01
	:	:	:	:	:
	5.211	1	0.00	0.00	100.00
	5.214	1	0.00	0.00	100.00
	Total	22045	98.74	100.00	
Missing	.	282	1.26		
Total		22327	100.00		

```
. drop if wlem>=.
(282 observations deleted)
. fre MINT
```

MINT

		Freq.	Percent	Valid	Cum.
Valid	0 nicht MINT	13679	62.05	63.31	63.31
	11 MINT* 1.1: Informatik	724	3.28	3.35	66.67
	12 MINT* 1.2: Elektrotechnik	64	0.29	0.30	66.96
	13 MINT* 1.3: Maschinentechnik	79	0.36	0.37	67.33
	14 MINT* 1.4: Mikrotechnik	55	0.25	0.25	67.58
	15 MINT* 1.5: Wirtschaftsingenieurwesen	7	0.03	0.03	67.61
	16 MINT* 1.6: Anderes aus Technik & IT	476	2.16	2.20	69.82
	21 MINT* 2.1: Bau	148	0.67	0.69	70.50
	22 MINT 2.2: Planung und Vermessung	75	0.34	0.35	70.85
	23 MINT 2.3: Architektur	461	2.09	2.13	72.98
	31 MINT* 3.1: Chemie	118	0.54	0.55	73.53
	32 MINT 3.2: Biotechnologie	12	0.05	0.06	73.58
	33 MINT 3.3: Gesundheit	125	0.57	0.58	74.16
	41 MINT 4.1: Geografie	104	0.47	0.48	74.64
	42 MINT* 4.2: Exakte Wissenschaften	79	0.36	0.37	75.01
	43 MINT 4.3: Andere MINT	32	0.15	0.15	75.16
	99	5367	24.35	24.84	100.00
	Total	21605	98.00	100.00	
Missing	.	440	2.00		
Total		22045	100.00		

```
. drop if MINT>=.
(440 observations deleted)
. count if matcon>=.
  107
. drop if matcon>=.
(107 observations deleted)
. count if selfeff>=.
  217
. drop if selfeff>=.
(217 observations deleted)
```

3.3 MINT-Verteilung

```
. fre MINT [aw=smp_w_nrastubw] if female==0, include
MINT
```

		Freq.	Percent	Valid	Cum.
Valid	0 nicht MINT	6056.908	56.40	56.40	56.40
	11 MINT* 1.1: Informatik	649.8262	6.05	6.05	62.45
	12 MINT* 1.2: Elektrotechnik	59.54559	0.55	0.55	63.00
	13 MINT* 1.3: Maschinentechnik	85.17598	0.79	0.79	63.79
	14 MINT* 1.4: Mikrotechnik	50.1191	0.47	0.47	64.26
	15 MINT* 1.5: Wirtschaftsingenieurwesen	1.326018	0.01	0.01	64.27
	16 MINT* 1.6: Anderes aus Technik & IT	416.4263	3.88	3.88	68.15
	21 MINT* 2.1: Bau	119.9866	1.12	1.12	69.27
	22 MINT 2.2: Planung und Vermessung	44.74996	0.42	0.42	69.68
	23 MINT 2.3: Architektur	326.228	3.04	3.04	72.72
	24 MINT 2.4: Anderes aus Bauwesen	0	0.00	0.00	72.72
	31 MINT* 3.1: Chemie	80.76886	0.75	0.75	73.47
	32 MINT 3.2: Biotechnologie	4.080289	0.04	0.04	73.51
	33 MINT 3.3: Gesundheit	9.502926	0.09	0.09	73.60
	34 MINT 3.4: Anderes aus C&LS	0	0.00	0.00	73.60
	41 MINT 4.1: Geografie	52.73258	0.49	0.49	74.09
	42 MINT* 4.2: Exakte Wissenschaften	63.37185	0.59	0.59	74.68
	43 MINT 4.3: Andere MINT	25.91312	0.24	0.24	74.92
	99	2693.339	25.08	25.08	100.00
	Total	10740	100.00	100.00	

```
. fre MINT [aw=smp_w_nrastubw] if female==1, include
MINT
```

		Freq.	Percent	Valid	Cum.
Valid	0 nicht MINT	7266.417	68.93	68.93	68.93
	11 MINT* 1.1: Informatik	72.60006	0.69	0.69	69.62
	12 MINT* 1.2: Elektrotechnik	3.487517	0.03	0.03	69.66
	13 MINT* 1.3: Maschinentechnik	2.221513	0.02	0.02	69.68
	14 MINT* 1.4: Mikrotechnik	.5966027	0.01	0.01	69.68
	15 MINT* 1.5: Wirtschaftsingenieurwesen	3.562429	0.03	0.03	69.72
	16 MINT* 1.6: Anderes aus Technik & IT	62.57383	0.59	0.59	70.31
	21 MINT* 2.1: Bau	6.486903	0.06	0.06	70.37
	22 MINT 2.2: Planung und Vermessung	30.71171	0.29	0.29	70.66
	23 MINT 2.3: Architektur	210.9861	2.00	2.00	72.67
	24 MINT 2.4: Anderes aus Bauwesen	0	0.00	0.00	72.67
	31 MINT* 3.1: Chemie	33.57419	0.32	0.32	72.98
	32 MINT 3.2: Biotechnologie	5.831783	0.06	0.06	73.04
	33 MINT 3.3: Gesundheit	100.7292	0.96	0.96	73.99
	34 MINT 3.4: Anderes aus C&LS	0	0.00	0.00	73.99
	41 MINT 4.1: Geografie	60.47487	0.57	0.57	74.57
	42 MINT* 4.2: Exakte Wissenschaften	26.7383	0.25	0.25	74.82
	43 MINT 4.3: Andere MINT	3.427072	0.03	0.03	74.85
	99	2650.581	25.15	25.15	100.00

```
       Total |      10541      100.00      100.00
```

3.4 Arbeitsdatensatz speichern

```
. // - drop observations for which MINT is not determined
. drop if MINT==99
(5,165 observations deleted)
.
. // - re-standardize key variables
. center wlem matcon selfeff [pw=smp_w_nrastubw], standard inplace
(modified variables: wlem matcon selfeff)
.
. // - sample design
. assert id_school!=""
. assert smp_w_nrastubw>0 & smp_w_nrastubw<.
.
. // - variables to keep
. local vlist ///
>     id_student wlem matcon selfeff MINT MINT1 MINT2 female immig truancy coachmath repeat grademath ///
>     gym books isei lfpm MINTm MINT1m MINT2m MINTf MINT1f MINT2f socnormsm socnormsf mathimpm mathimpf ///
>     id_school id_region smp_w_nrastubw smp_w_nrasturw*
. keep `vlist'
. order `vlist'
. compress
  variable immig was int now byte
  variable coachmath was int now byte
  variable books was int now byte
  variable isei was int now byte
  (64,464 bytes saved)
. save workingdata, replace
file workingdata.dta saved
```

4 Analysen

```
. use workingdata, clear
( )
```

4.1 Surveydesign

```
. // A) linearization (just for quick approximation)
.
. // strata not available in official release; M.Werner provided
. // instructions how to generate the strata; however, strategy here is to use
. // schools as clusters and ignore strata for linearization estimates and then
. // at the end use BRR for the final estimates
.
. svyset id_school [pw=smp_w_nrastubw]
      pweight: smp_w_nrastubw
          VCE: linearized
  Single unit: missing
     Strata 1: <one>
         SU 1: id_school
        FPC 1: <zero>
.
. // B) BRR (for final results)
.
. svyset [pw=smp_w_nrastubw], brr(smp_w_nrasturw*) fay(.5) vce(brr)
```

```
      pweight: smp_w_nrastubw
          VCE: brr
          MSE: off
    brrweight: smp_w_nrasturw1 .. smp_w_nrasturw120
          fay: .5
  Single unit: missing
     Strata 1: <one>
         SU 1: <observations>
        FPC 1: <zero>
```

4.2 Beruf mit 30 im Bereich der MINT-Fachkräfte

```
. svy: mean MINT1 MINT2, over(female) citype(logit)
(running mean on estimation sample)

BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
.................................................    50
.................................................   100
....................
```

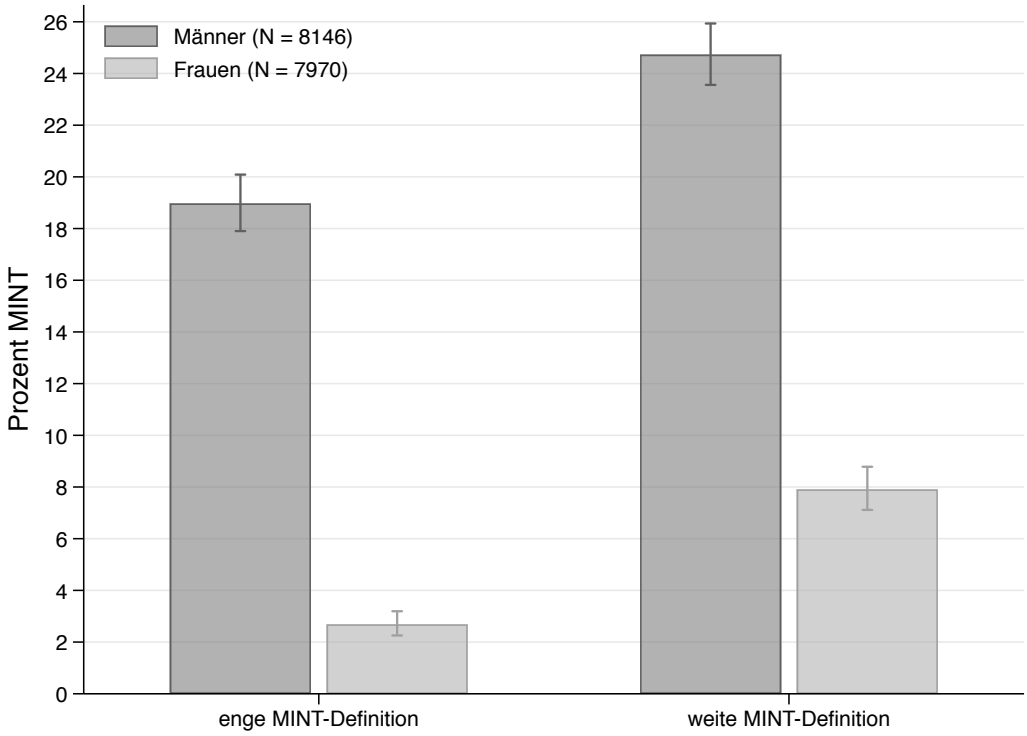
```
Survey: Mean estimation             Number of obs   =     16,116
                                    Population size = 57,724.632
                                    Replications    =        120
                                    Design df       =        119
```

	BRR			
	Mean	Std. Err.	[95% Conf.	Interval]
c.MINT1@female				
0	.1897118	.0055188	.1790243	.2008812
1	.0268479	.002356	.0225567	.0319288
c.MINT2@female				
0	.2472769	.0059983	.2355921	.2593447
1	.0790835	.0042101	.0711386	.0878318

```
. local Nm = el(e(_N),1,1)

. local Nf = el(e(_N),1,2)

. coefplot (, keep(*@0.female) label("Männer (N = `Nm')") rename(*@0.female = "")) ///
>          (, keep(*@1.female) label("Frauen (N = `Nf')") rename(*@1.female = "")) ///
>     , vertical recast(bar) base(0) barw(0.3) plotr(m(b=0)) cirecast(rcap) citop citype(logit) ///
>     rescale(100) yti("Prozent MINT") ylabel(0(2)26) ///
>     coefl(c.MINT1 = "enge MINT-Definition" c.MINT2 = "weite MINT-Definition")
```



4.3 Generieren von Rangdaten bzw. Rangdifferenzen

```
. gen double r_wlem = .
(16,116 missing values generated)
. mata: st_store(., "r_wlem", mm_ranks(st_data(., "wlem"), st_data(.,"smp_w_nrastubw"), 3, 1, 1))
. gen double r_matcon = .
(16,116 missing values generated)
. mata: st_store(., "r_matcon", mm_ranks(st_data(., "matcon"), st_data(.,"smp_w_nrastubw"), 3, 1, 1))
. gen double r_selfeff = .
(16,116 missing values generated)
. mata: st_store(., "r_selfeff", mm_ranks(st_data(., "selfeff"), st_data(.,"smp_w_nrastubw"), 3, 1, 1))
. gen double d_matcon = r_matcon - r_wlem
. gen double d_selfeff = r_selfeff - r_wlem
```

4.4 Korrelation zwischen Leistungsdaten und Selbsteinschätzung

```
. corr wlem matcon selfeff [aw=smp_w_nrastubw]
(sum of wgt is 57,724.6319285608)
(obs=16,116)
             |     wlem   matcon  selfeff
-------------+---------------------------
        wlem |   1.0000
      matcon |   0.3575   1.0000
     selfeff |   0.5776   0.4825   1.0000
. corr r_wlem r_matcon r_selfeff [aw=smp_w_nrastubw]
(sum of wgt is 57,724.6319285608)
(obs=16,116)
             |   r_wlem r_matcon r_self~f
```

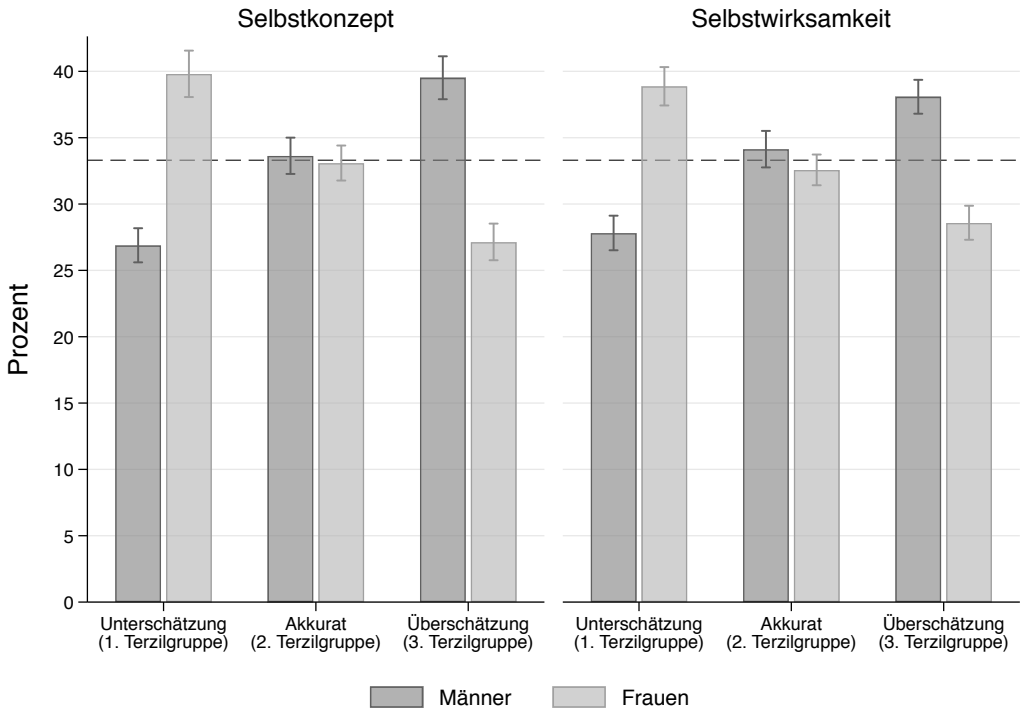
```
-------------+---------------------------
      r_wlem |   1.0000
    r_matcon |   0.3473   1.0000
   r_selfeff |   0.5965   0.4755   1.0000
```

4.5 Unter- bzw. Überschätzung der eigenen Kompetenzen

```
. su d_matcon [aw=smp_w_nrastubw]
    Variable |      Obs      Weight        Mean   Std. Dev.       Min        Max
-------------+--------------------------------------------------------------------
    d_matcon |   16,116  57724.6319   -9.16e-16   .3293434  -.9101894   .9337547
. gen abs = abs(d_matcon)
. su abs [aw=smp_w_nrastubw]
    Variable |      Obs      Weight        Mean   Std. Dev.       Min        Max
-------------+--------------------------------------------------------------------
         abs |   16,116  57724.6319    .2614751   .2002338   .0000104   .9337547
. drop abs
. svy: regress d_matcon i.female
(running regress on estimation sample)
BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
..................................................    50
..................................................   100
....................
Survey: Linear regression                       Number of obs     =     16,116
                                                Population size   = 57,724.632
                                                Replications      =        120
                                                Design df         =        119
                                                F(   1,    119)   =     310.19
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0293
------------------------------------------------------------------------------
             |                BRR
    d_matcon |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
    1.female |  -.1127828   .0064036   -17.61   0.000    -.1254626    -.100103
       _cons |   .0563989   .0054893    10.27   0.000     .0455295    .0672683
------------------------------------------------------------------------------
. xtile q_matcon  = d_matcon [pw=smp_w_nrastubw], nq(3)
. svy: proportion q_matcon, over(female)
(running proportion on estimation sample)
BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
..................................................    50
..................................................   100
....................
Survey: Proportion estimation       Number of obs   =     16,116
                                    Population size = 57,724.632
                                    Replications    =        120
                                    Design df       =        119
--------------------------------------------------------------
                     |             BRR              Normal
                     |  Proportion   Std. Err.     [95% Conf. Interval]
---------------------+----------------------------------------------------
q_matcon@female      |
           1 0       |   .2687109   .0064988      .2558427    .2815791
           1 1       |   .3980009   .0088371      .3805025    .4154993
           2 0       |   .3362307   .0069069      .3225544    .3499071
           2 1       |   .3307742   .0066666      .3175736    .3439747
           3 0       |   .3950584    .008173       .378875    .4112417
           3 1       |   .2712249   .0069757      .2574124    .2850375
```

```
. est sto matcon
. drop q_matcon
. su d_selfeff [aw=smp_w_nrastubw]
    Variable |      Obs      Weight        Mean   Std. Dev.       Min        Max
-------------+--------------------------------------------------------------------
   d_selfeff |   16,116  57724.6319    2.12e-16   .2593433   -.894361   .9796289
. gen abs = abs(d_selfeff)
. su abs [aw=smp_w_nrastubw]
    Variable |      Obs      Weight        Mean   Std. Dev.       Min        Max
-------------+--------------------------------------------------------------------
         abs |   16,116  57724.6319    .1992255   .1660291   2.76e-06   .9796289
. drop abs
. svy: regress d_selfeff i.female
(running regress on estimation sample)
BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
.................................................    50
.................................................   100
....................
Survey: Linear regression                       Number of obs     =     16,116
                                                Population size   = 57,724.632
                                                Replications      =        120
                                                Design df         =        119
                                                F(   1,    119)   =     226.63
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0186
------------------------------------------------------------------------------
             |                BRR
  d_selfeff |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
    1.female |  -.0707105   .0046971   -15.05   0.000    -.0800111   -.0614098
       _cons |   .0353599   .0038106     9.28   0.000     .0278145    .0429054
------------------------------------------------------------------------------
. xtile q_selfeff = d_selfeff [pw=smp_w_nrastubw], nq(3)
. svy: proportion q_selfeff, over(female)
(running proportion on estimation sample)
BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
.................................................    50
.................................................   100
....................
Survey: Proportion estimation           Number of obs   =     16,116
                                        Population size = 57,724.632
                                        Replications    =        120
                                        Design df       =        119
--------------------------------------------------------------
                             |             BRR            Normal
                             |  Proportion   Std. Err.     [95% Conf. Interval]
-----------------------------+--------------------------------------------------
q_selfeff@female             |
                       1 0   |   .2780048   .0065847      .2649664    .2910431
                       1 1   |   .3886636   .0073076      .3741938    .4031333
                       2 0   |   .3412319   .0069502      .3274697     .354994
                       2 1   |   .3256262     .00585      .3140427    .3372098
                       3 0   |   .3807634   .0064523      .3679872    .3935395
                       3 1   |   .2857102   .0064721      .2728948    .2985256
--------------------------------------------------------------
. est sto selfeff
. drop q_selfeff
. coefplot (matcon,  keep(*@0.female) label("Männer") rename(*_matcon@0.female  = "")) ///
>          (matcon,  keep(*@1.female) label("Frauen") rename(*_matcon@1.female  = "")) ///
```

```
>      ||  (selfeff, keep(*@0.female) label("Männer") rename(*_selfeff@0.female = "")) ///
>          (selfeff, keep(*@1.female) label("Frauen") rename(*_selfeff@1.female = "")) ///
>      || , vertical recast(bar) base(0) barw(0.3) plotr(m(b=0)) cirecast(rcap) citop citype(logit) ///
>     rescale(100) yti(Prozent) ylab(0(5)40) byopt(legend(pos(6))) legend(row(1)) yline(33.3) ///
>     bylabels("Selbstkonzept" "Selbstwirksamkeit") ///
>     coeflab(1.* = `""Unterschätzung" "(1. Terzilgruppe)""' ///
>             2.* = `""Akkurat" "(2. Terzilgruppe)""' ///
>             3.* = `""Überschätzung" "(3. Terzilgruppe)""')
```



4.6 Effekt der Unter- bzw. Überschätzung der eigenen Kompetenzen auf die beruflichen Vorstellungen

```
. svy: logit MINT1 r_wlem d_matcon
(running logit on estimation sample)
BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
..................................................    50
..................................................   100
....................
Survey: Logistic regression                     Number of obs     =     16,116
                                                Population size   = 57,724.632
                                                Replications      =        120
                                                Design df         =        119
                                                F(   2,    118)   =     229.29
                                                Prob > F          =     0.0000
```

MINT1	Coef.	BRR Std. Err.	t	P>|t|	[95% Conf.	Interval]
r_wlem	3.278281	.1529654	21.43	0.000	2.975394	3.581168
d_matcon	2.087413	.1268366	16.46	0.000	1.836264	2.338562
_cons	-3.982272	.1067144	-37.32	0.000	-4.193578	-3.770967

```
. margins, dydx(*) post
Average marginal effects                        Number of obs     =     16,116
Model VCE    : BRR
Expression   : Pr(MINT1), predict()
dy/dx w.r.t. : r_wlem d_matcon
```

	dy/dx	Delta-method Std. Err.	t	P>|t|	[95% Conf.	Interval]
r_wlem	.2985849	.013565	22.01	0.000	.271725	.3254449
d_matcon	.190121	.0112973	16.83	0.000	.1677512	.2124909

```
. est sto MINT1_matcon
. svy: logit MINT1 r_wlem d_selfeff
(running logit on estimation sample)
BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
..................................................    50
..................................................   100
....................
Survey: Logistic regression                     Number of obs     =     16,116
                                                Population size   = 57,724.632
                                                Replications      =        120
                                                Design df         =        119
                                                F(   2,    118)   =     163.91
                                                Prob > F          =     0.0000
```

MINT1	Coef.	BRR Std. Err.	t	P>|t|	[95% Conf.	Interval]
r_wlem	2.620817	.1442057	18.17	0.000	2.335275	2.906359
d_selfeff	1.630809	.1478314	11.03	0.000	1.338088	1.92353
_cons	-3.593769	.0997776	-36.02	0.000	-3.791339	-3.396199

```
. margins, dydx(*) post
Average marginal effects                        Number of obs     =     16,116
Model VCE    : BRR
Expression   : Pr(MINT1), predict()
dy/dx w.r.t. : r_wlem d_selfeff
```

	dy/dx	Delta-method Std. Err.	t	P>|t|	[95% Conf.	Interval]
r_wlem	.2427915	.0132902	18.27	0.000	.2164755	.2691075
d_selfeff	.1510776	.0135778	11.13	0.000	.1241922	.177963

```
. est sto MINT1_selfeff
. svy: logit MINT2 r_wlem d_matcon
(running logit on estimation sample)
BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
..................................................    50
..................................................   100
....................
Survey: Logistic regression                     Number of obs     =     16,116
                                                Population size   = 57,724.632
                                                Replications      =        120
                                                Design df         =        119
                                                F(   2,    118)   =     260.78
                                                Prob > F          =     0.0000
```

MINT2	Coef.	BRR Std. Err.	t	P>|t|	[95% Conf.	Interval]
r_wlem	2.999314	.1308563	22.92	0.000	2.740206	3.258423
d_matcon	1.516505	.1031237	14.71	0.000	1.31231	1.7207
_cons	-3.297974	.0883136	-37.34	0.000	-3.472844	-3.123104

```
. margins, dydx(*) post

Average marginal effects                        Number of obs     =     16,116
Model VCE    : BRR

Expression   : Pr(MINT2), predict()
dy/dx w.r.t. : r_wlem d_matcon
```

	dy/dx	Delta-method Std. Err.	t	P>|t|	[95% Conf.	Interval]
r_wlem	.3829688	.0152487	25.11	0.000	.3527748	.4131627
d_matcon	.1936356	.0122869	15.76	0.000	.1693063	.2179649

```
. est sto MINT2_matcon

. svy: logit MINT2 r_wlem d_selfeff
(running logit on estimation sample)

BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
..................................................    50
..................................................   100
....................

Survey: Logistic regression                     Number of obs     =     16,116
                                                Population size   = 57,724.632
                                                Replications      =        120
                                                Design df         =        119
                                                F(   2,    118)   =     210.75
                                                Prob > F          =     0.0000
```

MINT2	Coef.	BRR Std. Err.	t	P>|t|	[95% Conf.	Interval]
r_wlem	2.597146	.1259712	20.62	0.000	2.347711	2.846582
d_selfeff	1.367145	.1217421	11.23	0.000	1.126084	1.608207
_cons	-3.079471	.0832887	-36.97	0.000	-3.244391	-2.914551

```
. margins, dydx(*) post

Average marginal effects                        Number of obs     =     16,116
Model VCE    : BRR

Expression   : Pr(MINT2), predict()
dy/dx w.r.t. : r_wlem d_selfeff
```

	dy/dx	Delta-method Std. Err.	t	P>|t|	[95% Conf.	Interval]
r_wlem	.335073	.0157214	21.31	0.000	.303943	.366203
d_selfeff	.1763834	.0154796	11.39	0.000	.1457323	.2070345

```
. est sto MINT2_selfeff

. esttab MINT1_matcon MINT1_selfeff MINT2_matcon MINT2_selfeff, nostar nomti t(1)
```

	(1)	(2)	(3)	(4)
r_wlem	0.299	0.243	0.383	0.335
	(22.0)	(18.3)	(25.1)	(21.3)
d_matcon	0.190		0.194	
	(16.8)		(15.8)	

d_selfeff		0.151		0.176
		(11.1)		(11.4)
N	16116	16116	16116	16116

t statistics in parentheses

4.7 Zerlegung des MINT-Gender-Gaps

```
. svy: regress r_wlem i.female // gender difference in wlem
(running regress on estimation sample)
BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
..................................................    50
..................................................   100
....................
Survey: Linear regression                       Number of obs     =     16,116
                                                Population size   = 57,724.632
                                                Replications      =        120
                                                Design df         =        119
                                                F(   1,    119)   =      90.64
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0080
```

r_wlem	Coef.	BRR Std. Err.	t	P>|t|	[95% Conf.	Interval]
1.female	-.0517707	.0054377	-9.52	0.000	-.0625379	-.0410035
_cons	.5258888	.004625	113.71	0.000	.5167309	.5350468

```
.
. oaxaca MINT1 r_wlem d_matcon d_selfeff, by(female) svy pooled logit
(running oaxaca on estimation sample)
BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
..................................................    50
..................................................   100
....................
Blinder-Oaxaca decomposition                    Number of obs     =     16,116
                                                Population size   = 57,724.632
                                                Replications      =        120
                                                Design df         =        119
```

MINT1	Coef.	BRR Std. Err.	t	P>|t|	[95% Conf.	Interval]
overall						
group_1	.1897118	.0055188	34.38	0.000	.178784	.2006396
group_2	.0268479	.002356	11.40	0.000	.0221828	.031513
difference	.1628639	.0056631	28.76	0.000	.1516503	.1740775
explained	.0427123	.0030597	13.96	0.000	.0366537	.0487708
unexplained	.1201516	.0055212	21.76	0.000	.1092191	.1310842
explained						
r_wlem	.019193	.0021285	9.02	0.000	.0149782	.0234077
d_matcon	.0188075	.0022212	8.47	0.000	.0144092	.0232058
d_selfeff	.0047118	.001478	3.19	0.002	.0017852	.0076385
unexplained						
r_wlem	-.0253094	.0139398	-1.82	0.072	-.0529116	.0022928
d_matcon	.0023267	.0009656	2.41	0.018	.0004146	.0042388
d_selfeff	.0002428	.0007478	0.32	0.746	-.0012378	.0017235
_cons	.1428915	.0130211	10.97	0.000	.1171083	.1686746

```
. nlcom (r_wlem:  _b[explained:r_wlem]     / _b[overall:difference]*100)  ///
>     (d_matcon:  _b[explained:d_matcon]   / _b[overall:difference]*100)  ///
>     (d_selfeff: _b[explained:d_selfeff]  / _b[overall:difference]*100)  ///
>     (d_X:      (_b[explained:d_matcon]/*
>               */+_b[explained:d_selfeff]) / _b[overall:difference]*100)  ///
>     (tot:      (_b[explained:r_wlem]/*
>               */+_b[explained:d_matcon]/*
>               */+_b[explained:d_selfeff]) / _b[overall:difference]*100)  ///
>     , post
      r_wlem:  _b[explained:r_wlem]     / _b[overall:difference]*100
    d_matcon:  _b[explained:d_matcon]   / _b[overall:difference]*100
   d_selfeff:  _b[explained:d_selfeff]  / _b[overall:difference]*100
         d_X:  (_b[explained:d_matcon]+_b[explained:d_selfeff]) / _b[overall:difference]*100
         tot:  (_b[explained:r_wlem]+_b[explained:d_matcon]+_b[explained:d_selfeff]) / _b[overall:difference]*
> 100
```

MINT1	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
r_wlem	11.78466	1.235813	9.54	0.000	9.362511	14.20681
d_matcon	11.54797	1.38939	8.31	0.000	8.824814	14.27112
d_selfeff	2.893107	.9070403	3.19	0.001	1.115341	4.670874
d_X	14.44108	1.512225	9.55	0.000	11.47717	17.40498
tot	26.22574	1.810657	14.48	0.000	22.67691	29.77456

```
. est sto MINT1

. oaxaca MINT2 r_wlem d_matcon d_selfeff, by(female) svy pooled logit
(running oaxaca on estimation sample)

BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
.................................................    50
.................................................   100
....................

Blinder-Oaxaca decomposition                  Number of obs     =     16,116
                                              Population size   = 57,724.632
                                              Replications      =         120
                                              Design df         =         119
```

MINT2	Coef.	BRR Std. Err.	t	P>|t|	[95% Conf.	Interval]
overall						
group_1	.2472769	.0059983	41.22	0.000	.2353997	.2591541
group_2	.0790835	.0042101	18.78	0.000	.0707472	.0874199
difference	.1681934	.0069722	24.12	0.000	.1543878	.181999
explained	.0462278	.0030723	15.05	0.000	.0401443	.0523112
unexplained	.1219656	.0063586	19.18	0.000	.109375	.1345563
explained						
r_wlem	.0232603	.0025056	9.28	0.000	.0182989	.0282216
d_matcon	.0161478	.0021709	7.44	0.000	.0118491	.0204464
d_selfeff	.0068197	.0016208	4.21	0.000	.0036103	.0100291
unexplained						
r_wlem	.0268525	.0183063	1.47	0.145	-.0093958	.0631008
d_matcon	.0002447	.0005869	0.42	0.677	-.0009174	.0014068
d_selfeff	.0002775	.0005434	0.51	0.611	-.0007985	.0013534
_cons	.094591	.0172012	5.50	0.000	.0605309	.1286511

```
. nlcom (r_wlem:  _b[explained:r_wlem]     / _b[overall:difference]*100)  ///
>     (d_matcon:  _b[explained:d_matcon]   / _b[overall:difference]*100)  ///
>     (d_selfeff: _b[explained:d_selfeff]  / _b[overall:difference]*100)  ///
>     (d_X:      (_b[explained:d_matcon]/*
>               */+_b[explained:d_selfeff]) / _b[overall:difference]*100)  ///
>     (tot:      (_b[explained:r_wlem]/*
>               */+_b[explained:d_matcon]/*
>               */+_b[explained:d_selfeff]) / _b[overall:difference]*100)  ///
```

```
>     , post
      r_wlem:  _b[explained:r_wlem]     / _b[overall:difference]*100
    d_matcon:  _b[explained:d_matcon]   / _b[overall:difference]*100
   d_selfeff:  _b[explained:d_selfeff]  / _b[overall:difference]*100
         d_X:  (_b[explained:d_matcon]+_b[explained:d_selfeff]) / _b[overall:difference]*100
         tot:  (_b[explained:r_wlem]+_b[explained:d_matcon]+_b[explained:d_selfeff]) / _b[overall:difference]*
> 100
```

MINT2	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
r_wlem	13.82948	1.345725	10.28	0.000	11.19191	16.46705
d_matcon	9.600714	1.316369	7.29	0.000	7.020678	12.18075
d_selfeff	4.054686	.9793435	4.14	0.000	2.135208	5.974164
d_X	13.6554	1.489326	9.17	0.000	10.73637	16.57442
tot	27.48488	1.709676	16.08	0.000	24.13398	30.83578

```
. est sto MINT2
. esttab MINT1 MINT2, b(1) nostar ci wide
```

	(1) MINT1		(2) MINT2	
r_wlem	11.8	[9.4,14.2]	13.8	[11.2,16.5]
d_matcon	11.5	[8.8,14.3]	9.6	[7.0,12.2]
d_selfeff	2.9	[1.1,4.7]	4.1	[2.1,6.0]
d_X	14.4	[11.5,17.4]	13.7	[10.7,16.6]
tot	26.2	[22.7,29.8]	27.5	[24.1,30.8]
N	16116		16116	

95% confidence intervals in brackets

5 Zusatzanalysen

5.1 Zerlegung des MINT-Gender-Gaps: mit Kontrollvariablen

```
. // Models
. svy: logit MINT1 i.female r_wlem d_matcon d_selfeff ///
>     i.MINT1m i.MINT1f i.coachmath grademath i.gym i.repeat truancy i.immig isei books
(running logit on estimation sample)
BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
..................................................    50
..................................................   100
....................
Survey: Logistic regression                     Number of obs     =     15,356
                                                Population size   = 55,142.607
                                                Replications      =        120
                                                Design df         =        119
                                                F(  16,    104)   =      57.02
                                                Prob > F          =     0.0000
```

MINT1	Coef.	BRR Std. Err.	t	P>|t|	[95% Conf.	Interval]
1.female	-1.890756	.0940562	-20.10	0.000	-2.076997	-1.704515
r_wlem	2.964869	.224299	13.22	0.000	2.520734	3.409003
d_matcon	1.270647	.1693687	7.50	0.000	.9352798	1.606014
d_selfeff	.5956355	.167028	3.57	0.001	.2649035	.9263675
1.MINT1m	.1392663	.2101745	0.66	0.509	-.2769003	.5554329
1.MINT1f	.5259487	.1011923	5.20	0.000	.3255779	.7263196

```
        coachmath |
  Yes, sometimes |   .2582722    .111959     2.31   0.023     .0365822    .4799621
  Yes, regularly |   .0977643   .1626013     0.60   0.549    -.2242026    .4197311

         grademath |   .0173832   .0651923     0.27   0.790    -.1117041    .1464704
             1.gym |  -.3674725   .1090914    -3.37   0.001    -.5834843   -.1514607
          1.repeat |  -.2624633    .114341    -2.30   0.023      -.48887   -.0360567
           truancy |  -.0106802   .0577671    -0.18   0.854    -.1250648    .1037045

             immig |
Second generation |   .1075048   .1070067     1.00   0.317    -.1043792    .3193889
 First generation |   .2724158   .1250581     2.18   0.031     .0247883    .5200432

              isei |   .0054932   .0025153     2.18   0.031     .0005127    .0104738
             books |  -.0232627   .0248419    -0.94   0.351    -.0724521    .0259267
             _cons |  -3.530666    .321409   -10.98   0.000    -4.167088   -2.894244
------------------------------------------------------------------------------
```

```
. svy: logit MINT1 i.female##(c.r_wlem c.d_matcon c.d_selfeff ///
>     i.MINT1m i.MINT1f i.coachmath c.grademath i.gym i.repeat c.truancy i.immig c.isei c.books) ///
>     , vsquish nofvlabel
(running logit on estimation sample)

BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
..................................................    50
..................................................   100
....................
```

```
Survey: Logistic regression                     Number of obs     =     15,356
                                                Population size   = 55,142.607
                                                Replications      =        120
                                                Design df         =        119
                                                F(  31,     89)   =      32.03
                                                Prob > F          =     0.0000
```

```
------------------------------------------------------------------------------
             |                BRR
      MINT1  |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
    1.female |  -3.101625   1.133679    -2.74   0.007    -5.346422    -.856828
      r_wlem |    2.86433   .2271822    12.61   0.000     2.414487    3.314174
    d_matcon |   1.142186   .1793539     6.37   0.000     .7870473    1.497325
   d_selfeff |   .5940445   .1846715     3.22   0.002     .2283765    .9597125
    1.MINT1m |    .027572   .2342378     0.12   0.906    -.4362423    .4913863
    1.MINT1f |    .532217    .105431     5.05   0.000     .3234532    .7409809
   coachmath |
           2 |    .254535   .1266734     2.01   0.047     .0037089     .505361
           3 |   .1549268   .1775587     0.87   0.385    -.1966572    .5065108
   grademath |  -.0024945   .0705074    -0.04   0.972    -.1421062    .1371172
       1.gym |  -.3901835   .1115252    -3.50   0.001    -.6110145   -.1693526
    1.repeat |  -.2938601   .1089598    -2.70   0.008    -.5096113   -.0781089
     truancy |  -.0017462   .0617436    -0.03   0.977    -.1240046    .1205123
       immig |
           2 |   .1177583   .1161805     1.01   0.313    -.1122908    .3478074
           3 |   .2204295   .1372261     1.61   0.111    -.0512919    .4921508
        isei |   .0059553   .0026841     2.22   0.028     .0006405      .01127
       books |  -.0303378   .0268276    -1.13   0.260    -.0834592    .0227836
female#c.r_wlem |
           1 |   .3606759   .6808303     0.53   0.597    -.9874361    1.708788
female#c.d_matcon |
           1 |   .5876639   .5260568     1.12   0.266    -.4539811    1.629309
female#c.d_selfeff |
           1 |   .0118821   .4964869     0.02   0.981    -.9712115    .9949757
female#MINT1m |
         1 1 |   .5758281   .5381686     1.07   0.287    -.4897994    1.641456
female#MINT1f |
         1 1 |  -.0544456     .24535    -0.22   0.825    -.5402632     .431372
female#coachmath |
         1 2 |  -.0032211   .3014397    -0.01   0.991    -.6001018    .5936595
         1 3 |  -.2788959   .5493647    -0.51   0.613    -1.366693    .8089011
```

```
female#c.grademath |
                1  |   .1814424   .2318737     0.78   0.435    -.2776906    .6405754
       female#gym |
              1 1  |    .131365   .2383554     0.55   0.583    -.3406024    .6033324
    female#repeat |
              1 1  |   .2348674   .3172023     0.74   0.460    -.3932248    .8629597
  female#c.truancy |
                1  |  -.0577649   .1847257    -0.31   0.755    -.4235403    .3080104
     female#immig |
              1 2  |  -.0403102    .263916    -0.15   0.879    -.5628903    .4822699
              1 3  |   .2356895   .3495173     0.67   0.501    -.4563897    .9277686
    female#c.isei |
                1  |  -.0030373   .0073944    -0.41   0.682     -.017679    .0116044
   female#c.books |
                1  |   .0442957    .077471     0.57   0.569    -.1091046    .1976961
             _cons |  -3.349347   .3507496    -9.55   0.000    -4.043866   -2.654828
------------------------------------------------------------------------------
```

```
.         // => no gender differences
. svy: logit MINT2 i.female r_wlem d_matcon d_selfeff ///
>     i.MINT2m i.MINT2f i.coachmath grademath i.gym i.repeat truancy i.immig isei books
(running logit on estimation sample)

BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
..................................................    50
..................................................   100
....................
Survey: Logistic regression                     Number of obs     =     15,356
                                                Population size   = 55,142.607
                                                Replications      =        120
                                                Design df         =        119
                                                F(  16,    104)   =      48.09
                                                Prob > F          =     0.0000
```

MINT2	Coef.	BRR Std. Err.	t	P>|t|	[95% Conf.	Interval]
1.female	-1.133372	.0666469	-17.01	0.000	-1.26534	-1.001405
r_wlem	2.818291	.1826906	15.43	0.000	2.456546	3.180037
d_matcon	.9327338	.1467158	6.36	0.000	.6422218	1.223246
d_selfeff	.6192376	.1352406	4.58	0.000	.3514477	.8870276
1.MINT2m	.1371658	.1520022	0.90	0.369	-.1638138	.4381454
1.MINT2f	.4641995	.0844554	5.50	0.000	.2969695	.6314296
coachmath						
Yes, sometimes	.3108424	.096294	3.23	0.002	.1201706	.5015142
Yes, regularly	.0177666	.1302127	0.14	0.892	-.2400675	.2756008
grademath	-.0171054	.0580699	-0.29	0.769	-.1320896	.0978788
1.gym	-.1935358	.0825494	-2.34	0.021	-.3569918	-.0300798
1.repeat	-.2206166	.105119	-2.10	0.038	-.4287627	-.0124705
truancy	-.0066254	.0414572	-0.16	0.873	-.0887148	.075464
immig						
Second generation	.2144136	.0820014	2.61	0.010	.0520427	.3767845
First generation	.4267538	.1038913	4.11	0.000	.2210388	.6324689
isei	.0044384	.0022216	2.00	0.048	.0000394	.0088374
books	.0207998	.0184249	1.13	0.261	-.0156833	.0572829
_cons	-3.131029	.2675729	-11.70	0.000	-3.66085	-2.601208

```
. svy: logit MINT2 i.female##(c.r_wlem c.d_matcon c.d_selfeff ///
>     i.MINT2m i.MINT2f i.coachmath c.grademath i.gym i.repeat c.truancy i.immig c.isei c.books) ///
>     , vsquish nofvlabel
(running logit on estimation sample)

BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
```

```
..................................................    50
..................................................   100
..................
```

Survey: Logistic regression

Number of obs	= 15,356
Population size	= 55,142.607
Replications	= 120
Design df	= 119
F(31, 89)	= 27.65
Prob > F	= 0.0000

MINT2	Coef.	BRR Std. Err.	t	P>|t|	[95% Conf.	Interval]
1.female	-.2014918	.596291	-0.34	0.736	-1.382208	.979224
r_wlem	2.924859	.2094169	13.97	0.000	2.510192	3.339525
d_matcon	.9203881	.175127	5.26	0.000	.5736192	1.267157
d_selfeff	.5939928	.1688231	3.52	0.001	.2597062	.9282794
1.MINT2m	.1140747	.1856105	0.61	0.540	-.2534527	.4816021
1.MINT2f	.5435623	.0989168	5.50	0.000	.347697	.7394275
coachmath						
2	.3042449	.1124217	2.71	0.008	.0816387	.526851
3	.2211996	.1518476	1.46	0.148	-.0794738	.5218731
grademath	.0287354	.0741722	0.39	0.699	-.118133	.1756038
1.gym	-.2153487	.0956471	-2.25	0.026	-.4047395	-.025958
1.repeat	-.306283	.1105147	-2.77	0.006	-.5251132	-.0874528
truancy	-.0052584	.0540413	-0.10	0.923	-.1122656	.1017487
immig						
2	.2512428	.1069171	2.35	0.020	.0395363	.4629493
3	.3354932	.122812	2.73	0.007	.0923131	.5786734
isei	.006424	.0025747	2.50	0.014	.0013258	.0115223
books	.0054445	.0242505	0.22	0.823	-.0425738	.0534628
female#c.r_wlem						
1	-.3797809	.4013929	-0.95	0.346	-1.174579	.4150172
female#c.d_matcon						
1	.0774616	.3066007	0.25	0.801	-.5296385	.6845616
female#c.d_selfeff						
1	.0396639	.3259377	0.12	0.903	-.6057252	.6850531
female#MINT2m						
1 1	.0348092	.3325683	0.10	0.917	-.6237092	.6933277
female#MINT2f						
1 1	-.2279333	.1695534	-1.34	0.181	-.563666	.1077993
female#coachmath						
1 2	.0033853	.1875599	0.02	0.986	-.368002	.3747726
1 3	-.5630747	.3433144	-1.64	0.104	-1.242871	.1167222
female#c.grademath						
1	-.1367772	.1214166	-1.13	0.262	-.3771941	.1036398
female#gym						
1 1	.0949502	.1749139	0.54	0.588	-.2513968	.4412973
female#repeat						
1 1	.3215846	.1820703	1.77	0.080	-.0389328	.6821019
female#c.truancy						
1	.0058051	.1108333	0.05	0.958	-.2136559	.2252661
female#immig						
1 2	-.1026198	.1890875	-0.54	0.588	-.4770319	.2717923
1 3	.2382752	.2447508	0.97	0.332	-.2463558	.7229062
female#c.isei						
1	-.006119	.0046492	-1.32	0.191	-.0153248	.0030868
female#c.books						
1	.0617888	.0469695	1.32	0.191	-.0312155	.1547931
_cons	-3.456211	.3472139	-9.95	0.000	-4.143729	-2.768693

```
.         // => no gender differences
. // Decompositions
. xi: oaxaca MINT1 r_wlem d_matcon d_selfeff  ///
>     i.MINT1m i.MINT1f i.coachmath grademath i.gym i.repeat truancy i.immig isei books ///
>     , by(female) svy pooled logit
i.MINT1m          _IMINT1m_0-1        (naturally coded; _IMINT1m_0 omitted)
```

```
i.MINT1f          _IMINT1f_0-1        (naturally coded; _IMINT1f_0 omitted)
i.coachmath       _Icoachmath_1-3     (naturally coded; _Icoachmath_1 omitted)
i.gym             _Igym_0-1           (naturally coded; _Igym_0 omitted)
i.repeat          _Irepeat_0-1        (naturally coded; _Irepeat_0 omitted)
i.immig           _Iimmig_1-3         (naturally coded; _Iimmig_1 omitted)
(running oaxaca on estimation sample)

BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
..................................................    50
..................................................   100
....................
```

Blinder-Oaxaca decomposition

Number of obs	= 16,116
Population size	= 57,724.632
Replications	= 120
Design df	= 119

MINT1	Coef.	BRR Std. Err.	t	P>|t|	[95% Conf.	Interval]
overall						
group_1	.1927937	.0056373	34.20	0.000	.1816313	.203956
group_2	.027214	.0023731	11.47	0.000	.0225149	.031913
difference	.1655797	.0058272	28.41	0.000	.1540413	.1771182
explained	.0453099	.0036606	12.38	0.000	.0380615	.0525583
unexplained	.1202698	.0057307	20.99	0.000	.1089224	.1316172
explained						
r_wlem	.0221517	.0025649	8.64	0.000	.0170729	.0272305
d_matcon	.0180764	.0025708	7.03	0.000	.012986	.0231667
d_selfeff	.0053288	.0015184	3.51	0.001	.0023221	.0083354
_IMINT1m_1	.0001212	.0001884	0.64	0.521	-.0002518	.0004942
_IMINT1f_1	-.0002188	.0005274	-0.41	0.679	-.001263	.0008255
_Icoachmath_2	-.0012599	.0006808	-1.85	0.067	-.002608	.0000881
_Icoachmath_3	-.0007164	.0011999	-0.60	0.552	-.0030923	.0016595
grademath	.0003342	.0012454	0.27	0.789	-.0021318	.0028002
_Igym_1	.0021242	.0007468	2.84	0.005	.0006454	.003603
_Irepeat_1	-.0008391	.0004648	-1.81	0.074	-.0017594	.0000812
truancy	-.0000514	.0002804	-0.18	0.855	-.0006067	.0005038
_Iimmig_2	-.0001561	.0001891	-0.83	0.411	-.0005306	.0002184
_Iimmig_3	-.0002367	.0002284	-1.04	0.302	-.0006889	.0002156
isei	.0005098	.0003627	1.41	0.162	-.0002084	.001228
books	.0001421	.0001713	0.83	0.408	-.000197	.0004813
unexplained						
r_wlem	-.0105776	.0193001	-0.55	0.585	-.0487938	.0276386
d_matcon	.0012333	.0012882	0.96	0.340	-.0013174	.003784
d_selfeff	.0000196	.0007953	0.02	0.980	-.0015552	.0015944
_IMINT1m_1	-.0005526	.0005121	-1.08	0.283	-.0015666	.0004614
_IMINT1f_1	.0003792	.001702	0.22	0.824	-.0029908	.0037492
_Icoachmath_2	.0000444	.0032634	0.01	0.989	-.0064175	.0065062
_Icoachmath_3	.0017039	.003316	0.51	0.608	-.0048621	.0082699
grademath	-.0489219	.0610528	-0.80	0.425	-.1698127	.0719688
_Igym_1	-.0020274	.0036875	-0.55	0.583	-.009329	.0052741
_Irepeat_1	-.0023007	.0030408	-0.76	0.451	-.0083217	.0037203
truancy	-.000159	.0005178	-0.31	0.759	-.0011843	.0008663
_Iimmig_2	.0004961	.0032912	0.15	0.880	-.0060209	.0070131
_Iimmig_3	-.0012602	.0018558	-0.68	0.498	-.0049349	.0024145
isei	.0091646	.0220599	0.42	0.679	-.0345162	.0528454
books	-.010997	.018904	-0.58	0.562	-.0484288	.0264347
_cons	.1840252	.0617063	2.98	0.003	.0618405	.3062099

```
. nlcom (r_wlem:  _b[explained:r_wlem]     / _b[overall:difference]*100)  ///
>     (d_matcon:  _b[explained:d_matcon]   / _b[overall:difference]*100)  ///
>     (d_selfeff: _b[explained:d_selfeff]  / _b[overall:difference]*100)  ///
>     (d_X:      (_b[explained:d_matcon]/*
>               */+_b[explained:d_selfeff]) / _b[overall:difference]*100)  ///
>     (tot:      (_b[explained:r_wlem]/*
```

```
>              */+_b[explained:d_matcon]/*
>              */+_b[explained:d_selfeff]) / _b[overall:difference]*100)  ///
>     (rest:      (_b[overall:explained]-_b[explained:r_wlem]/*
>              */-_b[explained:d_matcon]/*
>              */-_b[explained:d_selfeff]) / _b[overall:difference]*100)  ///
>     , post
      r_wlem:  _b[explained:r_wlem]     / _b[overall:difference]*100
    d_matcon:  _b[explained:d_matcon]   / _b[overall:difference]*100
   d_selfeff:  _b[explained:d_selfeff]  / _b[overall:difference]*100
         d_X:  (_b[explained:d_matcon]+_b[explained:d_selfeff]) / _b[overall:difference]*100
         tot:  (_b[explained:r_wlem]+_b[explained:d_matcon]+_b[explained:d_selfeff]) / _b[overall:difference]*
> 100
        rest:  (_b[overall:explained]-_b[explained:r_wlem]-_b[explained:d_matcon]-_b[explained:d_selfeff]) / _
> b[overall:difference]*100
```

MINT1	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
r_wlem	13.37827	1.466252	9.12	0.000	10.50447	16.25207
d_matcon	10.91702	1.58474	6.89	0.000	7.810987	14.02305
d_selfeff	3.218247	.9078803	3.54	0.000	1.438834	4.99766
d_X	14.13527	1.663775	8.50	0.000	10.87433	17.39621
tot	27.51354	2.220725	12.39	0.000	23.161	31.86608
rest	-.1491199	1.416581	-0.11	0.916	-2.925569	2.627329

```
. est sto MINT1
. xi: oaxaca MINT2 r_wlem d_matcon d_selfeff ///
>     i.MINT2m i.MINT2f i.coachmath grademath i.gym i.repeat truancy i.immig isei books ///
>     , by(female) svy pooled logit
i.MINT2m          _IMINT2m_0-1        (naturally coded; _IMINT2m_0 omitted)
i.MINT2f          _IMINT2f_0-1        (naturally coded; _IMINT2f_0 omitted)
i.coachmath       _Icoachmath_1-3     (naturally coded; _Icoachmath_1 omitted)
i.gym             _Igym_0-1           (naturally coded; _Igym_0 omitted)
i.repeat          _Irepeat_0-1        (naturally coded; _Irepeat_0 omitted)
i.immig           _Iimmig_1-3         (naturally coded; _Iimmig_1 omitted)
(running oaxaca on estimation sample)
BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
..................................................    50
..................................................   100
....................
Blinder-Oaxaca decomposition                  Number of obs     =     16,116
                                              Population size   = 57,724.632
                                              Replications      =        120
                                              Design df         =        119
```

MINT2	Coef.	BRR Std. Err.	t	P>|t|	[95% Conf.	Interval]
overall						
group_1	.2495778	.0061534	40.56	0.000	.2373935	.261762
group_2	.0800784	.0042856	18.69	0.000	.0715926	.0885642
difference	.1694994	.0071019	23.87	0.000	.1554368	.1835619
explained	.0468527	.0037672	12.44	0.000	.0393932	.0543122
unexplained	.1226467	.006774	18.11	0.000	.1092334	.1360599
explained						
r_wlem	.0261858	.0029354	8.92	0.000	.0203735	.0319981
d_matcon	.0165014	.0027049	6.10	0.000	.0111454	.0218575
d_selfeff	.0068894	.0015983	4.31	0.000	.0037247	.0100541
_IMINT2m_1	.0001043	.0001368	0.76	0.447	-.0001666	.0003753
_IMINT2f_1	-.0003519	.0005985	-0.59	0.558	-.001537	.0008332
_Icoachmath_2	-.0018858	.0008437	-2.24	0.027	-.0035563	-.0002152
_Icoachmath_3	-.0001619	.0011934	-0.14	0.892	-.0025249	.0022011
grademath	-.000409	.0013852	-0.30	0.768	-.0031518	.0023338
_Igym_1	.0013913	.0006418	2.17	0.032	.0001205	.0026621
_Irepeat_1	-.0008771	.0005222	-1.68	0.096	-.0019112	.0001569

truancy	-.0000397	.0002519	-0.16	0.875	-.0005384	.0004591
_Iimmig_2	-.0003873	.0003411	-1.14	0.258	-.0010626	.0002881
_Iimmig_3	-.0004611	.0004177	-1.10	0.272	-.0012881	.000366
isei	.0005123	.0003835	1.34	0.184	-.0002471	.0012716
books	-.0001581	.0001611	-0.98	0.329	-.0004771	.000161
unexplained						
r_wlem	.0213865	.0229989	0.93	0.354	-.0241536	.0669266
d_matcon	.0003685	.0008396	0.44	0.662	-.0012941	.0020311
d_selfeff	-.0000288	.0006375	-0.05	0.964	-.0012911	.0012335
_IMINT2m_1	-.0001437	.0013057	-0.11	0.913	-.002729	.0024417
_IMINT2f_1	.0036086	.0027146	1.33	0.186	-.0017666	.0089839
_Icoachmath_2	-.0000451	.0037482	-0.01	0.990	-.0074669	.0073767
_Icoachmath_3	.0060463	.0035804	1.69	0.094	-.0010433	.0131359
grademath	.0713113	.06336	1.13	0.263	-.0541478	.1967703
_Igym_1	-.0027863	.0050669	-0.55	0.583	-.0128192	.0072467
_Irepeat_1	-.0061655	.0035562	-1.73	0.086	-.0132072	.0008762
truancy	.0000401	.000538	0.07	0.941	-.0010252	.0011054
_Iimmig_2	.0024112	.0044754	0.54	0.591	-.0064506	.011273
_Iimmig_3	-.0024168	.0024729	-0.98	0.330	-.0073133	.0024798
isei	.0355297	.0271709	1.31	0.194	-.0182714	.0893308
books	-.0294199	.022415	-1.31	0.192	-.0738037	.014964
_cons	.0229504	.067371	0.34	0.734	-.110451	.1563518

```
. nlcom (r_wlem:  _b[explained:r_wlem]     / _b[overall:difference]*100)  ///
>     (d_matcon:  _b[explained:d_matcon]   / _b[overall:difference]*100)  ///
>     (d_selfeff: _b[explained:d_selfeff]  / _b[overall:difference]*100)  ///
>     (d_X:      (_b[explained:d_matcon]/*
>               */+_b[explained:d_selfeff]) / _b[overall:difference]*100)  ///
>     (tot:      (_b[explained:r_wlem]/*
>               */+_b[explained:d_matcon]/*
>               */+_b[explained:d_selfeff]) / _b[overall:difference]*100)  ///
>     (rest:      (_b[overall:explained]-_b[explained:r_wlem]/*
>               */-_b[explained:d_matcon]/*
>               */-_b[explained:d_selfeff]) / _b[overall:difference]*100)  ///
>     , post
      r_wlem:  _b[explained:r_wlem]     / _b[overall:difference]*100
    d_matcon:  _b[explained:d_matcon]   / _b[overall:difference]*100
   d_selfeff:  _b[explained:d_selfeff]  / _b[overall:difference]*100
         d_X:  (_b[explained:d_matcon]+_b[explained:d_selfeff]) / _b[overall:difference]*100
         tot:  (_b[explained:r_wlem]+_b[explained:d_matcon]+_b[explained:d_selfeff]) / _b[overall:difference]*
> 100
        rest:  (_b[overall:explained]-_b[explained:r_wlem]-_b[explained:d_matcon]-_b[explained:d_selfeff]) / _
> b[overall:difference]*100
```

MINT2	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
r_wlem	15.44889	1.647902	9.37	0.000	12.21906	18.67872
d_matcon	9.735403	1.672073	5.82	0.000	6.4582	13.0126
d_selfeff	4.064555	.9498163	4.28	0.000	2.20295	5.926161
d_X	13.79996	1.870131	7.38	0.000	10.13457	17.46535
tot	29.24885	2.542842	11.50	0.000	24.26497	34.23273
rest	-1.607033	1.535613	-1.05	0.295	-4.616779	1.402713

```
. est sto MINT2
. esttab MINT1 MINT2, b(1) nostar ci wide
```

	(1) MINT1		(2) MINT2	
r_wlem	13.4	[10.5,16.3]	15.4	[12.2,18.7]
d_matcon	10.9	[7.8,14.0]	9.7	[6.5,13.0]
d_selfeff	3.2	[1.4,5.0]	4.1	[2.2,5.9]
d_X	14.1	[10.9,17.4]	13.8	[10.1,17.5]
tot	27.5	[23.2,31.9]	29.2	[24.3,34.2]
rest	-0.1	[-2.9,2.6]	-1.6	[-4.6,1.4]

N	16116	16116

95% confidence intervals in brackets

5.2 Erweiterte Vorhersagemodelle für Leistung und Fehleinschätzung

```
. svy: regress r_wlem i.female i.MINT2m i.MINT2f i.lfp socnormsm socnormsf i.mathimpm i.mathimpf ///
>     i.coachmath grademath i.gym i.repeat truancy i.immig isei books
(running regress on estimation sample)

BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
..................................................    50
..................................................   100
..................
```

Survey: Linear regression

Number of obs	= 7,139
Population size	= 23,509.267
Replications	= 120
Design df	= 119
F(18, 102)	= 252.71
Prob > F	= 0.0000
R-squared	= 0.3947

r_wlem	Coef.	BRR Std. Err.	t	P>|t|	[95% Conf.	Interval]
1.female	-.0499838	.0069326	-7.21	0.000	-.063711	-.0362566
1.MINT2m	.0321407	.0181431	1.77	0.079	-.0037844	.0680658
1.MINT2f	.0179158	.0104143	1.72	0.088	-.0027056	.0385372
1.lfpm	-.0177321	.0068491	-2.59	0.011	-.031294	-.0041702
socnormsm	-.0020825	.0066213	-0.31	0.754	-.0151933	.0110284
socnormsf	.0121621	.006466	1.88	0.062	-.0006413	.0249655
1.mathimpm	-.0098547	.0085479	-1.15	0.251	-.0267803	.007071
1.mathimpf	-.0097829	.0072866	-1.34	0.182	-.024211	.0046453
coachmath						
Yes, sometimes	-.0722052	.0095524	-7.56	0.000	-.0911198	-.0532905
Yes, regularly	-.0723973	.0112132	-6.46	0.000	-.0946006	-.050194
grademath	.0965207	.0048654	19.84	0.000	.0868867	.1061546
1.gym	.2071322	.0085591	24.20	0.000	.1901844	.2240799
1.repeat	-.0940179	.0096213	-9.77	0.000	-.113069	-.0749668
truancy	-.037504	.0060447	-6.20	0.000	-.049473	-.0255349
immig						
Second generation	-.0686523	.0103975	-6.60	0.000	-.0892405	-.0480642
First generation	-.0337398	.0124014	-2.72	0.007	-.0582959	-.0091837
isei	.0014597	.000253	5.77	0.000	.0009587	.0019607
books	.0276396	.0028977	9.54	0.000	.0219019	.0333773
_cons	-.0827051	.0269081	-3.07	0.003	-.1359859	-.0294244

```
. svy: regress r_wlem i.female##(i.MINT2m i.MINT2f i.lfp c.socnormsm c.socnormsf i.mathimpm i.mathimpf ///
>     i.coachmath c.grademath i.gym i.repeat c.truancy i.immig c.isei c.books) ///
>     , vsquish nofvlabel
(running regress on estimation sample)

BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
..................................................    50
..................................................   100
..................
```

Survey: Linear regression

Number of obs	= 7,139
Population size	= 23,509.267
Replications	= 120

```
                                    Design df         =       119
                                    F(  35,     85)   =    134.38
                                    Prob > F          =    0.0000
                                    R-squared         =    0.3971
```

r_wlem	Coef.	BRR Std. Err.	t	P>|t|	[95% Conf.	Interval]
1.female	-.0895104	.0551671	-1.62	0.107	-.1987468	.0197259
1.MINT2m	.0340244	.0282703	1.20	0.231	-.0219536	.0900024
1.MINT2f	.018508	.015114	1.22	0.223	-.0114193	.0484352
1.lfpm	-.0233647	.0098518	-2.37	0.019	-.0428722	-.0038571
socnormsm	-.0028797	.0098611	-0.29	0.771	-.0224058	.0166463
socnormsf	.0131168	.0097616	1.34	0.182	-.0062121	.0324456
1.mathimpm	-.0177764	.0123739	-1.44	0.153	-.0422779	.0067251
1.mathimpf	-.0016555	.012764	-0.13	0.897	-.0269294	.0236184
coachmath						
2	-.0828671	.0148418	-5.58	0.000	-.1122554	-.0534789
3	-.0682583	.0211709	-3.22	0.002	-.1101788	-.0263378
grademath	.0888503	.0073672	12.06	0.000	.0742624	.1034381
1.gym	.206231	.0133558	15.44	0.000	.1797852	.2326769
1.repeat	-.0993661	.0136121	-7.30	0.000	-.1263194	-.0724128
truancy	-.0380804	.0085242	-4.47	0.000	-.0549592	-.0212016
immig						
2	-.0537269	.0143609	-3.74	0.000	-.0821628	-.0252909
3	-.0376813	.0231214	-1.63	0.106	-.083464	.0081014
isei	.0021459	.0003474	6.18	0.000	.001458	.0028338
books	.02396	.0038149	6.28	0.000	.0164061	.0315139
female#MINT2m						
1 1	-.0080346	.0352226	-0.23	0.820	-.077779	.0617097
female#MINT2f						
1 1	-.000807	.0183924	-0.04	0.965	-.0372259	.0356119
female#lfpm						
1 1	.0110981	.0132015	0.84	0.402	-.0150421	.0372383
female#c.socnormsm						
1	.0010402	.0131214	0.08	0.937	-.0249415	.0270218
female#c.socnormsf						
1	-.0016106	.0118923	-0.14	0.892	-.0251585	.0219373
female#mathimpm						
1 1	.0158897	.0188777	0.84	0.402	-.0214901	.0532694
female#mathimpf						
1 1	-.0159707	.0191116	-0.84	0.405	-.0538137	.0218723
female#coachmath						
1 2	.0209824	.0172097	1.22	0.225	-.0130944	.0550592
1 3	-.0015969	.0253112	-0.06	0.950	-.0517157	.0485219
female#c.grademath						
1	.0157118	.0091625	1.71	0.089	-.0024309	.0338545
female#gym						
1 1	.0017629	.0174659	0.10	0.920	-.0328214	.0363471
female#repeat						
1 1	.0119884	.0212315	0.56	0.573	-.030052	.0540288
female#c.truancy						
1	.0024241	.0117362	0.21	0.837	-.0208147	.0256629
female#immig						
1 2	-.028457	.0172782	-1.65	0.102	-.0626696	.0057555
1 3	.0045831	.0294063	0.16	0.876	-.0536444	.0628106
female#c.isei						
1	-.0013756	.0004591	-3.00	0.003	-.0022847	-.0004665
female#c.books						
1	.0076298	.0053717	1.42	0.158	-.0030068	.0182664
_cons	-.0639187	.0412056	-1.55	0.124	-.1455098	.0176725

```
.     // => gender difference only in isei
. svy: regress d_matcon i.female i.MINT2m i.MINT2f i.lfp socnormsm socnormsf i.mathimpm i.mathimpf ///
>     i.coachmath grademath i.gym i.repeat truancy i.immig isei books
(running regress on estimation sample)

BRR replications (120)
```

```
----+--- 1 ----+--- 2 ----+--- 3 ----+--- 4 ----+--- 5
..................................................    50
..................................................   100
..................
Survey: Linear regression                       Number of obs     =      7,139
                                                Population size   = 23,509.267
                                                Replications      =        120
                                                Design df         =        119
                                                F(  18,    102)   =     135.03
                                                Prob > F          =     0.0000
                                                R-squared         =     0.3395
```

d_matcon	Coef.	BRR Std. Err.	t	P>|t|	[95% Conf.	Interval]
1.female	-.0600411	.0084644	-7.09	0.000	-.0768014	-.0432808
1.MINT2m	-.0062097	.021999	-0.28	0.778	-.04977	.0373506
1.MINT2f	-.0068821	.0104649	-0.66	0.512	-.0276036	.0138395
1.lfpm	.0177829	.0087652	2.03	0.045	.0004269	.0351388
socnormsm	.0274594	.00886	3.10	0.002	.0099159	.045003
socnormsf	-.0090318	.0076275	-1.18	0.239	-.024135	.0060714
1.mathimpm	.0325417	.0108262	3.01	0.003	.0111047	.0539786
1.mathimpf	.0248655	.0103965	2.39	0.018	.0042794	.0454515
coachmath						
Yes, sometimes	.0017765	.0110306	0.16	0.872	-.0200652	.0236182
Yes, regularly	-.0170722	.0140719	-1.21	0.227	-.0449359	.0107915
grademath	.1442125	.0060983	23.65	0.000	.1321372	.1562878
1.gym	-.1860035	.0099636	-18.67	0.000	-.2057324	-.1662746
1.repeat	.1029258	.0102242	10.07	0.000	.0826809	.1231707
truancy	.0345452	.0069238	4.99	0.000	.0208355	.048255
immig						
Second generation	.0711828	.0108064	6.59	0.000	.049785	.0925807
First generation	.0639144	.0150232	4.25	0.000	.034167	.0936618
isei	-.0013738	.0002979	-4.61	0.000	-.0019637	-.000784
books	-.0313786	.0030252	-10.37	0.000	-.0373688	-.0253883
_cons	-.4734029	.0373931	-12.66	0.000	-.547445	-.3993609

```
. svy: regress d_matcon i.female##(i.MINT2m i.MINT2f i.lfp c.socnormsm c.socnormsf i.mathimpm i.mathimpf ///
>     i.coachmath c.grademath i.gym i.repeat c.truancy i.immig c.isei c.books) ///
>     , vsquish nofvlabel
(running regress on estimation sample)
BRR replications (120)
----+--- 1 ----+--- 2 ----+--- 3 ----+--- 4 ----+--- 5
..................................................    50
..................................................   100
..................
Survey: Linear regression                       Number of obs     =      7,139
                                                Population size   = 23,509.267
                                                Replications      =        120
                                                Design df         =        119
                                                F(  35,     85)   =      74.78
                                                Prob > F          =     0.0000
                                                R-squared         =     0.3435
```

d_matcon	Coef.	BRR Std. Err.	t	P>|t|	[95% Conf.	Interval]
1.female	-.1551835	.0676309	-2.29	0.024	-.2890994	-.0212677
1.MINT2m	-.0308802	.0257155	-1.20	0.232	-.0817995	.0200391
1.MINT2f	.0027416	.0171238	0.16	0.873	-.0311653	.0366484
1.lfpm	.0293737	.0120401	2.44	0.016	.0055331	.0532143
socnormsm	.0206289	.0123091	1.68	0.096	-.0037444	.0450022

```
                socnormsf |   .0040217   .0110716     0.36   0.717    -.0179012    .0259446
              1.mathimpm |   .0324186   .0152592     2.12   0.036     .0022039    .0626333
              1.mathimpf |   .0166275   .0156356     1.06   0.290    -.0143326    .0475876
                coachmath |
                        2 |  -.0013652   .0180864    -0.08   0.940     -.037178    .0344477
                        3 |  -.0451301    .031328    -1.44   0.152    -.1071627    .0169026
                grademath |   .1408964   .0098662    14.28   0.000     .1213603    .1604325
                    1.gym |  -.1876522   .0150915   -12.43   0.000    -.2175349   -.1577694
                 1.repeat |   .1004826   .0146094     6.88   0.000     .0715544    .1294107
                  truancy |   .0397348   .0096377     4.12   0.000     .0206511    .0588185
                    immig |
                        2 |   .0633282    .013684     4.63   0.000     .0362326    .0904238
                        3 |   .0604702   .0240933     2.51   0.013     .0127631    .1081772
                     isei |  -.0025504   .0004338    -5.88   0.000    -.0034094   -.0016913
                    books |  -.0252932   .0040862    -6.19   0.000    -.0333842   -.0172021
            female#MINT2m |
                      1 1 |   .0513199   .0446471     1.15   0.253    -.0370857    .1397255
            female#MINT2f |
                      1 1 |  -.0172825   .0226628    -0.76   0.447    -.0621572    .0275922
              female#lfpm |
                      1 1 |  -.0219791   .0145332    -1.51   0.133    -.0507562    .0067981
female#c.socnormsm |
                        1 |   .0099165   .0150629     0.66   0.512    -.0199096    .0397426
female#c.socnormsf |
                        1 |  -.0233328   .0152569    -1.53   0.129     -.053543    .0068775
           female#mathimpm |
                      1 1 |   .0010155   .0226391     0.04   0.964    -.0438122    .0458433
           female#mathimpf |
                      1 1 |   .0160561   .0231587     0.69   0.489    -.0298005    .0619127
          female#coachmath |
                      1 2 |   .0039011   .0214196     0.18   0.856    -.0385118    .0463139
                      1 3 |   .0440366    .039522     1.11   0.267     -.034221    .1222942
female#c.grademath |
                        1 |   .0055232   .0119804     0.46   0.646    -.0181993    .0292456
               female#gym |
                      1 1 |   .0017831   .0187994     0.09   0.925    -.0354416    .0390079
            female#repeat |
                      1 1 |   .0042842   .0224639     0.19   0.849    -.0401967    .0487651
          female#c.truancy |
                        1 |  -.0111927   .0124686    -0.90   0.371    -.0358817    .0134963
             female#immig |
                      1 2 |    .014511   .0185399     0.78   0.435    -.0221999    .0512219
                      1 3 |   .0083429   .0294529     0.28   0.777    -.0499767    .0666625
            female#c.isei |
                        1 |   .0023097   .0005518     4.19   0.000      .001217    .0034024
           female#c.books |
                        1 |  -.0122973   .0056253    -2.19   0.031     -.023436   -.0011586
                    _cons |  -.4221085   .0558519    -7.56   0.000    -.5327008   -.3115162
------------------------------------------------------------------------------

.     // => gender difference in isei and books
. svy: regress d_selfeff i.female i.MINT2m i.MINT2f i.lfp socnormsm socnormsf i.mathimpm i.mathimpf ///
>     i.coachmath grademath i.gym i.repeat truancy i.immig isei books
(running regress on estimation sample)

BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
..................................................    50
..................................................   100
....................

Survey: Linear regression                       Number of obs     =      7,139
                                                Population size   = 23,509.267
                                                Replications      =        120
                                                Design df         =        119
                                                F(  18,    102)   =      31.13
                                                Prob > F          =     0.0000
                                                R-squared         =     0.1030
------------------------------------------------------------------------------
                             |                BRR
```

d_selfeff	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
1.female	-.0401152	.00777	-5.16	0.000	-.0555006	-.0247298
1.MINT2m	-.0205242	.0222314	-0.92	0.358	-.0645447	.0234963
1.MINT2f	-.0067126	.0106388	-0.63	0.529	-.0277784	.0143532
1.lfpm	.0223495	.0074334	3.01	0.003	.0076307	.0370684
socnormsm	.016575	.0075954	2.18	0.031	.0015354	.0316145
socnormsf	.0135423	.0064499	2.10	0.038	.0007709	.0263138
1.mathimpm	.0289999	.0097927	2.96	0.004	.0096094	.0483904
1.mathimpf	.0233923	.0093135	2.51	0.013	.0049506	.0418339
coachmath						
Yes, sometimes	.0284986	.0094979	3.00	0.003	.0096917	.0473054
Yes, regularly	.0201315	.0130477	1.54	0.126	-.0057042	.0459672
grademath	.0253186	.0057997	4.37	0.000	.0138346	.0368026
1.gym	-.0616124	.0094903	-6.49	0.000	-.0804043	-.0428206
1.repeat	.0547194	.0097246	5.63	0.000	.0354637	.073975
truancy	.0187829	.0062487	3.01	0.003	.0064098	.031156
immig						
Second generation	.0644164	.0110452	5.83	0.000	.0425458	.0862871
First generation	.0710866	.0143008	4.97	0.000	.0427696	.0994036
isei	-.0003589	.0002611	-1.37	0.172	-.000876	.0001581
books	-.0028823	.0032738	-0.88	0.380	-.0093648	.0036001
_cons	-.1500036	.0345252	-4.34	0.000	-.2183669	-.0816404

```
. svy: regress d_selfeff i.female##(i.MINT2m i.MINT2f i.lfp c.socnormsm c.socnormsf i.mathimpm i.mathimpf ///
>     i.coachmath c.grademath i.gym i.repeat c.truancy i.immig c.isei c.books) ///
>     , vsquish nofvlabel
(running regress on estimation sample)

BRR replications (120)
----+--- 1 ---+--- 2 ---+--- 3 ---+--- 4 ---+--- 5
..................................................    50
..................................................   100
....................

Survey: Linear regression                       Number of obs     =      7,139
                                                Population size   = 23,509.267
                                                Replications      =        120
                                                Design df         =        119
                                                F(  35,     85)   =      17.03
                                                Prob > F          =     0.0000
                                                R-squared         =     0.1076
```

d_selfeff	Coef.	BRR Std. Err.	t	P>|t|	[95% Conf.	Interval]
1.female	.0582595	.068314	0.85	0.395	-.0770089	.193528
1.MINT2m	-.0826649	.0334918	-2.47	0.015	-.148982	-.0163478
1.MINT2f	-.0036507	.0150802	-0.24	0.809	-.033511	.0262095
1.lfpm	.0309815	.0114278	2.71	0.008	.0083533	.0536096
socnormsm	.0254018	.0108416	2.34	0.021	.0039344	.0468692
socnormsf	.0195217	.010553	1.85	0.067	-.0013744	.0404178
1.mathimpm	.0306904	.0142781	2.15	0.034	.0024182	.0589625
1.mathimpf	.0124199	.0163334	0.76	0.449	-.0199219	.0447616
coachmath						
2	.0227242	.0164685	1.38	0.170	-.0098852	.0553336
3	.0249747	.0255936	0.98	0.331	-.0257033	.0756526
grademath	.0338933	.0088978	3.81	0.000	.0162748	.0515118
1.gym	-.0505517	.0155521	-3.25	0.001	-.0813464	-.0197571
1.repeat	.0543526	.0144603	3.76	0.000	.0257197	.0829855
truancy	.0230336	.0095228	2.42	0.017	.0041775	.0418897
immig						
2	.0556759	.0166849	3.34	0.001	.0226381	.0887137
3	.0659195	.0211341	3.12	0.002	.0240718	.1077672
isei	-.0003417	.00037	-0.92	0.358	-.0010743	.000391

```
             books |  -.0004426   .0044434    -0.10   0.921     -.009241    .0083558
     female#MINT2m |
               1 1 |    .119081    .047031     2.53   0.013      .025955     .212207
     female#MINT2f |
               1 1 |  -.0019682   .0248696    -0.08   0.937    -.0512125    .0472761
       female#lfpm |
               1 1 |   -.015649   .0150155    -1.04   0.299    -.0453812    .0140833
female#c.socnormsm |
                 1 |  -.0162936   .0154593    -1.05   0.294    -.0469045    .0143174
female#c.socnormsf |
                 1 |  -.0130586   .0138016    -0.95   0.346    -.0403871      .01427
   female#mathimpm |
               1 1 |  -.0033729   .0192821    -0.17   0.861    -.0415533    .0348075
   female#mathimpf |
               1 1 |   .0223684   .0210987     1.06   0.291    -.0194091     .064146
  female#coachmath |
               1 2 |    .008072   .0235108     0.34   0.732    -.0384817    .0546258
               1 3 |  -.0034108    .032003    -0.11   0.915      -.06678    .0599584
female#c.grademath |
                 1 |  -.0169602   .0113027    -1.50   0.136    -.0393407    .0054202
        female#gym |
               1 1 |  -.0182385   .0221715    -0.82   0.412    -.0621403    .0256634
     female#repeat |
               1 1 |   .0007283   .0203225     0.04   0.971    -.0395122    .0409688
  female#c.truancy |
                 1 |  -.0085129   .0120709    -0.71   0.482    -.0324144    .0153886
      female#immig |
               1 2 |   .0151642   .0213527     0.71   0.479    -.0271163    .0574446
               1 3 |   .0076704   .0289472     0.26   0.791     -.049648    .0649888
     female#c.isei |
                 1 |  -.0000132   .0005569    -0.02   0.981    -.0011159    .0010894
    female#c.books |
                 1 |  -.0053864   .0057596    -0.94   0.352     -.016791    .0060181
             _cons |  -.2027562   .0505835    -4.01   0.000    -.3029166   -.1025958
------------------------------------------------------------------------------

.     // => gender difference in MINT2m (such that effect for females is zero)
```