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name: <unnamed>
log: D:\Jason\workshop\Margins\2023\margins workshop 4.log
log type: text
opened on: 27 Feb 2023, 10:02:06
```

```
. set more 1
```

```
. use http://www.stata-press.com/data/r14/margex, clear
(Artificial data for margins)
```

```
. sum y outcome sex age
```

Variable	Obs	Mean	Std. Dev.	Min	Max
y	3,000	69.73357	21.53986	0	146.3
outcome	3,000	.1696667	.3754023	0	1
sex	3,000	.5006667	.5000829	0	1
age	3,000	39.799	11.54174	20	60

```
*****
* 1. Continuous Dependent variables
*****
```

```
. reg y i.sex##c.age
```

Source	SS	df	MS	Number of obs	=	3,000
Model	170983.675	3	56994.5583	F(3, 2996)	=	139.91
Residual	1220449.33	2,996	407.35959	Prob > F	=	0.0000
Total	1391433.01	2,999	463.965657	R-squared	=	0.1229
				Adj R-squared	=	0.1220
				Root MSE	=	20.183

	y	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
sex						
female		14.92308	2.789012	5.35	0.000	9.454508 20.39165
age		-4.929608	.0480944	-10.25	0.000	-.5872622 -.3986595
sex#c.age						
female		-.0224116	.0674167	-0.33	0.740	-.1545994 .1097762
_cons		82.36936	1.812958	45.43	0.000	78.8146 85.92413

```
*****
* 1.1 Average Adjusted Prediction and Average Marginal Effect
*****
margins i.sex
```

```
Predictive margins                                Number of obs    =    3,000
Model VCE      : OLS
```

```
Expression    : Linear prediction, predict()
```

	Margin	Delta-method Std. Err.	t	P> t	[95% Conf. Interval]
sex					
male	62.75002	.5509414	113.90	0.000	61.66975 63.83028
female	76.78114	.5491282	139.82	0.000	75.70443 77.85784

```
. margins, dydx(i.sex)

Average marginal effects          Number of obs   =       3,000
Model VCE      : OLS
```

```
Expression   : Linear prediction, predict()
dy/dx w.r.t. : 1.sex
```

		Delta-method				
	dy/dx	Std. Err.	t	P> t	[95% Conf. Interval]	
sex						
female	14.03112	.7778678	18.04	0.000	12.50591	15.55633

Note: dy/dx for factor levels is the discrete change from the base level.

```
.
. *****
. * 1.2 Adjusted Predictions and Marginal Effects at the Means
. *****
. margins i.sex, atmeans
```

```
Adjusted predictions          Number of obs   =       3,000
Model VCE      : OLS
```

```
Expression   : Linear prediction, predict()
at           : 0.sex           =       .4993333 (mean)
              1.sex           =       .5006667 (mean)
              age             =       39.799 (mean)
```

		Delta-method				
	Margin	Std. Err.	t	P> t	[95% Conf. Interval]	
sex						
male	62.75002	.5509414	113.90	0.000	61.66975	63.83028
female	76.78114	.5491282	139.82	0.000	75.70443	77.85784

```
. margins, dydx(i.sex) atmeans
```

```
Conditional marginal effects          Number of obs   =       3,000
Model VCE      : OLS
```

```
Expression   : Linear prediction, predict()
dy/dx w.r.t. : 1.sex
at           : 0.sex           =       .4993333 (mean)
              1.sex           =       .5006667 (mean)
              age             =       39.799 (mean)
```

		Delta-method				
	dy/dx	Std. Err.	t	P> t	[95% Conf. Interval]	
sex						
female	14.03112	.7778678	18.04	0.000	12.50591	15.55633

Note: dy/dx for factor levels is the discrete change from the base level.

```
.
. *****
. * 1.3 Adjusted Predictions and Marginal Effects at Representative values
. *****
. margins i.sex, at(age=(20(10)60))
```

```
Adjusted predictions          Number of obs   =       3,000
Model VCE      : OLS
```

```
Expression   : Linear prediction, predict()
```

```

1._at      : age          =          20
2._at      : age          =          30
3._at      : age          =          40
4._at      : age          =          50
5._at      : age          =          60

```

	Margin	Delta-method Std. Err.	t	P> t	[95% Conf. Interval]	
1#male	72.51015	.9336568	77.66	0.000	70.67947	74.34082
1#female	86.985	1.22567	70.97	0.000	84.58175	89.38824
2#male	67.58054	.5984013	112.94	0.000	66.40722	68.75386
2#female	81.83127	.8228617	99.45	0.000	80.21784	83.4447
3#male	62.65093	.5541361	113.06	0.000	61.56441	63.73746
3#female	76.67755	.5461908	140.39	0.000	75.6066	77.74849
4#male	57.72132	.8477402	68.09	0.000	56.05911	59.38353
4#female	71.52382	.604927	118.24	0.000	70.33771	72.70994
5#male	52.79171	1.262091	41.83	0.000	50.31706	55.26637
5#female	66.3701	.9380502	70.75	0.000	64.53081	68.20939

```

. margins, dydx(i.sex) at(age=(20(10)60))

```

```

Conditional marginal effects      Number of obs      =      3,000
Model VCE      : OLS

```

```

Expression      : Linear prediction, predict()
dy/dx w.r.t.    : 1.sex

```

```

1._at      : age          =          20
2._at      : age          =          30
3._at      : age          =          40
4._at      : age          =          50
5._at      : age          =          60

```

	dy/dx	Delta-method Std. Err.	t	P> t	[95% Conf. Interval]	
0.sex	(base outcome)					
1.sex						
_at						
1	14.47485	1.540773	9.39	0.000	11.45377	17.49593
2	14.25073	1.017441	14.01	0.000	12.25578	16.24568
3	14.02662	.7780689	18.03	0.000	12.50101	15.55222
4	13.8025	1.041441	13.25	0.000	11.76049	15.84451
5	13.57838	1.572518	8.63	0.000	10.49506	16.66171

Note: dy/dx for factor levels is the discrete change from the base level.

```

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.
. *****
. * 2. Binary Dependent variables
. *****
.
. logit outcome i.sex#c.age

```

```

Iteration 0: log likelihood = -1366.0718
Iteration 1: log likelihood = -1130.6519

```



```

1.sex      = .5006667 (mean)
age        = 39.799 (mean)

```

	Margin	Delta-method Std. Err.	z	P> z	[95% Conf. Interval]	
sex						
male	.0672832	.0076099	8.84	0.000	.0523679	.0821984
female	.1552839	.0120209	12.92	0.000	.1317234	.1788445

```

. margins, dydx(i.sex) atmeans

```

```

Conditional marginal effects      Number of obs      =      3,000
Model VCE      : OIM

```

```

Expression      : Pr(outcome), predict()
dy/dx w.r.t.    : 1.sex
at              : 0.sex      = .4993333 (mean)
                : 1.sex      = .5006667 (mean)
                : age        = 39.799 (mean)

```

	dy/dx	Delta-method Std. Err.	z	P> z	[95% Conf. Interval]	
sex						
female	.0880008	.0142272	6.19	0.000	.060116	.1158856

Note: dy/dx for factor levels is the discrete change from the base level.

```

. *****
. * 2.3 Adjusted Predictions and Marginal Effects at Representative values
. *****
. margins i.sex, at(age=(20(10)60))

```

```

Adjusted predictions      Number of obs      =      3,000
Model VCE      : OIM

```

```

Expression      : Pr(outcome), predict()
1._at          : age      =      20
2._at          : age      =      30
3._at          : age      =      40
4._at          : age      =      50
5._at          : age      =      60

```

	Margin	Delta-method Std. Err.	z	P> z	[95% Conf. Interval]	
_at#sex						
1#male	.0080106	.002354	3.40	0.001	.003397	.0126243
1#female	.0246885	.0053467	4.62	0.000	.0142092	.0351678
2#male	.023824	.0046315	5.14	0.000	.0147463	.0329016
2#female	.0644637	.0091944	7.01	0.000	.0464431	.0824843
3#male	.0686917	.0076827	8.94	0.000	.0536339	.0837496
3#female	.1579425	.0120468	13.11	0.000	.1343312	.1815539
4#male	.1822807	.0163514	11.15	0.000	.1502325	.214329
4#female	.3380009	.0144851	23.33	0.000	.3096107	.3663911
5#male	.4025188	.0433544	9.28	0.000	.3175457	.487492
5#female	.5815612	.0257546	22.58	0.000	.5310831	.6320392

```

. margins, dydx(i.sex) at(age=(20(10)60))

```



```

sex |
female | -3.10343 .7024166 -4.42 0.000 -4.480142 -1.726719
age | -1.1600698 .0099236 -16.13 0.000 -1.1795197 -.1406199
sex#c.age |
female | -.023138 .0203289 -1.14 0.255 -.0629819 .0167058
_cons | 7.224298 .4232181 17.07 0.000 6.394806 8.05379
-----

```

```

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. *****
. * 3.1 Average Adjusted Prediction and Average Marginal Effect
. *****
. margins i.sex

```

```

Predictive margins                                Number of obs    =    3,000
Model VCE      : OIM

```

```

1._predict    : Pr(group==1), predict(pr outcome(1))
2._predict    : Pr(group==2), predict(pr outcome(2))
3._predict    : Pr(group==3), predict(pr outcome(3))

```

```

-----
|                Delta-method
|                Margin   Std. Err.      z    P>|z|    [95% Conf. Interval]
-----+-----
_predict#sex |
  1#male     |   .1963344   .0109191   17.98   0.000   .1749333   .2177355
  1#female     |   .5876871   .0122378   48.02   0.000   .5637015   .6116728
  2#male     |   .4564214   .0134995   33.81   0.000   .4299629   .4828799
  2#female     |   .3454528   .0127735   27.04   0.000   .3204172   .3704885
  3#male     |   .3472442   .0109808   31.62   0.000   .3257222   .3687663
  3#female     |   .06686     .0076335    8.76   0.000   .0518987   .0818213
-----

```

```

. margins, dydx(i.sex)

```

```

Average marginal effects                            Number of obs    =    3,000
Model VCE      : OIM

```

```

dy/dx w.r.t. : 1.sex
1._predict    : Pr(group==1), predict(pr outcome(1))
2._predict    : Pr(group==2), predict(pr outcome(2))
3._predict    : Pr(group==3), predict(pr outcome(3))

```

```

-----
|                Delta-method
|                dy/dx   Std. Err.      z    P>|z|    [95% Conf. Interval]
-----+-----
0.sex       | (base outcome)
-----+-----
1.sex       |
  _predict |
    1     |   .3913528   .016401   23.86   0.000   .3592075   .423498
    2     |  -.1109686   .0185849   -5.97   0.000  -.1473943  -.0745428
    3     |  -.2803842   .0133734  -20.97   0.000  -.3065956  -.2541728
-----

```

Note: dy/dx for factor levels is the discrete change from the base level.

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. *****
. * 3.2 Adjusted Predictions and Marginal Effects at the Means
. *****
. margins i.sex, atmeans

```

```

Adjusted predictions                                Number of obs    =    3,000
Model VCE      : OIM

```

```

1._predict    : Pr(group==1), predict(pr outcome(1))
2._predict    : Pr(group==2), predict(pr outcome(2))

```

```

3._predict : Pr(group==3), predict(pr outcome(3))
at         : 0.sex      = .4993333 (mean)
           : 1.sex      = .5006667 (mean)
           : age        = 39.799 (mean)

```

	Margin	Delta-method Std. Err.	z	P> z	[95% Conf. Interval]	
_predict#sex						
1#male	.1393318	.0108882	12.80	0.000	.1179914	.1606723
1#female	.6184776	.0144219	42.88	0.000	.5902113	.6467439
2#male	.5334788	.0156358	34.12	0.000	.5028332	.5641243
2#female	.3555603	.0141027	25.21	0.000	.3279194	.3832011
3#male	.3271894	.0151745	21.56	0.000	.2974479	.356931
3#female	.0259622	.0054847	4.73	0.000	.0152123	.036712

```

. margins, dydx(i.sex) atmeans

```

```

Conditional marginal effects      Number of obs      =      3,000
Model VCE      : OIM

```

```

dy/dx w.r.t. : 1.sex
1._predict   : Pr(group==1), predict(pr outcome(1))
2._predict   : Pr(group==2), predict(pr outcome(2))
3._predict   : Pr(group==3), predict(pr outcome(3))
at           : 0.sex      = .4993333 (mean)
           : 1.sex      = .5006667 (mean)
           : age        = 39.799 (mean)

```

	dy/dx	Delta-method Std. Err.	z	P> z	[95% Conf. Interval]	
0.sex	(base outcome)					
1.sex						
_predict						
1	-.4791458	.0180705	26.52	0.000	.4437283	.5145633
2	-.1779185	.0210562	-8.45	0.000	-.2191879	-.1366491
3	-.3012272	.0161353	-18.67	0.000	-.3328519	-.2696026

Note: dy/dx for factor levels is the discrete change from the base level.

```

. *****
. * 3.3 Adjusted Predictions and Marginal Effects at Representative values
. *****
. margins i.sex, at(age=(20(10)60))

```

```

Adjusted predictions      Number of obs      =      3,000
Model VCE      : OIM

```

```

1._predict : Pr(group==1), predict(pr outcome(1))
2._predict : Pr(group==2), predict(pr outcome(2))
3._predict : Pr(group==3), predict(pr outcome(3))

```

```

1._at : age = 20
2._at : age = 30
3._at : age = 40
4._at : age = 50
5._at : age = 60

```

	Margin	Delta-method Std. Err.	z	P> z	[95% Conf. Interval]	
--	--------	---------------------------	---	------	----------------------	--

2	5		-.2612315	.0372794	-7.01	0.000	-.3342978	-.1881652
3	1		-.4045591	.0506925	-7.98	0.000	-.5039146	-.3052036
3	2		-.4249043	.0196821	-21.59	0.000	-.4634806	-.386328
3	3		-.2980331	.0161516	-18.45	0.000	-.3296896	-.2663766
3	4		-.1472325	.0150236	-9.80	0.000	-.1766782	-.1177868
3	5		-.0524678	.0092165	-5.69	0.000	-.0705318	-.0344038

 Note: dy/dx for factor levels is the discrete change from the base level.

```

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. *****
. * 4. Data collected with complex survey design
. *****
. use "D:\Jason\workshop\Margins\2023\margins.dta", clear

```

```

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.
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. svydes

```

Survey: Describing stage 1 sampling units

```

pweight: finalwgt
VCE: linearized
Single unit: missing
Strata 1: stratid
SU 1: psuid
FPC 1: <zero>

```

Stratum	#Units	#Obs	#Obs per Unit		
			min	mean	max
1	2	380	165	190.0	215
2	2	185	67	92.5	118
3	2	348	149	174.0	199
4	2	460	229	230.0	231
5	2	252	105	126.0	147
6	2	298	131	149.0	167
7	2	476	206	238.0	270
8	2	338	158	169.0	180
9	2	244	100	122.0	144
10	2	262	119	131.0	143
11	2	275	120	137.5	155
12	2	314	144	157.0	170
13	2	342	154	171.0	188
14	2	405	200	202.5	205
15	2	380	189	190.0	191
16	2	336	159	168.0	177
17	2	393	180	196.5	213
18	2	359	144	179.5	215
20	2	285	125	142.5	160
21	2	214	102	107.0	112
22	2	301	128	150.5	173
23	2	341	159	170.5	182
24	2	438	205	219.0	233
25	2	256	116	128.0	140
26	2	261	129	130.5	132
27	2	283	139	141.5	144
28	2	299	136	149.5	163
29	2	503	215	251.5	288
30	2	365	166	182.5	199
31	2	308	143	154.0	165
32	2	450	211	225.0	239
-----	-----	-----	-----	-----	-----
31	62	10,351	67	167.0	288

```

.
. sum illness sex age

```

Variable	Obs	Mean	Std. Dev.	Min	Max
illness	10,351	1.871124	1.290174	0	7
sex	10,351	1.525167	.4993904	1	2
age	10,351	47.57965	17.21483	20	74

```
. svy: reg illness i.sex#c.age
(running regress on estimation sample)
```

Survey: Linear regression

```
Number of strata = 31          Number of obs = 10,351
Number of PSUs  = 62          Population size = 117,157,513
                                   Design df = 31
                                   F( 3, 29) = 600.17
                                   Prob > F = 0.0000
                                   R-squared = 0.2472
```

	Coef.	Linearized Std. Err.	t	P> t	[95% Conf. Interval]	
illness						
sex						
Female	1.697105	.0714118	23.77	0.000	1.55146	1.84275
age	.01235	.0007846	15.74	0.000	.0107498	.0139501
sex#c.age						
Female	-.0108862	.0014354	-7.58	0.000	-.0138137	-.0079588
_cons	.6259047	.0553246	11.31	0.000	.5130694	.7387399

```
. *****
. * 4.1 Average Adjusted Prediction and Average Marginal Effect
. *****
. margins i.sex, vce(unconditional)
```

Predictive margins Number of obs = 10,351

Expression : Linear prediction, predict()

	Margin	Linearized Std. Err.	t	P> t	[95% Conf. Interval]	
sex						
Male	1.147723	.0428523	26.78	0.000	1.060325	1.235121
Female	2.384857	.0480366	49.65	0.000	2.286885	2.482828

```
. margins, dydx(i.sex) vce(unconditional)
```

Average marginal effects Number of obs = 10,351

Expression : Linear prediction, predict()
dy/dx w.r.t. : 2.sex

	dy/dx	Linearized Std. Err.	t	P> t	[95% Conf. Interval]	
sex						
Female	1.237134	.0313338	39.48	0.000	1.173228	1.301039

Note: dy/dx for factor levels is the discrete change from the base level.

```
. *****
```



```
DF adjustment:  Large sample          DF:      min      = 1,060.38
                                           avg      = 223,362.56
                                           max      = 493,335.88
Model F test:      Equal FMI          F( 5,71379.3) = 3.59
Within VCE type:   OIM                Prob > F      = 0.0030
```

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
smokes	1.198595	.3578195	3.35	0.001	.4972789	1.899911
age	.0360159	.0154399	2.33	0.020	.0057541	.0662776
bmi	.1039416	.0476136	2.18	0.029	.010514	.1973692
hsgrad	.1578992	.4049257	0.39	0.697	-.6357464	.9515449
female	-.1067433	.4164735	-0.26	0.798	-.9230191	.7095326
_cons	-5.478143	1.685075	-3.25	0.001	-8.782394	-2.173892

```
.
.
.   *****
.   * 5.1 Average Adjusted Prediction and Average Marginal Effect
.   *****
.   mimrgns using D:\Jason\workshop\Margins\2023\miestfile.dta , esample(esample)
predict(pr) dydx(*)
```

```
Multiple-imputation estimates          Imputations      = 20
Average marginal effects              Number of obs    = 154
                                       Average RVI      = 0.0364
                                       Largest FMI     = 0.1330
DF adjustment:  Large sample          DF:      min      = 1,099.73
                                           avg      = 311,279.06
                                           max      = 625,539.66
Within VCE type: Delta-method
```

```
Expression : Pr(attack), predict(pr)
dy/dx w.r.t. : smokes age bmi hsgrad female
```

	dy/dx	Std. Err.	t	P> t	[95% Conf. Interval]	
smokes	.2554116	.0650578	3.93	0.000	.1279003	.3829228
age	.0076757	.0030757	2.50	0.013	.0016474	.0137041
bmi	.0221116	.0094601	2.34	0.020	.0035496	.0406735
hsgrad	.0335879	.0861148	0.39	0.697	-.1351951	.2023709
female	-.0228004	.0886991	-0.26	0.797	-.1966481	.1510474

```
.   mimrgns using D:\Jason\workshop\Margins\2023\miestfile.dta , esample(esample) dydx(*)
```

```
Multiple-imputation estimates          Imputations      = 20
Average marginal effects              Number of obs    = 154
                                       Average RVI      = 0.0362
                                       Largest FMI     = 0.1355
DF adjustment:  Large sample          DF:      min      = 1,060.38
                                           avg      = 267,524.12
                                           max      = 493,335.88
Within VCE type: Delta-method
```

```
Expression : Linear prediction [log-odds], predict(xb)
dy/dx w.r.t. : smokes age bmi hsgrad female
```

	dy/dx	Std. Err.	t	P> t	[95% Conf. Interval]	
smokes	1.198595	.3578195	3.35	0.001	.4972789	1.899911
age	.0360159	.0154399	2.33	0.020	.0057541	.0662776
bmi	.1039416	.0476136	2.18	0.029	.010514	.1973692
hsgrad	.1578992	.4049257	0.39	0.697	-.6357464	.9515449
female	-.1067433	.4164735	-0.26	0.798	-.9230191	.7095326

```

. *****
. * 6. Plotting the results from the -margins- command
. *****
. use http://www.stata-press.com/data/rl4/margex, clear
(Artificial data for margins)

. mlogit group i.sex#c.age

Iteration 0:  log likelihood = -3213.9305
Iteration 1:  log likelihood = -2441.2113
Iteration 2:  log likelihood = -2339.4727
Iteration 3:  log likelihood = -2324.0574
Iteration 4:  log likelihood = -2323.1654
Iteration 5:  log likelihood = -2323.1628
Iteration 6:  log likelihood = -2323.1628

Multinomial logistic regression                Number of obs   =       3,000
                                                LR chi2(6)      =       1781.54
                                                Prob > chi2     =         0.0000
Log likelihood = -2323.1628                    Pseudo R2      =         0.2772

-----+-----
      group |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
1          | (base outcome)
-----+-----
2          |
   sex     |
   female  | -2.361453   .4732721    -4.99  0.000    -3.28905   -1.433857
   age     | -.0884692   .0088024   -10.05  0.000    -.1057215  -.0712169
   sex#c.age |
   female  |  .0116919   .0105998     1.10  0.270    -.0090833  .0324671
   _cons   |  4.863548   .4000653    12.16  0.000     4.079434   5.647661
-----+-----
3          |
   sex     |
   female  | -3.10343   .7024166    -4.42  0.000    -4.480142  -1.726719
   age     | -.1600698   .0099236   -16.13  0.000    -.1795197  -.1406199
   sex#c.age |
   female  |  -.023138   .0203289    -1.14  0.255    -.0629819  .0167058
   _cons   |  7.224298   .4232181    17.07  0.000     6.394806   8.05379
-----+-----

.
.
. *****
. * Plotting the Adjusted Predictions
. *****
. margins i.sex, at(age=(20(10)60))

Adjusted predictions                Number of obs   =       3,000
Model VCE      : OIM

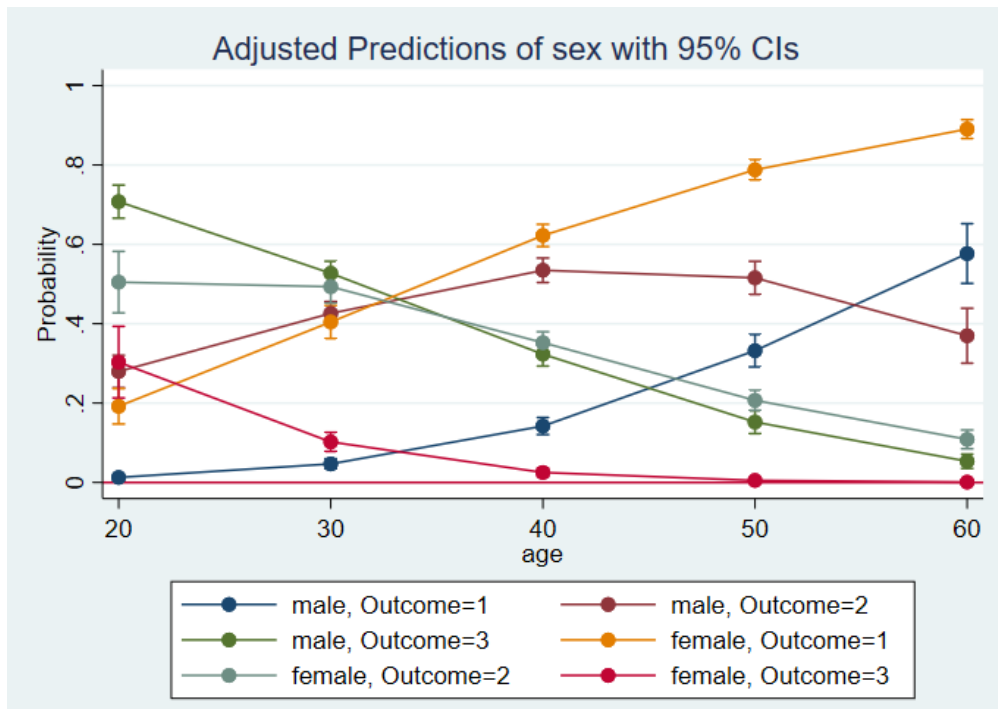
1. _predict   : Pr(group==1), predict(pr outcome(1))
2. _predict   : Pr(group==2), predict(pr outcome(2))
3. _predict   : Pr(group==3), predict(pr outcome(3))

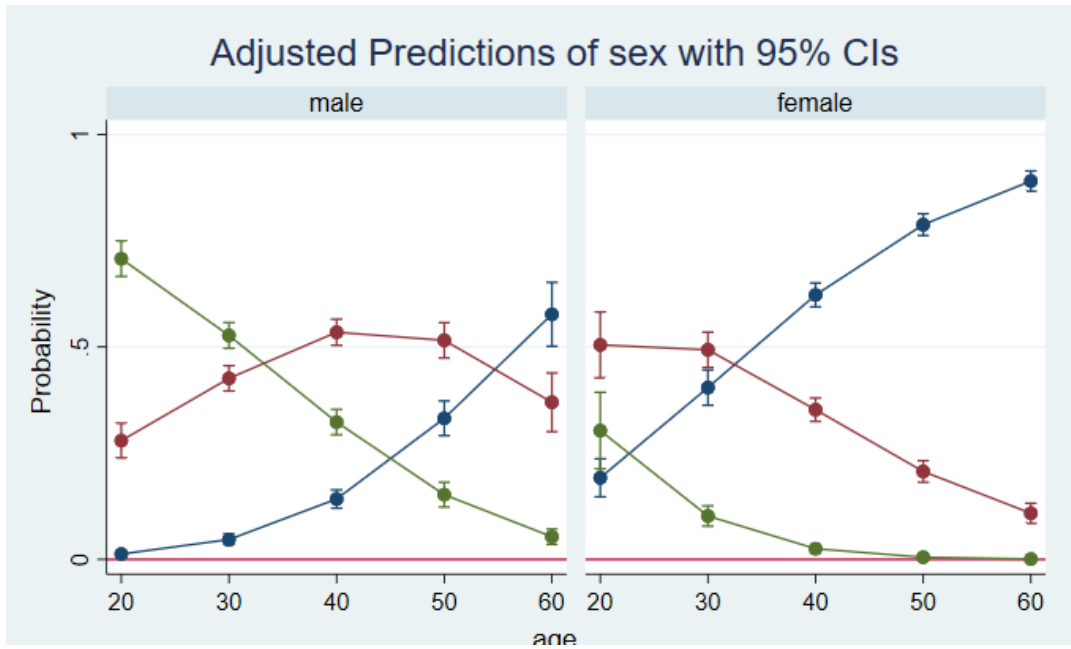
1. _at       : age           =           20
2. _at       : age           =           30
3. _at       : age           =           40
4. _at       : age           =           50
5. _at       : age           =           60

```

_predict#_at#sex	Delta-method				
	Margin	Std. Err.	z	P> z	[95% Conf. Interval]
1#1#male	.0126692	.0028692	4.42	0.000	.0070457 .0182927
1#1#female	.1920224	.0228275	8.41	0.000	.1472813 .2367635
1#2#male	.0467692	.0066373	7.05	0.000	.0337604 .059778
1#2#female	.4044238	.021257	19.03	0.000	.3627608 .4460867
1#3#male	.1421408	.0109796	12.95	0.000	.1206213 .1636604
1#3#female	.6224511	.0143228	43.46	0.000	.594379 .6505232
1#4#male	.3320474	.0208241	15.95	0.000	.2912329 .3728619
1#4#female	.787917	.0130506	60.37	0.000	.7623382 .8134958
1#5#male	.5768218	.0383867	15.03	0.000	.5015853 .6520583
1#5#female	.8905212	.0121263	73.44	0.000	.8667539 .9142884
2#1#male	.2795929	.0208103	13.44	0.000	.2388054 .3203804
2#1#female	.5047988	.0395215	12.77	0.000	.427338 .5822596
2#2#male	.4261096	.015173	28.08	0.000	.3963711 .4558481
2#2#female	.4933594	.0211976	23.27	0.000	.451813 .5349059
2#3#male	.5346418	.0157039	34.05	0.000	.5038627 .5654208
2#3#female	.3523646	.0140078	25.15	0.000	.3249099 .3798194
2#4#male	.5156169	.0212172	24.30	0.000	.474032 .5572017
2#4#female	.2069798	.0129141	16.03	0.000	.1816685 .232291
2#5#male	.3697871	.0352686	10.48	0.000	.3006619 .4389123
2#5#female	.1085555	.012078	8.99	0.000	.084883 .1322281
3#1#male	.7077379	.0212994	33.23	0.000	.6659919 .7494839
3#1#female	.3031788	.0460007	6.59	0.000	.2130191 .3933386
3#2#male	.5271211	.0154281	34.17	0.000	.4968825 .5573597
3#2#female	.1022168	.0122213	8.36	0.000	.0782635 .12617
3#3#male	.3232174	.0152249	21.23	0.000	.2933772 .3530576
3#3#female	.0251843	.0053923	4.67	0.000	.0146155 .035753
3#4#male	.1523357	.0149037	10.22	0.000	.123125 .1815464
3#4#female	.0051032	.0018942	2.69	0.007	.0013906 .0088158
3#5#male	.0533911	.009203	5.80	0.000	.0353536 .0714286
3#5#female	.0009233	.0004988	1.85	0.064	-.0000544 .001901

`marginsplot, yline(0)`





```
.      graph save D:\Jason\workshop\Margins\2023\graph2.gph, replace
(file D:\Jason\workshop\Margins\2023\graph2.gph saved)
```

```
.
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```

```
. log close
      name: <unnamed>
      log:  D:\Jason\workshop\Margins\2023\margins workshop 4.log
      log type: text
      closed on: 27 Feb 2023, 11:06:11
```

```
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```