(R)
Statistics/Data Analysis

User: Thamchanok Pianmuean
Project: Assignment 9

```
1
      name:  <unnamed>
       log:  C:\Users\Kriss\OneDrive\เดสก์ท็อป\426\asss9.smcl
  log type:  smcl
 opened on:  31 Mar 2021, 23:06:24

1 . mlogit y x1 x2 x3 x4, baseoutcome(0)

Iteration 0:   log likelihood = -228.64363
Iteration 1:   log likelihood = -204.50752
Iteration 2:   log likelihood = -203.29728
Iteration 3:   log likelihood = -203.28338
Iteration 4:   log likelihood = -203.28337

Multinomial logistic regression                 Number of obs     =        152
                                                LR chi2(20)       =      50.72
                                                Prob > chi2       =     0.0002
Log likelihood = -203.28337                     Pseudo R2         =     0.1109
```

y	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
0	(base outcome)					
1						
x1	-.1220175	1.086872	-0.11	0.911	-2.252248	2.008213
x2	-2.016388	1.349482	-1.49	0.135	-4.661323	.6285484
x3	1.253423	1.23587	1.01	0.310	-1.168837	3.675683
x4	1.307279	.5491571	2.38	0.017	.2309504	2.383607
_cons	-18.06503	8.062973	-2.24	0.025	-33.86817	-2.261896
2						
x1	.9699943	.991428	0.98	0.328	-.9731688	2.913157
x2	-1.631037	1.27855	-1.28	0.202	-4.136949	.8748753
x3	-1.034421	.9547311	-1.08	0.279	-2.905659	.836818
x4	.2042703	.3925818	0.52	0.603	-.5651758	.9737165
_cons	-.9022321	5.40243	-0.17	0.867	-11.4908	9.686336
3						
x1	-.4040394	.938099	-0.43	0.667	-2.24268	1.434601
x2	-.9533924	1.222189	-0.78	0.435	-3.348838	1.442053
x3	-.1658373	.8733107	-0.19	0.849	-1.877495	1.54582
x4	.2174653	.3490812	0.62	0.533	-.4667212	.9016518
_cons	-1.061943	4.802704	-0.22	0.825	-10.47507	8.351185
4						
x1	1.677905	.9300468	1.80	0.071	-.1449532	3.500763
x2	-2.104352	1.212395	-1.74	0.083	-4.480602	.2718986
x3	-1.209535	.8915675	-1.36	0.175	-2.956975	.5379055
x4	.1831672	.3654684	0.50	0.616	-.5331376	.899472
_cons	-.0171095	5.005591	-0.00	0.997	-9.827887	9.793669
5						
x1	1.832363	.8632903	2.12	0.034	.1403452	3.524381
x2	-2.368735	1.168139	-2.03	0.043	-4.658246	-.079224
x3	.0976971	.8455682	0.12	0.908	-1.559586	1.75498
x4	.4905651	.3468626	1.41	0.157	-.189273	1.170403
_cons	-4.204706	4.763082	-0.88	0.377	-13.54017	5.130762

1.

The model is jointly significant at .05 level.

Most of parameters are insignificant.

```
2 . est store m1

3 . fitstat

  Measures of Fit for mlogit of y

  Log-Lik Intercept Only:       -228.644   Log-Lik Full Model:          -203.283
  D(122):                        406.567   LR(20):                       50.721
                                           Prob > LR:                     0.000
  McFadden's R2:                   0.111   McFadden's Adj R2:            -0.020
  ML (Cox-Snell) R2:               0.284   Cragg-Uhler(Nagelkerke) R2:    0.298
  Count R2:                        0.500   Adj Count R2:                  0.062
  AIC:                             3.070   AIC*n:                       466.567
  BIC:                          -206.347   BIC':                         49.757
  BIC used by Stata:             532.164   AIC used by Stata:           456.567

4 . mlogit y x1 x2 x3 x4 if y!=4 , baseoutcome(0)

  Iteration 0:   log likelihood = -160.69745
  Iteration 1:   log likelihood =  -139.7611
  Iteration 2:   log likelihood =  -138.7881
  Iteration 3:   log likelihood = -138.77638
  Iteration 4:   log likelihood = -138.77638

  Multinomial logistic regression                 Number of obs     =        127
                                                  LR chi2(16)       =      43.84
                                                  Prob > chi2       =     0.0002
  Log likelihood = -138.77638                     Pseudo R2         =     0.1364
```

y	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
0	(base outcome)					
1						
x1	.0295265	1.082242	0.03	0.978	-2.091628	2.150681
x2	-1.973401	1.359023	-1.45	0.146	-4.637037	.6902346
x3	1.207552	1.247359	0.97	0.333	-1.237227	3.652332
x4	1.243142	.5389165	2.31	0.021	.1868851	2.299399
_cons	-17.20365	7.955084	-2.16	0.031	-32.79533	-1.611975
2						
x1	1.014523	.9872634	1.03	0.304	-.9204779	2.949524
x2	-1.652876	1.2878	-1.28	0.199	-4.176919	.8711657
x3	-1.059433	.9622316	-1.10	0.271	-2.945372	.8265061
x4	.205666	.3806016	0.54	0.589	-.5402994	.9516315
_cons	-.9039178	5.256532	-0.17	0.863	-11.20653	9.398696
3						
x1	-.3555477	.9341051	-0.38	0.703	-2.18636	1.475265
x2	-.953488	1.228872	-0.78	0.438	-3.362033	1.455057
x3	-.1864263	.8801572	-0.21	0.832	-1.911503	1.53865
x4	.1988436	.3362763	0.59	0.554	-.4602457	.857933
_cons	-.8040827	4.644225	-0.17	0.863	-9.906596	8.298431
5						
x1	1.917478	.8656523	2.22	0.027	.2208305	3.614125
x2	-2.399049	1.184989	-2.02	0.043	-4.721585	-.0765135
x3	.0750429	.8626823	0.09	0.931	-1.615783	1.765869
x4	.4760917	.3418197	1.39	0.164	-.1938626	1.146046
_cons	-4.002073	4.712976	-0.85	0.396	-13.23934	5.235191

```
5 . est store m2

6 . hausman m2 m1, alleqs constant

Note: the rank of the differenced variance matrix (19) does not equal the number of coefficient
      for anything unexpected and possibly consider scaling your variables so that the coeffi
```

	Coefficients (b) m2	(B) m1	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
1				
x1	.0295265	-.1220175	.151544	.
x2	-1.973401	-2.016388	.0429865	.1607527
x3	1.207552	1.253423	-.0458709	.1689117
x4	1.243142	1.307279	-.0641366	.
_cons	-17.20365	-18.06503	.861379	.
2				
x1	1.014523	.9699943	.0445285	.
x2	-1.652876	-1.631037	-.0218398	.1540759
x3	-1.059433	-1.034421	-.0250125	.1199088
x4	.205666	.2042703	.0013957	.
_cons	-.9039178	-.9022321	-.0016857	.
3				
x1	-.3555477	-.4040394	.0484917	.
x2	-.953488	-.9533924	-.0000956	.1279901
x3	-.1864263	-.1658373	-.0205891	.1095678
x4	.1988436	.2174653	-.0186217	.
_cons	-.8040827	-1.061943	.2578602	.
5				
x1	1.917478	1.832363	.0851147	.0639035
x2	-2.399049	-2.368735	-.0303146	.1991226
x3	.0750429	.0976971	-.0226542	.1709826
x4	.4760917	.4905651	-.0144735	.
_cons	-4.002073	-4.204706	.2026339	.

b = consistent under Ho and Ha; obtained from mlogit
B = inconsistent under Ha, efficient under Ho; obtained from mlogit

Test: Ho: difference in coefficients not systematic

chi2(19) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 1.97
Prob>chi2 = 1.0000
(V_b-V_B is not positive definite)

H_0 is rejected, we have violation of IIA

```
7 . *2

8 . ologit y x1 x2 x3 x4, nolog
```

The model is jointly significant at .05 level.

Ordered logistic regression — Number of obs = 152
LR chi2(4) = 24.81
Prob > chi2 = 0.0001
Log likelihood = -216.23748 — Pseudo R2 = 0.0543

y	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	1.26067	.3475145	3.63	0.000	.5795538	1.941786
x2	-.8530234	.3508641	-2.43	0.015	-1.540705	-.1653424
x3	.2068371	.3398536	0.61	0.543	-.4592637	.8729379
x4	.1261028	.1511501	0.83	0.404	-.1701459	.4223515
/cut1	-.8807685	2.139511			-5.074134	3.312597
/cut2	-.0328063	2.126237			-4.200155	4.134542
/cut3	.6557008	2.118367			-3.496223	4.807624
/cut4	1.48964	2.117389			-2.660365	5.639646
/cut5	2.283969	2.124223			-1.879432	6.447371

only half of parameters is significant.

```
. fitstat

Measures of Fit for ologit of y

Log-Lik Intercept Only:      -228.644   Log-Lik Full Model:          -216.237
D(143):                       432.475   LR(4):                        24.812
                                        Prob > LR:                     0.000
McFadden's R2:                  0.054   McFadden's Adj R2:             0.015
ML (Cox-Snell) R2:              0.151   Cragg-Uhler(Nagelkerke) R2:    0.158
McKelvey & Zavoina's R2:        0.157
Variance of y*:                 3.904   Variance of error:             3.290
Count R2:                       0.480   Adj Count R2:                  0.025
AIC:                            2.964   AIC*n:                       450.475
BIC:                         -285.940   BIC':                         -4.717
BIC used by Stata:            477.690   AIC used by Stata:           450.475

. *3

. do "C:\Users\Kriss\AppData\Local\Temp\STD01000000.tmp"

. g y_15=(y>0)

. g y_25=(y>1)

. g y_35=(y>2)

. g y_45=(y>3)

. g y_55=(y>4)

. qui logit y_15 x1 x2 x3 x4, nolog

. est store m15

. qui logit y_25 x1 x2 x3 x4, nolog

. est store m25

. qui logit y_35 x1 x2 x3 x4, nolog

. est store m35

. qui logit y_45 x1 x2 x3 x4, nolog

. est store m45

. qui logit y_55 x1 x2 x3 x4, nolog

. est store m55

. suest m15 m25 m35 m45 m55

Simultaneous results for m15, m25, m35, m45, m55

                                                Number of obs     =        152
```

	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
m15_y_15						
x1	1.097122	.9033857	1.21	0.225	-.6734812	2.867725
x2	-1.82336	1.135405	-1.61	0.108	-4.048713	.4019928
x3	-.3069072	.803698	-0.38	0.703	-1.882126	1.268312
x4	.3527502	.3544918	1.00	0.320	-.3420409	1.047541
_cons	-1.099312	4.856106	-0.23	0.821	-10.6171	8.418481
m25_y_25						
x1	1.264527	.5825003	2.17	0.030	.1228478	2.406207
x2	-.7792338	.604258	-1.29	0.197	-1.963558	.4050901
x3	-.8053988	.6052151	-1.33	0.183	-1.991599	.380801

(3)

From comparing BIC', ordered model is more appropriated model for y.

x4	-.2074297	.3082284	-0.67	0.501	-.8115462	.3966868
_cons	5.389609	4.422033	1.22	0.223	-3.277416	14.05663
m35_y_35						
x1	.864886	.4721274	1.83	0.067	-.0604667	1.790239
x2	-.6170464	.4658079	-1.32	0.185	-1.530013	.2959203
x3	-.0281734	.4629933	-0.06	0.951	-.9356237	.8792769
x4	-.0449685	.2176813	-0.21	0.836	-.4716161	.3816791
_cons	1.899683	3.086536	0.62	0.538	-4.149816	7.949182
m45_y_45						
x1	1.679889	.4359289	3.85	0.000	.8254838	2.534294
x2	-1.051402	.4339843	-2.42	0.015	-1.901996	-.2008088
x3	-.1154448	.4385046	-0.26	0.792	-.974898	.7440085
x4	.0623465	.1817055	0.34	0.732	-.2937897	.4184826
_cons	-.4960081	2.567482	-0.19	0.847	-5.52818	4.536164
m55_y_55						
x1	1.213482	.3980963	3.05	0.002	.4332271	1.993736
x2	-.8226954	.3994092	-2.06	0.039	-1.605523	-.0398677
x3	.672316	.4147506	1.62	0.105	-.1405801	1.485212
x4	.2113165	.1907187	1.11	0.268	-.1624853	.5851183
_cons	-3.847181	2.713683	-1.42	0.156	-9.165902	1.471539

```
28 . test [m15_y_15]x1=[m25_y_25]x1=[m35_y_35]x1=[m45_y_45]x1=[m55_y_55]x1

 ( 1)  [m15_y_15]x1 - [m25_y_25]x1 = 0
 ( 2)  [m15_y_15]x1 - [m35_y_35]x1 = 0
 ( 3)  [m15_y_15]x1 - [m45_y_45]x1 = 0
 ( 4)  [m15_y_15]x1 - [m55_y_55]x1 = 0

           chi2(  4) =    6.95
         Prob > chi2 =    0.1384

29 . test [m15_y_15]x2=[m25_y_25]x2=[m35_y_35]x2=[m45_y_45]x2=[m55_y_55]x2

 ( 1)  [m15_y_15]x2 - [m25_y_25]x2 = 0
 ( 2)  [m15_y_15]x2 - [m35_y_35]x2 = 0
 ( 3)  [m15_y_15]x2 - [m45_y_45]x2 = 0
 ( 4)  [m15_y_15]x2 - [m55_y_55]x2 = 0

           chi2(  4) =    3.24
         Prob > chi2 =    0.5186

30 . test [m15_y_15]x3=[m25_y_25]x3=[m35_y_35]x3=[m45_y_45]x3=[m55_y_55]x3

 ( 1)  [m15_y_15]x3 - [m25_y_25]x3 = 0
 ( 2)  [m15_y_15]x3 - [m35_y_35]x3 = 0
 ( 3)  [m15_y_15]x3 - [m45_y_45]x3 = 0
 ( 4)  [m15_y_15]x3 - [m55_y_55]x3 = 0

           chi2(  4) =    8.55
         Prob > chi2 =    0.0734

31 . test [m15_y_15]x4=[m25_y_25]x4=[m35_y_35]x4=[m45_y_45]x4=[m55_y_55]x4

 ( 1)  [m15_y_15]x4 - [m25_y_25]x4 = 0
 ( 2)  [m15_y_15]x4 - [m35_y_35]x4 = 0
 ( 3)  [m15_y_15]x4 - [m45_y_45]x4 = 0
 ( 4)  [m15_y_15]x4 - [m55_y_55]x4 = 0

           chi2(  4) =    7.47
         Prob > chi2 =    0.1130
```

From the test, the ordered model is appropriated.

```
32 .
end of do-file

33 . *4

34 . est restore m1
(results m1 are active now)

35 . margins, dydx(*) predict(outcome(0))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==0), predict(outcome(0))
dy/dx w.r.t. : x1 x2 x3 x4
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	-.049448	.0394996	-1.25	0.211	-.1268658	.0279698
x2	.0953594	.0625156	1.53	0.127	-.027169	.2178878
x3	.0128947	.0388471	0.33	0.740	-.0632443	.0890336
x4	-.0202353	.0163353	-1.24	0.215	-.0522519	.0117814

```
36 . margins, dydx(*) predict(outcome(0)) at((median))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==0), predict(outcome(0))
dy/dx w.r.t. : x1 x2 x3 x4
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	-.049448	.0394996	-1.25	0.211	-.1268658	.0279698
x2	.0953594	.0625156	1.53	0.127	-.027169	.2178878
x3	.0128947	.0388471	0.33	0.740	-.0632443	.0890336
x4	-.0202353	.0163353	-1.24	0.215	-.0522519	.0117814

```
37 . margins, dydx(*) predict(outcome(1))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==1), predict(outcome(1))
dy/dx w.r.t. : x1 x2 x3 x4
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	-.0770801	.0429311	-1.80	0.073	-.1612236	.0070633
x2	-.0090692	.0417711	-0.22	0.828	-.0909391	.0728007
x3	.0862353	.0585697	1.47	0.141	-.0285593	.2010298
x4	.0558661	.02814	1.99	0.047	.0007127	.1110196

```
38 . margins, dydx(*) predict(outcome(1)) at((median))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==1), predict(outcome(1))
dy/dx w.r.t. : x1 x2 x3 x4
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	-.0770801	.0429311	-1.80	0.073	-.1612236	.0070633
x2	-.0090692	.0417711	-0.22	0.828	-.0909391	.0728007
x3	.0862353	.0585697	1.47	0.141	-.0285593	.2010298
x4	.0558661	.02814	1.99	0.047	.0007127	.1110196

```
39 . margins, dydx(*) predict(outcome(2))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==2), predict(outcome(2))
dy/dx w.r.t. : x1 x2 x3 x4
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	-.010222	.0443173	-0.23	0.818	-.0970824	.0766384
x2	.0162247	.0506471	0.32	0.749	-.0830418	.1154912
x3	-.0705732	.048277	-1.46	0.144	-.1651944	.0240479
x4	-.0146586	.0203981	-0.72	0.472	-.0546381	.0253209

```
40 . margins, dydx(*) predict(outcome(2)) at((median))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==2), predict(outcome(2))
dy/dx w.r.t. : x1 x2 x3 x4
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	-.010222	.0443173	-0.23	0.818	-.0970824	.0766384
x2	.0162247	.0506471	0.32	0.749	-.0830418	.1154912
x3	-.0705732	.048277	-1.46	0.144	-.1651944	.0240479
x4	-.0146586	.0203981	-0.72	0.472	-.0546381	.0253209

```
41 . margins, dydx(*) predict(outcome(3))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==3), predict(outcome(3))
dy/dx w.r.t. : x1 x2 x3 x4
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	-.189127	.0587973	-3.22	0.001	-.3043675	-.0738865
x2	.1043358	.0651863	1.60	0.109	-.023427	.2320986
x3	.0071591	.0574438	0.12	0.901	-.1054288	.1197469
x4	-.0209355	.0234814	-0.89	0.373	-.0669581	.0250872

```
42 . margins, dydx(*) predict(outcome(3)) at((median))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==3), predict(outcome(3))
dy/dx w.r.t. : x1 x2 x3 x4
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	-.189127	.0587973	-3.22	0.001	-.3043675	-.0738865
x2	.1043358	.0651863	1.60	0.109	-.023427	.2320986
x3	.0071591	.0574438	0.12	0.901	-.1054288	.1197469
x4	-.0209355	.0234814	-0.89	0.373	-.0669581	.0250872

```
43 . margins, dydx(*) predict(outcome(4))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==4), predict(outcome(4))
dy/dx w.r.t. : x1 x2 x3 x4
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	.077112	.0601692	1.28	0.200	-.0408174	.1950415
x2	-.0337673	.0612127	-0.55	0.581	-.1537419	.0862073
x3	-.1532631	.0608112	-2.52	0.012	-.2724508	-.0340753
x4	-.0312193	.0263643	-1.18	0.236	-.0828923	.0204538

```
44 . margins, dydx(*) predict(outcome(4)) at((median))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==4), predict(outcome(4))
dy/dx w.r.t. : x1 x2 x3 x4
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	.077112	.0601692	1.28	0.200	-.0408174	.1950415
x2	-.0337673	.0612127	-0.55	0.581	-.1537419	.0862073
x3	-.1532631	.0608112	-2.52	0.012	-.2724508	-.0340753
x4	-.0312193	.0263643	-1.18	0.236	-.0828923	.0204538

```
45 . margins, dydx(*) predict(outcome(5))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==5), predict(outcome(5))
dy/dx w.r.t. : x1 x2 x3 x4
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	.2487651	.0737675	3.37	0.001	.1041835	.3933467
x2	-.1730834	.0790483	-2.19	0.029	-.3280153	-.0181515
x3	.1175473	.0846921	1.39	0.165	-.0484461	.2835406
x4	.0311825	.0375786	0.83	0.407	-.0424701	.1048351

```
46 . margins, dydx(*) predict(outcome(5)) at((median))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==5), predict(outcome(5))
dy/dx w.r.t. : x1 x2 x3 x4
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	.2487651	.0737675	3.37	0.001	.1041835	.3933467
x2	-.1730834	.0790483	-2.19	0.029	-.3280153	-.0181515
x3	.1175473	.0846921	1.39	0.165	-.0484461	.2835406
x4	.0311825	.0375786	0.83	0.407	-.0424701	.1048351

```
47 . *Ordered

48 . qui ologit y x1 x2 x3 x4, nolog

49 . margins, dydx(*) predict(outcome(0))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==0), predict(outcome(0))
dy/dx w.r.t. : x1 x2 x3 x4
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	-.0681609	.0273944	-2.49	0.013	-.121853	-.0144688
x2	.0461206	.0233188	1.98	0.048	.0004166	.0918247
x3	-.0111831	.0186422	-0.60	0.549	-.0477211	.0253549
x4	-.006818	.0084411	-0.81	0.419	-.0233623	.0097263

```
50 . margins, dydx(*) predict(outcome(0)) at((median))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==0), predict(outcome(0))
dy/dx w.r.t. : x1 x2 x3 x4
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	-.0681609	.0273944	-2.49	0.013	-.121853	-.0144688
x2	.0461206	.0233188	1.98	0.048	.0004166	.0918247
x3	-.0111831	.0186422	-0.60	0.549	-.0477211	.0253549
x4	-.006818	.0084411	-0.81	0.419	-.0233623	.0097263

```
51 . margins, dydx(*) predict(outcome(1))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==1), predict(outcome(1))
dy/dx w.r.t. : x1 x2 x3 x4
```

	Delta-method dy/dx	Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	-.0599322	.0226362	-2.65	0.008	-.1042983	-.015566
x2	.0405527	.0197166	2.06	0.040	.0019088	.0791965
x3	-.009833	.0162697	-0.60	0.546	-.041721	.022055
x4	-.0059949	.0073186	-0.82	0.413	-.0203391	.0083493

```
52 . margins, dydx(*) predict(outcome(1)) at((median))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==1), predict(outcome(1))
dy/dx w.r.t. : x1 x2 x3 x4
```

	Delta-method dy/dx	Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	-.0599322	.0226362	-2.65	0.008	-.1042983	-.015566
x2	.0405527	.0197166	2.06	0.040	.0019088	.0791965
x3	-.009833	.0162697	-0.60	0.546	-.041721	.022055
x4	-.0059949	.0073186	-0.82	0.413	-.0203391	.0083493

```
53 . margins, dydx(*) predict(outcome(2))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==2), predict(outcome(2))
dy/dx w.r.t. : x1 x2 x3 x4
```

	Delta-method dy/dx	Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	-.0614076	.0202331	-3.04	0.002	-.1010639	-.0217514
x2	.0415511	.0188187	2.21	0.027	.004667	.0784351
x3	-.0100751	.0166518	-0.61	0.545	-.0427121	.0225619
x4	-.0061425	.007391	-0.83	0.406	-.0206285	.0083435

```
54 . margins, dydx(*) predict(outcome(2)) at((median))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==2), predict(outcome(2))
dy/dx w.r.t. : x1 x2 x3 x4
```

	Delta-method dy/dx	Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	-.0614076	.0202331	-3.04	0.002	-.1010639	-.0217514
x2	.0415511	.0188187	2.21	0.027	.004667	.0784351
x3	-.0100751	.0166518	-0.61	0.545	-.0427121	.0225619
x4	-.0061425	.007391	-0.83	0.406	-.0206285	.0083435

```
55 . margins, dydx(*) predict(outcome(3))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==3), predict(outcome(3))
dy/dx w.r.t. : x1 x2 x3 x4
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	-.0649197	.0193261	-3.36	0.001	-.1027982	-.0270412
x2	.0439275	.0192343	2.28	0.022	.006229	.081626
x3	-.0106513	.017627	-0.60	0.546	-.0451996	.0238969
x4	-.0064938	.0078483	-0.83	0.408	-.0218763	.0088886

```
56 . margins, dydx(*) predict(outcome(3)) at((median))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==3), predict(outcome(3))
dy/dx w.r.t. : x1 x2 x3 x4
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	-.0649197	.0193261	-3.36	0.001	-.1027982	-.0270412
x2	.0439275	.0192343	2.28	0.022	.006229	.081626
x3	-.0106513	.017627	-0.60	0.546	-.0451996	.0238969
x4	-.0064938	.0078483	-0.83	0.408	-.0218763	.0088886

```
57 . margins, dydx(*) predict(outcome(4))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==4), predict(outcome(4))
dy/dx w.r.t. : x1 x2 x3 x4
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	-.0206373	.0127601	-1.62	0.106	-.0456467	.004372
x2	.0139641	.0092144	1.52	0.130	-.0040958	.032024
x3	-.003386	.0059659	-0.57	0.570	-.0150789	.008307
x4	-.0020643	.0027613	-0.75	0.455	-.0074764	.0033478

```
58 . margins, dydx(*) predict(outcome(4)) at((median))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==4), predict(outcome(4))
dy/dx w.r.t. : x1 x2 x3 x4
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	-.0206373	.0127601	-1.62	0.106	-.0456467	.004372
x2	.0139641	.0092144	1.52	0.130	-.0040958	.032024
x3	-.003386	.0059659	-0.57	0.570	-.0150789	.008307
x4	-.0020643	.0027613	-0.75	0.455	-.0074764	.0033478

```
59 . margins, dydx(*) predict(outcome(5))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==5), predict(outcome(5))
dy/dx w.r.t. : x1 x2 x3 x4
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	.2750578	.0661191	4.16	0.000	.1454667	.4046489
x2	-.1861159	.0724194	-2.57	0.010	-.3280553	-.0441766
x3	.0451285	.073977	0.61	0.542	-.0998638	.1901208
x4	.0275136	.032782	0.84	0.401	-.0367379	.0917651

```
60 . margins, dydx(*) predict(outcome(5)) at((median))

Average marginal effects                        Number of obs     =        152
Model VCE    : OIM

Expression   : Pr(y==5), predict(outcome(5))
dy/dx w.r.t. : x1 x2 x3 x4
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	.2750578	.0661191	4.16	0.000	.1454667	.4046489
x2	-.1861159	.0724194	-2.57	0.010	-.3280553	-.0441766
x3	.0451285	.073977	0.61	0.542	-.0998638	.1901208
x4	.0275136	.032782	0.84	0.401	-.0367379	.0917651

```
61 . log close
      name:  <unnamed>
       log:  C:\Users\Kriss\OneDrive\เดสก์ท็อป\426\asss9.smcl
  log type:  smcl
 closed on:  31 Mar 2021, 23:09:24
```