(R)
Statistics/Data Analysis

(R)
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Notes:
1. Unicode is supported; see help unicode_advice.
2. More than 2 billion observations are allowed; see help obs_advice.
3. Maximum number of variables is set to 5000; see help set_maxvar.

```
1 . use "C:\Users\com\Downloads\assign09.dta", clear

2 . log using "C:\Users\com\Downloads\assign 9.smcl"
```

(1)

```
      name:  <unnamed>
       log:  C:\Users\com\Downloads\assign 9.smcl
  log type:  smcl
 opened on:  31 Mar 2021, 23:17:33

3 . mlogit y x1 x2 x3 x4, nolog

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            |
          x1 |  -1.832363   .8632903    -2.12   0.034    -3.524381   -.1403452
          x2 |   2.368735   1.168139     2.03   0.043      .079224    4.658246
          x3 |  -.0976971   .8455682    -0.12   0.908     -1.75498    1.559586
          x4 |  -.4905651   .3468626    -1.41   0.157     -1.170403     .189273
       _cons |   4.204706   4.763082     0.88   0.377    -5.130762    13.54017
-------------+----------------------------------------------------------------
1            |
          x1 |  -1.954381    .814615    -2.40   0.016    -3.550997   -.3577647
          x2 |   .3523473    .782471     0.45   0.652    -1.181268    1.885962
          x3 |   1.155726   1.030763     1.12   0.262     -.864533    3.175985
          x4 |   .8167134   .4673336     1.75   0.081    -.0992436    1.732671
       _cons |  -13.86033   7.056818    -1.96   0.050    -27.69144   -.0292169
-------------+----------------------------------------------------------------
2            |
          x1 |  -.8623688   .6749745    -1.28   0.201    -2.185294    .4605568
          x2 |   .7376981   .6909685     1.07   0.286    -.6165753    2.091972
          x3 |  -1.132118   .6624929    -1.71   0.087     -2.43058    .1663445
          x4 |  -.2862948   .2878698    -0.99   0.320    -.8505092    .2779195
       _cons |   3.302474   4.043716     0.82   0.414    -4.623064    11.22801
-------------+----------------------------------------------------------------
3            |
          x1 |  -2.236402   .6199683    -3.61   0.000    -3.451518   -1.021287
          x2 |   1.415342   .6376614     2.22   0.026     .1655491    2.665136
          x3 |  -.2635344   .6026228    -0.44   0.662    -1.444653    .9175846
          x4 |  -.2730998   .2507716    -1.09   0.276    -.7646032    .2184035
       _cons |   3.142763   3.534705     0.89   0.374    -3.785131    10.07066
------------------------------------------------------------------------------
```

4						
x1	**-.1544581**	**.5644404**	**-0.27**	**0.784**	**-1.260741**	**.9518248**
x2	**.2643829**	**.5265539**	**0.50**	**0.616**	**-.7676439**	**1.29641**
x3	**-1.307232**	**.5372575**	**-2.43**	**0.015**	**-2.360237**	**-.2542264**
x4	**-.3073979**	**.2338932**	**-1.31**	**0.189**	**-.7658201**	**.1510242**
_cons	**4.187597**	**3.285728**	**1.27**	**0.202**	**-2.252312**	**10.62751**
5	(base outcome)					

4 . 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**
Maximum Likelihood R2:	**0.284**	Cragg & Uhler's R2:	**0.298**
Count R2:	**0.086**	Adj Count R2:	**0.021**
AIC:	**3.070**	AIC*n:	**466.567**
BIC:	**-206.347**	BIC':	**49.757**

5 . mlogit y x1 x2 x3 x4 if y!=4, nolog

Multinomial logistic regression

Number of obs	= **127**
LR chi2(**16**)	= **43.84**
Prob > chi2	= **0.0002**
Pseudo R2	= **0.1364**

Log likelihood = **-138.77638**

y	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
0						
x1	**-1.917478**	**.8656523**	**-2.22**	**0.027**	**-3.614125**	**-.2208305**
x2	**2.399049**	**1.184989**	**2.02**	**0.043**	**.0765135**	**4.721585**
x3	**-.0750429**	**.8626823**	**-0.09**	**0.931**	**-1.765869**	**1.615783**
x4	**-.4760917**	**.3418197**	**-1.39**	**0.164**	**-1.146046**	**.1938626**
_cons	**4.002073**	**4.712976**	**0.85**	**0.396**	**-5.235191**	**13.23934**
1						
x1	**-1.887951**	**.8108206**	**-2.33**	**0.020**	**-3.47713**	**-.2987722**
x2	**.4256484**	**.7803751**	**0.55**	**0.585**	**-1.103859**	**1.955155**
x3	**1.13251**	**1.04128**	**1.09**	**0.277**	**-.9083626**	**3.173382**
x4	**.7670503**	**.4586998**	**1.67**	**0.094**	**-.1319848**	**1.666086**
_cons	**-13.20158**	**6.968**	**-1.89**	**0.058**	**-26.85861**	**.455447**
2						
x1	**-.902955**	**.6677474**	**-1.35**	**0.176**	**-2.211716**	**.4058058**
x2	**.746173**	**.6920624**	**1.08**	**0.281**	**-.6102444**	**2.10259**
x3	**-1.134476**	**.6573489**	**-1.73**	**0.084**	**-2.422856**	**.1539042**
x4	**-.2704256**	**.2800586**	**-0.97**	**0.334**	**-.8193303**	**.2784791**
_cons	**3.098155**	**3.947385**	**0.78**	**0.433**	**-4.638579**	**10.83489**
3						
x1	**-2.273025**	**.6227095**	**-3.65**	**0.000**	**-3.493514**	**-1.052537**
x2	**1.445561**	**.6553098**	**2.21**	**0.027**	**.1611778**	**2.729945**
x3	**-.2614692**	**.6184131**	**-0.42**	**0.672**	**-1.473537**	**.9505983**
x4	**-.277248**	**.2489175**	**-1.11**	**0.265**	**-.7651174**	**.2106213**
_cons	**3.19799**	**3.521038**	**0.91**	**0.364**	**-3.703118**	**10.0991**
5	(base outcome)					

```
6 . est store m2

7 .


8 . est store m1

9 . hausman m2 m1, alleqs constant
```

Note: the rank of the differenced variance matrix (**0**) does not equal the number of coefficients being tested (**20**); be sure this is what you expect, or there may be problems computing the test. Examine the output of your estimators for anything unexpected and possibly consider scaling your variables so that the coefficients are on a similar scale.

	——— Coefficients ———			
	(b) m2	(B) m1	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
0				
x1	**-1.917478**	**-1.917478**	**0**	**0**
x2	**2.399049**	**2.399049**	**0**	**0**
x3	**-.0750429**	**-.0750429**	**0**	**0**
x4	**-.4760917**	**-.4760917**	**0**	**0**
_cons	**4.002073**	**4.002073**	**0**	**0**
1				
x1	**-1.887951**	**-1.887951**	**0**	**0**
x2	**.4256484**	**.4256484**	**0**	**0**
x3	**1.13251**	**1.13251**	**0**	**0**
x4	**.7670503**	**.7670503**	**0**	**0**
_cons	**-13.20158**	**-13.20158**	**0**	**0**
2				
x1	**-.902955**	**-.902955**	**0**	**0**
x2	**.746173**	**.746173**	**0**	**0**
x3	**-1.134476**	**-1.134476**	**0**	**0**
x4	**-.2704256**	**-.2704256**	**0**	**0**
_cons	**3.098155**	**3.098155**	**0**	**0**
3				
x1	**-2.273025**	**-2.273025**	**0**	**0**
x2	**1.445561**	**1.445561**	**0**	**0**
x3	**-.2614692**	**-.2614692**	**0**	**0**
x4	**-.277248**	**-.277248**	**0**	**0**
_cons	**3.19799**	**3.19799**	**0**	**0**

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(**0**) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= **0.00**
Prob>chi2 = .
(V_b-V_B is not positive definite)

Overall test
model is jointly significant at 5% level

Individual test
most of the parameters are insignificant

OOF and Forecast error
pseudo R^2 is low
counts $R^2 < 0.5$, model should be improved.

IIA test we accept H_0. So, the data is IIA the MNL logit is appropriate over the nested logit/ASC Probit models

(2)

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

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
------------------------------------------------------------------------------

11

12 . findit gologit2

(3)

13 . gologit2 y x1 x2 x3 x4, pl sto(ologit) link(p)

Generalized Ordered Probit Estimates            Number of obs     =        152
                                                LR chi2(4)        =      23.50
                                                Prob > chi2       =     0.0001
Log likelihood = -216.89508                     Pseudo R2         =     0.0514

 ( 1)  [0]x1 - [1]x1 = 0
 ( 2)  [0]x2 - [1]x2 = 0
 ( 3)  [0]x3 - [1]x3 = 0
 ( 4)  [0]x4 - [1]x4 = 0
 ( 5)  [1]x1 - [2]x1 = 0
 ( 6)  [1]x2 - [2]x2 = 0
 ( 7)  [1]x3 - [2]x3 = 0
 ( 8)  [1]x4 - [2]x4 = 0
 ( 9)  [2]x1 - [3]x1 = 0
 (10)  [2]x2 - [3]x2 = 0
 (11)  [2]x3 - [3]x3 = 0
 (12)  [2]x4 - [3]x4 = 0
 (13)  [3]x1 - [4]x1 = 0
 (14)  [3]x2 - [4]x2 = 0
 (15)  [3]x3 - [4]x3 = 0
 (16)  [3]x4 - [4]x4 = 0

------------------------------------------------------------------------------
           y |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
0            |
          x1 |   .7194818   .2020884     3.56   0.000     .3233959    1.115568
          x2 |  -.5041496   .2049628    -2.46   0.014    -.9058693   -.1024299
          x3 |   .1109476   .2041695     0.54   0.587    -.2892173    .5111125
          x4 |   .0732426   .0867141     0.84   0.398    -.0967139    .2431991
       _cons |   .4623429   1.229346     0.38   0.707    -1.947131    2.871817
-------------+----------------------------------------------------------------
1            |
          x1 |   .7194818   .2020884     3.56   0.000     .3233959    1.115568
          x2 |  -.5041496   .2049628    -2.46   0.014    -.9058693   -.1024299
          x3 |   .1109476   .2041695     0.54   0.587    -.2892173    .5111125
          x4 |   .0732426   .0867141     0.84   0.398    -.0967139    .2431991
       _cons |   .0266402   1.224714     0.02   0.983    -2.373756    2.427036
------------------------------------------------------------------------------
```

2						
x1	.7194818	.2020884	3.56	0.000	.3233959	1.115568
x2	-.5041496	.2049628	-2.46	0.014	-.9058693	-.1024299
x3	.1109476	.2041695	0.54	0.587	-.2892173	.5111125
x4	.0732426	.0867141	0.84	0.398	-.0967139	.2431991
_cons	-.3534276	1.220028	-0.29	0.772	-2.744639	2.037784
3						
x1	.7194818	.2020884	3.56	0.000	.3233959	1.115568
x2	-.5041496	.2049628	-2.46	0.014	-.9058693	-.1024299
x3	.1109476	.2041695	0.54	0.587	-.2892173	.5111125
x4	.0732426	.0867141	0.84	0.398	-.0967139	.2431991
_cons	-.8395408	1.218495	-0.69	0.491	-3.227746	1.548665
4						
x1	.7194818	.2020884	3.56	0.000	.3233959	1.115568
x2	-.5041496	.2049628	-2.46	0.014	-.9058693	-.1024299
x3	.1109476	.2041695	0.54	0.587	-.2892173	.5111125
x4	.0732426	.0867141	0.84	0.398	-.0967139	.2431991
_cons	-1.315206	1.220947	-1.08	0.281	-3.708217	1.077805

```
14 . lrtest ologit gologit, stats
   estimation result gologit not found
   r(111);

15 . gologit2 y x1 x2 x3 x4, npl sto(gologit) link(p)

Generalized Ordered Probit Estimates              Number of obs     =        152
                                                  LR chi2(20)       =      62.94
                                                  Prob > chi2       =     0.0000
Log likelihood = -197.17374                       Pseudo R2         =     0.1376
```

y	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
0						
x1	.3572168	.4029218	0.89	0.375	-.4324953	1.146929
x2	-.8430554	.5215851	-1.62	0.106	-1.865344	.1792327
x3	.2174726	.4699002	0.46	0.644	-.7035149	1.13846
x4	.6301649	.2667108	2.36	0.018	.1074213	1.152909
_cons	-7.270173	3.882206	-1.87	0.061	-14.87916	.3388114
1						
x1	.3815073	.3018235	1.26	0.206	-.210056	.9730705
x2	-.0159532	.3528003	-0.05	0.964	-.7074291	.6755227
x3	-.4463186	.318717	-1.40	0.161	-1.070992	.1783554
x4	-.3245584	.1577207	-2.06	0.040	-.6336852	-.0154316
_cons	5.945013	2.271297	2.62	0.009	1.493353	10.39667
2						
x1	.3404404	.2758877	1.23	0.217	-.2002895	.8811702
x2	.0353617	.3074022	0.12	0.908	-.5671356	.637859
x3	-.0702493	.2585965	-0.27	0.786	-.577089	.4365905
x4	-.1951006	.1263031	-1.54	0.122	-.4426502	.0524489
_cons	3.376936	1.791931	1.88	0.059	-.1351848	6.889057
3						
x1	1.140714	.2586096	4.41	0.000	.6338481	1.647579
x2	-.6973459	.2627334	-2.65	0.008	-1.212294	-.1823979
x3	-.0515296	.2426607	-0.21	0.832	-.5271359	.4240766
x4	-.0319761	.1198625	-0.27	0.790	-.2669022	.20295
_cons	.6640111	1.677911	0.40	0.692	-2.624635	3.952657
4						
x1	.7732183	.2551915	3.03	0.002	.2730522	1.273384

x2	-.6291826	.243014	-2.59	0.010	-1.105481	-.1528838
x3	.4068852	.2489172	1.63	0.102	-.0809836	.8947539
x4	.1212267	.1142629	1.06	0.289	-.1027244	.3451778
_cons	-2.159693	1.595193	-1.35	0.176	-5.286213	.9668279

WARNING! 86 in-sample cases have an outcome with a predicted probability that is less than 0. See the gologit2 help section on Warning Messages for more information.

16 . lrtest ologit gologit, stats

Likelihood-ratio test LR chi2(16) = 39.44
(Assumption: ologit nested in gologit) Prob > chi2 = 0.0009

Akaike's information criterion and Bayesian information criterion

We reject H_0, the appropriate model is MN logit

Model	Obs	ll(null)	ll(model)	df	AIC	BIC
ologit	152	-228.6436	-216.8951	9	451.7902	479.0051
gologit	152	-228.6436	-197.1737	25	444.3475	519.9445

Note: N=Obs used in calculating BIC; see [R] BIC note.

4

17 . 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	-.0499158	.0547573	-0.91	0.362	-.1572382	.0574065
x2	.1178047	.0700462	1.68	0.093	-.0194832	.2550927
x3	-.0303886	.0667857	-0.46	0.649	-.1612862	.1005089
x4	-.0880564	.0400957	-2.20	0.028	-.1666425	-.0094702

18 . 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	-.0499158	.0547573	-0.91	0.362	-.1572382	.0574065
x2	.1178047	.0700462	1.68	0.093	-.0194832	.2550927
x3	-.0303886	.0667857	-0.46	0.649	-.1612862	.1005089
x4	-.0880564	.0400957	-2.20	0.028	-.1666425	-.0094702

```
19 . 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	-.0256552	.056212	-0.46	0.648	-.1358287	.0845183
x2	-.1146446	.0688186	-1.67	0.096	-.2495266	.0202374
x3	.1187979	.0676823	1.76	0.079	-.0138571	.2514528
x4	.1523467	.0500055	3.05	0.002	.0543377	.2503556

```
20 . 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	-.0256552	.056212	-0.46	0.648	-.1358287	.0845183
x2	-.1146446	.0688186	-1.67	0.096	-.2495266	.0202374
x3	.1187979	.0676823	1.76	0.079	-.0138571	.2514528
x4	.1523467	.0500055	3.05	0.002	.0543377	.2503556

```
21 . 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	-.0247692	.0487558	-0.51	0.611	-.1203289	.0707905
x2	-.0135825	.0649086	-0.21	0.834	-.140801	.113636
x3	-.0677042	.057129	-1.19	0.236	-.179675	.0442666
x4	-.006787	.0274649	-0.25	0.805	-.0606173	.0470432

```
22 . 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	-.0247692	.0487558	-0.51	0.611	-.1203289	.0707905
x2	-.0135825	.0649086	-0.21	0.834	-.140801	.113636
x3	-.0677042	.057129	-1.19	0.236	-.179675	.0442666
x4	-.006787	.0274649	-0.25	0.805	-.0606173	.0470432

```
23 . 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
```

	Delta-method dy/dx	Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	-.2589438	.0723984	-3.58	0.000	-.4008421	-.1170455
x2	.2300615	.0804258	2.86	0.004	.0724297	.3876932
x3	-.004475	.0565331	-0.08	0.937	-.1152779	.1063279
x4	-.047432	.0317246	-1.50	0.135	-.109611	.0147471

```
24 . 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
```

	Delta-method dy/dx	Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	-.2589438	.0723984	-3.58	0.000	-.4008421	-.1170455
x2	.2300615	.0804258	2.86	0.004	.0724297	.3876932
x3	-.004475	.0565331	-0.08	0.937	-.1152779	.1063279
x4	-.047432	.0317246	-1.50	0.135	-.109611	.0147471

```
25 . 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
```

	Delta-method dy/dx	Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	.094683	.0653609	1.45	0.147	-.0334221	.222788
x2	-.0043281	.0669036	-0.06	0.948	-.1354568	.1268006
x3	-.1554691	.0694493	-2.24	0.025	-.2915872	-.0193511
x4	-.051556	.0388786	-1.33	0.185	-.1277567	.0246446

```
26 .  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	.094683	.0653609	1.45	0.147	-.0334221	.222788
x2	-.0043281	.0669036	-0.06	0.948	-.1354568	.1268006
x3	-.1554691	.0694493	-2.24	0.025	-.2915872	-.0193511
x4	-.051556	.0388786	-1.33	0.185	-.1277567	.0246446

```
27 . 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	.2646011	.0789902	3.35	0.001	.1097832	.4194189
x2	-.215311	.0772763	-2.79	0.005	-.3667699	-.0638521
x3	.1392391	.0831653	1.67	0.094	-.0237618	.3022401
x4	.0414847	.0387655	1.07	0.285	-.0344942	.1174636

```
28 . 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	.2646011	.0789902	3.35	0.001	.1097832	.4194189
x2	-.215311	.0772763	-2.79	0.005	-.3667699	-.0638521
x3	.1392391	.0831653	1.67	0.094	-.0237618	.3022401
x4	.0414847	.0387655	1.07	0.285	-.0344942	.1174636

```
29 . 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
```

	Delta-method dy/dx	Std. Err.	z	P>|z|	[95% Conf.	Interval]
x1	**-.0499158**	**.0547573**	**-0.91**	**0.362**	**-.1572382**	**.0574065**
x2	**.1178047**	**.0700462**	**1.68**	**0.093**	**-.0194832**	**.2550927**
x3	**-.0303886**	**.0667857**	**-0.46**	**0.649**	**-.1612862**	**.1005089**
x4	**-.0880564**	**.0400957**	**-2.20**	**0.028**	**-.1666425**	**-.0094702**

30 .