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name: <unnamed>
log: /Users/mien/Desktop/ee426/6104640328_10.log
log type: text
opened on: 8 Apr 2021, 09:54:54

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```
. probit y1 x1 x2 x3
```

```

Iteration 0: log likelihood = -45.533775
Iteration 1: log likelihood = -35.05321
Iteration 2: log likelihood = -34.122847
Iteration 3: log likelihood = -34.092095
Iteration 4: log likelihood = -34.09209
Iteration 5: log likelihood = -34.09209

```

```

Probit regression                               Number of obs      =
67                                                LR chi2(3)          =
22.88                                           Prob > chi2         =
0.0000                                           Pseudo R2           =
Log likelihood = -34.09209
0.2513

```

```

-----
            y1 |      Coef.   Std. Err.      z    P>|z|     [95% Conf.
Interval]
-----+-----
            x1 |   2.574932   .7958181     3.24   0.001    1.015157
4.134707
            x2 |  -.5031798   .297949     -1.69   0.091
-1.087149   .0807895
            x3 |   .3449061   .1616015     2.13   0.033
028173     .6616392
            _cons | -2.186903   .6334447     -3.45   0.001    -3.428432
-.9453743

```

```

Note: 1 failure and 0 successes completely determined.
      The overall model is significant since chi2 < 0.05. x1 and
x3 are significant but x2 is not. Pseudo R2 is quite low.

```

```
. probit y2 x1 x2 x3
```

```

Iteration 0: log likelihood = -22.432361
Iteration 1: log likelihood = -19.734461
Iteration 2: log likelihood = -19.678976
Iteration 3: log likelihood = -19.678766
Iteration 4: log likelihood = -19.678766

```

Probit regression	Number of obs	=
67		
	LR chi2(3)	=
5.51		
	Prob > chi2	=
0.1382		
Log likelihood = -19.678766	Pseudo R2	=
0.1228		

	y2	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]

+						
	x1	1.196021	.8449952	1.42	0.157	-.4601389
2.852182						
	x2	-.1604507	.1166507	-1.38	0.169	-. .
3890818	.0681804					
	x3	.1023406	.2083685	0.49	0.623	-. .
3060541	.5107354					
	_cons	.5275558	.5565448	0.95	0.343	-.563252
1.618364						

None of the independent variables is significant as well as the overall model. However, x1 might be the best independent variable to explain among all.

```
. probit y3 x1 x2 x3
```

```
Iteration 0: log likelihood = -39.952416
Iteration 1: log likelihood = -35.846932
Iteration 2: log likelihood = -35.496676
Iteration 3: log likelihood = -35.486934
Iteration 4: log likelihood = -35.486933
```

Probit regression	Number of obs	=
67		
	LR chi2(3)	=
8.93		
	Prob > chi2	=
0.0302		
Log likelihood = -35.486933	Pseudo R2	=
0.1118		

	y3	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]

+						
	x1	1.549326	.6925982	2.24	0.025	.1918581
2.906793						

	x2		-.33157	.2931093	-1.13	0.258	-.
9060538			.2429137				
	x3		.0952456	.1142564	0.83	0.404	-.
128693			.3191841				
	_cons		-1.713771	.5536004	-3.10	0.002	-2.798808
-.6287342							

The overall model is significant. Only x1 is significant though. Pseudo R2 is low.

. mvprobit (y1 x1 x2 x3) (y2 x1 x2 x3) (y3 x1 x2 x3)

Iteration 0: log likelihood = -89.257789
 Iteration 1: log likelihood = -88.984175
 Iteration 2: log likelihood = -88.982664
 Iteration 3: log likelihood = -88.982663

Multivariate probit (SML, # draws = 5)	Number of obs	=
67		
	Wald chi2(9)	=
25.03		
Log likelihood = -88.982663	Prob > chi2	=
0.0029		

		Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
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y1							
	x1		2.592376	.8023984	3.23	0.001	1.019704
4.165048							
	x2		-.5314422	.3036422	-1.75	0.080	
-1.12657			.0636857				
	x3		.3491611	.1619024	2.16	0.031	.
0318383			.6664839				
	_cons		-2.194319	.6357735	-3.45	0.001	-3.440412
-.9482253							

y2							
	x1		1.221734	.8478931	1.44	0.150	-.4401059
2.883574							
	x2		-.1557306	.1180077	-1.32	0.187	-.
3870215			.0755604				
	x3		.1054215	.2100288	0.50	0.616	-.
3062274			.5170704				
	_cons		.5119029	.5577948	0.92	0.359	-.5813547
1.605161							

y3						
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2.890642	x1	1.535622	.6913496	2.22	0.026	.1806018
9396887	x2	-.3542075	.2987204	-1.19	0.236	-.
1285416	.2312737					
	x3	.0956571	.1143892	0.84	0.403	-.
	.3198557					
-.6095614	_cons	-1.691533	.5520363	-3.06	0.002	-2.773504

4970077	/atrho21	.1028098	.306035	0.34	0.737	-.
	.7026274					

3038669	/atrho31	.1399288	.2264305	0.62	0.537	-.
	.5837245					

4251472	/atrho32	.1014794	.268692	0.38	0.706	-.
	.6281061					

4597606	rho21	.1024491	.3028229	0.34	0.735	-.
	.6060328					

2948474	rho31	.1390226	.2220542	0.63	0.531	-.
	.5253672					

4012578	rho32	.1011325	.2659439	0.38	0.704	-.
	.5567467					

Likelihood ratio test of rho21 = rho31 = rho32 = 0:
chi2(3) = .550251 Prob > chi2 = 0.9077

If rho=0, Ho is not rejected. Here, p-value > 0.05
Therefore, the model is not significant.

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. log close
      name: <unnamed>
      log: /Users/mien/Desktop/ee426/6104640328_10.log
      log type: text
      closed on: 8 Apr 2021, 09:56:40
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