

____ _ (R)

____/ / ____/

____/ / /____/

Data analysis

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/_ /
____/ / /
Statistics/

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-----  
-----  
          name: <unnamed>  
          log:  /Users/oksanaliashenko/Documents/Diversity/New  
SEM/SEm'new.smcl  
          log type: smcl  
          opened on:  7 Mar 2025, 15:07:54
```

```
1 . do "/var/folders/jv/5982sp3s1hn9wf9zxglpf5cr0000gn/T//  
SD82454.000000"
```

```
2 . * Аналіз 1: po_s як предиктор  
3 . sem (pc1iq <- po_s) (pc2iq <- po_s) (pc1out <- pc1iq pc2iq  
po_s), vce(bootstr  
> ap, reps(5000))  
(running sem on estimation sample)
```

```
Bootstrap replications  
(5,000): .....10.....20.....30.....40...  
> .....50.....60.....70.....80.....90.....100..  
.....110..  
> .....120.....130.....140.....150.....160.....  
..170.....  
> ...180.....190.....200.....210.....220.....230  
.....24  
>  
0.....250.....260.....270.....280.....290.....  
..300.....  
> .....310.....320.....330.....340.....350.....3  
60.....  
>  
370.....380.....390.....400.....410.....420.....  
....430..  
> .....440.....450.....460.....470.....480.....  
..490.....  
> ..500.....510.....520.....530.....540.....550..  
.....560
```

>570.....580.....590.....600.....610.....
...620.....

>630.....640.....650.....660.....670.....68
0.....6

>
90.....700.....710.....720.....730.....740.....
...750...

>760.....770.....780.....790.....800.....
810.....

>
.820.....830.....840.....850.....860.....870.....
.....880.

>890.....900.....910.....920.....930.....
..940.....

> ...950.....960.....970.....980.....990.....1,0
00.....

>
1,010.....1,020.....1,030.....1,040.....1,050.....
..1,060..

>1,070.....1,080.....1,090.....1,100.....1,1
10.....

>
1,120.....1,130.....1,140.....1,150.....1,160.....
..1,170..

>1,180.....1,190.....1,200.....1,210.....1,2
20.....

>
1,230.....1,240.....1,250.....1,260.....1,270.....
..1,280..

>1,290.....1,300.....1,310.....1,320.....1,3
30.....

>
1,340.....1,350.....1,360.....1,370.....1,380.....
..1,390..

>1,400.....1,410.....1,420.....1,430.....1,4
40.....

>
1,450.....1,460.....1,470.....1,480.....1,490.....
..1,500..

>1,510.....1,520.....1,530.....1,540.....1,5
50.....

>
1,560.....1,570.....1,580.....1,590.....1,600.....
..1,610..

>1,620.....1,630.....1,640.....1,650.....1,660.....
>
1,670.....1,680.....1,690.....1,700.....1,710.....
..1,720..

>1,730.....1,740.....1,750.....1,760.....1,770.....
>
1,780.....1,790.....1,800.....1,810.....1,820.....
..1,830..

>1,840.....1,850.....1,860.....1,870.....1,880.....
>
1,890.....1,900.....1,910.....1,920.....1,930.....
..1,940..

>1,950.....1,960.....1,970.....1,980.....1,990.....
>
2,000.....2,010.....2,020.....2,030.....2,040.....
..2,050..

>2,060.....2,070.....2,080.....2,090.....2,100.....
>
2,110.....2,120.....2,130.....2,140.....2,150.....
..2,160..

>2,170.....2,180.....2,190.....2,200.....2,210.....
>
2,220.....2,230.....2,240.....2,250.....2,260.....
..2,270..

>2,280.....2,290.....2,300.....2,310.....2,320.....
>
2,330.....2,340.....2,350.....2,360.....2,370.....
..2,380..

>2,390.....2,400.....2,410.....2,420.....2,430.....
>
2,440.....2,450.....2,460.....2,470.....2,480.....
..2,490..

>2,500.....2,510.....2,520.....2,530.....2,540.....
>
2,550.....2,560.....2,570.....2,580.....2,590.....
..2,600..

>2,610.....2,620.....2,630.....2,640.....2,650.....

>
2,660.....2,670.....2,680.....2,690.....2,700.....
..2,710..

>2,720.....2,730.....2,740.....2,750.....2,760.....

>
2,770.....2,780.....2,790.....2,800.....2,810.....
..2,820..

>2,830.....2,840.....2,850.....2,860.....2,870.....

>
2,880.....2,890.....2,900.....2,910.....2,920.....
..2,930..

>2,940.....2,950.....2,960.....2,970.....2,980.....

>
2,990.....3,000.....3,010.....3,020.....3,030.....
..3,040..

>3,050.....3,060.....3,070.....3,080.....3,090.....

>
3,100.....3,110.....3,120.....3,130.....3,140.....
..3,150..

>3,160.....3,170.....3,180.....3,190.....3,200.....

>
3,210.....3,220.....3,230.....3,240.....3,250.....
..3,260..

>3,270.....3,280.....3,290.....3,300.....3,310.....

>
3,320.....3,330.....3,340.....3,350.....3,360.....
..3,370..

>3,380.....3,390.....3,400.....3,410.....3,420.....

>
3,430.....3,440.....3,450.....3,460.....3,470.....
..3,480..

>3,490.....3,500.....3,510.....3,520.....3,530.....

>
3,540.....3,550.....3,560.....3,570.....3,580.....
..3,590..

>3,600.....3,610.....3,620.....3,630.....3,640.....

>
3,650.....3,660.....3,670.....3,680.....3,690.....
..3,700..

>3,710.....3,720.....3,730.....3,740.....3,750.....

>
3,760.....3,770.....3,780.....3,790.....3,800.....
..3,810..

>3,820.....3,830.....3,840.....3,850.....3,860.....

>
3,870.....3,880.....3,890.....3,900.....3,910.....
..3,920..

>3,930.....3,940.....3,950.....3,960.....3,970.....

>
3,980.....3,990.....4,000.....4,010.....4,020.....
..4,030..

>4,040.....4,050.....4,060.....4,070.....4,080.....

>
4,090.....4,100.....4,110.....4,120.....4,130.....
..4,140..

>4,150.....4,160.....4,170.....4,180.....4,190.....

>
4,200.....4,210.....4,220.....4,230.....4,240.....
..4,250..

>4,260.....4,270.....4,280.....4,290.....4,300.....

>
4,310.....4,320.....4,330.....4,340.....4,350.....
..4,360..

>4,370.....4,380.....4,390.....4,400.....4,410.....

>
4,420.....4,430.....4,440.....4,450.....4,460.....
..4,470..

>4,480.....4,490.....4,500.....4,510.....4,520.....

>
4,530.....4,540.....4,550.....4,560.....4,570.....
..4,580..

```

> .....4,590.....4,600.....4,610.....4,620.....4,6
30.....
>
4,640.....4,650.....4,660.....4,670.....4,680.....
..4,690..

> .....4,700.....4,710.....4,720.....4,730.....4,7
40.....
>
4,750.....4,760.....4,770.....4,780.....4,790.....
..4,800..

> .....4,810.....4,820.....4,830.....4,840.....4,8
50.....
>
4,860.....4,870.....4,880.....4,890.....4,900.....
..4,910..

> .....4,920.....4,930.....4,940.....4,950.....4,9
60.....
> 4,970.....4,980.....4,990.....5,000 done

```

```

Structural equation model
Number of obs = 43
Estimation method: ml
Replications = 5,000

Log likelihood = -162.52902

```

		Observed	Bootstrap			
Normal-based		coefficient	std. err.	z	P> z	[95%
conf. interval]						

+-----						
Structural						
pc1iq						
	po_s	14.40781	10.84795	1.33	0.184	
-6.853778	35.6694					
	_cons	-1.262046	.7442962	-1.70	0.090	
-2.72084	.1967475					

+-----						
pc2iq						
	po_s	6.164646	6.648273	0.93	0.354	
-6.865729	19.19502					
	_cons	-.3186461	.35259	-0.90	0.366	
-1.00971	.3724175					

+-----						
pc1out						

.4873071	pc1iq	.5674503	.0408901	13.88	0.000
	.6475935				
.5648771	pc2iq	.7098282	.073956	9.60	0.000
	.8547793				
-4.308681	po_s	1.85099	3.142747	0.59	0.556
	8.01066				
-.1646061	_cons	.2075745	.1898915	1.09	0.274
	.5797551				

+-----					
	var(e.pc1iq)	8.887686	1.736982		
6.05944	13.03602				
	var(e.pc2iq)	1.958486	.3816787		
1.336701	2.869502				
	var(e.pc1out)	.6491448	.1314657		
.4364707	.9654461				

4 . estat teffects

Direct effects

		Observed	Bootstrap			
		coefficient	std. err.	z	P> z	[95%
Normal-based						
conf. interval]						

+-----						
	Structural					
	pc1iq					
	po_s	14.40781	10.84795	1.33	0.184	
-6.853778	35.6694					

+-----						
	pc2iq					
	po_s	6.164646	6.648273	0.93	0.354	
-6.865729	19.19502					

+-----						
	pc1out					
	pc1iq	.5674503	.0408901	13.88	0.000	
.4873071	.6475935					
	pc2iq	.7098282	.073956	9.60	0.000	
.5648771	.8547793					
	po_s	1.85099	3.142747	0.59	0.556	
-4.308681	8.01066					

Indirect effects

		Observed	Bootstrap			
Normal-based		coefficient	std. err.	z	P> z	[95% conf. interval]

+-----						
Structural						
pc1iq						
po_s		0	(no path)			

+-----						
pc2iq						
po_s		0	(no path)			

+-----						
pc1out						
pc1iq		0	(no path)			
pc2iq		0	(no path)			
po_s		12.55156	6.164725	2.04	0.042	
.4689164	24.63419					

Total effects

		Observed	Bootstrap			
Normal-based		coefficient	std. err.	z	P> z	[95% conf. interval]

+-----						
Structural						
pc1iq						
po_s		14.40781	10.84795	1.33	0.184	
-6.853778	35.6694					

+-----						
pc2iq						
po_s		6.164646	6.648273	0.93	0.354	
-6.865729	19.19502					

+-----						
pc1out						
pc1iq		.5674503	.0408901	13.88	0.000	

.4873071	.6475935				
	pc2iq	.7098282	.073956	9.60	0.000
.5648771	.8547793				
	po_s	14.40255	6.246173	2.31	0.021
2.160272	26.64482				

5 . nlcom _b[pc1iq:po_s] * _b[pc1out:pc1iq]

_nl_1: _b[pc1iq:po_s] * _b[pc1out:pc1iq]

		Coefficient	Std. err.	z	P> z	[95% conf. interval]
--	--	-------------	-----------	---	------	-------------------------

+-----

	_nl_1	8.175716	6.109501	1.34	0.181	
-3.798686	20.15012					

6 . nlcom _b[pc2iq:po_s] * _b[pc1out:pc2iq]

_nl_1: _b[pc2iq:po_s] * _b[pc1out:pc2iq]

		Coefficient	Std. err.	z	P> z	[95% conf. interval]
--	--	-------------	-----------	---	------	-------------------------

+-----

	_nl_1	4.375839	4.793183	0.91	0.361	
-5.018627	13.77031					

7 . nlcom (_b[pc1iq:po_s] * _b[pc1out:pc1iq]) + (_b[pc2iq:po_s]
* _b[pc1out:pc2iq
>]) + _b[pc1out:po_s]

_nl_1: (_b[pc1iq:po_s] * _b[pc1out:pc1iq]) +
(_b[pc2iq:po_s] * _b[pc1out
> :pc2iq]) + _b[pc1out:po_s]

		Coefficient	Std. err.	z	P> z	[95% conf. interval]

+	-----					
	_nl_1	14.40255	6.246173	2.31	0.021	
2.160272	26.64482					

```

8 .
9 . * Аналіз 2: pos_m як предиктор
10 . sem (pc1iq <- pos_m) (pc2iq <- pos_m) (pc1out <- pc1iq
pc2iq pos_m), vce(boot
> strap, reps(5000))
(running sem on estimation sample)

Bootstrap replications
(5,000): .....10.....20.....30.....40...
> .....50.....60.....70.....80.....90.....100..
.....110.
> .....120.....130.....140.....150.....160.....
..170.....
> ...180.....190.....200.....210.....220.....230
.....24
>
0.....250.....260.....270.....280.....290.....
..300....
> .....310.....320.....330.....340.....350.....3
60.....
>
370.....380.....390.....400.....410.....420.....
....430..
> .....440.....450.....460.....470.....480.....
.490.....
> ..500.....510.....520.....530.....540.....550.
.....560
> .....570.....580.....590.....600.....610.....
...620.....
> ....630.....640.....650.....660.....670.....68
0.....6
>
90.....700.....710.....720.....730.....740.....
...750...
> .....760.....770.....780.....790.....800.....

```

810.....
>
.820.....830.....840.....850.....860.....870....
.....880.

>890.....900.....910.....920.....930.....
..940.....

> ...950.....960.....970.....980.....990.....1,0
00.....
>
1,010.....1,020.....1,030.....1,040.....1,050.....
..1,060..

>1,070.....1,080.....1,090.....1,100.....1,1
10.....
>
1,120.....1,130.....1,140.....1,150.....1,160.....
..1,170..

>1,180.....1,190.....1,200.....1,210.....1,2
20.....
>
1,230.....1,240.....1,250.....1,260.....1,270.....
..1,280..

>1,290.....1,300.....1,310.....1,320.....1,3
30.....
>
1,340.....1,350.....1,360.....1,370.....1,380.....
..1,390..

>1,400.....1,410.....1,420.....1,430.....1,4
40.....
>
1,450.....1,460.....1,470.....1,480.....1,490.....
..1,500..

>1,510.....1,520.....1,530.....1,540.....1,5
50.....
>
1,560.....1,570.....1,580.....1,590.....1,600.....
..1,610..

>1,620.....1,630.....1,640.....1,650.....1,6
60.....
>
1,670.....1,680.....1,690.....1,700.....1,710.....
..1,720..

>1,730.....1,740.....1,750.....1,760.....1,7
70.....
>
1,780.....1,790.....1,800.....1,810.....1,820.....

..1,830..

>1,840.....1,850.....1,860.....1,870.....1,880.....

>
1,890.....1,900.....1,910.....1,920.....1,930.....
..1,940..

>1,950.....1,960.....1,970.....1,980.....1,990.....

>
2,000.....2,010.....2,020.....2,030.....2,040.....
..2,050..

>2,060.....2,070.....2,080.....2,090.....2,100.....

>
2,110.....2,120.....2,130.....2,140.....2,150.....
..2,160..

>2,170.....2,180.....2,190.....2,200.....2,210.....

>
2,220.....2,230.....2,240.....2,250.....2,260.....
..2,270..

>2,280.....2,290.....2,300.....2,310.....2,320.....

>
2,330.....2,340.....2,350.....2,360.....2,370.....
..2,380..

>2,390.....2,400.....2,410.....2,420.....2,430.....

>
2,440.....2,450.....2,460.....2,470.....2,480.....
..2,490..

>2,500.....2,510.....2,520.....2,530.....2,540.....

>
2,550.....2,560.....2,570.....2,580.....2,590.....
..2,600..

>2,610.....2,620.....2,630.....2,640.....2,650.....

>
2,660.....2,670.....2,680.....2,690.....2,700.....
..2,710..

>2,720.....2,730.....2,740.....2,750.....2,760.....

>
2,770.....2,780.....2,790.....2,800.....2,810.....

..2,820..

>2,830.....2,840.....2,850.....2,860.....2,870.....

>
2,880.....2,890.....2,900.....2,910.....2,920.....
..2,930..

>2,940.....2,950.....2,960.....2,970.....2,980.....

>
2,990.....3,000.....3,010.....3,020.....3,030.....
..3,040..

>3,050.....3,060.....3,070.....3,080.....3,090.....

>
3,100.....3,110.....3,120.....3,130.....3,140.....
..3,150..

>3,160.....3,170.....3,180.....3,190.....3,200.....

>
3,210.....3,220.....3,230.....3,240.....3,250.....
..3,260..

>3,270.....3,280.....3,290.....3,300.....3,310.....

>
3,320.....3,330.....3,340.....3,350.....3,360.....
..3,370..

>3,380.....3,390.....3,400.....3,410.....3,420.....

>
3,430.....3,440.....3,450.....3,460.....3,470.....
..3,480..

>3,490.....3,500.....3,510.....3,520.....3,530.....

>
3,540.....3,550.....3,560.....3,570.....3,580.....
..3,590..

>3,600.....3,610.....3,620.....3,630.....3,640.....

>
3,650.....3,660.....3,670.....3,680.....3,690.....
..3,700..

>3,710.....3,720.....3,730.....3,740.....3,750.....

>
3,760.....3,770.....3,780.....3,790.....3,800.....

..3,810..

>3,820.....3,830.....3,840.....3,850.....3,860.....

>
3,870.....3,880.....3,890.....3,900.....3,910.....
..3,920..

>3,930.....3,940.....3,950.....3,960.....3,970.....

>
3,980.....3,990.....4,000.....4,010.....4,020.....
..4,030..

>4,040.....4,050.....4,060.....4,070.....4,080.....

>
4,090.....4,100.....4,110.....4,120.....4,130.....
..4,140..

>4,150.....4,160.....4,170.....4,180.....4,190.....

>
4,200.....4,210.....4,220.....4,230.....4,240.....
..4,250..

>4,260.....4,270.....4,280.....4,290.....4,300.....

>
4,310.....4,320.....4,330.....4,340.....4,350.....
..4,360..

>4,370.....4,380.....4,390.....4,400.....4,410.....

>
4,420.....4,430.....4,440.....4,450.....4,460.....
..4,470..

>4,480.....4,490.....4,500.....4,510.....4,520.....

>
4,530.....4,540.....4,550.....4,560.....4,570.....
..4,580..

>4,590.....4,600.....4,610.....4,620.....4,630.....

>
4,640.....4,650.....4,660.....4,670.....4,680.....
..4,690..

>4,700.....4,710.....4,720.....4,730.....4,740.....

>
4,750.....4,760.....4,770.....4,780.....4,790.....

```
> .....4,810.....4,820.....4,830.....4,840.....4,850.....
>
> .....4,860.....4,870.....4,880.....4,890.....4,900.....
> .....4,910.....
> .....4,920.....4,930.....4,940.....4,950.....4,960.....
> .....4,970.....4,980.....4,990.....5,000 done
```

Log likelihood = -197.82422

Normal-based		Observed	Bootstrap			
conf. interval]		coefficient	std. err.	z	P> z	[95%
+-----						
Structural						
pc1iq						
1.766091	pos_m	8.854376	3.616539	2.45	0.014	
	15.94266					
-5.357909	_cons	-3.039638	1.182813	-2.57	0.010	
	-.7213677					
+-----						
pc2iq						
-5.062608	pos_m	-1.140033	2.001351	-0.57	0.569	
	2.782542					
-.8202745	_cons	.3490479	.596604	0.59	0.559	
	1.51837					
+-----						
pc1out						
.467863	pc1iq	.5501953	.042007	13.10	0.000	
	.6325275					
.6165812	pc2iq	.7328777	.059336	12.35	0.000	
	.8491742					
.0904893	pos_m	2.192179	1.07231	2.04	0.041	
	4.293868					
-.9096953	_cons	-.3350304	.2932018	-1.14	0.253	
	.2396345					
+-----						
+-----						

var(e.pc1iq)	8.416542	1.705279
5.658111 12.51976		
var(e.pc2iq)	2.01965	.5021123
1.240669 3.287732		
var(e.pc1out)	.6065356	.131443
.3966355 .9275153		

11 . estat teffects

Direct effects

		Observed	Bootstrap			
Normal-based		coefficient	std. err.	z	P> z	[95%
conf. interval]						

+-----

Structural						
pc1iq						
pos_m		8.854376	3.616539	2.45	0.014	
1.766091 15.94266						

+-----

pc2iq						
pos_m		-1.140033	2.001351	-0.57	0.569	
-5.062608 2.782542						

+-----

pc1out						
pc1iq		.5501953	.042007	13.10	0.000	
.467863 .6325275						
pc2iq		.7328777	.059336	12.35	0.000	
.6165812 .8491742						
pos_m		2.192179	1.07231	2.04	0.041	
.0904893 4.293868						

Indirect effects

		Observed	Bootstrap			
Normal-based		coefficient	std. err.	z	P> z	[95%
conf. interval]						

+-----					
Structural					
pc1iq					
pos_m		0 (no path)			

+-----					
pc2iq					
pos_m		0 (no path)			

+-----					
pc1out					
pc1iq		0	(no path)		
pc2iq		0	(no path)		
pos_m		4.036131	2.228856	1.81	0.070
-.3323462	8.404608				

Total effects

		Observed	Bootstrap		
Normal-based		coefficient	std. err.	z	P> z
conf. interval]					[95%

+					
Structural					
pc1iq					
pos_m		8.854376	3.616539	2.45	0.014
1.766091	15.94266				

+					
pc2iq					
pos_m		-1.140033	2.001351	-0.57	0.569
-5.062608	2.782542				

+					
pc1out					
pc1iq		.5501953	.042007	13.10	0.000
.467863	.6325275				
pc2iq		.7328777	.059336	12.35	0.000
.6165812	.8491742				
pos_m		6.228309	2.287642	2.72	0.006
1.744614	10.712				

12 . nlcom _b[pc1iq:pos_m] * _b[pc1out:pc1iq]

```
_nl_1: _b[pc1iq:pos_m] * _b[pc1out:pc1iq]
```

		Coefficient	Std. err.	z	P> z	[95% conf. interval]
	_nl_1	4.871636	1.963479	2.48	0.013	
1.023288	8.719983					

```
13 . nlcom _b[pc2iq:pos_m] * _b[pc1out:pc2iq]
```

```
_nl_1: _b[pc2iq:pos_m] * _b[pc1out:pc2iq]
```

		Coefficient	Std. err.	z	P> z	[95% conf. interval]
	_nl_1	-.8355048	1.471972	-0.57	0.570	
-3.720517	2.049507					

```
14 . nlcom (_b[pc1iq:pos_m] * _b[pc1out:pc1iq]) +  
(_b[pc2iq:pos_m] * _b[pc1out:pc2  
> iq]) + _b[pc1out:pos_m]
```

```
_nl_1: (_b[pc1iq:pos_m] * _b[pc1out:pc1iq]) +  
(_b[pc2iq:pos_m] * _b[pc1o  
> ut:pc2iq]) + _b[pc1out:pos_m]
```

		Coefficient	Std. err.	z	P> z	[95% conf. interval]
	_nl_1	6.228309	2.287642	2.72	0.006	
1.744614	10.712					

```

15 .
16 . * Аналіз 3: neu_s як предиктор
17 . sem (pc1iq <- neu_s) (pc2iq <- neu_s) (pc1out <- pc1iq
pc2iq neu_s), vce(boot
> strap, reps(5000))
(running sem on estimation sample)

      Bootstrap replications
(5,000): .....10.....20.....30.....40...
> .....50.....60.....70.....80.....90.....100..
.....110.

> .....120.....130.....140.....150.....160.....
..170.....

> ...180.....190.....200.....210.....220.....230
.....24
>
0.....250.....260.....270.....280.....290.....
..300....

> .....310.....320.....330.....340.....350.....3
60.....
>
370.....380.....390.....400.....410.....420.....
....430..

> .....440.....450.....460.....470.....480.....
.490.....

> ..500.....510.....520.....530.....540.....550.
.....560

> .....570.....580.....590.....600.....610.....
...620.....

> ....630.....640.....650.....660.....670.....68
0.....6
>
90.....700.....710.....720.....730.....740.....
...750...

> .....760.....770.....780.....790.....800.....
810.....
>
.820.....830.....840.....850.....860.....870.....
.....880.

> .....890.....900.....910.....920.....930.....
..940.....

> ...950.....960.....970.....980.....990.....1,0
00.....

```

>
1,010.....1,020.....1,030.....1,040.....1,050.....
..1,060..

>1,070.....1,080.....1,090.....1,100.....1,1
10.....

>
1,120.....1,130.....1,140.....1,150.....1,160.....
..1,170..

>1,180.....1,190.....1,200.....1,210.....1,2
20.....

>
1,230.....1,240.....1,250.....1,260.....1,270.....
..1,280..

>1,290.....1,300.....1,310.....1,320.....1,3
30.....

>
1,340.....1,350.....1,360.....1,370.....1,380.....
..1,390..

>1,400.....1,410.....1,420.....1,430.....1,4
40.....

>
1,450.....1,460.....1,470.....1,480.....1,490.....
..1,500..

>1,510.....1,520.....1,530.....1,540.....1,5
50.....

>
1,560.....1,570.....1,580.....1,590.....1,600.....
..1,610..

>1,620.....1,630.....1,640.....1,650.....1,6
60.....

>
1,670.....1,680.....1,690.....1,700.....1,710.....
..1,720..

>1,730.....1,740.....1,750.....1,760.....1,7
70.....

>
1,780.....1,790.....1,800.....1,810.....1,820.....
..1,830..

>1,840.....1,850.....1,860.....1,870.....1,8
80.....

>
1,890.....1,900.....1,910.....1,920.....1,930.....
..1,940..

>1,950.....1,960.....1,970.....1,980.....1,9
90.....

>
2,000.....2,010.....2,020.....2,030.....2,040.....
..2,050..

>2,060.....2,070.....2,080.....2,090.....2,1
00.....

>
2,110.....2,120.....2,130.....2,140.....2,150.....
..2,160..

>2,170.....2,180.....2,190.....2,200.....2,2
10.....

>
2,220.....2,230.....2,240.....2,250.....2,260.....
..2,270..

>2,280.....2,290.....2,300.....2,310.....2,3
20.....

>
2,330.....2,340.....2,350.....2,360.....2,370.....
..2,380..

>2,390.....2,400.....2,410.....2,420.....2,4
30.....

>
2,440.....2,450.....2,460.....2,470.....2,480.....
..2,490..

>2,500.....2,510.....2,520.....2,530.....2,5
40.....

>
2,550.....2,560.....2,570.....2,580.....2,590.....
..2,600..

>2,610.....2,620.....2,630.....2,640.....2,6
50.....

>
2,660.....2,670.....2,680.....2,690.....2,700.....
..2,710..

>2,720.....2,730.....2,740.....2,750.....2,7
60.....

>
2,770.....2,780.....2,790.....2,800.....2,810.....
..2,820..

>2,830.....2,840.....2,850.....2,860.....2,8
70.....

>
2,880.....2,890.....2,900.....2,910.....2,920.....
..2,930..

>2,940.....2,950.....2,960.....2,970.....2,9
80.....

>
2,990.....3,000.....3,010.....3,020.....3,030.....
..3,040..

>3,050.....3,060.....3,070.....3,080.....3,0
90.....

>
3,100.....3,110.....3,120.....3,130.....3,140.....
..3,150..

>3,160.....3,170.....3,180.....3,190.....3,2
00.....

>
3,210.....3,220.....3,230.....3,240.....3,250.....
..3,260..

>3,270.....3,280.....3,290.....3,300.....3,3
10.....

>
3,320.....3,330.....3,340.....3,350.....3,360.....
..3,370..

>3,380.....3,390.....3,400.....3,410.....3,4
20.....

>
3,430.....3,440.....3,450.....3,460.....3,470.....
..3,480..

>3,490.....3,500.....3,510.....3,520.....3,5
30.....

>
3,540.....3,550.....3,560.....3,570.....3,580.....
..3,590..

>3,600.....3,610.....3,620.....3,630.....3,6
40.....

>
3,650.....3,660.....3,670.....3,680.....3,690.....
..3,700..

>3,710.....3,720.....3,730.....3,740.....3,7
50.....

>
3,760.....3,770.....3,780.....3,790.....3,800.....
..3,810..

>3,820.....3,830.....3,840.....3,850.....3,8
60.....

>
3,870.....3,880.....3,890.....3,900.....3,910.....
..3,920..

>3,930.....3,940.....3,950.....3,960.....3,9
70.....

>
3,980.....3,990.....4,000.....4,010.....4,020.....
..4,030..

>4,040.....4,050.....4,060.....4,070.....4,0
80.....

>
4,090.....4,100.....4,110.....4,120.....4,130.....
..4,140..

>4,150.....4,160.....4,170.....4,180.....4,1
90.....

>
4,200.....4,210.....4,220.....4,230.....4,240.....
..4,250..

>4,260.....4,270.....4,280.....4,290.....4,3
00.....

>
4,310.....4,320.....4,330.....4,340.....4,350.....
..4,360..

>4,370.....4,380.....4,390.....4,400.....4,4
10.....

>
4,420.....4,430.....4,440.....4,450.....4,460.....
..4,470..

>4,480.....4,490.....4,500.....4,510.....4,5
20.....

>
4,530.....4,540.....4,550.....4,560.....4,570.....
..4,580..

>4,590.....4,600.....4,610.....4,620.....4,6
30.....

>
4,640.....4,650.....4,660.....4,670.....4,680.....
..4,690..

>4,700.....4,710.....4,720.....4,730.....4,7
40.....

>
4,750.....4,760.....4,770.....4,780.....4,790.....
..4,800..

>4,810.....4,820.....4,830.....4,840.....4,8
50.....

>
4,860.....4,870.....4,880.....4,890.....4,900.....
..4,910..

>4,920.....4,930.....4,940.....4,950.....4,9
60.....

```
> 4,970.....4,980.....4,990.....5,000 done
```

```

Structural equation model
Number of obs =      43
Estimation method: ml
Replications   = 5,000

```

Log likelihood = -39.125994

Normal-based		Observed	Bootstrap		
[95% conf. interval]		coefficient	std. err.	z	P> z

+-----					
Structural					
pc1iq					
	neu_s	-45.14826	194.5693	-0.23	0.817
-426.4971	336.2006				
	_cons	-.3673617	.6221696	-0.59	0.555
-1.586792	.8520683				

+-----					
pc2iq					
	neu_s	144.2066	63.97534	2.25	0.024
18.81722	269.5959				
	_cons	-.3209134	.277193	-1.16	0.247
-.8642017	.222375				

+-----					
pc1out					
	pc1iq	.5730156	.0420648	13.62	0.000
.49057	.6554612				
	pc2iq	.7323858	.0727019	10.07	0.000
.5898927	.8748789				
	neu_s	-24.02521	60.69319	-0.40	0.692
-142.9817	94.93126				
	_cons	.3676477	.1695157	2.17	0.030
.0354032	.6998923				

+-----					
var(e.pc1iq)		9.289143	1.74601		
6.426607	13.42671				
var(e.pc2iq)		1.903522	.4796455		
1.161646	3.11919				
var(e.pc1out)		.6519954	.1297527		
.441416	.9630325				

18 . estat teffects

Direct effects

Normal-based		Observed	Bootstrap			
conf. interval]		coefficient	std. err.	z	P> z	[95%
+-----						
Structural						
pc1iq						
neu_s		-45.14826	194.5693	-0.23	0.817	
-426.4971	336.2006					
+-----						
pc2iq						
neu_s		144.2066	63.97534	2.25	0.024	
18.81722	269.5959					
+-----						
pc1out						
pc1iq		.5730156	.0420648	13.62	0.000	
.49057	.6554612					
pc2iq		.7323858	.0727019	10.07	0.000	
.5898927	.8748789					
neu_s		-24.02521	60.69319	-0.40	0.692	
-142.9817	94.93126					
+-----						

Indirect effects

	Observed	Bootstrap			
Normal-based	coefficient	std. err.	z	P> z	[95%
conf. interval]					
Structural					
pc1iq					
neu_s	0	(no path)			
pc2iq					
neu_s	0	(no path)			

+-----					
	pc1out				
	pc1iq		0	(no path)	
	pc2iq		0	(no path)	
	neu_s		79.74419	119.8683	0.67 0.506
-155.1934	314.6818				

Total effects

+-----					

			Observed	Bootstrap	
Normal-based			coefficient	std. err.	z P> z [95%
conf. interval]					

+-----					
	Structural				
	pc1iq				
	neu_s		-45.14826	194.5693	-0.23 0.817
-426.4971	336.2006				

+-----					
	pc2iq				
	neu_s		144.2066	63.97534	2.25 0.024
18.81722	269.5959				

+-----					
	pc1out				
	pc1iq		.5730156	.0420648	13.62 0.000
.49057	.6554612				
	pc2iq		.7323858	.0727019	10.07 0.000
.5898927	.8748789				
	neu_s		55.71899	122.0283	0.46 0.648
-183.4521	294.8901				

19 . nlcom _b[pc1iq:neu_s] * _b[pc1out:pc1iq]

_nl_1: _b[pc1iq:neu_s] * _b[pc1out:pc1iq]

+-----					

			Coefficient	Std. err.	z P> z [95%
conf. interval]					

+-----					

>50.....60.....70.....80.....90.....100..
.....110.

>120.....130.....140.....150.....160.....
..170.....

> ...180.....190.....200.....210.....220.....230
.....24

>
0.....250.....260.....270.....280.....290.....
..300.....

>310.....320.....330.....340.....350.....3
60.....

>
370.....380.....390.....400.....410.....420.....
....430..

>440.....450.....460.....470.....480.....
.490.....

> ..500.....510.....520.....530.....540.....550..
.....560

>570.....580.....590.....600.....610.....
...620.....

>630.....640.....650.....660.....670.....68
0.....6

>
90.....700.....710.....720.....730.....740.....
...750...

>760.....770.....780.....790.....800.....
810.....

>
.820.....830.....840.....850.....860.....870.....
.....880.

>890.....900.....910.....920.....930.....
..940.....

> ...950.....960.....970.....980.....990.....1,0
00.....

>
1,010.....1,020.....1,030.....1,040.....1,050.....
..1,060..

>1,070.....1,080.....1,090.....1,100.....1,1
10.....

>
1,120.....1,130.....1,140.....1,150.....1,160.....
..1,170..

>1,180.....1,190.....1,200.....1,210.....1,220.....

>
1,230.....1,240.....1,250.....1,260.....1,270.....
..1,280..

>1,290.....1,300.....1,310.....1,320.....1,330.....

>
1,340.....1,350.....1,360.....1,370.....1,380.....
..1,390..

>1,400.....1,410.....1,420.....1,430.....1,440.....

>
1,450.....1,460.....1,470.....1,480.....1,490.....
..1,500..

>1,510.....1,520.....1,530.....1,540.....1,550.....

>
1,560.....1,570.....1,580.....1,590.....1,600.....
..1,610..

>1,620.....1,630.....1,640.....1,650.....1,660.....

>
1,670.....1,680.....1,690.....1,700.....1,710.....
..1,720..

>1,730.....1,740.....1,750.....1,760.....1,770.....

>
1,780.....1,790.....1,800.....1,810.....1,820.....
..1,830..

>1,840.....1,850.....1,860.....1,870.....1,880.....

>
1,890.....1,900.....1,910.....1,920.....1,930.....
..1,940..

>1,950.....1,960.....1,970.....1,980.....1,990.....

>
2,000.....2,010.....2,020.....2,030.....2,040.....
..2,050..

>2,060.....2,070.....2,080.....2,090.....2,100.....

>
2,110.....2,120.....2,130.....2,140.....2,150.....
..2,160..

>2,170.....2,180.....2,190.....2,200.....2,210.....

>
2,220.....2,230.....2,240.....2,250.....2,260.....
..2,270..

>2,280.....2,290.....2,300.....2,310.....2,320.....

>
2,330.....2,340.....2,350.....2,360.....2,370.....
..2,380..

>2,390.....2,400.....2,410.....2,420.....2,430.....

>
2,440.....2,450.....2,460.....2,470.....2,480.....
..2,490..

>2,500.....2,510.....2,520.....2,530.....2,540.....

>
2,550.....2,560.....2,570.....2,580.....2,590.....
..2,600..

>2,610.....2,620.....2,630.....2,640.....2,650.....

>
2,660.....2,670.....2,680.....2,690.....2,700.....
..2,710..

>2,720.....2,730.....2,740.....2,750.....2,760.....

>
2,770.....2,780.....2,790.....2,800.....2,810.....
..2,820..

>2,830.....2,840.....2,850.....2,860.....2,870.....

>
2,880.....2,890.....2,900.....2,910.....2,920.....
..2,930..

>2,940.....2,950.....2,960.....2,970.....2,980.....

>
2,990.....3,000.....3,010.....3,020.....3,030.....
..3,040..

>3,050.....3,060.....3,070.....3,080.....3,090.....

>
3,100.....3,110.....3,120.....3,130.....3,140.....
..3,150..

>3,160.....3,170.....3,180.....3,190.....3,200.....

>
3,210.....3,220.....3,230.....3,240.....3,250.....
..3,260..

>3,270.....3,280.....3,290.....3,300.....3,310.....

>
3,320.....3,330.....3,340.....3,350.....3,360.....
..3,370..

>3,380.....3,390.....3,400.....3,410.....3,420.....

>
3,430.....3,440.....3,450.....3,460.....3,470.....
..3,480..

>3,490.....3,500.....3,510.....3,520.....3,530.....

>
3,540.....3,550.....3,560.....3,570.....3,580.....
..3,590..

>3,600.....3,610.....3,620.....3,630.....3,640.....

>
3,650.....3,660.....3,670.....3,680.....3,690.....
..3,700..

>3,710.....3,720.....3,730.....3,740.....3,750.....

>
3,760.....3,770.....3,780.....3,790.....3,800.....
..3,810..

>3,820.....3,830.....3,840.....3,850.....3,860.....

>
3,870.....3,880.....3,890.....3,900.....3,910.....
..3,920..

>3,930.....3,940.....3,950.....3,960.....3,970.....

>
3,980.....3,990.....4,000.....4,010.....4,020.....
..4,030..

>4,040.....4,050.....4,060.....4,070.....4,080.....

>
4,090.....4,100.....4,110.....4,120.....4,130.....
..4,140..

```

> .....4,150.....4,160.....4,170.....4,180.....4,1
90.....
>
4,200.....4,210.....4,220.....4,230.....4,240.....
..4,250..

> .....4,260.....4,270.....4,280.....4,290.....4,3
00.....
>
4,310.....4,320.....4,330.....4,340.....4,350.....
..4,360..

> .....4,370.....4,380.....4,390.....4,400.....4,4
10.....
>
4,420.....4,430.....4,440.....4,450.....4,460.....
..4,470..

> .....4,480.....4,490.....4,500.....4,510.....4,5
20.....
>
4,530.....4,540.....4,550.....4,560.....4,570.....
..4,580..

> .....4,590.....4,600.....4,610.....4,620.....4,6
30.....
>
4,640.....4,650.....4,660.....4,670.....4,680.....
..4,690..

> .....4,700.....4,710.....4,720.....4,730.....4,7
40.....
>
4,750.....4,760.....4,770.....4,780.....4,790.....
..4,800..

> .....4,810.....4,820.....4,830.....4,840.....4,8
50.....
>
4,860.....4,870.....4,880.....4,890.....4,900.....
..4,910..

> .....4,920.....4,930.....4,940.....4,950.....4,9
60.....
> 4,970.....4,980.....4,990.....5,000 done

```

```

Structural equation model
Number of obs = 43
Estimation method: ml
Replications = 5,000

```

```

Log likelihood = -137.23044

```


		Observed	Bootstrap			
Normal-based		coefficient	std. err.	z	P> z	[95%
conf. interval]						
+-----						
Structural						
pc1iq						
10.33717	neu_p	42.56711	16.44415	2.59	0.010	
	74.79705					
	_cons	-2.27927	.6818433	-3.34	0.001	
-3.615658	-.9428817					
+-----						
pc2iq						
2.454102	neu_p	17.72169	7.789729	2.28	0.023	
	32.98928					
	_cons	-.7330388	.3475473	-2.11	0.035	
-1.414219	-.0518587					
+-----						
pc1out						
.4578392	pc1iq	.5465497	.0452613	12.08	0.000	
	.6352601					
.5125773	pc2iq	.6698452	.0802402	8.35	0.000	
	.8271131					
	neu_p	7.101821	5.07019	1.40	0.161	
-2.835569	17.03921					
	_cons	-.0015382	.2470554	-0.01	0.995	
-.4857579	.4826814					
+-----						
var(e.pc1iq)		7.874691	1.204085			
5.835525	10.62642					
var(e.pc2iq)		1.786946	.4013235			
1.15065	2.775106					
var(e.pc1out)		.6272178	.1221235			
.4282366	.9186563					
+-----						

conf. interval]					

+-----					
Structural					
pc1iq					
neu_p					
10.33717	74.79705	42.56711	16.44415	2.59	0.010

+-----					
pc2iq					
neu_p					
2.454102	32.98928	17.72169	7.789729	2.28	0.023

+-----					
pc1out					
pc1iq					
.4578392	.6352601	.5465497	.0452613	12.08	0.000
pc2iq					
.5125773	.8271131	.6698452	.0802402	8.35	0.000
neu_p					
-2.835569	17.03921	7.101821	5.07019	1.40	0.161

Indirect effects

Normal-based					
Observed					
Bootstrap					
coefficent					
std. err.					
z					
P> z					
[95%					
conf. interval]					

+-----					
Structural					
pc1iq					
neu_p					
0 (no path)					

+-----					
pc2iq					
neu_p					
0 (no path)					

+-----					
pc1out					
pc1iq					
0 (no path)					
pc2iq					
0 (no path)					
neu_p					
12.93099	57.34067	35.13583	11.32921	3.10	0.002

Total effects

		Observed	Bootstrap			
Normal-based		coefficient	std. err.	z	P> z	[95% conf. interval]

+-----						
Structural						
pc1iq						
neu_p		42.56711	16.44415	2.59	0.010	
10.33717	74.79705					

+-----						
pc2iq						
neu_p		17.72169	7.789729	2.28	0.023	
2.454102	32.98928					

+-----						
pc1out						
pc1iq		.5465497	.0452613	12.08	0.000	
.4578392	.6352601					
pc2iq		.6698452	.0802402	8.35	0.000	
.5125773	.8271131					
neu_p		42.23765	10.05368	4.20	0.000	
22.5328	61.94249					

26 . nlcom _b[pc1iq:neu_p] * _b[pc1out:pc1iq]

_nl_1: _b[pc1iq:neu_p] * _b[pc1out:pc1iq]

		Coefficient	Std. err.	z	P> z	[95% conf. interval]

+-----						
_nl_1		23.26504	9.240418	2.52	0.012	
5.154151	41.37592					

27 . nlcom _b[pc2iq:neu_p] * _b[pc1out:pc2iq]

_nl_1: _b[pc2iq:neu_p] * _b[pc1out:pc2iq]

```

-----
| Coefficient Std. err.      z    P>|z|    [95%
conf. interval]
-----+-----
      _nl_1 |   11.87079   5.530746   2.15   0.032
1.030726   22.71085

```

```

28 . nlcom (_b[pc1iq:neu_p] * _b[pc1out:pc1iq]) +
(_b[pc2iq:neu_p] * _b[pc1out:pc2
> iq]) + _b[pc1out:neu_p]

      _nl_1: (_b[pc1iq:neu_p] * _b[pc1out:pc1iq]) +
(_b[pc2iq:neu_p] * _b[pc1o
> ut:pc2iq]) + _b[pc1out:neu_p]

```

```

-----
| Coefficient Std. err.      z    P>|z|    [95%
conf. interval]
-----+-----
      _nl_1 |   42.23765  10.05368   4.20   0.000
22.5328   61.94249

```

```

29 .
30 . * Аналіз 5: neu_m як предиктор
31 . sem (pc1iq <- neu_m) (pc2iq <- neu_m) (pc1out <- pc1iq
pc2iq neu_m), vce(boot
> strap, reps(5000))
(running sem on estimation sample)

Bootstrap replications
(5,000): .....10.....20.....30.....40...
> .....50.....60.....70.....80.....90.....100..
.....110.

> .....120.....130.....140.....150.....160.....
..170.....

> ...180.....190.....200.....210.....220.....230
.....24
>
0.....250.....260.....270.....280.....290.....

```

..300....

>310.....320.....330.....340.....350.....360.....

>

370.....380.....390.....400.....410.....420.....
....430..

>440.....450.....460.....470.....480.....
.490.....

> ..500.....510.....520.....530.....540.....550.
.....560

>570.....580.....590.....600.....610.....
...620.....

>630.....640.....650.....660.....670.....680.....

>

90.....700.....710.....720.....730.....740.....
...750...

>760.....770.....780.....790.....800.....
810.....

>

.820.....830.....840.....850.....860.....870.....
.....880.

>890.....900.....910.....920.....930.....
..940.....

> ...950.....960.....970.....980.....990.....1,000.....

>

1,010.....1,020.....1,030.....1,040.....1,050.....
..1,060..

>1,070.....1,080.....1,090.....1,100.....1,110.....

>

1,120.....1,130.....1,140.....1,150.....1,160.....
..1,170..

>1,180.....1,190.....1,200.....1,210.....1,220.....

>

1,230.....1,240.....1,250.....1,260.....1,270.....
..1,280..

>1,290.....1,300.....1,310.....1,320.....1,330.....

>

1,340.....1,350.....1,360.....1,370.....1,380.....

..1,390..

>1,400.....1,410.....1,420.....1,430.....1,440.....

>
1,450.....1,460.....1,470.....1,480.....1,490.....
..1,500..

>1,510.....1,520.....1,530.....1,540.....1,550.....

>
1,560.....1,570.....1,580.....1,590.....1,600.....
..1,610..

>1,620.....1,630.....1,640.....1,650.....1,660.....

>
1,670.....1,680.....1,690.....1,700.....1,710.....
..1,720..

>1,730.....1,740.....1,750.....1,760.....1,770.....

>
1,780.....1,790.....1,800.....1,810.....1,820.....
..1,830..

>1,840.....1,850.....1,860.....1,870.....1,880.....

>
1,890.....1,900.....1,910.....1,920.....1,930.....
..1,940..

>1,950.....1,960.....1,970.....1,980.....1,990.....

>
2,000.....2,010.....2,020.....2,030.....2,040.....
..2,050..

>2,060.....2,070.....2,080.....2,090.....2,100.....

>
2,110.....2,120.....2,130.....2,140.....2,150.....
..2,160..

>2,170.....2,180.....2,190.....2,200.....2,210.....

>
2,220.....2,230.....2,240.....2,250.....2,260.....
..2,270..

>2,280.....2,290.....2,300.....2,310.....2,320.....

>
2,330.....2,340.....2,350.....2,360.....2,370.....

..2,380..

>2,390.....2,400.....2,410.....2,420.....2,430.....

>
2,440.....2,450.....2,460.....2,470.....2,480.....
..2,490..

>2,500.....2,510.....2,520.....2,530.....2,540.....

>
2,550.....2,560.....2,570.....2,580.....2,590.....
..2,600..

>2,610.....2,620.....2,630.....2,640.....2,650.....

>
2,660.....2,670.....2,680.....2,690.....2,700.....
..2,710..

>2,720.....2,730.....2,740.....2,750.....2,760.....

>
2,770.....2,780.....2,790.....2,800.....2,810.....
..2,820..

>2,830.....2,840.....2,850.....2,860.....2,870.....

>
2,880.....2,890.....2,900.....2,910.....2,920.....
..2,930..

>2,940.....2,950.....2,960.....2,970.....2,980.....

>
2,990.....3,000.....3,010.....3,020.....3,030.....
..3,040..

>3,050.....3,060.....3,070.....3,080.....3,090.....

>
3,100.....3,110.....3,120.....3,130.....3,140.....
..3,150..

>3,160.....3,170.....3,180.....3,190.....3,200.....

>
3,210.....3,220.....3,230.....3,240.....3,250.....
..3,260..

>3,270.....3,280.....3,290.....3,300.....3,310.....

>
3,320.....3,330.....3,340.....3,350.....3,360.....

..3,370..

>3,380.....3,390.....3,400.....3,410.....3,420.....

>
3,430.....3,440.....3,450.....3,460.....3,470.....
..3,480..

>3,490.....3,500.....3,510.....3,520.....3,530.....

>
3,540.....3,550.....3,560.....3,570.....3,580.....
..3,590..

>3,600.....3,610.....3,620.....3,630.....3,640.....

>
3,650.....3,660.....3,670.....3,680.....3,690.....
..3,700..

>3,710.....3,720.....3,730.....3,740.....3,750.....

>
3,760.....3,770.....3,780.....3,790.....3,800.....
..3,810..

>3,820.....3,830.....3,840.....3,850.....3,860.....

>
3,870.....3,880.....3,890.....3,900.....3,910.....
..3,920..

>3,930.....3,940.....3,950.....3,960.....3,970.....

>
3,980.....3,990.....4,000.....4,010.....4,020.....
..4,030..

>4,040.....4,050.....4,060.....4,070.....4,080.....

>
4,090.....4,100.....4,110.....4,120.....4,130.....
..4,140..

>4,150.....4,160.....4,170.....4,180.....4,190.....

>
4,200.....4,210.....4,220.....4,230.....4,240.....
..4,250..

>4,260.....4,270.....4,280.....4,290.....4,300.....

>
4,310.....4,320.....4,330.....4,340.....4,350.....


```

..4,360..

> .....4,370.....4,380.....4,390.....4,400.....4,4
10.....
>
4,420.....4,430.....4,440.....4,450.....4,460.....
..4,470..

> .....4,480.....4,490.....4,500.....4,510.....4,5
20.....
>
4,530.....4,540.....4,550.....4,560.....4,570.....
..4,580..

> .....4,590.....4,600.....4,610.....4,620.....4,6
30.....
>
4,640.....4,650.....4,660.....4,670.....4,680.....
..4,690..

> .....4,700.....4,710.....4,720.....4,730.....4,7
40.....
>
4,750.....4,760.....4,770.....4,780.....4,790.....
..4,800..

> .....4,810.....4,820.....4,830.....4,840.....4,8
50.....
>
4,860.....4,870.....4,880.....4,890.....4,900.....
..4,910..

> .....4,920.....4,930.....4,940.....4,950.....4,9
60.....
> 4,970.....4,980.....4,990.....5,000 done

```

```

Structural equation model
Number of obs = 43
Estimation method: ml
Replications = 5,000

```

```

Log likelihood = -134.73427

```

```

-----
-----
Normal-based          |   Observed   Bootstrap
                      | coefficient  std. err.      z    P>|z|    [95%
conf. interval]      |
-----+-----
      Structural      |
      pc1iq           |

```

```

neu_m | 36.48323 18.20669 2.00 0.045
.7987659 72.16769
_cons | -1.842805 .7360529 -2.50 0.012
-3.285442 -.4001679
-----
+-----
pc2iq |
neu_m | 16.59429 7.800762 2.13 0.033
1.305074 31.8835
_cons | -.6040716 .3618756 -1.67 0.095
-1.313335 .1051916
-----
+-----
pc1out |
pc1iq | .5730787 .0434131 13.20 0.000
.4879906 .6581668
pc2iq | .7208977 .0706995 10.20 0.000
.5823291 .8594662
neu_m | .1618662 5.116923 0.03 0.975
-9.867118 10.19085
_cons | .305242 .230054 1.33 0.185
-.1456555 .7561394
-----
+-----
var(e.pc1iq) | 8.512652 1.528842
5.986764 12.10424
var(e.pc2iq) | 1.871031 .4637697
1.151052 3.041354
var(e.pc1out) | .6553779 .1306289
.4434366 .9686168
-----
-----

```

32 . estat teffects

Direct effects

```

-----
-----
Normal-based | Observed Bootstrap
| coefficient std. err. z P>|z| [95%
conf. interval]
-----
+-----
Structural |
pc1iq |
neu_m | 36.48323 18.20669 2.00 0.045
.7987659 72.16769
-----
+-----
pc2iq |

```

1.305074	neu_m 31.8835	16.59429	7.800762	2.13	0.033

+-----					
	pc1out				
	pc1iq	.5730787	.0434131	13.20	0.000
.4879906	.6581668				
	pc2iq	.7208977	.0706995	10.20	0.000
.5823291	.8594662				
	neu_m	.1618662	5.116923	0.03	0.975
-9.867118	10.19085				

Total effects					
	Observed	Bootstrap			
Normal-based	coefficient	std. err.	z	P> z	[95%
conf. interval]					

+-----					
Structural					
pc1iq					
	neu_m	36.48323	18.20669	2.00	0.045
.7987659	72.16769				

+-----					
pc2iq					
	neu_m	16.59429	7.800762	2.13	0.033
1.305074	31.8835				

+-----					
pc1out					
	pc1iq	.5730787	.0434131	13.20	0.000
.4879906	.6581668				
	pc2iq	.7208977	.0706995	10.20	0.000
.5823291	.8594662				
	neu_m	33.03241	11.67693	2.83	0.005
10.14604	55.91878				

```
33 . nlcom _b[pc1iq:neu_m] * _b[pc1out:pc1iq]
      _nl_1: _b[pc1iq:neu_m] * _b[pc1out:pc1iq]
```

+-----					

		Coefficient	Std. err.	z	P> z
[95% conf. interval]					

	_nl_1	20.90776	10.34824	2.02	0.043
.6255759	41.18995				

```
34 . nlcom _b[pc2iq:neu_m] * _b[pc1out:pc2iq]
      _nl_1: _b[pc2iq:neu_m] * _b[pc1out:pc2iq]
```

+-----					

		Coefficient	Std. err.	z	P> z
[95% conf. interval]					

	_nl_1	11.96278	5.687091	2.10	0.035
.8162891	23.10928				

```

-----
35 . nlcom (_b[pc1iq:neu_m] * _b[pc1out:pc1iq]) +
(_b[pc2iq:neu_m] * _b[pc1out:pc2
    > iq]) + _b[pc1out:neu_m]

```

```

        _nl_1: (_b[pc1iq:neu_m] * _b[pc1out:pc1iq]) +
(_b[pc2iq:neu_m] * _b[pc1o
    > ut:pc2iq]) + _b[pc1out:neu_m]

```

```

-----
| Coefficient Std. err.      z    P>|z|    [95%
conf. interval]
-----+-----
      _nl_1 |   33.03241   11.67693    2.83   0.005
10.14604    55.91878

```

```

36 .
37 . * Аналіз 6: neu_n як предиктор
38 . sem (pc1iq <- neu_n) (pc2iq <- neu_n) (pc1out <- pc1iq
pc2iq neu_n), vce(boot
    > strap, reps(5000))
    (running sem on estimation sample)

Bootstrap replications
(5,000): .....10.....20.....30.....40...
> .....50.....60.....70.....80.....90.....100..
.....110.

> .....120.....130.....140.....150.....160.....
..170.....

> ...180.....190.....200.....210.....220.....230
.....24
>
0.....250.....260.....270.....280.....290.....
..300....

> .....310.....320.....330.....340.....350.....3
60.....
>
370.....380.....390.....400.....410.....420.....
....430..

> .....440.....450.....460.....470.....480.....
.490.....

```

> ..500.....510.....520.....530.....540.....550.
.....560

>570.....580.....590.....600.....610.....
...620.....

>630.....640.....650.....660.....670.....68
0.....6

>
90.....700.....710.....720.....730.....740.....
...750...

>760.....770.....780.....790.....800.....
810.....

>
.820.....830.....840.....850.....860.....870....
.....880.

>890.....900.....910.....920.....930.....
..940.....

> ...950.....960.....970.....980.....990.....1,0
00.....

>
1,010.....1,020.....1,030.....1,040.....1,050.....
..1,060..

>1,070.....1,080.....1,090.....1,100.....1,1
10.....

>
1,120.....1,130.....1,140.....1,150.....1,160.....
..1,170..

>1,180.....1,190.....1,200.....1,210.....1,2
20.....

>
1,230.....1,240.....1,250.....1,260.....1,270.....
..1,280..

>1,290.....1,300.....1,310.....1,320.....1,3
30.....

>
1,340.....1,350.....1,360.....1,370.....1,380.....
..1,390..

>1,400.....1,410.....1,420.....1,430.....1,4
40.....

>
1,450.....1,460.....1,470.....1,480.....1,490.....
..1,500..

>1,510.....1,520.....1,530.....1,540.....1,5
50.....

>
1,560.....1,570.....1,580.....1,590.....1,600.....
..1,610..

>1,620.....1,630.....1,640.....1,650.....1,6
60.....

>
1,670.....1,680.....1,690.....1,700.....1,710.....
..1,720..

>1,730.....1,740.....1,750.....1,760.....1,7
70.....

>
1,780.....1,790.....1,800.....1,810.....1,820.....
..1,830..

>1,840.....1,850.....1,860.....1,870.....1,8
80.....

>
1,890.....1,900.....1,910.....1,920.....1,930.....
..1,940..

>1,950.....1,960.....1,970.....1,980.....1,9
90.....

>
2,000.....2,010.....2,020.....2,030.....2,040.....
..2,050..

>2,060.....2,070.....2,080.....2,090.....2,1
00.....

>
2,110.....2,120.....2,130.....2,140.....2,150.....
..2,160..

>2,170.....2,180.....2,190.....2,200.....2,2
10.....

>
2,220.....2,230.....2,240.....2,250.....2,260.....
..2,270..

>2,280.....2,290.....2,300.....2,310.....2,3
20.....

>
2,330.....2,340.....2,350.....2,360.....2,370.....
..2,380..

>2,390.....2,400.....2,410.....2,420.....2,4
30.....

>
2,440.....2,450.....2,460.....2,470.....2,480.....
..2,490..

>2,500.....2,510.....2,520.....2,530.....2,5
40.....

>
2,550.....2,560.....2,570.....2,580.....2,590.....
..2,600..

>2,610.....2,620.....2,630.....2,640.....2,6
50.....

>
2,660.....2,670.....2,680.....2,690.....2,700.....
..2,710..

>2,720.....2,730.....2,740.....2,750.....2,7
60.....

>
2,770.....2,780.....2,790.....2,800.....2,810.....
..2,820..

>2,830.....2,840.....2,850.....2,860.....2,8
70.....

>
2,880.....2,890.....2,900.....2,910.....2,920.....
..2,930..

>2,940.....2,950.....2,960.....2,970.....2,9
80.....

>
2,990.....3,000.....3,010.....3,020.....3,030.....
..3,040..

>3,050.....3,060.....3,070.....3,080.....3,0
90.....

>
3,100.....3,110.....3,120.....3,130.....3,140.....
..3,150..

>3,160.....3,170.....3,180.....3,190.....3,2
00.....

>
3,210.....3,220.....3,230.....3,240.....3,250.....
..3,260..

>3,270.....3,280.....3,290.....3,300.....3,3
10.....

>
3,320.....3,330.....3,340.....3,350.....3,360.....
..3,370..

>3,380.....3,390.....3,400.....3,410.....3,4
20.....

>
3,430.....3,440.....3,450.....3,460.....3,470.....
..3,480..

>3,490.....3,500.....3,510.....3,520.....3,5
30.....

>
3,540.....3,550.....3,560.....3,570.....3,580.....
..3,590..

>3,600.....3,610.....3,620.....3,630.....3,6
40.....

>
3,650.....3,660.....3,670.....3,680.....3,690.....
..3,700..

>3,710.....3,720.....3,730.....3,740.....3,7
50.....

>
3,760.....3,770.....3,780.....3,790.....3,800.....
..3,810..

>3,820.....3,830.....3,840.....3,850.....3,8
60.....

>
3,870.....3,880.....3,890.....3,900.....3,910.....
..3,920..

>3,930.....3,940.....3,950.....3,960.....3,9
70.....

>
3,980.....3,990.....4,000.....4,010.....4,020.....
..4,030..

>4,040.....4,050.....4,060.....4,070.....4,0
80.....

>
4,090.....4,100.....4,110.....4,120.....4,130.....
..4,140..

>4,150.....4,160.....4,170.....4,180.....4,1
90.....

>
4,200.....4,210.....4,220.....4,230.....4,240.....
..4,250..

>4,260.....4,270.....4,280.....4,290.....4,3
00.....

>
4,310.....4,320.....4,330.....4,340.....4,350.....
..4,360..

>4,370.....4,380.....4,390.....4,400.....4,4
10.....

>
4,420.....4,430.....4,440.....4,450.....4,460.....
..4,470..

>4,480.....4,490.....4,500.....4,510.....4,5
20.....

```

>
4,530.....4,540.....4,550.....4,560.....4,570.....
..4,580..

> .....4,590.....4,600.....4,610.....4,620.....4,6
30.....
>
4,640.....4,650.....4,660.....4,670.....4,680.....
..4,690..

> .....4,700.....4,710.....4,720.....4,730.....4,7
40.....
>
4,750.....4,760.....4,770.....4,780.....4,790.....
..4,800..

> .....4,810.....4,820.....4,830.....4,840.....4,8
50.....
>
4,860.....4,870.....4,880.....4,890.....4,900.....
..4,910..

> .....4,920.....4,930.....4,940.....4,950.....4,9
60.....
> 4,970.....4,980.....4,990.....5,000 done

```

```

Structural equation model
Number of obs = 43
Estimation method: ml
Replications = 5,000

Log likelihood = -164.75065

```


		Observed	Bootstrap		
Normal-based		coefficient	std. err.	z	P> z
conf. interval]					[95%

+-----					
Structural					
pc1iq					
neu_n		17.95143	9.072705	1.98	0.048
.1692573					
35.73361					
_cons		-3.923315	1.633984	-2.40	0.016
-7.125865					
-.7207643					

+-----					
pc2iq					
neu_n		9.51477	4.092034	2.33	0.020
1.494532					
17.53501					
_cons		-1.809734	.8384653	-2.16	0.031

-3.453096 -.1663721

+-----					
	pc1out				
	pc1iq		.5844356	.0448685	13.03 0.000
.496495	.6723762				
	pc2iq		.747944	.0810287	9.23 0.000
.5891306	.9067573				
	neu_n		-2.113138	2.614631	-0.81 0.419
-7.237722	3.011445				
	_cons		.722262	.4901642	1.47 0.141
-.2384421	1.682966				

+-----					
	var(e.pc1iq)		8.488955	1.481107	
6.030332	11.94998				
	var(e.pc2iq)		1.805929	.4641142	
1.091306	2.988512				
	var(e.pc1out)		.6465038	.1310103	
.4345903	.9617499				

39 . estat teffects

Direct effects

			Observed	Bootstrap	
Normal-based			coefficient	std. err.	z P> z [95%
conf. interval]					

+-----					
	Structural				
	pc1iq				
	neu_n		17.95143	9.072705	1.98 0.048
.1692573	35.73361				

+-----					
	pc2iq				
	neu_n		9.51477	4.092034	2.33 0.020
1.494532	17.53501				

+-----					
	pc1out				
	pc1iq		.5844356	.0448685	13.03 0.000
.496495	.6723762				
	pc2iq		.747944	.0810287	9.23 0.000
.5891306	.9067573				
	neu_n		-2.113138	2.614631	-0.81 0.419

-7.237722 3.011445

Indirect effects

		Observed	Bootstrap			
Normal-based		coefficient	std. err.	z	P> z	[95%
conf. interval]						

+-----

Structural						
pc1iq						
neu_n		0	(no path)			

+-----

pc2iq						
neu_n		0	(no path)			

+-----

pc1out						
pc1iq		0	(no path)			
pc2iq		0	(no path)			
neu_n		17.60797	5.736511	3.07	0.002	
6.364617	28.85133					

Total effects

		Observed	Bootstrap			
Normal-based		coefficient	std. err.	z	P> z	[95%
conf. interval]						

+-----

Structural						
pc1iq						
neu_n		17.95143	9.072705	1.98	0.048	
.1692573	35.73361					

+-----

pc2iq						
neu_n		9.51477	4.092034	2.33	0.020	
1.494532	17.53501					

-----		Coefficient	Std. err.	z	P> z	[95%
conf. interval]						

+-----						
	_nl_1	15.49483	6.39919	2.42	0.015	
2.952651	28.03702					


```

43 .
44 . * Аналіз 7: neg_s як предиктор
45 . sem (pc1iq <- neg_s) (pc2iq <- neg_s) (pc1out <- pc1iq
pc2iq neg_s), vce(boot
> strap, reps(5000))
(running sem on estimation sample)

Bootstrap replications
(5,000): .....10.....20.....30.....40...
> .....50.....60.....70.....80.....90.....100..
.....110.

> .....120.....130.....140.....150.....160.....
..170.....

> ...180.....190.....200.....210.....220.....230
.....24
>
0.....250.....260.....270.....280.....290.....
..300....

> .....310.....320.....330.....340.....350.....3
60.....
>
370.....380.....390.....400.....410.....420.....
....430..

> .....440.....450.....460.....470.....480.....
.490.....

> ..500.....510.....520.....530.....540.....550.
.....560

> .....570.....580.....590.....600.....610.....
...620.....

> ....630.....640.....650.....660.....670.....68
0.....6
>

```

90.....700.....710.....720.....730.....740.....
...750...

>760.....770.....780.....790.....800.....
810.....

>
.820.....830.....840.....850.....860.....870....
.....880..

>890.....900.....910.....920.....930.....
..940.....

> ...950.....960.....970.....980.....990.....1,0
00.....

>
1,010.....1,020.....1,030.....1,040.....1,050.....
..1,060..

>1,070.....1,080.....1,090.....1,100.....1,1
10.....

>
1,120.....1,130.....1,140.....1,150.....1,160.....
..1,170..

>1,180.....1,190.....1,200.....1,210.....1,2
20.....

>
1,230.....1,240.....1,250.....1,260.....1,270.....
..1,280..

>1,290.....1,300.....1,310.....1,320.....1,3
30.....

>
1,340.....1,350.....1,360.....1,370.....1,380.....
..1,390..

>1,400.....1,410.....1,420.....1,430.....1,4
40.....

>
1,450.....1,460.....1,470.....1,480.....1,490.....
..1,500..

>1,510.....1,520.....1,530.....1,540.....1,5
50.....

>
1,560.....1,570.....1,580.....1,590.....1,600.....
..1,610..

>1,620.....1,630.....1,640.....1,650.....1,6
60.....

>
1,670.....1,680.....1,690.....1,700.....1,710.....
..1,720..

>1,730.....1,740.....1,750.....1,760.....1,770.....

>
1,780.....1,790.....1,800.....1,810.....1,820.....
..1,830..

>1,840.....1,850.....1,860.....1,870.....1,880.....

>
1,890.....1,900.....1,910.....1,920.....1,930.....
..1,940..

>1,950.....1,960.....1,970.....1,980.....1,990.....

>
2,000.....2,010.....2,020.....2,030.....2,040.....
..2,050..

>2,060.....2,070.....2,080.....2,090.....2,100.....

>
2,110.....2,120.....2,130.....2,140.....2,150.....
..2,160..

>2,170.....2,180.....2,190.....2,200.....2,210.....

>
2,220.....2,230.....2,240.....2,250.....2,260.....
..2,270..

>2,280.....2,290.....2,300.....2,310.....2,320.....

>
2,330.....2,340.....2,350.....2,360.....2,370.....
..2,380..

>2,390.....2,400.....2,410.....2,420.....2,430.....

>
2,440.....2,450.....2,460.....2,470.....2,480.....
..2,490..

>2,500.....2,510.....2,520.....2,530.....2,540.....

>
2,550.....2,560.....2,570.....2,580.....2,590.....
..2,600..

>2,610.....2,620.....2,630.....2,640.....2,650.....

>
2,660.....2,670.....2,680.....2,690.....2,700.....
..2,710..

>2,720.....2,730.....2,740.....2,750.....2,760.....

>
2,770.....2,780.....2,790.....2,800.....2,810.....
..2,820..

>2,830.....2,840.....2,850.....2,860.....2,870.....

>
2,880.....2,890.....2,900.....2,910.....2,920.....
..2,930..

>2,940.....2,950.....2,960.....2,970.....2,980.....

>
2,990.....3,000.....3,010.....3,020.....3,030.....
..3,040..

>3,050.....3,060.....3,070.....3,080.....3,090.....

>
3,100.....3,110.....3,120.....3,130.....3,140.....
..3,150..

>3,160.....3,170.....3,180.....3,190.....3,200.....

>
3,210.....3,220.....3,230.....3,240.....3,250.....
..3,260..

>3,270.....3,280.....3,290.....3,300.....3,310.....

>
3,320.....3,330.....3,340.....3,350.....3,360.....
..3,370..

>3,380.....3,390.....3,400.....3,410.....3,420.....

>
3,430.....3,440.....3,450.....3,460.....3,470.....
..3,480..

>3,490.....3,500.....3,510.....3,520.....3,530.....

>
3,540.....3,550.....3,560.....3,570.....3,580.....
..3,590..

>3,600.....3,610.....3,620.....3,630.....3,640.....

>
3,650.....3,660.....3,670.....3,680.....3,690.....
..3,700..

>3,710.....3,720.....3,730.....3,740.....3,750.....

>
3,760.....3,770.....3,780.....3,790.....3,800.....
..3,810..

>3,820.....3,830.....3,840.....3,850.....3,860.....

>
3,870.....3,880.....3,890.....3,900.....3,910.....
..3,920..

>3,930.....3,940.....3,950.....3,960.....3,970.....

>
3,980.....3,990.....4,000.....4,010.....4,020.....
..4,030..

>4,040.....4,050.....4,060.....4,070.....4,080.....

>
4,090.....4,100.....4,110.....4,120.....4,130.....
..4,140..

>4,150.....4,160.....4,170.....4,180.....4,190.....

>
4,200.....4,210.....4,220.....4,230.....4,240.....
..4,250..

>4,260.....4,270.....4,280.....4,290.....4,300.....

>
4,310.....4,320.....4,330.....4,340.....4,350.....
..4,360..

>4,370.....4,380.....4,390.....4,400.....4,410.....

>
4,420.....4,430.....4,440.....4,450.....4,460.....
..4,470..

>4,480.....4,490.....4,500.....4,510.....4,520.....

>
4,530.....4,540.....4,550.....4,560.....4,570.....
..4,580..

>4,590.....4,600.....4,610.....4,620.....4,630.....

>
4,640.....4,650.....4,660.....4,670.....4,680.....
..4,690..

```

> .....4,700.....4,710.....4,720.....4,730.....4,7
40.....
>
4,750.....4,760.....4,770.....4,780.....4,790.....
..4,800..

> .....4,810.....4,820.....4,830.....4,840.....4,8
50.....
>
4,860.....4,870.....4,880.....4,890.....4,900.....
..4,910..

> .....4,920.....4,930.....4,940.....4,950.....4,9
60.....
> 4,970.....4,980.....4,990.....5,000 done

```

```

Structural equation model
Number of obs = 43
Estimation method: ml
Replications = 5,000

Log likelihood = -185.74556

```

		Observed	Bootstrap			
Normal-based		coefficient	std. err.	z	P> z	[95%
conf. interval]						

+-----						
Structural						
pc1iq						
	neg_s	-13.95743	4.890266	-2.85	0.004	
-23.54218	-4.372685					
	_cons	.7699747	.6623642	1.16	0.245	
-5.282353	2.068185					

+-----						
pc2iq						
	neg_s	-3.593316	3.131831	-1.15	0.251	
-9.731592	2.544959					
	_cons	.3388478	.3567076	0.95	0.342	
-3.3602863	1.037982					

+-----						
pc1out						
	pc1iq	.5589523	.0470244	11.89	0.000	
.4667862	.6511185					
	pc2iq	.7034801	.0732649	9.60	0.000	
.5598836	.8470766					
	neg_s	-1.421583	1.489864	-0.95	0.340	
-4.341663	1.498498					

.0104101	_cons	.431618	.214906	2.01	0.045
	.852826				

+-----					
	var(e.pc1iq)	8.018135	1.376943		
5.726612	11.22662				
	var(e.pc2iq)	1.949237	.4208011		
1.276754	2.975925				
	var(e.pc1out)	.6445861	.133286		
.429805	.966697				

46 . estat teffects

Direct effects

		Observed	Bootstrap			
Normal-based		coefficient	std. err.	z	P> z	[95%
conf. interval]						

+-----						
	Structural					
	pc1iq					
	neg_s	-13.95743	4.890266	-2.85	0.004	
-23.54218	-4.372685					

+-----						
	pc2iq					
	neg_s	-3.593316	3.131831	-1.15	0.251	
-9.731592	2.544959					

+-----						
	pc1out					
	pc1iq	.5589523	.0470244	11.89	0.000	
.4667862	.6511185					
	pc2iq	.7034801	.0732649	9.60	0.000	
.5598836	.8470766					
	neg_s	-1.421583	1.489864	-0.95	0.340	
-4.341663	1.498498					

Indirect effects

Normal-based		Observed	Bootstrap			
conf. interval]		coefficient	std. err.	z	P> z	[95%

+-----						
Structural						
pc1iq						
neg_s		0	(no path)			

+-----						
pc2iq						
neg_s		0	(no path)			

+-----						
pc1out						
pc1iq		0	(no path)			
pc2iq		0	(no path)			
neg_s		-10.32936	3.608251	-2.86	0.004	
-17.40141	-3.257323					

Total effects

Normal-based		Observed	Bootstrap			
conf. interval]		coefficient	std. err.	z	P> z	[95%

+-----						
Structural						
pc1iq						
neg_s		-13.95743	4.890266	-2.85	0.004	
-23.54218	-4.372685					

+-----						
pc2iq						
neg_s		-3.593316	3.131831	-1.15	0.251	
-9.731592	2.544959					

+-----						
pc1out						
pc1iq		.5589523	.0470244	11.89	0.000	
.4667862	.6511185					
pc2iq		.7034801	.0732649	9.60	0.000	
.5598836	.8470766					
neg_s		-11.75095	3.581265	-3.28	0.001	
-18.7701	-4.731797					

```

-----
-----
47 . nlcom _b[pc1iq:neg_s] * _b[pc1out:pc1iq]
      _nl_1: _b[pc1iq:neg_s] * _b[pc1out:pc1iq]

-----
-----
| Coefficient   Std. err.      z    P>|z|    [95%
conf. interval]
-----+-----
      _nl_1 |   -7.801538    2.639621   -2.96   0.003
-12.9751    -2.627976

-----
-----

48 . nlcom _b[pc2iq:neg_s] * _b[pc1out:pc2iq]
      _nl_1: _b[pc2iq:neg_s] * _b[pc1out:pc2iq]

-----
-----
| Coefficient   Std. err.      z    P>|z|    [95%
conf. interval]
-----+-----
      _nl_1 |   -2.527827    2.235679   -1.13   0.258
-6.909677    1.854024

-----
-----

49 . nlcom (_b[pc1iq:neg_s] * _b[pc1out:pc1iq]) +
      (_b[pc2iq:neg_s] * _b[pc1out:pc2
      > iq]) + _b[pc1out:neg_s]
      _nl_1: (_b[pc1iq:neg_s] * _b[pc1out:pc1iq]) +
      (_b[pc2iq:neg_s] * _b[pc1o
      > ut:pc2iq]) + _b[pc1out:neg_s]

-----
-----
| Coefficient   Std. err.      z    P>|z|    [95%
conf. interval]
-----+-----
      _nl_1 |  -11.75095    3.581265   -3.28   0.001
-18.7701    -4.731797

```

```

-----
50 .
51 . * Аналіз 8: neg_m як предиктор
52 . sem (pc1iq <- neg_m) (pc2iq <- neg_m) (pc1out <- pc1iq
pc2iq neg_m), vce(boot
> strap, reps(5000))
(running sem on estimation sample)

Bootstrap replications
(5,000): .....10.....20.....30.....40...
> .....50.....60.....70.....80.....90.....100..
.....110.

> .....120.....130.....140.....150.....160.....
..170.....

> ...180.....190.....200.....210.....220.....230
.....24
>
0.....250.....260.....270.....280.....290.....
..300....

> .....310.....320.....330.....340.....350.....3
60.....
>
370.....380.....390.....400.....410.....420.....
....430..

> .....440.....450.....460.....470.....480.....
.490.....

> ..500.....510.....520.....530.....540.....550.
.....560

> .....570.....580.....590.....600.....610.....
...620.....

> ....630.....640.....650.....660.....670.....68
0.....6
>
90.....700.....710.....720.....730.....740.....
...750...

> .....760.....770.....780.....790.....800.....
810.....
>
.820.....830.....840.....850.....860.....870....
.....880.

> .....890.....900.....910.....920.....930.....

```

..940.....

> ...950.....960.....970.....980.....990.....1,000.....

>
1,010.....1,020.....1,030.....1,040.....1,050.....
..1,060..

>1,070.....1,080.....1,090.....1,100.....1,110.....

>
1,120.....1,130.....1,140.....1,150.....1,160.....
..1,170..

>1,180.....1,190.....1,200.....1,210.....1,220.....

>
1,230.....1,240.....1,250.....1,260.....1,270.....
..1,280..

>1,290.....1,300.....1,310.....1,320.....1,330.....

>
1,340.....1,350.....1,360.....1,370.....1,380.....
..1,390..

>1,400.....1,410.....1,420.....1,430.....1,440.....

>
1,450.....1,460.....1,470.....1,480.....1,490.....
..1,500..

>1,510.....1,520.....1,530.....1,540.....1,550.....

>
1,560.....1,570.....1,580.....1,590.....1,600.....
..1,610..

>1,620.....1,630.....1,640.....1,650.....1,660.....

>
1,670.....1,680.....1,690.....1,700.....1,710.....
..1,720..

>1,730.....1,740.....1,750.....1,760.....1,770.....

>
1,780.....1,790.....1,800.....1,810.....1,820.....
..1,830..

>1,840.....1,850.....1,860.....1,870.....1,880.....

>
1,890.....1,900.....1,910.....1,920.....1,930.....

..1,940..

>1,950.....1,960.....1,970.....1,980.....1,990.....

>

2,000.....2,010.....2,020.....2,030.....2,040.....
..2,050..

>2,060.....2,070.....2,080.....2,090.....2,100.....

>

2,110.....2,120.....2,130.....2,140.....2,150.....
..2,160..

>2,170.....2,180.....2,190.....2,200.....2,210.....

>

2,220.....2,230.....2,240.....2,250.....2,260.....
..2,270..

>2,280.....2,290.....2,300.....2,310.....2,320.....

>

2,330.....2,340.....2,350.....2,360.....2,370.....
..2,380..

>2,390.....2,400.....2,410.....2,420.....2,430.....

>

2,440.....2,450.....2,460.....2,470.....2,480.....
..2,490..

>2,500.....2,510.....2,520.....2,530.....2,540.....

>

2,550.....2,560.....2,570.....2,580.....2,590.....
..2,600..

>2,610.....2,620.....2,630.....2,640.....2,650.....

>

2,660.....2,670.....2,680.....2,690.....2,700.....
..2,710..

>2,720.....2,730.....2,740.....2,750.....2,760.....

>

2,770.....2,780.....2,790.....2,800.....2,810.....
..2,820..

>2,830.....2,840.....2,850.....2,860.....2,870.....

>

2,880.....2,890.....2,900.....2,910.....2,920.....

..2,930..

>2,940.....2,950.....2,960.....2,970.....2,980.....

>
2,990.....3,000.....3,010.....3,020.....3,030.....
..3,040..

>3,050.....3,060.....3,070.....3,080.....3,090.....

>
3,100.....3,110.....3,120.....3,130.....3,140.....
..3,150..

>3,160.....3,170.....3,180.....3,190.....3,200.....

>
3,210.....3,220.....3,230.....3,240.....3,250.....
..3,260..

>3,270.....3,280.....3,290.....3,300.....3,310.....

>
3,320.....3,330.....3,340.....3,350.....3,360.....
..3,370..

>3,380.....3,390.....3,400.....3,410.....3,420.....

>
3,430.....3,440.....3,450.....3,460.....3,470.....
..3,480..

>3,490.....3,500.....3,510.....3,520.....3,530.....

>
3,540.....3,550.....3,560.....3,570.....3,580.....
..3,590..

>3,600.....3,610.....3,620.....3,630.....3,640.....

>
3,650.....3,660.....3,670.....3,680.....3,690.....
..3,700..

>3,710.....3,720.....3,730.....3,740.....3,750.....

>
3,760.....3,770.....3,780.....3,790.....3,800.....
..3,810..

>3,820.....3,830.....3,840.....3,850.....3,860.....

>
3,870.....3,880.....3,890.....3,900.....3,910.....

..3,920..

>3,930.....3,940.....3,950.....3,960.....3,970.....

>

3,980.....3,990.....4,000.....4,010.....4,020.....
..4,030..

>4,040.....4,050.....4,060.....4,070.....4,080.....

>

4,090.....4,100.....4,110.....4,120.....4,130.....
..4,140..

>4,150.....4,160.....4,170.....4,180.....4,190.....

>

4,200.....4,210.....4,220.....4,230.....4,240.....
..4,250..

>4,260.....4,270.....4,280.....4,290.....4,300.....

>

4,310.....4,320.....4,330.....4,340.....4,350.....
..4,360..

>4,370.....4,380.....4,390.....4,400.....4,410.....

>

4,420.....4,430.....4,440.....4,450.....4,460.....
..4,470..

>4,480.....4,490.....4,500.....4,510.....4,520.....

>

4,530.....4,540.....4,550.....4,560.....4,570.....
..4,580..

>4,590.....4,600.....4,610.....4,620.....4,630.....

>

4,640.....4,650.....4,660.....4,670.....4,680.....
..4,690..

>4,700.....4,710.....4,720.....4,730.....4,740.....

>

4,750.....4,760.....4,770.....4,780.....4,790.....
..4,800..

>4,810.....4,820.....4,830.....4,840.....4,850.....

>

4,860.....4,870.....4,880.....4,890.....4,900.....

..4,910..

>4,920.....4,930.....4,940.....4,950.....4,960.....
> 4,970.....4,980.....4,990.....5,000 done

Structural equation model
Number of obs = 43
Estimation method: ml
Replications = 5,000

Log likelihood = -192.21365

		Observed	Bootstrap			
Normal-based		coefficient	std. err.	z	P> z	[95%
conf. interval]						

+-----						
Structural						
pc1iq						
neg_m		-13.73019	3.766542	-3.65	0.000	
-21.11247	-6.347901					
_cons		3.534412	1.266312	2.79	0.005	
1.052487	6.016337					

+-----						
pc2iq						
neg_m		-2.452329	2.521033	-0.97	0.331	
-7.393463	2.488804					
_cons		.7345507	.8175406	0.90	0.369	
-.8677994	2.336901					

+-----						
pc1out						
pc1iq		.5381217	.0440173	12.23	0.000	
.4518494	.624394					
pc2iq		.6893929	.0734664	9.38	0.000	
.5454015	.8333844					
neg_m		-2.345344	1.520532	-1.54	0.123	
-5.325533	.6348437					
_cons		.9799948	.4945931	1.98	0.048	
.0106101	1.94938					

+-----						
var(e.pc1iq)		7.421744	1.444959			
5.067378	10.86998					
var(e.pc2iq)		1.974347	.4053341			
1.320297	2.952402					
var(e.pc1out)		.6137388	.1297886			
.4054882	.9289428					

53 . estat teffects

Direct effects

		Observed	Bootstrap			
Normal-based		coefficient	std. err.	z	P> z	[95%
conf. interval]						
+-----						
Structural						
pc1iq						
neg_m		-13.73019	3.766542	-3.65	0.000	
-21.11247	-6.347901					
+-----						
pc2iq						
neg_m		-2.452329	2.521033	-0.97	0.331	
-7.393463	2.488804					
+-----						
pc1out						
pc1iq		.5381217	.0440173	12.23	0.000	
.4518494	.624394					
pc2iq		.6893929	.0734664	9.38	0.000	
.5454015	.8333844					
neg_m		-2.345344	1.520532	-1.54	0.123	
-5.325533	.6348437					

Indirect effects

		Observed	Bootstrap			
Normal-based		coefficient	std. err.	z	P> z	[95%
conf. interval]						

+-----						
Structural						
pc1iq						
neg_m		0	(no path)			

+-----					
	pc2iq				
	neg_m		0	(no path)	

+-----					
	pc1out				
	pc1iq		0	(no path)	
	pc2iq		0	(no path)	
	neg_m		-9.07913	2.4907	-3.65 0.000
-13.96081	-4.197449				

Total effects

			Observed	Bootstrap			
Normal-based			coefficient	std. err.	z	P> z	[95%
conf. interval]							

+-----					
	Structural				
	pc1iq				
	neg_m		-13.73019	3.766542	-3.65 0.000
-21.11247	-6.347901				

+-----					
	pc2iq				
	neg_m		-2.452329	2.521033	-0.97 0.331
-7.393463	2.488804				

+-----					
	pc1out				
	pc1iq		.5381217	.0440173	12.23 0.000
.4518494	.624394				
	pc2iq		.6893929	.0734664	9.38 0.000
.5454015	.8333844				
	neg_m		-11.42447	2.565271	-4.45 0.000
-16.45231	-6.396636				

54 . nlcom _b[pc1iq:neg_m] * _b[pc1out:pc1iq]

_nl_1: _b[pc1iq:neg_m] * _b[pc1out:pc1iq]

		Coefficient	Std. err.	z	P> z	[95% conf. interval]

+-----						
	_nl_1	-7.388512	2.033705	-3.63	0.000	
-11.3745	-3.402523					

```
55 . nlcom _b[pc2iq:neg_m] * _b[pc1out:pc2iq]
```

```
      _nl_1: _b[pc2iq:neg_m] * _b[pc1out:pc2iq]
```

		Coefficient	Std. err.	z	P> z	[95% conf. interval]

+-----						
	_nl_1	-1.690618	1.75574	-0.96	0.336	
-5.131806	1.750569					

```
56 . nlcom (_b[pc1iq:neg_m] * _b[pc1out:pc1iq]) +
      (_b[pc2iq:neg_m] * _b[pc1out:pc2
      > iq]) + _b[pc1out:neg_m]
```

```
      _nl_1: (_b[pc1iq:neg_m] * _b[pc1out:pc1iq]) +
      (_b[pc2iq:neg_m] * _b[pc1o
      > ut:pc2iq]) + _b[pc1out:neg_m]
```

		Coefficient	Std. err.	z	P> z	[95% conf. interval]

+-----						
	_nl_1	-11.42447	2.565271	-4.45	0.000	
-16.45231	-6.396636					

```
57 .
      end of do-file
```

```
58 . log close
      name: <unnamed>
      log: /Users/oksanaliashenko/Documents/Diversity/New
```

SEM/SEm'new.smcl
log type: smcl
closed on: 7 Mar 2025, 23:20:14

