

PLS Table製作教學

指導老師：吳智鴻 教授 / 教學助理：陳碩晴





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- 01 Scale properties of the measurement model
- 02 Discriminant Validity:
Fornell-Larcker criterion
- 03 Discriminant Validity:
Heterotrait-monotrait
- 04 Moderating Effect
- 05 結構模型評鑑鑑定表
- 06 中介效果鑑定表

前置作業：匯入資料、畫模型



File Edit View Themes Calculate Info Languages

Create New Project

Create New Path Model

Save Ctrl+S

Save As...

Duplicate Ctrl+D

Switch Workspace

Archive Project

Restore Project from Archive

Select Active Data File

Import Project from Backup File

Import Projects from a Folder

Import Data File

Import Sample Projects

Export Project

Export Model for SemPLS Package in R

Export as Image to File

Export as Image to Clipboard

Print

Exit

1.建置新的專案

File Edit View Themes Calculate Info Language

Save

New Project

New Path Model

Project Explorer



- > ECSI
- > NFT
 - i Double-click to import data!
 - ! NFT
- > PLS-SEM BOOK - Corporate Reputation
- Archive

←新的專案建置完成

Indicators



No indicators to show.

Save

New Project

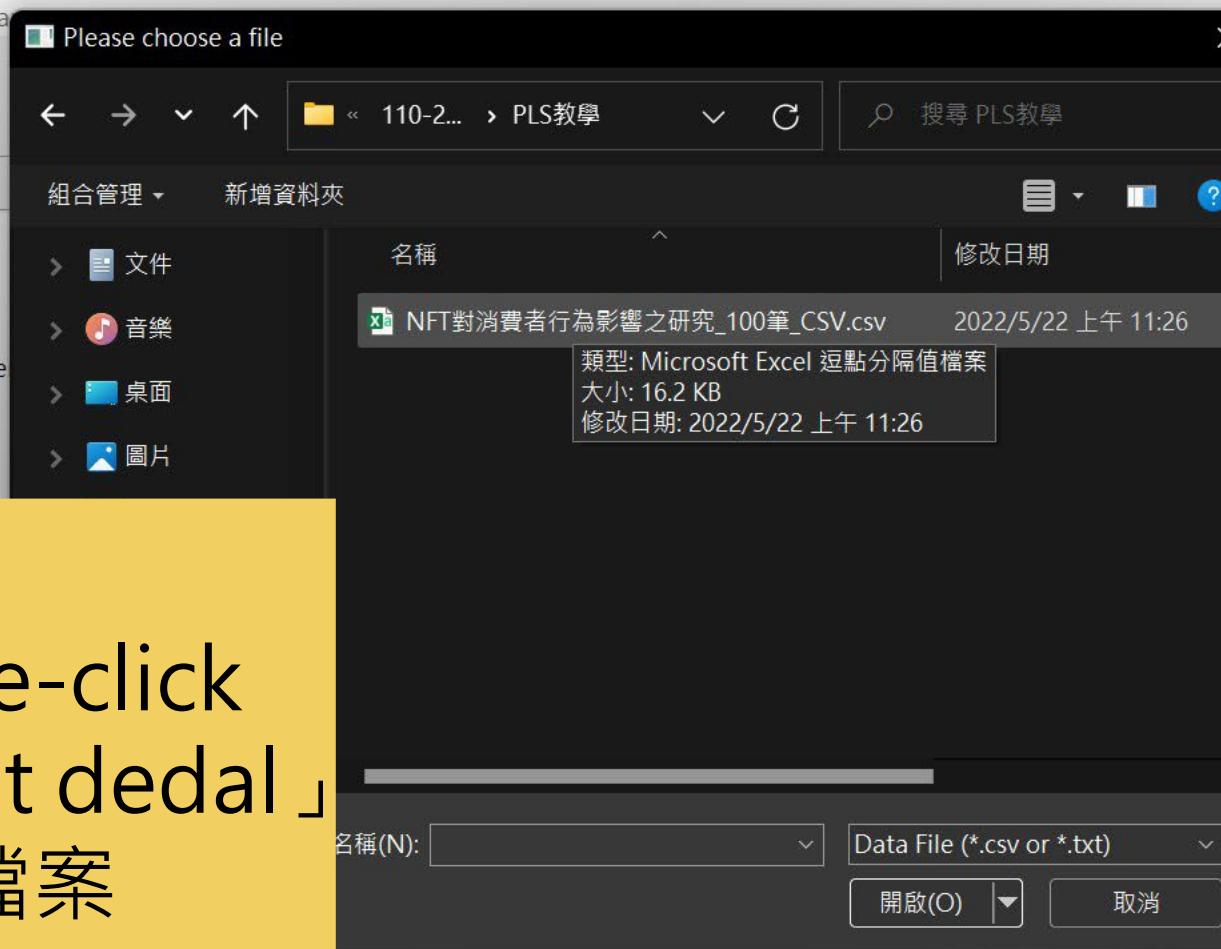
New Path Model

Project Explorer

- > ECSI
- < NFT
 - Double-click to import data!
 - NFT
- > PLS-SEM BOOK - Competitive Reputation Extension
- Archive

Indicators

2. 點兩下
「Double-click
to import dedal」
匯入csv檔案



File Edit View Themes Calculate Info Language



Project Explorer

- > ECSI
- > NFT
 - Double-click to import data!*
 - NFT
- > PLS-SEM BOOK - Corporate Reputation Extended
- Archive



Import Datafile



Name:

NFT對消費者行為影響之研究_100筆_CSV

OK

Cancel

↑ csv檔案匯入成功

File Edit View Themes Calculate Info Language



Select Latent Variable Connect Quadratic Effect Moderating Effect Comment Calculate

Project Explorer



- > ECSI
- < NFT
 - NFT
 - NFT 對消費者行為影響之研究_100筆_CSV [100 records]
- > PLS-SEM BOOK - Corporate Reputation Extended
- Archive

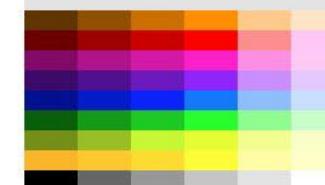
NFT 對消費者行為影響之研究_100筆_CSV.txt

NFT.splsm

↑ 可以開始畫模型了！

Grid
Snap

More Themes



Font Size

-1 - +1

Bold - Italic

Border Size

-1 - +1

Align



Indicators



No.	Indicator
1	sex
8	will_create
9	PP1
10	PP2
11	PP3
12	PP
13	PS1
14	PS2
15	PS3
16	PS
17	TR1

SmartPLS: C:\Users\yolan\smartpls_workspace

File Edit View Themes Calculate Info Language

Select Latent Variable Connect Quadratic Effect Moderating Effect Comment Calculate

Create latent variables (ALT+2).

Project Explorer

- > ECSI
- < NFT
 - NFT
 - NFT 對消費者行為影響之研究_100筆_CSV [100 records]
- > PLS-SEM BOOK - Corporate Reputation Extended
- Archive

NFT 對消費者行為影響之研究_100筆_CSV.txt NFT.splsm

3.新增構面

Indicators

No.	Indicator
1	sex
8	will_create
9	PP1
10	PP2
11	PP3
12	PP
13	PS1
14	PS2
15	PS3
16	PS
17	TR1

Grid Snap More Themes

Font Size

-1 - +1

Bold - Italic

Border Size

-1 - +1

Align

Horizontal Vertical Center Top Bottom Left Right

23°C 多雲

上午 11:29 2022/5/22

File Edit View Themes Calculate Info Language



Select

Latent Variable

Connect

Quadratic Effect

Moderating Effect

Comment

Calculate

Project Explorer



NFT對消費者行為影響之研究_100筆_CSV.txt

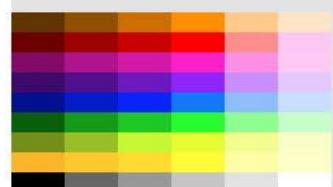
*NFT.sppls



- > ECSI
- > NFT
 - NFT
 - NFTNFT對消費者行為影響之研究_100筆_CSV [100 records]
- > PLS-SEM BOOK - Corporate Reputation Extended
- Archive



More Themes



Font Size



Border Size



Align

Latent
Variable 1

↑ 點一下空白處新增構面

No.	Indicator
1	sex
8	will_create
9	PP1
10	PP2
11	PP3
12	PP
13	PS1
14	PS2
15	PS3
16	PS
17	TR1



Select Latent Variable Connect Quadratic Effect Moderating Effect Comment Calculate

Project Explorer



NFT 對消費者行為影響之研究_100筆_CSV.txt *NFT.splsm



- > ECSI
- > NFT
 - NFT
 - NFT 對消費者行為影響之研究_100筆_CSV [100 records]
- > PLS-SEM BOOK - Corporate Reputation Extended
- Archive

Indicators

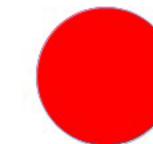


No.	Indicator
1	sex
8	will_create
9	PP1
10	PP2
11	PP3
12	PP
13	PS1
14	PS2
15	PS3
16	PS
17	TR1

新增想要的構面數量



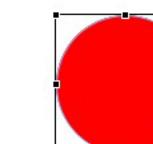
Latent Variable 1



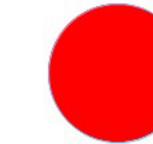
Latent Variable 2



Latent Variable 3



Latent Variable 5



Latent Variable 4

Grid Snap

More Themes

Font Size

-1 - +1

Bold - Italic

Border Size

-1 - +1

Align

Horizontal Vertical Center Top Bottom Left Right



Select

Latent Variable

Connect

Quadratic Effect
Moderating Effect
Comment
Latent variables (ALT+3)

Calculate

Project Explorer

- > ECSI
- > NFT
 - NFT
 - NFT 對消費者行為影響之研究_100筆_CSV [100 records]
- > PLS-SEM BOOK - Corporate Reputation Extended
- Archive

Indicators

No.	Indicator
1	sex
8	will_create
9	PP1
10	PP2
11	PP3
12	PP
13	PS1
14	PS2
15	PS3
16	PS
17	TR1

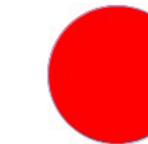
4. 建立構面與構面的關係



Latent Variable 1



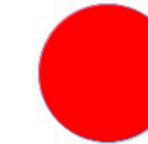
Latent Variable 2



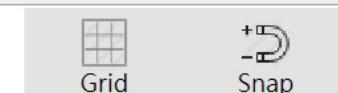
Latent Variable 3



Latent Variable 5



Latent Variable 4





Select Latent Variable Connect Quadratic Effect Moderating Effect Comment Calculate

Project Explorer

- ECSI
- NFT
 - NFT
 - NFT對消費者行為影響之研究_100筆_CSV [100 records]
- PLS-SEM BOOK - Corporate Reputation Extended
- Archive

NFT對消費者行為影響之研究_100筆_CSV.txt *NFT.sppls

可以開始繪製構面與構面的關係

Latent Variable 1

Latent Variable 2

Latent Variable 3

Latent Variable 4

Latent Variable 5

Errors

- This latent variable has no indicators.
- This variable is part of an incoherent graph.

Grid Snap More Themes

Font Size

-1 - +1

Bold - Italic

Border Size

-1 - +1

Align

Horizontal Vertical Center Top Bottom Left Right



Select

Latent Variable

Connect

Quadratic Effect

Moderating Effect

Comment

Calculate

Project Explorer



NFT對消費者行為影響之研究_100筆_CSV.txt



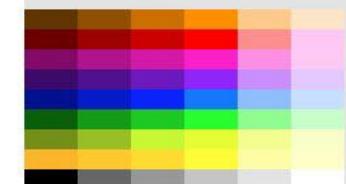
*NFT.splsm



Grid

Snap

More Themes



Font Size

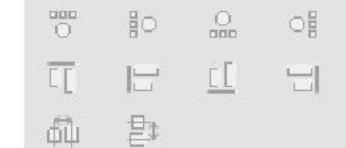
-1 - +1

Bold - Italic

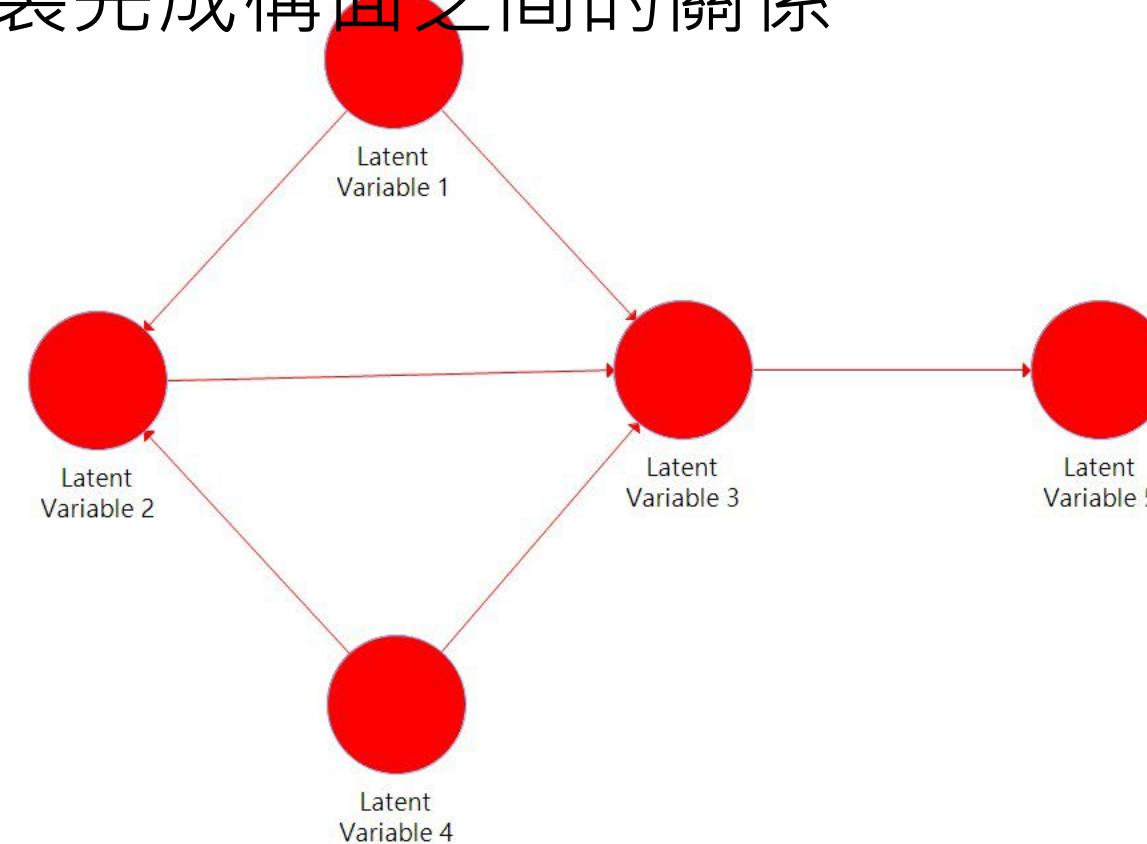
Border Size

-1 - +1

Align



繪製完成構面之間的關係



Indicators



No.	Indicator
1	sex
8	will_create
9	PP1
10	PP2
11	PP3
12	PP
13	PS1
14	PS2
15	PS3
16	PS
17	TR1

SmartPLS: C:\Users\yolan\smartpls_workspace

File Edit View Themes Calculate Info Language

Select Latent Variable Connect Quadratic Effect More

Project Explorer

- ECSI
- NFT
 - NFT
NFT對消費者行為影響之研究_100筆_CS [100 records]
- PLS-SEM BOOK - Corporate Reputation Extended
- Archive

Indicators

No.	Indicator
1	sex
8	will_create
9	PP1
10	PP2
11	PP3
12	PP
13	PS1
14	PS2
15	PS3
16	PS
17	TR1

Latent Variable 2

Latent Variable 5

More Themes

Grid Snap

Font Size

-1 - +1

Bold - Italic

Border Size

-1 - +1

Align

23°C 多雲

上午 11:32 2022/5/22

5. 對著構面按右鍵，重新命名構面名稱

Contextual Menu (Right-clicked on Latent Variable 2):

- Delete
- Rename F2
- Add Moderating Effect ...
- Add Quadratic Effect ...
- Switch Between Format
- Set Indicator Weighting to 'Mode A'
- Set Indicator Weighting to 'Mode B'
- Set Indicator Weighting to 'Sumscores'
- Set Indicator Weighting to 'Predefined'
- Align Indicators Top Alt+W
- Align Indicators Left Alt+A
- Align Indicators Bottom Alt+S
- Align Indicators Right Alt+D
- Align Selected Element Top
- Align Selected Element Left
- Align Selected Element Bottom
- Align Selected Element Right
- Match Width
- Match Height
- Export as Image to File
- Export as Image to Clipboard



Select

Latent Variable

Connect

Quadratic Effect

Moderating Effect

Comment

Calculate

Project Explorer

- > ECSI
- > NFT
 - NFT
 - NFT 對消費者行為影響之研究_100筆_CSV [100 records]
- > PLS-SEM BOOK - Corporate Reputation Extended
- Archive



NFT對消費者行為影響之研究_100筆_CSV [100 records]



Rename variable

Rename variable

Rename variable 'Latent Variable 1'.

Name displayed in model (multiple lines)

Security

Name displayed in reports:

Security

OK Cancel

重新命名構面名稱

Latent
Variable 4Latent
Variable 5

Indicators

No.	Indicator
1	sex
8	will_create
9	PP1
10	PP2
11	PP3
12	PP
13	PS1
14	PS2
15	PS3
16	PS
17	TR1





Select Latent Variable Connect Quadratic Effect Moderating Effect Comment Calculate

Project Explorer



NFT對消費者行為影響之研究_100筆_CSV.txt

*NFT.splsm



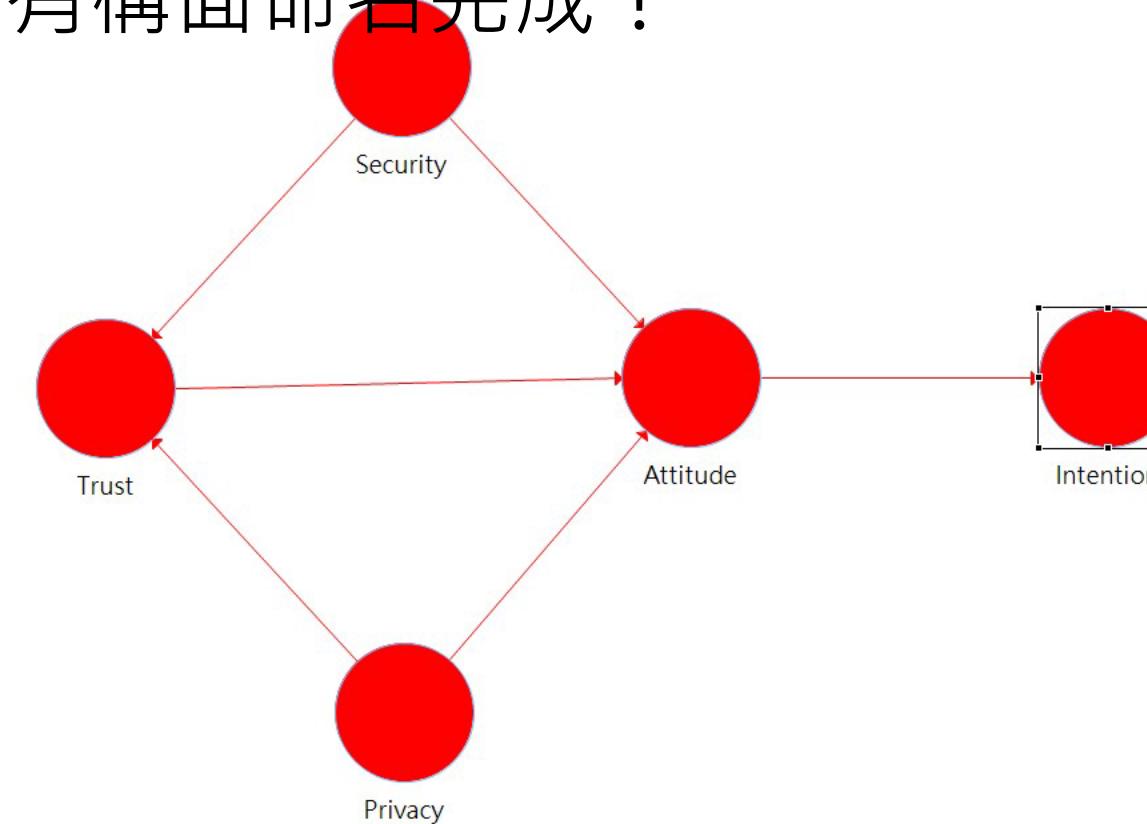
- > ECSI
- > NFT
 - NFT
 - NFT對消費者行為影響之研究_100筆_CSV [100 records]
- > PLS-SEM BOOK - Corporate Reputation Extended
- Archive

Indicators



No.	Indicator
1	sex
8	will_create
9	PP1
10	PP2
11	PP3
12	PP
13	PS1
14	PS2
15	PS3
16	PS
17	TR1

所有構面命名完成！



Grid Snap

More Themes

Font Size

-1 - +1

Bold - Italic

Border Size

-1 - +1

Align

Top Center Bottom Left Right



Select

Latent Variable

Connect

Quadratic Effect

Moderating Effect

Comment

Calculate

Project Explorer



- > ECSI
- > NFT
 - NFT
 - NFT 對消費者行為影響之研究_100筆_CSV [100 records]
- > PLS-SEM BOOK - Corporate Reputation Extended
- Archive

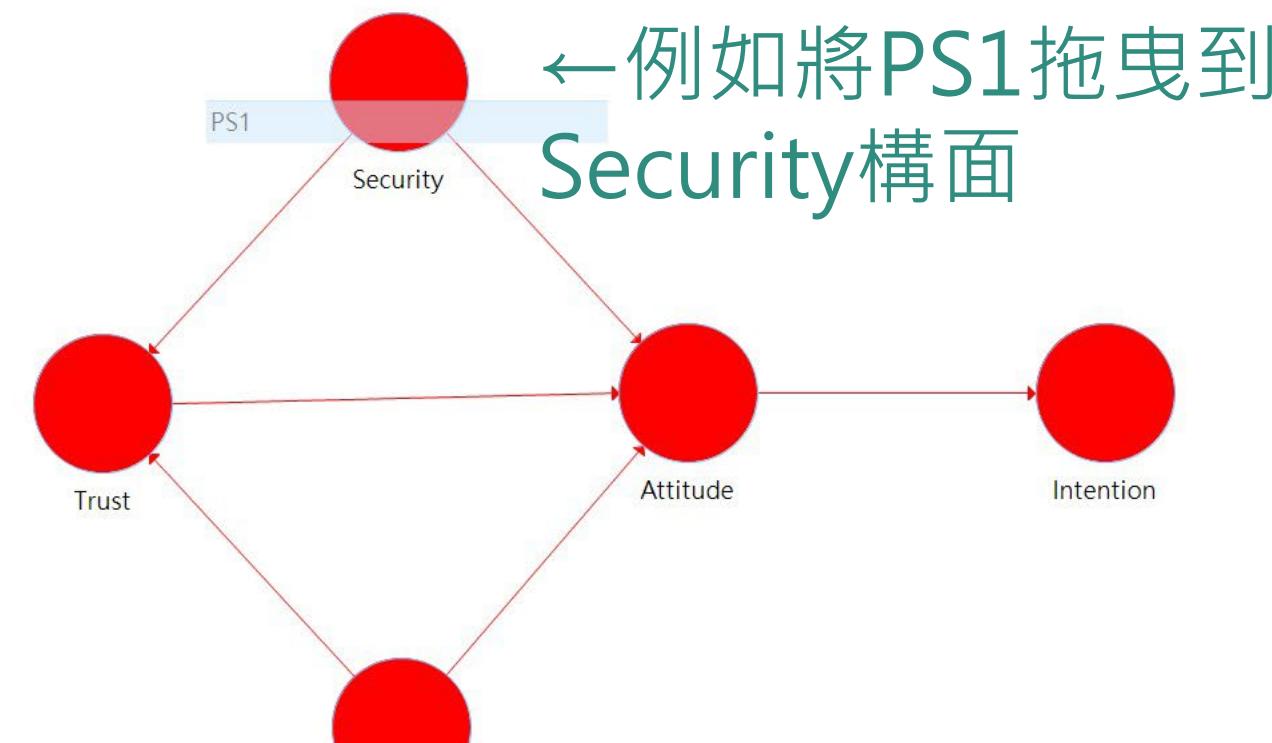
Indicators



No.	Indicator
1	sex
8	will_create
9	PP1
10	PP2
11	PP3
12	PP
13	PS1
14	PS2
15	PS3
16	PS
17	TR1

6.將左下角csv檔案的資料拖曳到構面中

NFT 對消費者行為影響之研究_100筆_CSV.txt



SmartPLS: C:\Users\yolan\smartpls_workspace

File Edit View Themes Calculate Info Language

Select Latent Variable Connect Quadratic Effect Moderating Effect Comment Calculate

Project Explorer: NFT 對消費者行為影響之研究_100筆_CVS.txt *NFT.sppls

Indicators:

No.	Indicator
20	TR
21	AT1
22	AT2
23	AT3
24	AT
25	IN1
26	IN2
27	IN3
28	IN

MEAN MEDIAN MIN MAX STDEV MISSING

4.91 5.00 1.00 7.00 1.40 -

所有csv資料拖曳完成！構面會由紅色變為藍色，表示可以開始進行統計

Scale properties of the measurement model



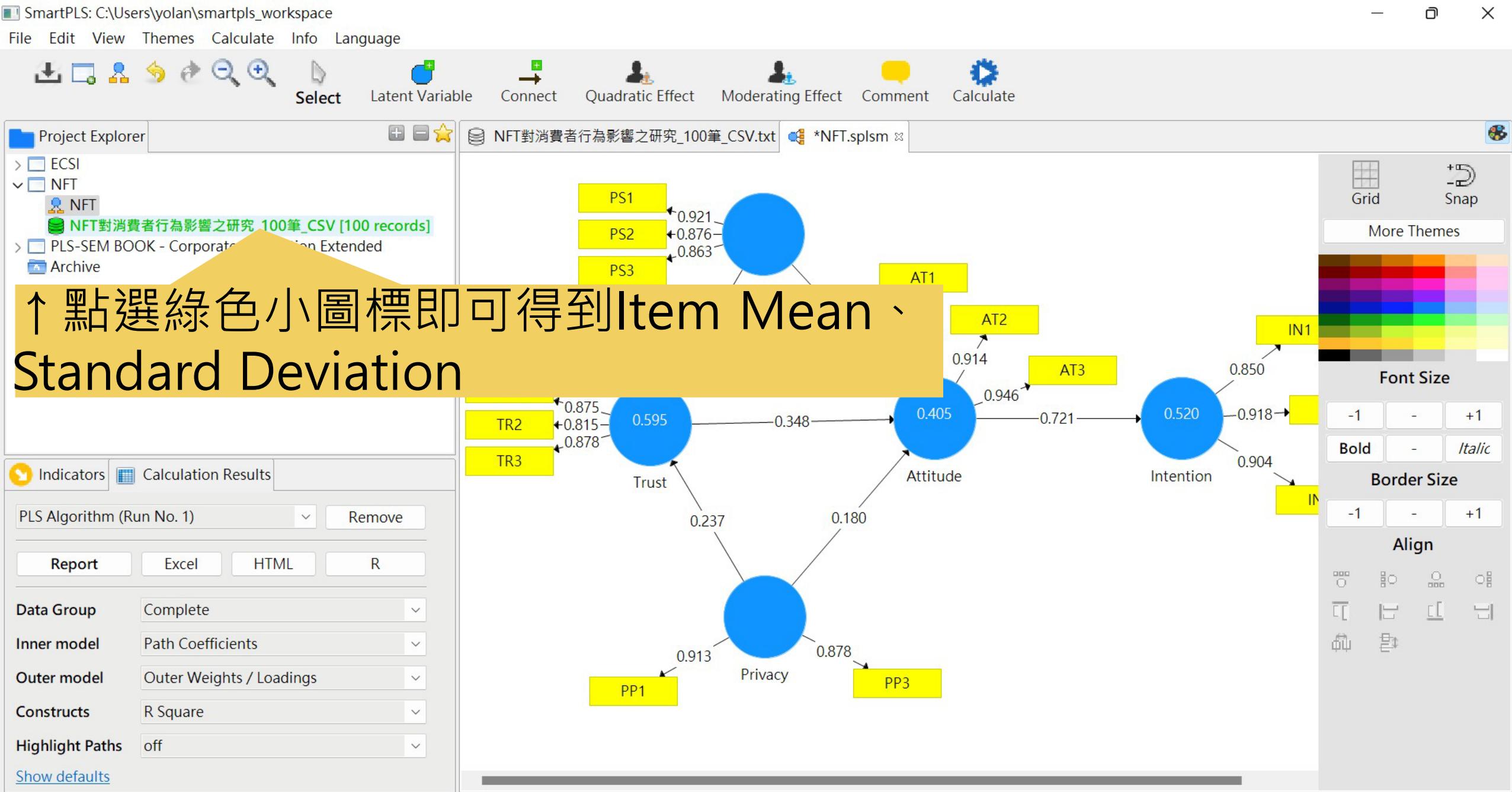
Scale properties of the measurement model 範例

Construct	Item	Item mean	Standard deviation	Standardized item loading	T-statistic	Cronbach's alpha	Composite reliability	AVE
Financial self-efficacy	FS1	5.83	1.028	0.660	20.428	0.776	0.848	0.528
	FS2	5.46	1.014	0.805	49.851			
	FS3	5.44	1.062	0.775	38.665			
	FS4	5.56	1.041	0.664	24.359			
	FS5	5.52	1.088	0.719	27.655			
Confirmation	CON1	5.21	0.990	0.785	44.625	0.795	0.867	0.619
	CON2	5.22	1.036	0.774	42.143			
	CON3	5.25	1.033	0.821	57.104			
	CON4	5.42	1.038	0.766	43.842			
Fintech continuance intention	FCI1	5.73	0.913	0.729	27.180	0.802	0.864	0.561
	FCI2	5.46	0.901	0.645	20.529			
	FCI3	5.92	0.889	0.829	60.149			
	FCI4	5.98	0.901	0.792	42.431			
	FCI5	5.99	0.907	0.737	27.285			
Satisfaction	SAT1	5.31	1.041	0.823	62.504	0.772	0.856	0.599
	SAT2	5.22	1.039	0.801	49.875			
	SAT3	5.14	1.080	0.813	53.086			
	SAT4	5.88	1.004	0.646	20.082			
Technological self-efficacy	TSE1	6.35	0.915	0.822	33.720	0.787	0.859	0.604
	TSE2	6.49	0.832	0.816	29.376			
	TSE3	6.36	0.783	0.729	19.599			
	TSE4	6.05	0.909	0.735	18.607			
Perceived usefulness	PU1	5.59	1.016	0.739	32.810	0.719	0.826	0.543
	PU2	5.77	0.967	0.763	37.286			
	PU3	5.71	0.948	0.745	34.348			
	PU4	6.00	0.885	0.698	27.174			

Table 4.
Scale properties of the measurement model

1. 取得Item Mean、Standard Deviation值

Construct	Item	Item Mean	Standard Deviation	Standardized item loading	Cronbach's Alpha	Composite Reliability	rho_A	AVE	VIF
Trust		5.53	1.08		0.82	0.89	0.85	0.73	
	TR1	5.33	1.29	0.88					1.73
	TR2	5.66	1.27	0.82					1.84
	TR3	5.61	1.22	0.88					2.10
Security		5.26	1.13		0.86	0.92	0.86	0.79	
	PS1	5.20	1.23	0.92					3.09
	PS2	5.64	1.09	0.88					2.40
	PS3	4.93	1.51	0.86					1.97
Attitude		5.72	1.15		0.92	0.95	0.93	0.87	
	AT1	5.70	1.21	0.93					3.52
	AT2	5.66	1.33	0.91					3.13
	AT3	5.81	1.16	0.95					3.89
Privacy		5.09	1.11		0.76	0.89	0.77	0.80	
	PP1	5.24	1.27	0.91					1.58
	PP3	4.79	1.58	0.88					1.58
Intention		5.08	1.24		0.87	0.92	0.87	0.79	
	IN1	5.40	1.39	0.85					1.83
	IN2	4.94	1.38	0.92					3.08
	IN3	4.91	1.40	0.90					2.86





Project Explorer



ECSI

NFT



NFT 對消費者行為影響之研究_100筆_CSV [100 records]

PLS-SEM BOOK - Corporate Reputation Extended



NFT 對消費者行為影響之研究_100筆_CSV.txt ✎

*NFT.spism

Delimiter:

Comma

Encoding:

BIG5

Re-Analyze

Open External

Value Quote Character:

None

Sample size:

100

Number Format:

US (example: 1,000.23)

Indicators:

52

Missing Value Marker:

None

Missing Values:

0

Indicators:

Indicator Correlations

Raw File

Copy to Clipboard

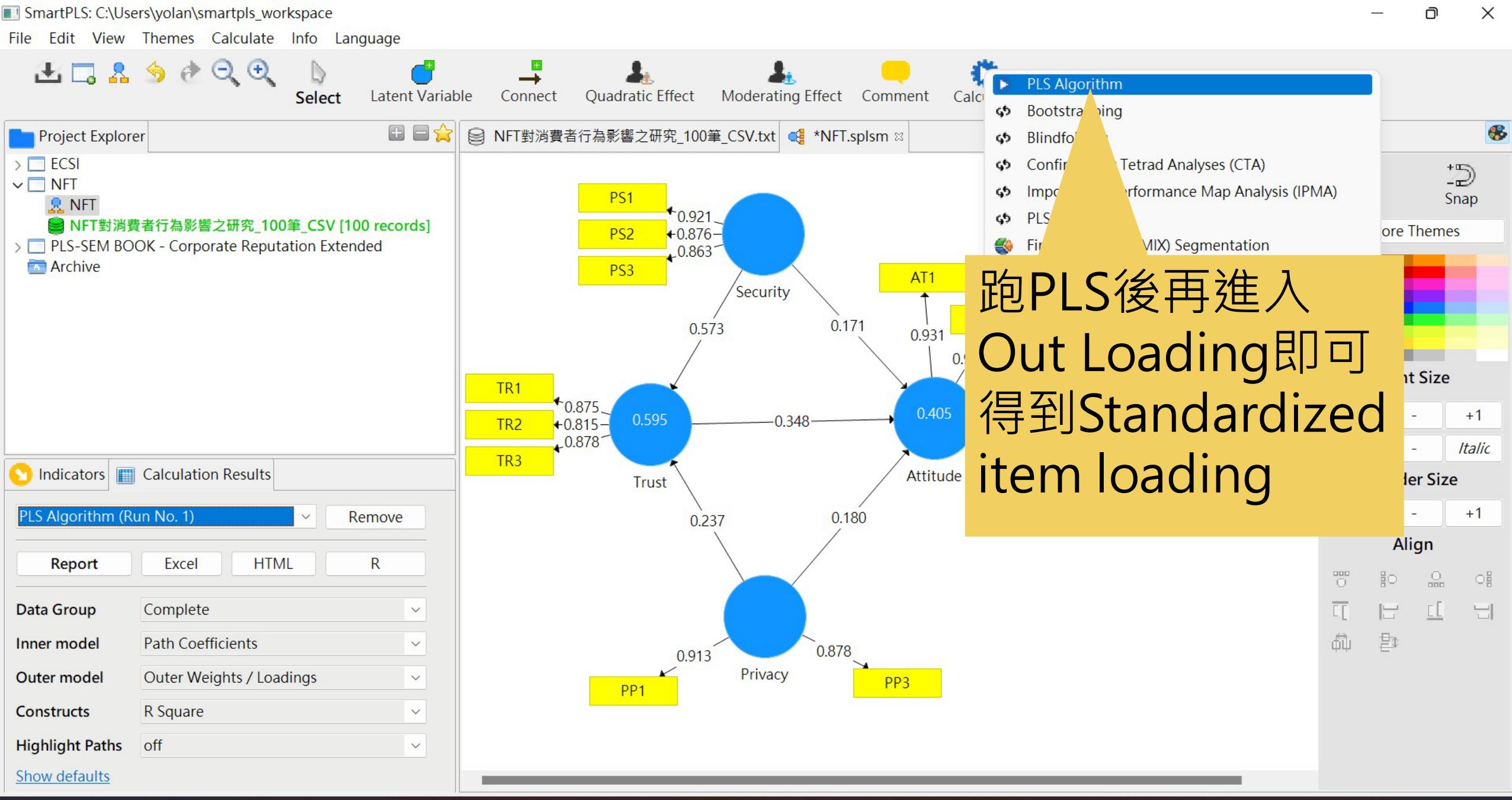
	No.	Missing	Mean	Median	Min	Max	Standar...	Excess K...	Skewness
sex	1	0	1.430	1.000	1.000	2.000	0.495	-1.957	0.287
age	2	0	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
edu	3	0	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
job	4	0	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
area	5	0	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
create...	6	0	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
NFT_f...	7	0	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
will_cr...	8	0	0.750	1.000	0.000	1.000	0.433	-0.639	-1.172
PP1	9	0	5.240	5.000	2.000	7.000	1.266	-0.357	-0.404
PP2	10	0	5.240	5.000	2.000	7.000	1.289	-0.500	-0.488
PP3	11	0	4.790	5.000	1.000	7.000	1.577	-0.734	-0.299
PP	12	0	5.090	5.000	2.330	7.000	1.112	-0.332	-0.304
PS1	13	0	5.200	5.000	1.000	7.000	1.233	0.466	-0.585
PS2	14	0	5.640	6.000	2.000	7.000	1.091	1.009	-0.788
PS3	15	0	4.930	5.000	1.000	7.000	1.505	-0.127	-0.612
PS	16	0	5.256	5.330	1.330	7.000	1.131	0.786	-0.688
TR1	17	0	5.330	6.000	2.000	7.000	1.289	-0.327	-0.640

Item Mean Standard Deviation

No.	Indicator	MEAN	MEDIAN	MIN	MAX	STDEV	MISSING
20	TR	4.91	5.00	1.00	7.00	1.40	-
21	AT1						
22	AT2						
23	AT3						
24	AT						
25	IN1						
26	IN2						
27	IN3						
28	IN						

2. 取得Standardized item loading值

Construct	Item	Item Mean	Standard Deviation	Standardized item loading	Cronbach's Alpha	Composite Reliability	rho_A	AVE	VIF
Trust		5.53	1.08		0.82	0.89	0.85	0.73	
	TR1	5.33	1.29	0.88					1.73
	TR2	5.66	1.27	0.82					1.84
	TR3	5.61	1.22	0.88					2.10
Security		5.26	1.13		0.86	0.92	0.86	0.79	
	PS1	5.20	1.23	0.92					3.09
	PS2	5.64	1.09	0.88					2.40
	PS3	4.93	1.51	0.86					1.97
Attitude		5.72	1.15		0.92	0.95	0.93	0.87	
	AT1	5.70	1.21	0.93					3.52
	AT2	5.66	1.33	0.91					3.13
	AT3	5.81	1.16	0.95					3.89
Privacy		5.09	1.11		0.76	0.89	0.77	0.80	
	PP1	5.24	1.27	0.91					1.58
	PP3	4.79	1.58	0.88					1.58
		5.08	1.24		0.87	0.92	0.87	0.79	
Intention	IN1	5.40	1.39	0.85					1.83
	IN2	4.94	1.38	0.92					3.08
	IN3	4.91	1.40	0.90					2.86



跑PLS後再進入
Outer Loading即可
得到Standardized
item loading

SmartPLS: C:\Us

File Edit View

Project Explorer

ECSI NFT NFT PLS-SEM BC Archive

Indicators

PLS Algorithm (F)

Report

Data Group

Inner model

Outer model Outer Weights / Loadings

Constructs R Square

Highlight Paths off

Show defaults

Partial Least Squares Algorithm

The PLS path modeling method was developed by Wold (1982). In essence, the PLS algorithm is a sequence of regressions in terms of weight vectors. The weight vectors obtained at convergence satisfy fixed point equations (see Dijkstra, 2010, for a general analysis of these equations).

Read more!

Setup Weighting

Basic Settings

Weighting Scheme: Centroid Factor Path (Path is selected)

Maximum Iterations: 300

Stop Criterion (10^{-X}): 7

Advanced Settings

Configure individual initial weights

Basic Settings

Weighting Scheme

PLS-SEM allows the user to apply three structural model weighting schemes:

- (1) centroid weighting scheme,
- (2) factor weighting scheme, and
- (3) path weighting scheme (default).

While the results differ little for the alternative weighting schemes, path weighting is the recommended approach. This weighting scheme provides the highest R^2 value for endogenous latent variables and is generally applicable for all kinds of PLS path model specifications and estimations. Moreover, when the path model includes higher-order constructs (often called second-order models), researchers should usually not use the centroid weighting scheme.

Maximum Iterations

This parameter represents the maximum number of iterations that will be used for calculating the PLS results. This number should be sufficiently large (e.g., 300).

After Calculation: Open Full Report Close Start Calculation

PP1 Privacy PP3

↑ 跑 PLS

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Save

New Project

New Path Model

Hide Zero Values

Increase Decimals

Decrease Decimals

Export to Excel

Export to Web

Export to R

Project Explorer



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Indicators



No. Indicator

20 TR

21 AT1

22 AT2

23 AT3

24 AT

25 IN1

26 IN2

27 IN3

28 IN

MEAN MEDIAN MIN MAX STDEV MISSING

4.91 5.00 1.00 7.00 1.40 -

NFT對消費者行為影響之研究_100筆_CSV.txt *NFT.splsm PLS Algorithm (Run No. 2)

Outer Loadings

Matrix

Copy to Clipboard:

Excel Format

R Format

	Attitude	Intention	Privacy	Security	Trust
AT1	0.931				
AT2	0.914				
AT3	0.946				
IN1		0.850			
IN2		0.918			
IN3		0.904			
PP1			0.913		
PP3			0.878		
PS1				0.921	
PS2				0.876	
PS3				0.863	
TR1					0.875
TR2					0.815

Final Results

Path Coefficients

Indirect Effects

Total Effects

Outer Loadings

Outer Weights

Quality Criteria

R Square

f Square

Construct Reliability and Validity

Discriminant Validity

VIF

Interim Results

Stop Criterion Changes

Setting

Inner Model

Outer Model

Indicator Data (Original)

Indicator Data (Standardized)

↑ 點 Out Loading 就可以跑出 Standardized item loading

3. 取得Cronbach's Alpha、Composite Reliability、rho_A、AVE值

Construct	Item	Item Mean	Standard Deviation	Standardized item loading	Cronbach's Alpha	Composite Reliability	rho_A	AVE	VIF
Trust	TR1	5.53	1.08		0.82	0.89	0.85	0.73	
	TR2								1.73
	TR3								1.84
Security	PS1								2.10
	PS2								
	PS3								
Attitude	AT1								
	AT2								
	AT3								
Privacy	PP1	5.09	1.11						
	PP3	5.24	1.27	0.91					
		4.79	1.58	0.88					
Intention	IN1	5.08	1.24						
	IN2	5.40	1.39	0.85					
	IN3	4.94	1.38	0.92					

Fornell and Larcker
(1981) 建議潛在變項的
CR值能達到0.60以上。

過去學者建議AVE數值應高於0.5以上，但考量
數據資料的實際面向，亦可以AVE高於0.36以
上為勉強接受之標準(Fornell & Larcker, 1981)。

Save

New Project

New Path Model

Hide Zero Values

Increase Decimals

Decrease Decimals

Export to Excel

Export to Web

Export to R

Project Explorer



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*NFT.splsm

PLS Algorithm (Run No. 2)

Construct Reliability and Validity

	Cronbac...	rho_A	Composi...	Average ...	
Attitude	0.923	0.934	0.951	0.866	
Intention	0.869	0.870	0.920	0.794	
Privacy	0.755	0.769	0.890	0.802	
Security	0.864	0.864	0.917	0.787	
Trust	0.822	0.850	0.892	0.734	

Copy to Clipboard:

Excel Format

R Format

Indicators



No. Indicator

20 TR

21 AT1

22 AT2

23 AT3

24 AT

25 IN1

26 IN2

27 IN3

28 IN

MEAN MEDIAN MIN MAX STDEV MISSING

↑ 點Construct Reliability and Validity就可以跑出Cronbach's Alpha、Composite Reliability、rho_A、AVE

4. 取得VIF值

Construct	Item	Item Mean	Standard Deviation	Standardized item loading	Cronbach's Alpha	Composite Reliability	rho_A	AVE	VIF
Trust		5.53	1.08		0.82	0.89	0.85	0.79	
	TR1	5.33	1.29	0.88					1.73
	TR2	5.66	1.27	0.82					1.84
	TR3	5.61	1.22	0.88					2.10
Security		5.26	1.13		0.86				
	PS1	5.20	1.23	0.92					3.09
	PS2	5.64	1.09	0.88					2.40
	PS3	4.93	1.51	0.86					1.97
Attitude		5.72	1.15		0.92	0.95	0.93	0.87	
	AT1	5.70	1.21	0.93					3.52
	AT2	5.66	1.33	0.91					3.13
	AT3	5.81	1.16	0.95					3.89
Privacy		5.09	1.11		0.76	0.89	0.77	0.80	
	PP1	5.24	1.27	0.91					1.58
	PP3	4.79	1.58	0.88					1.58
Intention		5.08	1.24		0.87	0.92	0.87	0.79	
	IN1	5.40	1.39	0.85					1.83
	IN2	4.94	1.38	0.92					3.08
	IN3	4.91	1.40	0.90					2.86

VIF越小越好，原則上
不要大於10。

Save

New Project

New Path Model

Hide Zero Values

Increase Decimals

Decrease Decimals

Export to Excel

Export to Web

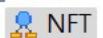
Export to R

Project Explorer



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Indicators



No. Indicator

20 TR

21 AT1

22 AT2

23 AT3

24 AT

25 IN1

26 IN2

27 IN3

28 IN

MEAN MEDIAN MIN MAX STDEV MISSING

4.91

5.00

1.00

7.00

1.40

-

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多雲

Collinearity Statistics (VIF)

Outer VIF Values

Inner VIF Values

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R Format

	VIF
AT1	3.520
AT2	3.132
AT3	3.885
IN1	1.830
IN2	3.081
IN3	2.855
PP1	1.582
PP3	1.582
PS1	3.086
PS2	2.395
PS3	1.971
TR1	1.726
TR2	1.837

Final Results

[Path Coefficients](#)[Indirect Effects](#)[Total Effects](#)[Outer Loadings](#)[Outer Weights](#)[Latent Variable](#)[Residuals](#)

Quality Criteria

[R Square](#)[f Square](#)[Construct Reliability and Validity](#)[Discriminant Validity](#)[Collinearity Statistics \(VIF\)](#)[Model Fit](#)[N](#)

Interim Results

[Stop Criterion Changes](#)[Setting](#)[Inner Model](#)[Outer Model](#)[Indicator Data \(Original\)](#)[Indicator Data \(Standardized\)](#)[Indicator Data \(Correlations\)](#)

↑ 點 Collinearity Statistics(VIF) 就可以得到VIF

Discriminant Validity: Fornell-Larcker criterion



*Discriminant Validity: Fornell-Larcker criterion*範例

Table 5.
Discriminant validity:
Fornell-Larcker
criterion

	1	2	3	4	5	6
1. Perceived usefulness	0.737					
2. Confirmation	0.516	0.787				
3. Fintech continuance intention	0.520	0.449	0.749			
4. Financial self-efficacy	0.416	0.392	0.358	0.727		
5. Satisfaction	0.490	0.659	0.493	0.409	0.774	
6. Technological self-efficacy	0.269	0.142	0.246	0.157	0.118	0.777



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Indicators

No.	Indicator
20	TR
21	AT1
22	AT2
23	AT3
24	AT
25	IN1
26	IN2
27	IN3
28	IN

MEAN	MEDIAN	MIN	MAX	STDEV	MISSING
4.91	5.00	1.00	7.00	1.40	-

Discriminant Validity

	Attitude	Intention	Privacy	Security	Trust
Attitude	0.930				
Intention	0.721	0.891			
Privacy	0.549	0.610	0.896		
Security	0.573	0.614	0.775	0.887	
Trust	0.600	0.635	0.681	0.757	0.857

Final Results

[Path Coefficients](#)[Indirect Effects](#)[Total Effects](#)[Outer Loadings](#)[Outer Weights](#)[Latent Variable](#)[Residuals](#)

Quality Criteria

[R Square](#)[f Square](#)[Construct Reliability and Validity](#)[Discriminant Validity](#)[Collinearity Statistics \(VIF\)](#)[Model Fit](#)[Model Selection Criteria](#)

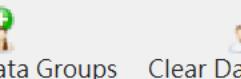
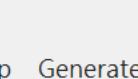
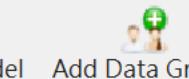
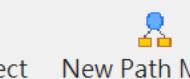
Interim Results

[Stop Criterion Changes](#)[Setting](#)[Inner Model](#)[Outer Model](#)[Indicator Data \(Original\)](#)[Indicator Data \(Standardized\)](#)[Indicator Data \(Correlations\)](#)

Base Data

[Setting](#)[Inner Model](#)[Outer Model](#)[Indicator Data \(Original\)](#)[Indicator Data \(Standardized\)](#)[Indicator Data \(Correlations\)](#)

↑跑PLS後點Discriminant Validity就做好了



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點選綠色圖塊，取得平均數、標準差、峰度、偏態

Indicators

No.	Indicator
1	sex
8	will_create
9	PP1
10	PP2
11	PP3
12	PP
13	PS1
14	PS2
15	PS3
16	PS
17	TR1

前提：excel原始檔中必須新增各構面數值的平均。例如新增的PP欄位為PP1、PP2、PP3三項平均。

*NFT.splsm NFT對消費者行為影響之研究_100筆_CSV.txt

Delimiter: Comma Encoding: BIG5
 Value Quote Character: None Sample size: 100
 Number Format: US (example: 1,000.23) Indicators: 52
 Missing Value Marker: None Missing Values: 0

Re-Analyze Open External

Indicators	Indicator Correlations		Raw File							Copy to Clipboard	
	No.	Missing	Mean	Median	Min	Max	Standard Deviation	Excess Kurtosis	Skewness		
sex	1	0	1.430	1.000	1.000	2.000	0.495	-1.957	0.287		
age	2	0	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000		
edu	3	0	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000		
job	4	0	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000		
area	5	0	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000		
create...	6	0	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000		
NFT_f...	7	0	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000		
will_cr...	8	0	0.750	1.000	0.000	1.000	0.433	-0.639	-1.172		
PP1	9	0	5.240	5.000	2.000	7.000	1.266	-0.357	-0.404		
PP2	10	0	5.240	5.000	2.000	7.000	1.289	-0.500	-0.488		
PP3	11	0	4.790	5.000	1.000	7.000	1.577	-0.734	-0.299		
PP	12	0	5.090	5.000	2.330	7.000	1.112	-0.332	-0.304		
PS1	13	0	5.200	5.000	1.000	7.000	1.233	0.466	-0.585		
PS2	14	0	5.640	6.000	2.000	7.000	1.091	1.009	-0.788		
PS3	15	0	4.930	5.000	1.000	7.000	1.505	-0.127	-0.612		
PS	16	0	5.256	5.330	1.330	7.000	1.131	0.786	-0.688		
TR1	17	0	5.330	6.000	2.000	7.000	1.289	-0.327	-0.640		

Discriminant Validity: Fornell-Larcker criterion 參考解答

		1	2	3	4	5
1	Attitude	0.93				
2	Intention	0.72	0.89			
3	Privacy	0.55	0.61	0.90		
4	Security	0.57	0.61	0.78	0.89	
5	Trust	0.60	0.64	0.68	0.76	0.86
	Mean	5.72	5.08	5.09	5.26	5.53
	S.D.	1.15	1.24	1.11	1.13	1.08
	Kurtosis	2.17	0.54	-0.33	0.79	0.14
	Skewness	-1.26	-0.592	-0.30	-0.688	-0.73

根據Hair et al. (1998) 的建議，兩個不同概念間的相關係數應小於每一概念的平均解釋變異量 (AVE) 之平方根。將不同的兩個概念進行量測，將其結果進行相關分析，若其相關程度皆很低，表示兩個概念間具有區別效度 (吳萬益、林清河，2002) 。

Discriminant Validity: Heterotrait–monotrait



*Discriminant Validity: Heterotrait-monotrait*範例

Table 6.

Discriminant validity:
Heterotrsait–
monotrait (HTMT)

	1	2	3	4	5
1. Perceived usefulness					
2. Confirmation	0.678				
3. Fintech continuance intention	0.680	0.560			
4. Financial self-efficacy	0.554	0.487	0.459		
5. Satisfaction	0.657	0.837	0.629	0.518	
6. Technological self-efficacy	0.341	0.168	0.292	0.203	0.152

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Save New Project New Path Model Hide Zero Values Increase Decimals Decrease Decimals Export to Excel Export to Web Export to R

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Discriminant Validity

Fornell-Larcker Cri... Cross Loadings Heterotrait-Monot... Heterotrait-Monotrait Ratio (HTMT) Copy to Clipboard: Excel Format R Format

Attitude

	Intention	Privacy	Security	Trust
Intention	0.802			
Privacy	0.649	0.753		
Security	0.639	0.707	0.957	
Trust	0.673	0.748	0.823	0.868

2. 點 HTMT

Indicators

No.	Indicator
20	TR
21	AT1
22	AT2
23	AT3
24	AT
25	IN1
26	IN2
27	IN3
28	IN

Final Results Quality Criteria Interim Results Base Data

Path Coefficients R Square Stop Criterion Changes Setting

Indirect Effects f Square Inner Model

Total Effects Construct Reliability and Validity Outer Model

Outer Loadings Discriminant Validity Indicator Data (Original)

Outer Weights Collinearity Statistics (VIF) Indicator Data (Standardized)

Latent Variable Model Fit Model Selection Criteria

Residuals

1. 跑 PLSPS 後，點 Discriminant Validity

Discriminant validity: Heterotrait–monotrait 參考解答

		1	2	3	4	5
1	Attitude					
2	Intention	0.802				
3	Privacy	0.649	0.753			
4	Security	0.639	0.707	0.957		
5	Trust	0.673	0.748	0.823	0.868	

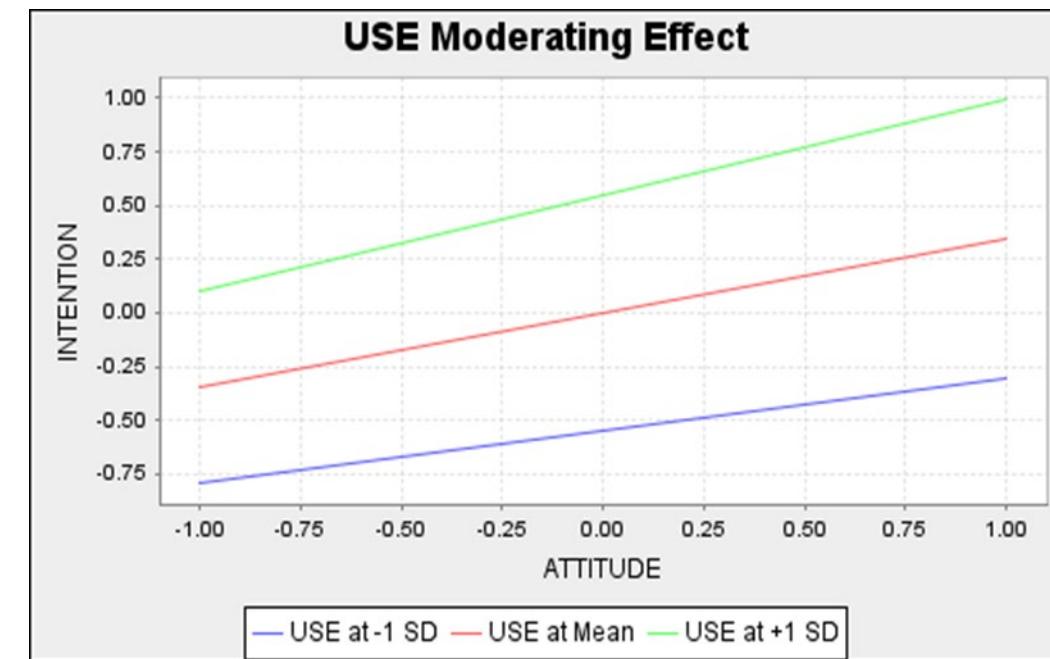
HTMT值不能大於0.85，
若兩構面相近可以放寬
到0.9。

Moderating Effect(PLS)



*Moderating Effect*範例

	Original Sample	| t |	p-value	Outcome
H6 : USE \times ATT \rightarrow INT	0.101	2.87	0.049	Supported
H7 : ARCS \times USE \rightarrow ATT	0.082	1.97	0.004	Supported



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Select Latent Variable Connect Quadratic Effect Moderating Effect Comment

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Indicators

No.	Indicator
43	Consumer
44	Creator1
45	Creator2
46	Creator3
47	Creator4
48	Creator
49	Platform1
50	Platform2
51	Platform3
52	Platform

Security

Trust

Attitude

Privacy

PS1 PS2 PS3 TR1 TR2 TR3 PP1 PP3

1.新增調節效果

Delete Rename F2 Add Moderating Effect ...

- Set Indicator Weighting to 'Automatic'
- Set Indicator Weighting to 'Mode A'
- Set Indicator Weighting to 'Mode B'
- Set Indicator Weighting to 'Sumscores'
- Set Indicator Weighting to 'Predefined'
- Align Indicators Top Alt+W
- Align Indicators Left Alt+A
- Align Indicators Bottom Alt+S
- Align Indicators Right Alt+D
- Align Selected Element Top
- Align Selected Element Left
- Align Selected Element Bottom
- Align Selected Element Right
- Match Width
- Match Height
- Export as Image to File
- Export as Image to Clipboard

Font Size

Border Size

Align

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File Edit View Themes Calculate Info Language

Select Latent Variable Connect Quadratic Effect Moderating Effect Comment Calculate

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Indicators

No.	Indicator
43	Consumer
44	Creator1
45	Creator2
46	Creator3
47	Creator4
48	Creator
49	Platform1
50	Platform2
51	Platform3
52	Platform

*NFT.splsm

```

    graph TD
      Security((Security)) --> PS1[PS1]
      Security --> PS2[PS2]
      Security --> PS3[PS3]
      Security --> Trust((Trust))
      Trust --> TR1[TR1]
      Trust --> TR2[TR2]
      Trust --> TR3[TR3]
      Trust --> Privacy((Privacy))
      Privacy --> PP1[PP1]
      Privacy --> PP3[PP3]
      Privacy --> Attitude((Attitude))
      Attitude --> AT1[AT1]
      Attitude --> A[Attitude]
  
```

2. 設定調節變相、自變相

Dependent Variable: Attitude

Moderator Variable: Security

Independent Variable: Trust

Calculation Method: Two Stage

Advanced Settings

Product Term Generation: Standardized

Weighing Mode: Automatic

舉例來說：

```

    graph LR
      MV((調節變相(MV))) --> DV((依變相(DV)))
      IV((自變相(IV))) --> DV
  
```

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Indicators

No.	Indicator
43	Consumer
44	Creator1
45	Creator2
46	Creator3
47	Creator4
48	Creator
49	Platform1
50	Platform2
51	Platform3
52	Platform

Moderating Effect

Basic Settings

Dependent Variable: Attitude
Moderator Variable: Security
Independent Variable: Trust
Calculation Method:
 Product Indicator
 Two Stage
 Orthogonalization

Advanced Settings

Product Term Generation:
 Unstandardized
 Mean Centered
 Standardized

Weighing Mode:
 Automatic
 Mode A
 Mode B
 Sumscores
 Pre Defined

Basic Settings

Dependent Variable

The selected dependent variable for which a moderating effect will be estimated.

Predictor Variable

Field to define the predictor variable for which a moderating effect will be estimated.

Moderator Variable

Field to define the moderator variable for which a moderating effect will be estimated.

Calculation Method

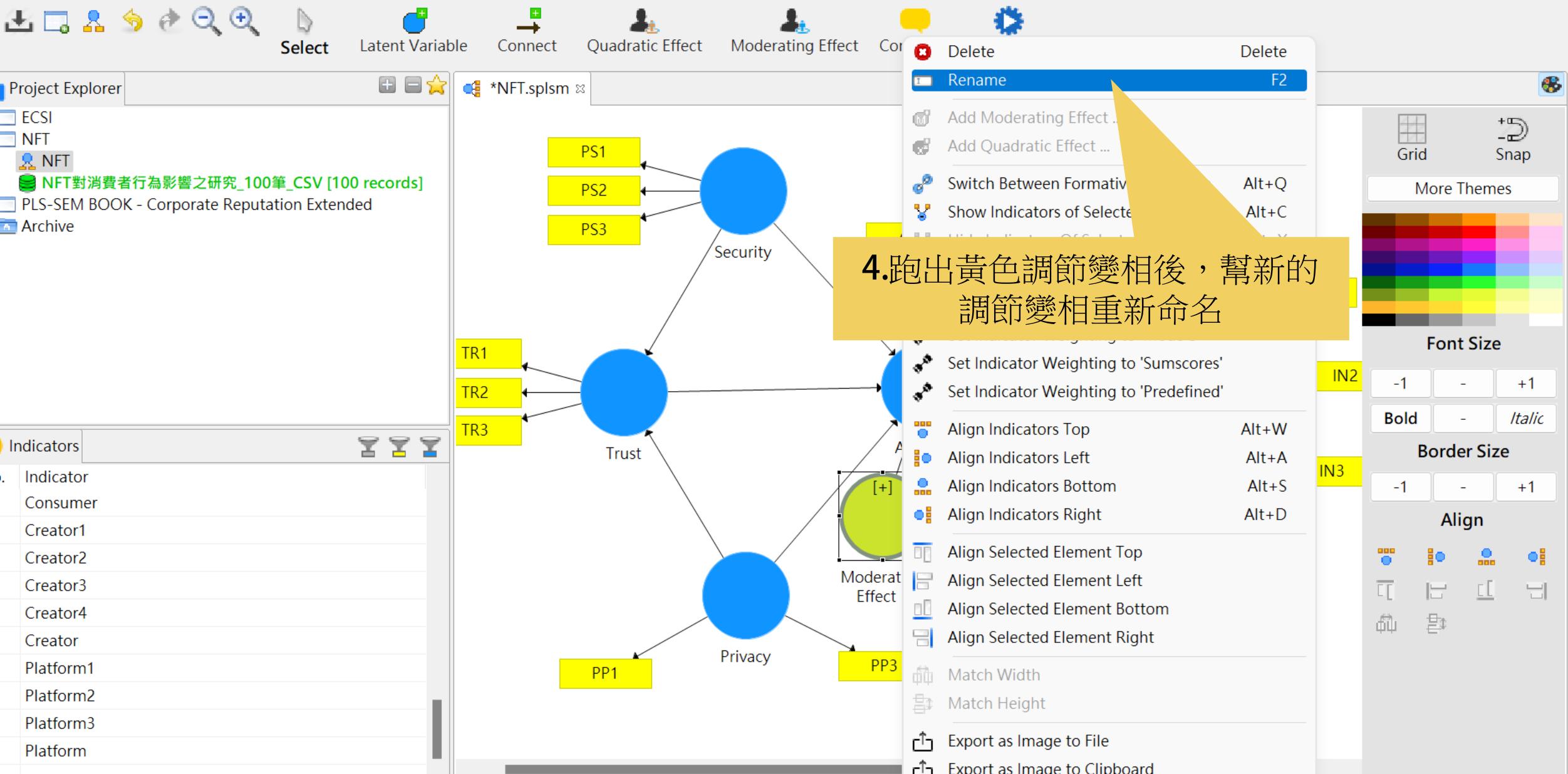
Selects the method of interaction term construct in PLS path modeling. There are three options:

(1) Product Indicator
This approach uses all possible pair combinations of the indicators of the latent predictor and the latent moderator variable. These product terms serve as indicators ("product indicators") of the interaction term in the structural model.

(2) Two-stage (default)
This approach uses the latent variable scores of the latent predictor and latent moderator interaction term. The calculation of the product involves the interaction variable.

OK Cancel

3. 設定好後按OK



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File Edit View Themes Calculate Info Language

Select Latent Variable Connect Quadratic Effect Moderating Effect Comment Calculate

Project Explorer: *NFT.splsm

Indicators:

No.	Indicator
43	Consumer
44	Creator1
45	Creator2
46	Creator3
47	Creator4
48	Creator
49	Platform1
50	Platform2
51	Platform3
52	Platform

Diagram:

Rename variable dialog:

Rename variable
Rename variable 'Trust X Security'.
Name displayed in model (multiple lines possible):
Trust X Security
Name displayed in repository:
Trust X Security

OK

5.命名方式：自變相X調節變相

SmartPLS: C:\Us

File Edit View

Bootstrapping

Bootstrapping is a nonparametric procedure that allows testing the statistical significance of various PLS-SEM results such path coefficients, Cronbach's alpha, HTMT, and R² values.

Read more!

Project Explorer

ECSI

NFT

NFT

PLS-SEM BC

Archive

Setup Partial Least Squares Weighting

Basic Settings

Subsamples: 5000

Do Parallel Processing (checked)

Amount of Results

Advanced Settings

Confidence Interval Method: Bias-Corrected and Accelerated (BCa) Bootstrap (selected)

Test Type: Two Tailed (selected)

Significance Level: 0.05

6. 設5000次

Indicators

No.	Indicator
43	Consumer
44	Creator1
45	Creator2
46	Creator3
47	Creator4
48	Creator
49	Platform1
50	Platform2
51	Platform3
52	Platform

Basic Settings

Subsamples

In bootstrapping, subsamples are created with observations randomly drawn (with replacement) from the original set of data. To ensure stability of results, the number of subsamples should be large. For an initial assessment, one may use a smaller number of bootstrap subsamples (e.g., 500). For the final results preparation, however, one should use a large number of bootstrap subsamples (e.g., 5,000).

Note: Larger numbers of bootstrap subsamples increase the computation time.

Do Parallel Processing

This option runs the bootstrapping routine on multiple processors (if your computer device offers more than one core). Using parallel computing will reduce computation time.

Amount of Results

(1) Basic Bootstrapping (default)

Only a basic set of results for bootstrapping is assembled. This includes:

After Calculation: Open Full Report

Close Start Calculation

PP1 Privacy PP3

7. 跑Bootstrapping

33°C 晴時多雲

Windows Search File Explorer LINE W P Google Chrome Microsoft Edge

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2022/5/30 1

更多 Themes

Font Size

Italic

Border Size

Align

More Snap

SmartPLS: C:\Users\yolan\smartpls_workspace

File Edit View Themes Calculate Info Language

Save New Project New Path Model Hide Zero Values Increase Decimals Decrease Decimals Export to Excel Export to Web Export to R

Project Explorer *NFT.splsm Bootstrapping (Run No. 1) Path Coefficients

ECSI NFT NFT 對消費者行為影響之研究_100筆 CSV [100 records] PLS-SEM BOOK - Corporate Reputation Extended Archive

Path Coefficients

	Original Sample (O)	Sample Mean (M)	Standard Deviation (ST...)	T Statistics (|O/STDEV|)	P Values
Attitude -> Intention	0.721	0.721	0.053	13.628	0.000
Privacy -> Attitude	0.194	0.184	0.157	1.240	0.215
Privacy -> Trust	0.237	0.238	0.098	2.405	0.016
Security -> Attitude	0.149	0.147	0.198	0.753	0.451
Security -> Trust	0.573	0.575	0.092	6.209	0.000
Trust -> Attitude	0.340	0.355	0.157	2.161	0.031
Trust X Security -> Attitude	-0.034	-0.031	0.093	0.364	0.716

Indicators

No.	Indicator
43	Consumer
44	Creator1
45	Creator2
46	Creator3
47	Creator4
48	Creator
49	Platform1
50	Platform2
51	Platform3
52	Platform

Final Results Histograms Base Data

[Path Coefficients](#) [Path Coefficients Histogram](#) [Setting](#)
[Total Indirect Effects](#) [Indirect Effects Histogram](#) [Inner Model](#)
[Specific Indirect Effects](#) [Total Effects Histogram](#) [Outer Model](#)
[Total Effects](#) [Indicator Data \(Original\)](#)
[Outer Loadings](#) [Indicator Data \(Standardized\)](#)
[Outer Weights](#)

Moderating Effect 表格參考解答

	Original Sample	| t |	p-value	Outcome
H7 : Trust*Security→Attitude	(0.03)	0.36	0.72	No

SmartPLS: C:\Users\yolan\smartpls_workspace

File Edit View Themes Calculate Info Language

Select Latent Variable Connect Quadratic Effect Moderating Effect Comment Calcul

Project Explorer *NFT.splsm

ECI NFT
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PLS-SEM BOOK - Corporate Reputation Extended
Archive

Indicators

No.	Indicator
43	Consumer
44	Creator1
45	Creator2
46	Creator3
47	Creator4
48	Creator
49	Platform1
50	Platform2
51	Platform3
52	Platform

Security → PS1, PS2, PS3

Trust → TR1, TR2, TR3

Privacy → PP1, PP3

Attitude → AT1, AT2

Intention → IN2, IN3

Trust X Security (Moderating Effect)

PLS Algorithm

- Bootstrapping
- Blindfolding
- Confirmatory Tetrad Analyses (CTA)
- Importance-Performance Map Analysis (IPMA)
- PLS Predict
- Finite Mixture (FIMIX) Segmentation
- Prediction-Oriented Segmentation (POS)
- Multi-Group Analysis (MGA)
- Permutation
- Consistent PLS Algorithms

Snap Themes Front Size Bold Border Size Align

SmartPLS: C:\Users\yolan\smartpls_workspace

File Edit View Themes Calculate Info Language

Save New Project New Path Model Hide Zero Values Increase Decimals Decrease Decimals Export to Excel Export to Web Export to R

Project Explorer *NFT.splsm PLS Algorithm (Run No. 1) Simple Slope Analysis

Copy to Clipboard: Chart

Trust X Security

Altitude

Trust

Legend: Security at -1 SD (Red), Security at Mean (Blue), Security at +1 SD (Green)

Indicators

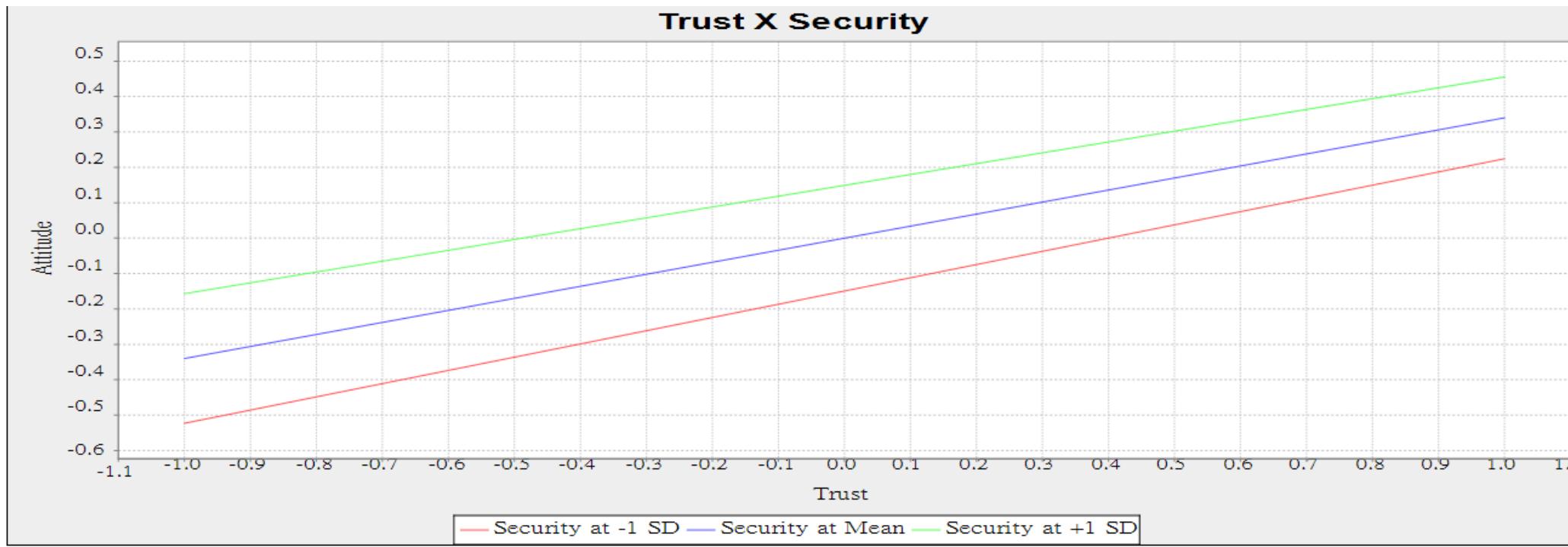
No.	Indicator
43	Consumer
44	Creator1
45	Creator2
46	Creator3
47	Creator4
48	Creator
49	Platform1
50	Platform2
51	Platform3
52	Platform

Path Coefficients
Indirect Effects
Total Effects
Outer Loadings
Outer Weights
Latent Variable
Residuals
Simple Slope Analysis

R Square
f Square
Construct Reliability and Validity
Discriminant Validity
Collinearity Statistics (VIF)
Model Fit
Model Selection Criteria

Stop Criterion Changes
Setting
Inner Model
Outer Model
Indicator Data (Original)
Indicator Data (Standardized)
Indicator Data (Correlations)

Moderating Effect 圖表參考解答



Moderating Effect(EXCEL)



	V10	V11	V1	V15	V16	PS	V18	V19	V20	TR	V22	V23	V24
1	.	.	.	.	.	.	.	.	.	.	.	.	.
2	5.00	5.00	.	5.00	5.0	5.00	6.00	6.00	6.0	6.00	5.00	5.00	5.0
3	7.00	7.00	.	7.00	7.0	7.00	7.00	7.00	7.0	7.00	7.00	7.00	7.0
4	4.00	4.00	.	4.00	4.0	4.00	5.00	5.00	5.0	5.00	5.00	5.00	5.0
5	3.00	5.00	.	3.00	3.67	3.67	4.00	5.00	6.0	5.00	6.00	6.00	6.0
6	6.00	5.00	.	6.00	5.33	5.33	5.00	5.00	5.0	5.00	5.00	5.00	5.0
7	7.00	7.00	.	7.00	6.67	6.67	7.00	7.00	7.0	7.00	7.00	7.00	7.0
8	5.00	5.00	.	5.00	6.00	6.00	5.00	5.00	5.0	6.00	6.00	7.00	7.0
9	6.00	6.00	.	6.00	6.00	6.00	6.00	6.00	6.0	5.67	5.00	6.00	6.0
10	7.00	6.00	.	7.00	6.00	6.00	7.00	7.00	7.0	6.33	7.00	7.00	7.0
11	6.00	6.00	.	6.00	6.00	6.00	6.00	6.00	6.0	6.00	6.00	7.00	7.0
12	7.00	7.00	.	7.00	6.00	6.00	6.00	6.00	6.0	6.00	7.00	6.00	6.0
13	5.00	6.00	.	5.00	5.33	5.33	5.00	5.00	5.0	5.33	6.00	6.00	5.0
14	6.00	5.00	.	6.00	6.33	6.33	6.00	6.00	6.0	5.67	6.00	6.00	6.0
15	7.00	6.00	.	7.00	6.00	6.00	6.00	6.00	6.0	6.00	7.00	7.00	7.0
16	5.00	6.00	.	5.00	5.33	5.00	6.00	6.00	6.0	6.00	7.00	6.00	7.0
17	7.00	7.00	.	7.00	6.33	6.33	7.00	6.33	6.00	6.00	6.00	6.00	5.0
18	7.00	6.00	.	7.00	5.67	6.00	6.00	5.00	5.00	5.0	5.00	6.00	6.0
19	5.00	6.00	.	5.00	4.67	4.67	6.00	6.00	6.00	6.00	5.33	5.00	6.00
20	5.00	5.00	.	5.00	5.33	5.00	6.00	6.00	5.67	6.00	7.00	6.00	7.0
21	5.00	4.00	.	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.33	6.00	5.00
22	5.00	6.00	.	5.00	4.67	4.67	6.00	7.00	5.0	6.00	6.00	5.00	6.0
23	5.00	5.00	.	5.00	4.67	4.67	4.00	5.00	3.00	3.00	6.00	4.00	4.67
24	4.00	6.00	.	4.00	4.67	4.67	4.00	5.00	5.0	4.67	4.00	4.67	5.00
25	6.00	5.00	.	6.00	5.00	5.00	4.00	4.33	4.00	4.00	4.00	4.00	5.00
26	3.00	3.00	.	3.00	2.33	2.33	3.00	4.00	3.0	3.33	3.00	5.00	4.33
27	6.00	4.00	.	6.00	5.33	5.33	6.00	6.00	5.0	5.67	5.00	5.00	4.00

1.打開SPSS匯入CSV檔案後，點選「分析→迴歸方法→線性」

報表(P)
敘述統計(E)
比較平均數法(M)
一般線性模式(G)
混合模式(X)
相關(C)
迴歸方法(R)
線性(L)...
對數線性(O)
曲線估計(C)...
分類(V)
資料縮減(D)

SPSS 處理器 已就緒

未命名 - SPSS 資料編輯程式

檔案(F) 編輯(E) 檢視(V) 資料(D) 轉換(T) 分析(A) 統計圖(G) 公用程式(U) 視窗(W) 輔助說明(H)

1 : PS

	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	5.00	5.00	4.0	4.67									6.0	6.00	5.00	5.00
3	7.00	7.00	2.00	2.00	2.00								7.0	7.00	7.00	7.00
4	4.00												5.0	5.00	5.00	5.00
5	3.00												6.0	5.00	6.00	6.00
6	6.00												5.0	5.00	5.00	5.00
7	7.00												7.0	7.00	7.00	7.00
8	5.00	5.00	4.0	4.67									5.0	6.00	6.00	7.00
9	6.00	6.00	5.0	5.67									6.0	5.67	5.00	6.00
10	7.00	6.00	6.0	6.33									7.0	6.33	7.00	7.00
11	6.00	6.00	6.0	6.00									6.0	6.00	6.00	7.00
12	7.00	7.00	7.0	7.00									6.0	6.00	7.00	6.00
13	5.00	6.00	6.0	5.67									5.0	5.33	6.00	6.00
14	6.00	5.00	5.0	5.33									6.0	5.67	6.00	6.00
15	7.00	6.00	6.0	6.33									6.0	6.00	7.00	7.00
16	5.00	6.00	5.0	5.33									6.0	6.00	7.00	6.00
17	7.00	7.00	5.0	6.33									6.0	6.00	6.00	5.00
18	7.00	6.00	4.0	5.67									5.0	5.00	6.00	7.00
19	5.00	6.00	3.0	4.67									6.0	5.33	5.00	6.00
20	5.00	5.00	6.0	5.33	5.00	6.00	6.0	5.67	6.00	7.00			6.0	6.33	6.00	7.00
21	5.00	4.00	6.0	5.00	6.00	6.00	6.0	6.00	6.00	7.00			6.0	6.33	6.00	5.00
22	5.00	6.00	3.0	4.67	6.00	7.00	5.0	6.00	3.00	6.00			6.0	5.00	7.00	6.00
23	5.00	5.00	4.0	4.67	4.00	5.00	3.0	4.00	3.00	7.00			4.0	4.67	7.00	6.00
24	4.00	6.00	4.0	4.67	4.00	5.00	5.0	4.67	4.00	5.00			5.0	4.67	5.00	5.00
25	6.00	5.00	4.0	5.00	4.00	5.00	4.0	4.33	4.00	4.00			4.0	4.00	4.00	4.00
26	3.00	3.00	1.0	2.33	3.00	4.00	3.0	3.33	3.00	5.00			5.0	4.33	5.00	6.00
27	6.00	4.00	6.0	5.33	6.00	6.00	5.0	5.67	5.00	5.00			5.0	5.00	5.00	4.00

資料檢視 | 變數檢視 |

線性迴歸

依變數(D) : # AT

自變數(I) : # TR # PS

方法(M) : 強迫進入變數

選擇變數(E) :

觀察值標記(C) :

加權最小平方法之權數(H) :

統計量(S)... 統計圖(L)... 儲存(A)... 選項(O)...

X SPSS

SPSS 處理器 已就緒

33°C 多雲

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輸出
迴歸
標題
註解
進入/刪除的變數
模式摘要
變異數分析
係數

模式摘要

模式	R	R 平方	調適後的 R 平方	估計的標準誤
1	.613 ^a	.376	.363	.91928

a. 預測變數：(常數), PS, TR

變異數分析^b

模式	平方和	自由度	平均平方和	F 檢定	顯著性
1 迴歸	49.377	2	24.689	29.215	.000 ^a
殘差	81.973	97	.845		
總和	131.350	99			

a. 預測變數：(常數), PS, TR

b. 依變數：AT

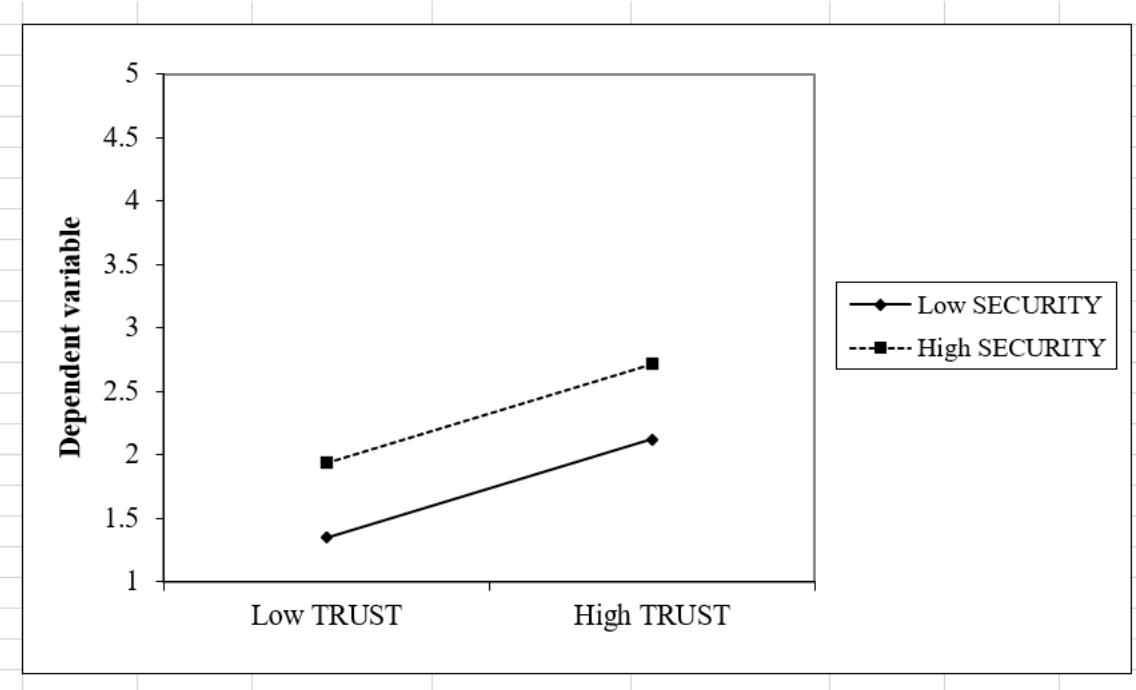
係數^a

模式	截距 (常數)	未標準化係數		標準化迴歸係數		
		估計值	標準誤	B	t	顯著性
1	2.031	.493		4.119	.000	
TR	.387	.127	.366	3.055	.003	
PS	.295	.121	.291	2.430	.017	

a. 依變數：AT

Moderating Effect 圖表參考解答

Variable names:	
Name of independent variable:	TRUST
Name of moderator:	SECURITY
Unstandardised Regression Coefficients:	
Independent variable:	0.387
Moderator:	0.295
Interaction:	0.001
Intercept / Constant:	2.031
Means / SDs of variables:	
Mean of independent variable:	0
SD of independent variable:	1
Mean of moderator:	0
SD of moderator:	1



結構模型評鑑鑑定表

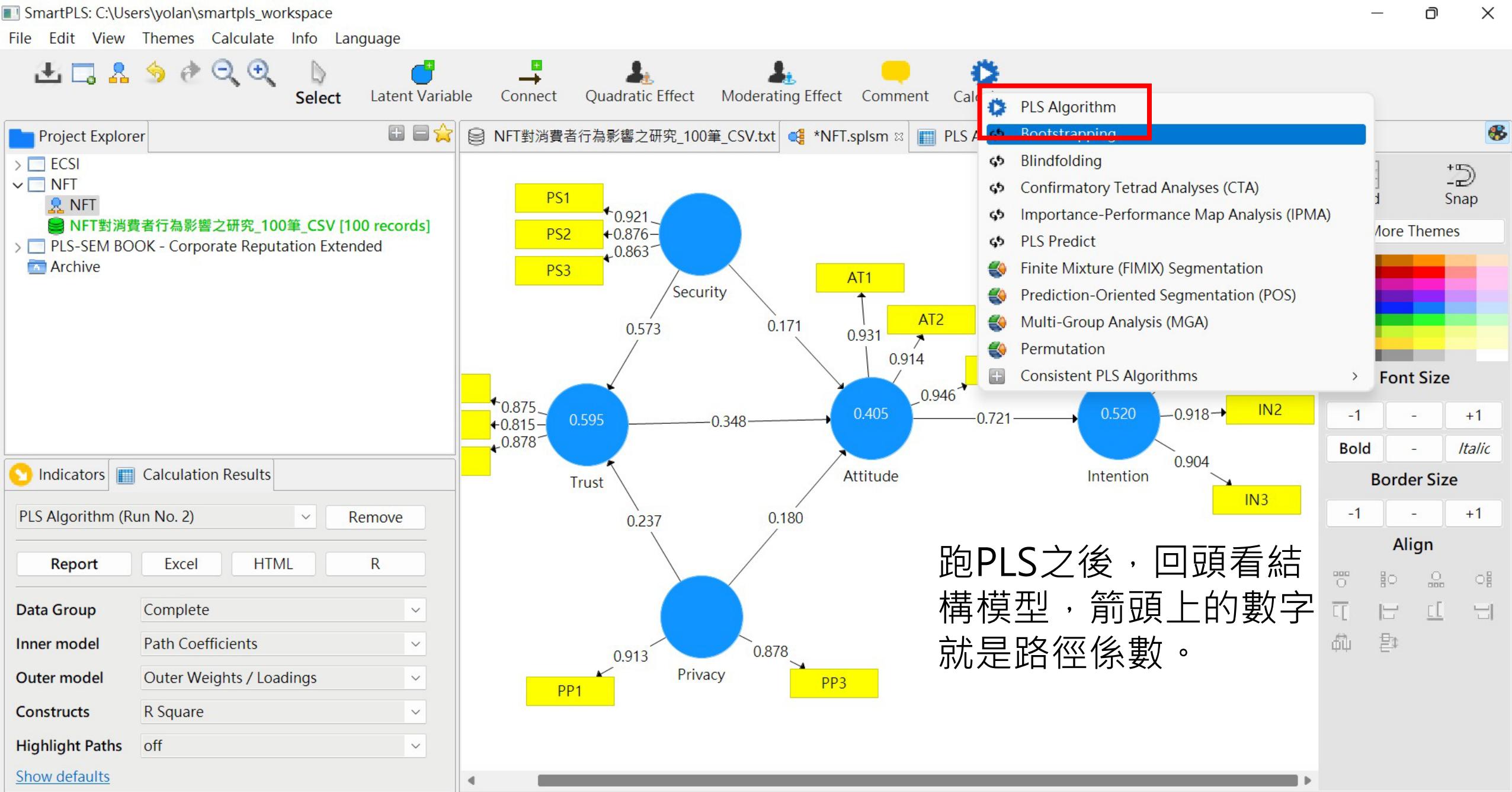


結構模型評鑑鑑定表範例

	Path Coefficients	| t |	p-value	Outcome	R square	f square	q square	95% CILL	95% CIUL	Model Fit
H1:USE→ATTITUDE	0.41	2.45	0.014	Supported	0.75	0.15	2.37	0.04	0.69	SRMR=0.3
H2:ARCS→ATTITUDE	0.48	3.09	0.002	Supported	0.75	0.20	2.15	0.21	0.84	NFI=na
H3:ATTITUDE→INTENTION	0.34	3.54	0	Supported	0.74	0.14	2.30	0.15	0.53	RMS theta=0.16
H4:USE→INTENTION	0.55	5.92	0	Supported	0.74	0.35	1.47	0.36	0.72	
H5:Mental Theory→USE	-0.32	3.27	0.001	Supported	0.10	0.11	-0.01	-0.50	-0.12	

1. 取得Path Coefficients(路徑係數)

	Path Coefficients	| t |	p-value	Outcome	R square	f square	q square	95%CILL	95%CIUL	Model Fit
H1 : Security→Trust	0.57	6.52	0.000	Supported	0.60	0.03	1.39	0.40	0.74	SRMR=0.077
H2 : Security→Attitude	0.17	1.00	0.318	No	0.41	0.02	0.66	(0.18)	0.53	NFI=0.768 RMS
H3 : Trust→Attitude	0.33	2.23	0.026	Supported	0.41	0.08	0.54	0.01	0.65	theta=0.245
H4 : Privacy→Trust	0.24	2.51	0.013	Supported	0.60	0.06	1.33	0.05	0.42	
H5 : Privacy→Attitude	0.18	1.29	0.196	No	0.41	0.02	0.65	(0.14)	0.42	
H6 : Attitude→Intentior	0.72	14.34	0.000	Supported	0.52	1.08	(1.18)	0.61	0.81	



SmartPLS: C:\Us

File Edit View

Bootstrapping

Bootstrapping is a nonparametric procedure that allows testing the statistical significance of various PLS-SEM results such path coefficients, Cronbach's alpha, HTMT, and R² values.

Read more!

Project Explorer

ECSI

NFT

NFT

PLS-SEM BC

Archive

Indicators

PLS Algorithm (F)

Report

Basic Settings

Subsamples: 500

Do Parallel Processing: checked

Amount of Results: Basic Bootstrapping (radio button selected)

Advanced Settings

Confidence Interval Method: Bias-Corrected and Accelerated (BCa) Bootstrap (radio button selected)

Test Type: Two Tailed (radio button selected)

Significance Level: 0.05

Outer model: Outer Weights / Loadings

Constructs: R Square

Highlight Paths: off

Show defaults

Basic Settings

Subsamples

In bootstrapping, subsamples are created with observations randomly drawn (with replacement) from the original set of data. To ensure stability of results, the number of subsamples should be large. For an initial assessment, one may use a smaller number of bootstrap subsamples (e.g., 500). For the final results preparation, however, one should use a large number of bootstrap subsamples (e.g., 5,000).

Note: Larger numbers of bootstrap subsamples increase the computation time.

Do Parallel Processing

This option runs the bootstrapping routine on multiple processors (if your computer device offers more than one core). Using parallel computing will reduce computation time.

Amount of Results

(1) Basic Bootstrapping (default)

Only a basic set of results for bootstrapping is assembled. This includes:

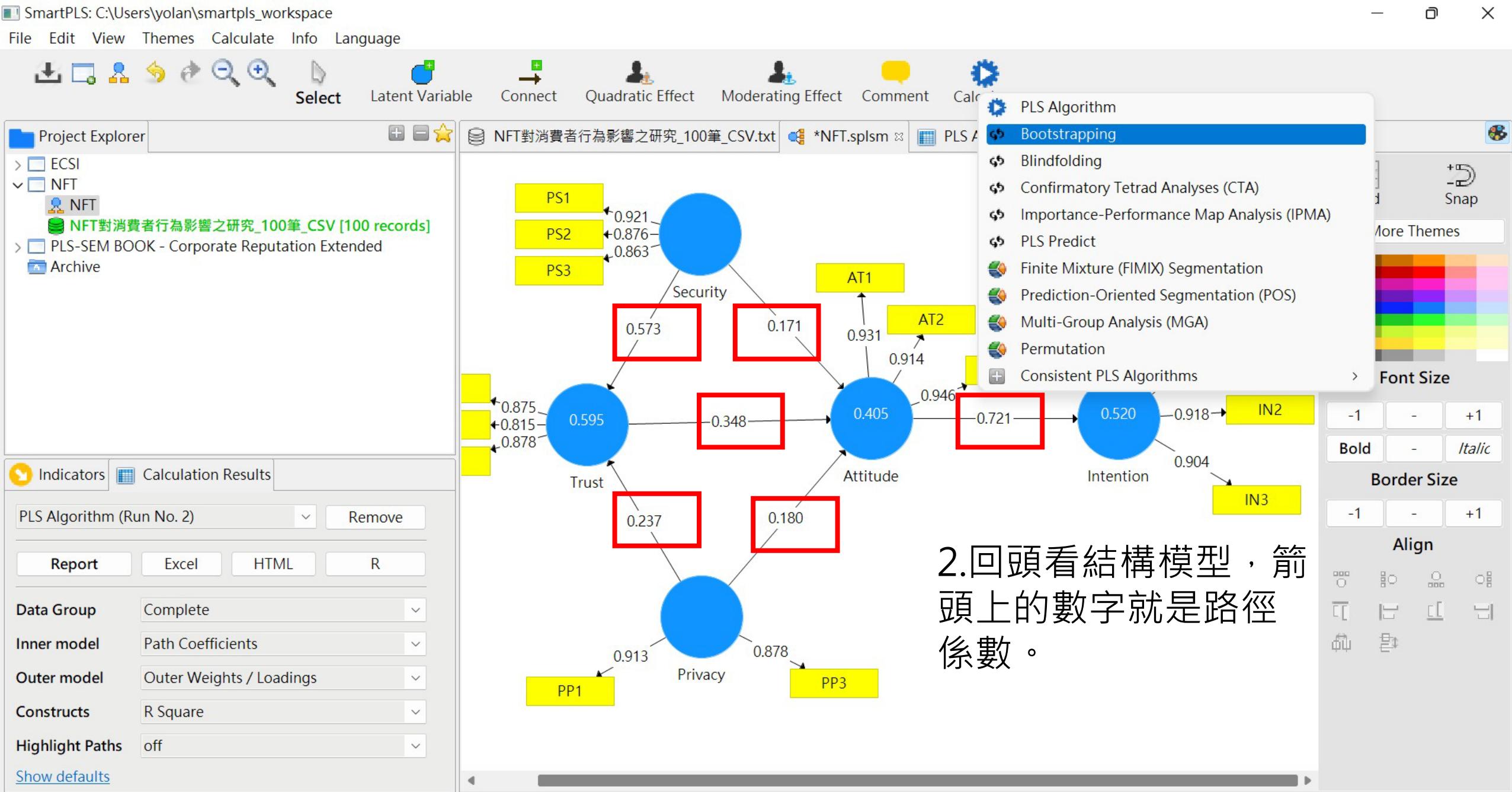
After Calculation: Open Full Report

Close

Start Calculation

PP1 Privacy PP3

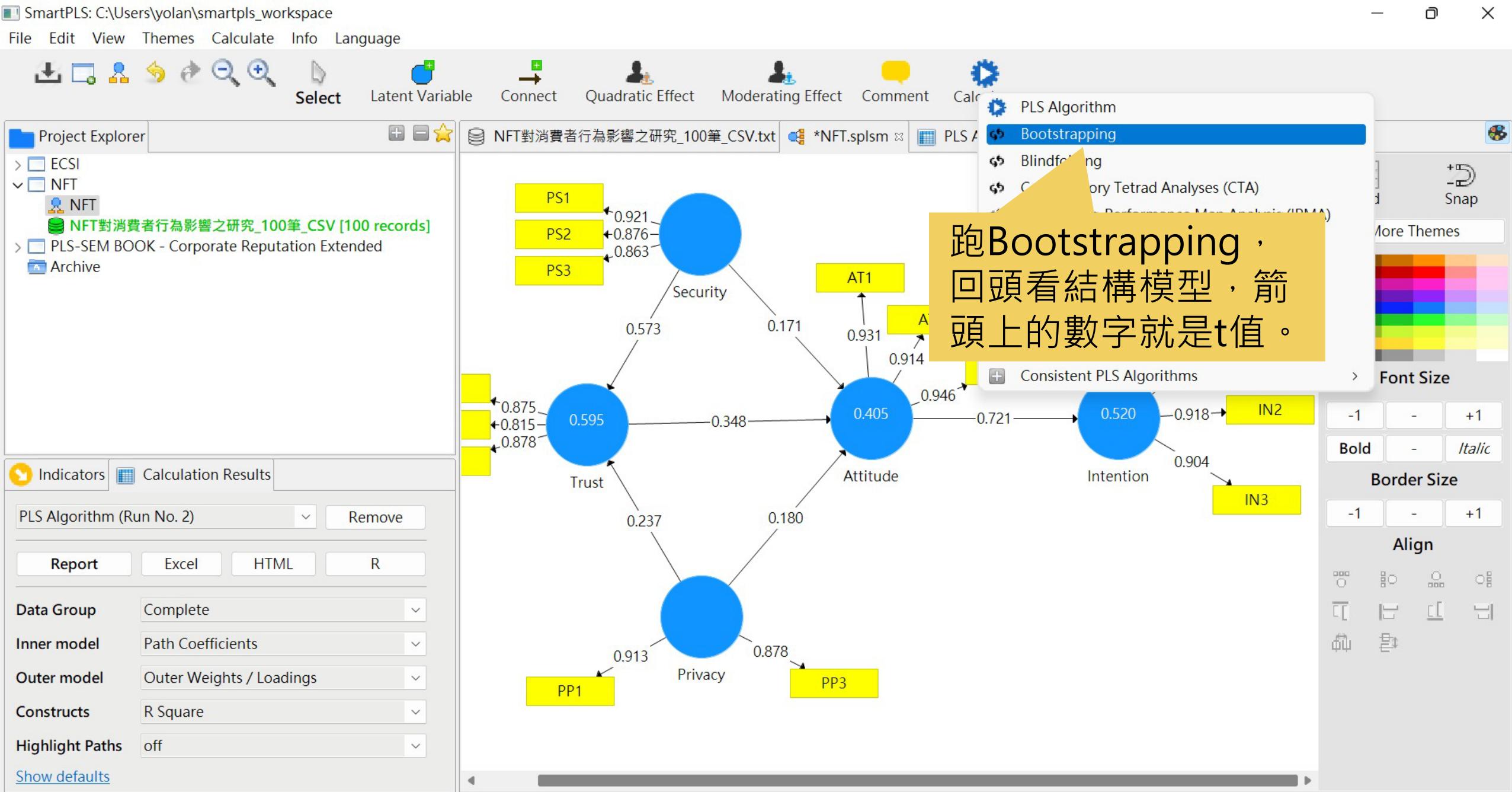
1.跑PLS



1. 取得t值

	Path Coefficients	| t |	p-value	Outcom e Support ed	R square	f square	q square	95%CILL	95%CIUL	Model Fit
H1 : Security→Trust	0.57	6.52	0.000	ed	0.60	0.03	1.39	0.40	0.74	SRMR=0.077
H2 : Security→Attitude	0.17	1.00	0.318	No Support	0.41	0.02	0.66	(0.18)	0.53	NFI=0.768 RMS
H3 : Trust→Attitude	0.33	2.23	0.026	ed Support	0.41	0.08	0.54	0.01	0.65	theta=0.245
H4 : Privacy→Trust	0.24	2.51	0.013	ed	0.60	0.06	1.33	0.05	0.42	
H5 : Privacy→Attitude	0.18	1.29	0.196	No Support	0.41	0.02	0.65	(0.14)	0.42	
H6 : Attitude→Intentior	0.72	14.34	0.000	ed	0.52	1.08	(1.18)	0.61	0.81	

t值越接近0，兩組之間
越沒有差異，t值越遠
離0則兩組差異越大。



Bootstrapping

Bootstrapping is a nonparametric procedure that allows testing the statistical significance of various PLS-SEM results such path coefficients, Cronbach's alpha, HTMT, and R² values.

[Read more!](#)

Setup Partial Least Squares Weighting

Basic Settings

Subsamples

5000

1. 設5000次

Do Parallel Processing

Amount of Results

Advanced Settings

Confidence Interval Method

- Percentile Bootstrap
- Studentized Bootstrap
- Bias-Corrected and Accelerated (BCa) Bootstrap

Test Type

- One Tailed
- Two Tailed

Significance Level

0.05

Basic Settings

Subsamples

In bootstrapping, subsamples are created with observations randomly drawn (with replacement) from the original set of data. To ensure stability of results, the number of subsamples should be large. For an initial assessment, one may use a smaller number of bootstrap subsamples (e.g., 500). For the final results preparation, however, one should use a large number of bootstrap subsamples (e.g., 5,000).

Note: Larger numbers of bootstrap subsamples increase the computation time.

Do Parallel Processing

This option runs the bootstrapping routine on multiple processors (if your computer device offers more than one core). Using parallel computing will reduce computation time.

Amount of Results

(1) Basic Bootstrapping (*default*)

Only a basic set of results for bootstrapping is assembled. This includes:

After Calculation: Open Full Report

Close

Start Calculation

Outer Weights / Loadings

R Square

off

PP1

Privacy

PP3

2. 跑Bootstrapping



^

中

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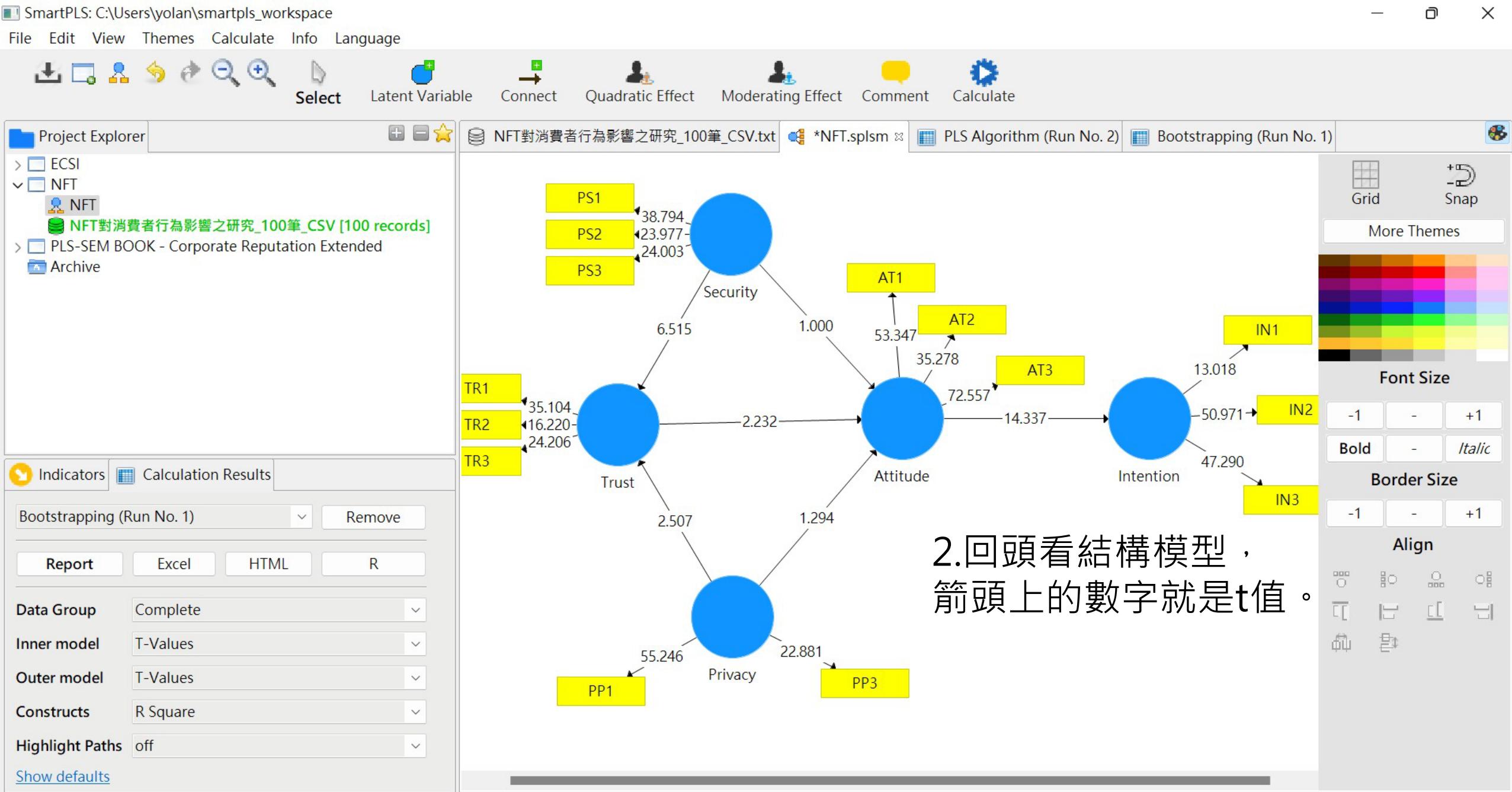
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▢

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1



3. 取得p value

	Path Coefficients	t	p-value	Outcome	R square	f square	q square	95%CILL	95%CIUL	Model Fit
H1 : Security→Trust	0.57	6.52	0.000	Supported	0.60	0.03	1.39	0.40	0.74	SRMR=0.077
H2 : Security→Attitude	0.17	1.00	0.318	No	0.41	0.02	0.66	(0.18)	0.53	NFI=0.768 RMSEA=0.025
H3 : Trust→Attitude	0.33	2.23	0.026	Supported	0.41	0.08	0.54	0.01	0.65	theta=0.245
H4 : Privacy→Trust	0.24	2.51	0.013	Supported	0.60	0.06	1.33	0.05	0.42	
H5 : Privacy→Attitude	0.18	1.29	0.196	No	0.41	0.02	0.65	(0.14)	0.42	
H6 : Attitude→Intentior	0.72	14.34	0.000	Supported	0.52	1.08	(1.18)	0.61	0.81	

P值小於0.05就可以

SmartPLS: C:\Users\yolan\smartpls_workspace

File Edit View Themes Calculate Info Language

Save New Project New Path Model Hide Zero Values Increase Decimals Decrease Decimals Export to Excel Export to Web Export to R

Project Explorer NFT對消費者行為影響之研究_100筆_CSV.txt *NFT.splsm PLS Algorithm (Run No. 2) Bootstrapping (Run No. 1)

ECSI NFT
NFT 對消費者行為影響之研究_100筆_CSV [100 records]
PLS-SEM BOOK - Corporate Reputation Extended
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Path Coefficients

Mean, STDEV, T-Values... Confidence Intervals Confidence Intervals B... Samples Copy to Clipboard: Excel Format R Format

	Original ...	Sample ...	Standar...	T Statisti...	P Values
Attitude ...	0.721	0.722	0.050	14.337	0.000
Privacy ...	0.180	0.172	0.139	1.294	0.196
Privacy ...	0.237	0.241	0.094	2.507	0.013
Security ...	0.171	0.172	0.171	1.000	0.318
Security ...	0.573	0.573	0.088	6.515	0.000
Trust -> ...	0.348	0.351	0.156	2.232	0.026

Indicators

No.	Indicator
20	TR
21	AT1
22	AT2
23	AT3
24	AT
25	IN1
26	IN2
27	IN3
28	IN

Final Results Histograms Base Data

Path Coefficients Path Coefficients Histogram Setting
Total Indirect Effects Indirect Effects Histogram Inner Model
Specific Indirect Effects Total Effects Histogram Outer Model
Total Effects Outer Loadings Indicator Data (Original)
Outer Loadings Outer Weights Indicator Data (Standardized)

24°C 多雲

2022/5/22 下午 01:21

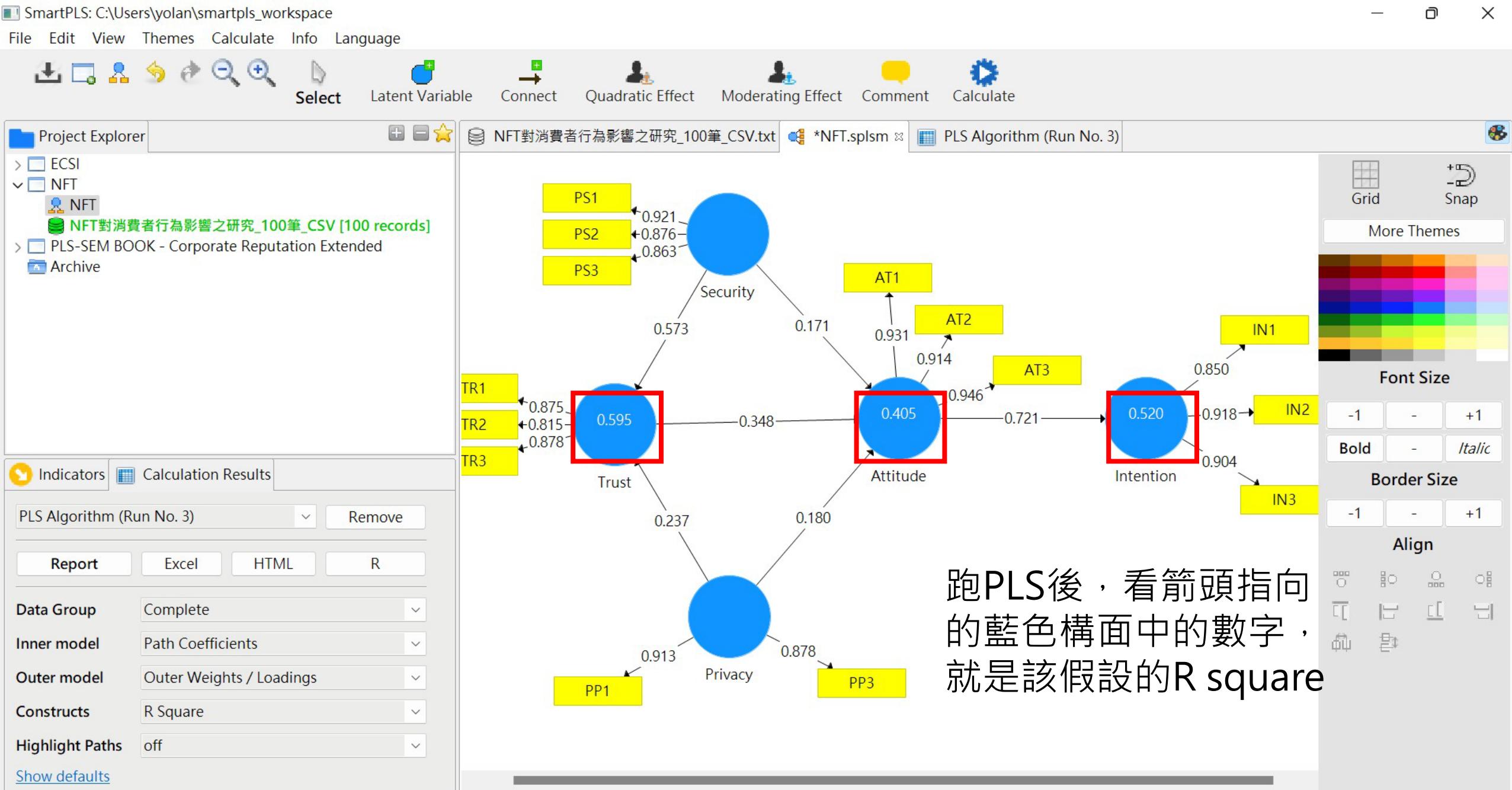
4. Outcome : 若 $|t|$ 大於 1.96 即成立 ! Supported !

	Path Coefficients	$|t|$	p-value	Outcome	R square	f square	q square	95%CILL	95%CIUL	Model Fit
H1 : Security→Trust	0.57	6.52	0.000	Supported	0.60	0.03	1.39	0.40	0.74	SRMR=0.077
H2 : Security→Attitude	0.17	1.00	0.318	No	0.41	0.02	0.66	(0.18)	0.53	NFI=0.768 RMSEA=0.025
H3 : Trust→Attitude	0.33	2.23	0.026	Supported	0.41	0.08	0.54	0.01	0.65	theta=0.245
H4 : Privacy→Trust	0.24	2.51	0.013	Supported	0.60	0.06	1.33	0.05	0.42	
H5 : Privacy→Attitude	0.18	1.29	0.196	No	0.41	0.02	0.65	(0.14)	0.42	
H6 : Attitude→Intentior	0.72	14.34	0.000	Supported	0.52	1.08	(1.18)	0.61	0.81	

5.取得 R square

	Path Coefficients	| t |	p-value	Outcome	R square	f square	q square	95%CILL	95%CIUL	Model Fit
H1 : Security→Trust	0.57	6.52	0.000	Supported	0.60	0.03	1.39	0.40	0.74	SRMR=0.077
H2 : Security→Attitude	0.17	1.00	0.318	No	0.41	0.02	0.66	(0.18)	0.53	NFI=0.768 RMSEA=0.025
H3 : Trust→Attitude	0.33	2.23	0.026	Supported	0.41	0.08	0.54	0.01	0.65	theta=0.245
H4 : Privacy→Trust	0.24	2.51	0.013	Supported	0.60	0.06	1.33	0.05	0.42	
H5 : Privacy→Attitude	0.18	1.29	0.196	No	0.41	0.02	0.65	(0.14)	0.42	
H6 : Attitude→Intentior	0.72	14.34	0.000	Supported	0.52	1.08	(1.18)	0.61	0.81	

R square高表示解釋程度高，
大於0.5或是越接近1.0最好



6. 取得 f square

	Path Coefficients	| t |	p-value	Outcome	R square	f square	q square	95%CILL	95%CIUL	Model Fit
H1 : Security→Trust	0.57	6.52	0.000	Supported	0.60	0.03	1.39	0.40	0.74	SRMR=0.077
H2 : Security→Attitude	0.17	1.00	0.318	No	0.41	0.02	0.66	(0.18)	0.53	NFI=0.768 RMSEA=0.025
H3 : Trust→Attitude	0.33	2.23	0.026	Supported	0.41	0.08	0.54	0.01	0.65	theta=0.245
H4 : Privacy→Trust	0.24	2.51	0.013	Supported	0.60	0.06	1.33	0.05	0.42	
H5 : Privacy→Attitude	0.18	1.29	0.196	No	0.41	0.02	0.65	(0.14)	0.42	
H6 : Attitude→Intentior	0.72	14.34	0.000	Supported	0.52	1.08	(1.18)	0.61	0.81	

SmartPLS: C:\Users\yolan\smartpls_workspace

File Edit View Themes Calculate Info Language

Save New Project New Path Model Hide Zero Values Increase Decimals Decrease Decimals Export to Excel Export to Web Export to R

Project Explorer NFT對消費者行為影響之研究_100筆_CSV.txt *NFT.splsm PLS Algorithm (Run No. 3)

f Square

	Attitude	Intention	Privacy	Security	Trust
Attitude		1.084			
Intention					
Privacy	0.021			0.055	
Security	0.015				0.324
Trust	0.082				

Copy to Clipboard: Excel Format R Format

Indicators

No.	Indicator
20	TR
21	AT1
22	AT2
23	AT3
24	AT
25	IN1
26	IN2
27	IN3
28	IN

Final Results Quality Criteria Interim Results Base Data

[Path Coefficients](#) [R Square](#) [Stop Criterion Changes](#) [Setting](#)

[Indirect Effects](#) [f Square](#) [Construct Reliability and Validity](#) [Inner Model](#)

[Total Effects](#) [Outer Loadings](#) [Outer Weights](#) [Outer Model](#)

[Outer Loadings](#) [Construct Reliability and Validity](#) [Collinearity Statistics \(VIF\)](#) [Indicator Data \(Original\)](#)

[Outer Weights](#) [Outer Model](#) [Model Fit](#) [Indicator Data \(Standardized\)](#)

[Latent Variable](#) [Residuals](#) [Model Selection Criteria](#) [Indicator Data \(Correlations\)](#)

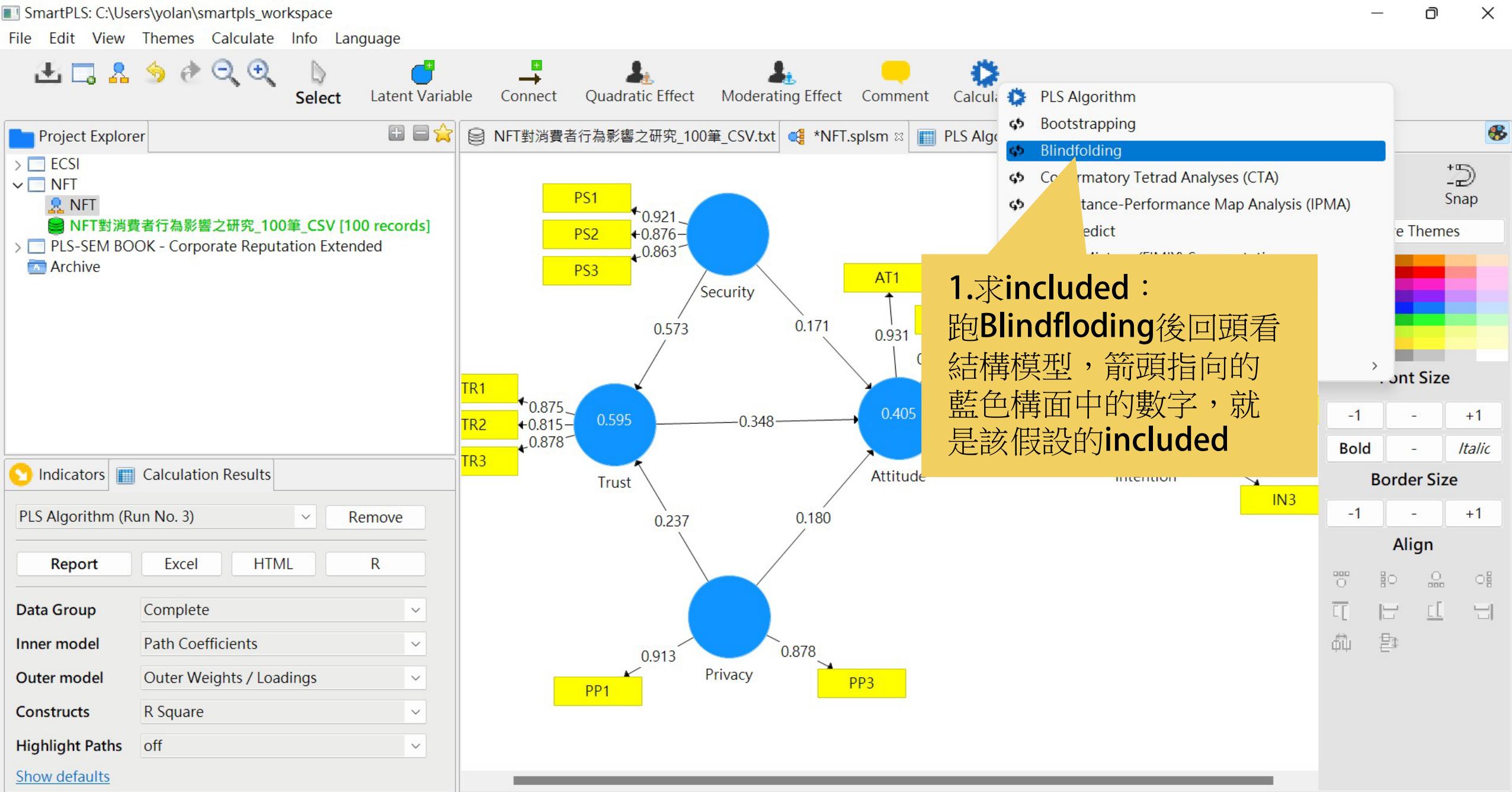
跑PLS後，點f square

6.取得 q square

	Path Coefficients	| t |	p-value	Outcome	R square	f square	q square	95%CILL	95%CIUL	Model Fit
H1 : Security→Trust	0.57	6.52	0.000	Supported	0.60	0.03	1.39	0.40	0.74	SRMR=0.077
H2 : Security→Attitude	0.17	1.00	0.318	No	0.41	0.02	0.66	(0.18)	0.53	NFI=0.768 RMSEA=0.025
H3 : Trust→Attitude	0.33	2.23	0.026	Supported	0.41	0.08	0.54	0.01	0.65	theta=0.245
H4 : Privacy→Trust	0.24	2.51	0.013	Supported	0.60	0.06	1.33	0.05	0.42	
H5 : Privacy→Attitude	0.18	1.29	0.196	No	0.41	0.02	0.65	(0.14)	0.42	
H6 : Attitude→Intentior	0.72	14.34	0.000	Supported	0.52	1.08	(1.18)	0.61	0.81	

要先求出included和exclude後才能計算出q square
所以我們先來算included吧!

	included	excluded	q square
H1 : Security→Trust	0.404	0.308	0.161073
H2 : Security→Attitude	0.332	0.325	0.010479
H3 : Trust→Attitude	0.332	0.296	0.053892
H4 : Privacy→Trust	0.404	0.395	0.015101
H5 : Privacy→Attitude	0.332	0.327	0.007485
H6 : Attitude→Intentior	0.406	0.352	0.090909



SmartPLS: C:\Us

File Edit View

Blindfolding

Blindfolding is a sample re-use technique. It allows calculating Stone-Geisser's Q² value (Stone, 1974; Geisser, 1974), which represents an evaluation criterion for the cross-validated predictive relevance of the PLS path model.

Read more!

Project Explorer

- ECSI
- NFT
- NFT
- NFT對消

PLS-SEM BC

Archive

Indicators

PLS Algorithm (F)

Report

Data Group

Inner model

Outer model Outer Weights / Loadings

Constructs R Square

Highlight Paths off

Show defaults

Setup Partial Least Squares Weighting

Basic Settings

Omission Distance 7

Basic Settings

Omission Distance

Default: 7

The systematic pattern of data point elimination and prediction in the blindfolding procedure depends on the omission distance (D). The user must select a value for D when running the blindfolding procedure. Suggested values of D are between 5 and 12. An omission distance of seven (D=7), for example, implies that every seventh data point of the target construct's indicators are eliminated in a single blindfolding round. Since the blindfolding procedure has to omit and predict every data point of the indicators used in the measurement model of a certain latent variable, it comprises seven blindfolding rounds. Hence, the number of blindfolding rounds always equals the omission distance D.

It is important to note that the omission distance has to be chosen so that the number of observations in the data set divided by the omission distance D is not an integer. If the number of observations divided by D results in an integer, the procedure would delete full observations (i.e., entire rows of the data set). Hence, the number of observations used per blindfolding round would be smaller than the number of observations in the original data set. However, the goal of the blindfolding procedure is to use all observations for prediction and thus not to delete entire observations per blindfolding.

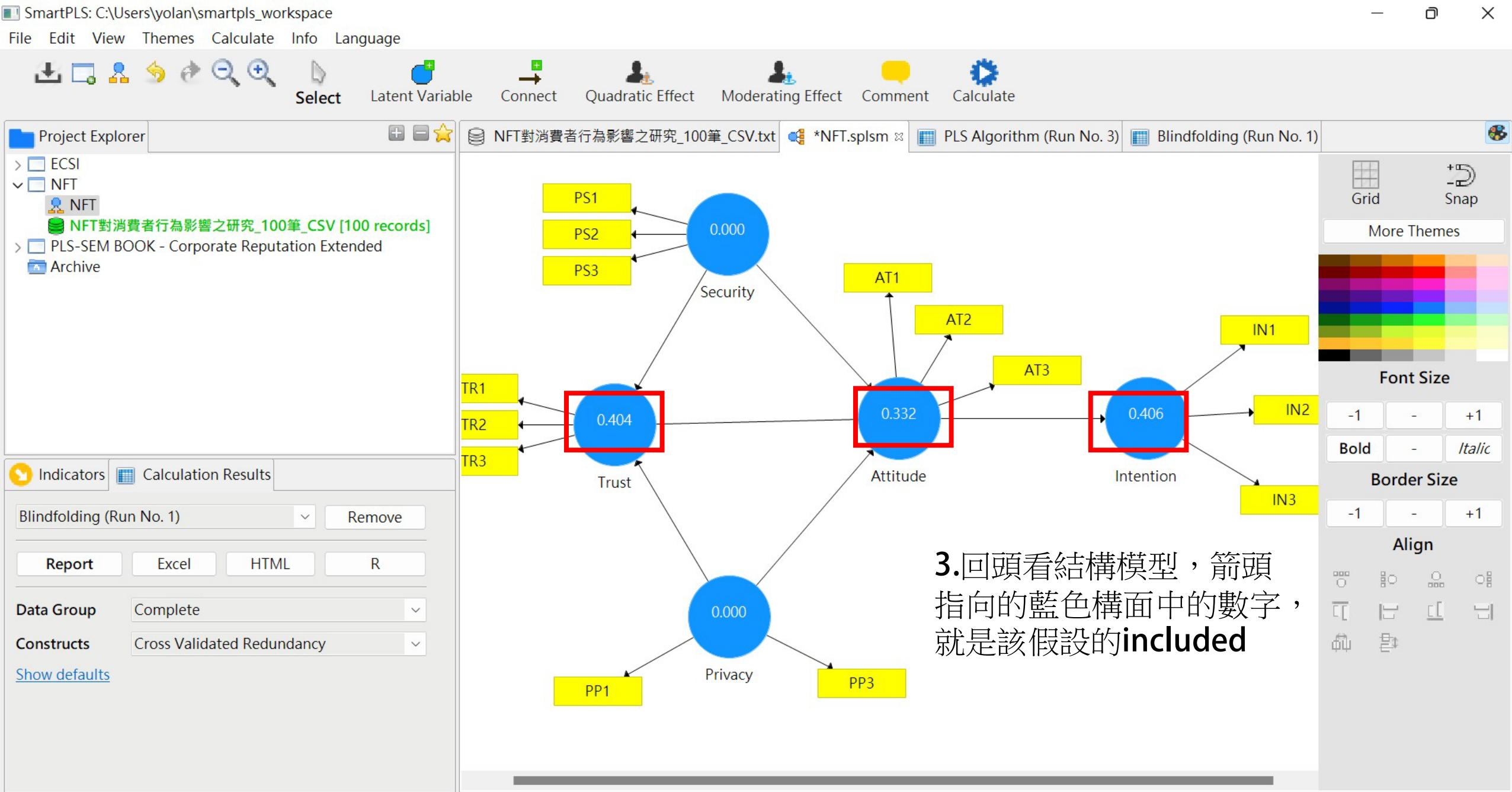
After Calculation: Open Full Report Close Start Calculation

PP1 Privacy PP3

2.跑Blindfolding

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下午 01:28 2022/5/22 1



要先求出included和exclude後才能計算出q square
最後我們算出excluded吧!

	included	excluded	q square
H1 : Security→Trust	0.404	0.308	0.161073
H2 : Security→Attitude	0.332	0.325	0.010479
H3 : Trust→Attitude	0.332	0.296	0.053892
H4 : Privacy→Trust	0.404	0.395	0.015101
H5 : Privacy→Attitude	0.332	0.327	0.007485
H6 : Attitude→Intentior	0.406	0.352	0.090909

SmartPLS: C:\Users\yolan\smartpls_workspace

File Edit View Themes Calculate Info Language

Select Latent Variable Connect Quadratic Effect Moderating Effect Comment Calculate

Project Explorer

- > ECSI
- > NFT
 - NFT
 - NFT對消費者行為影響之研究_100筆_CSV [100 records]
- > PLS-SEM BOOK - Corporate Reputation Extended
- Archive

NFT對消費者行為影響之研究_100筆_CSV.txt *NFT.sppls

1.求excluded：刪除構面後跑Blindfloading，回頭看結構模型，箭頭指向的藍色構面中的數字，就是該假設的excluded

Indicators

No.	Indicator
20	TR
21	AT1
22	AT2
23	AT3
24	AT
25	IN1
26	IN2
27	IN3
28	IN

MEAN MEDIAN MIN MAX STDEV MISSING

4.91 5.00 1.00 7.00 1.40 -

Grid Snap More Themes

Font Size -1 - +1

Bold - Italic

Border Size -1 - +1

Align

24°C 多雲

下午 01:35 2022/5/22



Select

Latent Variable

Connect

Quadratic Effect

Moderating Effect

Comment

Calculate

Project Explorer



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*NFT.sppls



- > ECSI
- > NFT
 - NFT**
 - NFT對消費者行為影響之研究_100筆_CSV [100 records]
- > PLS-SEM BOOK - Corporate Reputation Extended
- Archive

Indicators

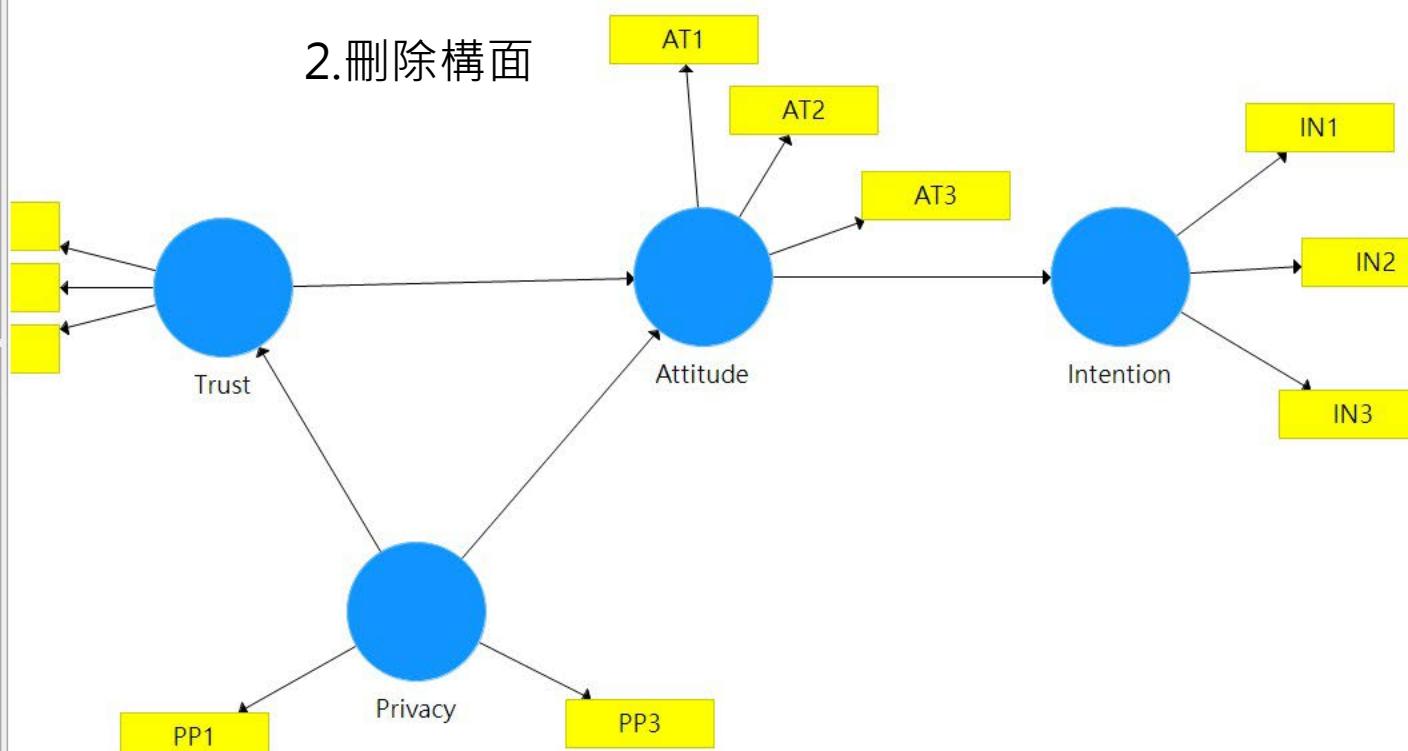


No.	Indicator
20	TR
21	AT1
22	AT2
23	AT3
24	AT
25	IN1
26	IN2
27	IN3
28	IN

MEAN	MEDIAN	MIN	MAX	STDEV	MISSING
------	--------	-----	-----	-------	---------

4.91	5.00	1.00	7.00	1.40	-
------	------	------	------	------	---

2.刪除構面



SmartPLS: C:\Users\yolan\smartpls_workspace

File Edit View Themes Calculate Info Language

Select Latent Variable Connect Quadratic Effect Moderating Effect Comment Calculate

Project Explorer NFT 對消費者行為影響之研究_100筆_CSV.txt *NFT.splsm

ECSE NFT PLS-SEM BOOK - Corporate Reputation Extended Archive

Indicators

No.	Indicator
20	TR
21	AT1
22	AT2
23	AT3
24	AT
25	IN1
26	IN2
27	IN3
28	IN

MEAN MEDIAN MIN MAX STDEV MISSING

4.91 5.00 1.00 7.00 1.40 -

3.跑Blindfolding

The screenshot shows the SmartPLS software interface. On the left, the Project Explorer displays a project named 'NFT' containing a CSV file ('NFT 對消費者行為影響之研究_100筆_CSV.txt') and a model file ('*NFT.splsm'). The Indicators panel lists variables: TR, AT1, AT2, AT3, AT, IN1, IN2, IN3, and IN. Below it, summary statistics for these variables are shown: MEAN, MEDIAN, MIN, MAX, STDEV, and MISSING. A large orange callout box highlights the 'Blindfolding' option in the 'Calculate' menu, which is currently selected. The main workspace contains a path diagram with latent variables Trust, Attitude, and Intention, and observed variables AT1, AT2, AT3, IN2, IN3, PP1, and PP3. Arrows indicate relationships between Trust and Attitude, Attitude and Intention, Trust and Privacy, Privacy and Intention, and Intention and IN2. The right side of the screen features a toolbar with various icons for data manipulation and a color palette for styling elements.

PLS Algorithm
Bootstrapping
Blindfolding
Confirmatory Tetrad Analyses (CTA)
Importance-Performance Map Analysis (IPMA)
PLS Predict
Finite Mixture (FIMIX) Segmentation
Prediction-Oriented Segmentation (POS)
Multi-Group Analysis (MGA)
Permutation
Consistent PLS Algorithms

Snap

ore Themes

Font Size

-1 - +1

Bold - Italic

Border Size

-1 - +1

Align

24°C 多雲

下午 01:35 2022/5/22

SmartPLS: C:\Us

File Edit View

Blindfolding

Blindfolding is a sample re-use technique. It allows calculating Stone-Geisser's Q² value (Stone, 1974; Geisser, 1974), which represents an evaluation criterion for the cross-validated predictive relevance of the PLS path model.

Read more!

Project Explorer

ECSI

NFT

NFT

NFT對消

PLS-SEM BC

Archive

Setup Partial Least Squares Weighting

Basic Settings

Omission Distance 7

Indicators

No.	Indicator
20	TR
21	AT1
22	AT2
23	AT3
24	AT
25	IN1
26	IN2
27	IN3
28	IN

MEAN MEDIAN MIN MAX STDEV MISSING

4.91 5.00 1.00 7.00 1.40 -

PP1 Privacy PP3

After Calculation: Open Full Report Close Start Calculation

3.跑Blindfolding

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LINE W X Google Chrome

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+

- Snap

More Themes

Font Size

- +1

- +1 Italic

Border Size

- +1

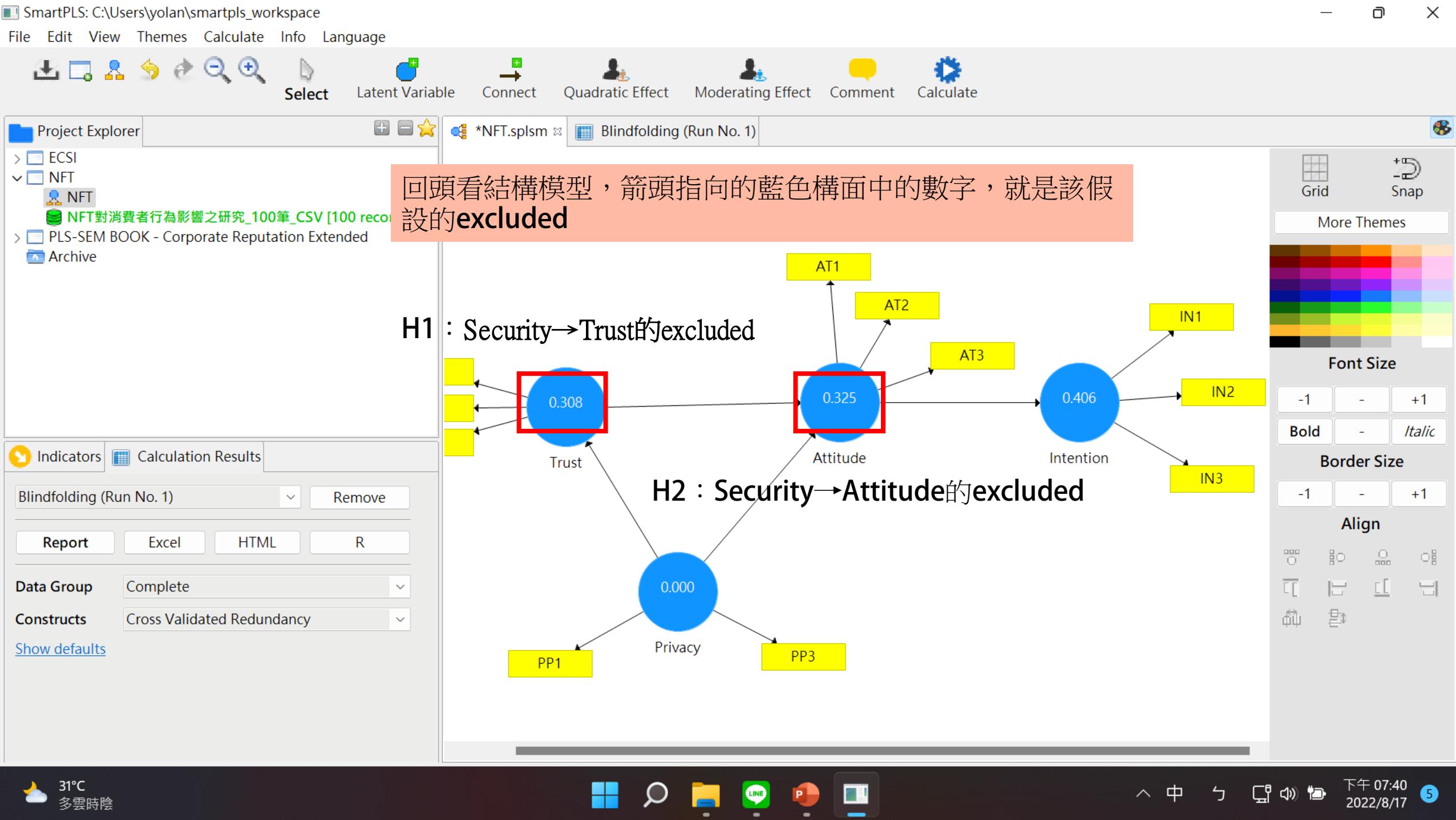
Align

Horizontal Vertical Center

Left Right Center

Top Bottom Center

Top Bottom Left Right Center



要先求出included和exclude後才能計算出q square

	included	excluded	q square
H1 : Security→Trust	0.404	0.308	0.161073
H2 : Security→Attitude	0.332	0.325	0.010479
H3 : Trust→Attitude	0.332	0.296	0.053892
H4 : Privacy→Trust	0.404	0.395	0.015101
H5 : Privacy→Attitude	0.332	0.327	0.007485
H6 : Attitude→Intentior	0.406	0.352	0.090909

$$q \text{ square} = (\text{included} - \text{excluded}) / (1 - \text{included})$$

6. 取得95%CILL、95%CIUL

	Path Coefficients	| t |	p-value	Outcome	R square	f square	q square	95%CILL	95%CIUL	Model Fit
H1 : Security→Trust	0.57	6.52	0.000	Supported	0.60	0.03	1.39	0.40	0.74	SRMR=0.077
H2 : Security→Attitude	0.17	1.00	0.318	No	0.41	0.02	0.66	(0.18)	0.53	NFI=0.768 RMSt theta=0.245
H3 : Trust→Attitude	0.33	2.23	0.026	Supported	0.41	0.08	0.54	0.01	0.65	
H4 : Privacy→Trust	0.24	2.51	0.013	Supported	0.60	0.06	1.33	0.05	0.42	
H5 : Privacy→Attitude	0.18	1.29	0.196	No	0.41	0.02	0.65	(0.14)	0.42	
H6 : Attitude→Intentior	0.72	14.34	0.000	Supported	0.52	1.08	(1.18)	0.61	0.81	



Select

Latent Variable

Connect

Quadratic Effect

Moderating Effect

Comment

Calculate

PLS Algorithm

Bootstrapping

Blindfolding

Tetrad Analyses (CTA)

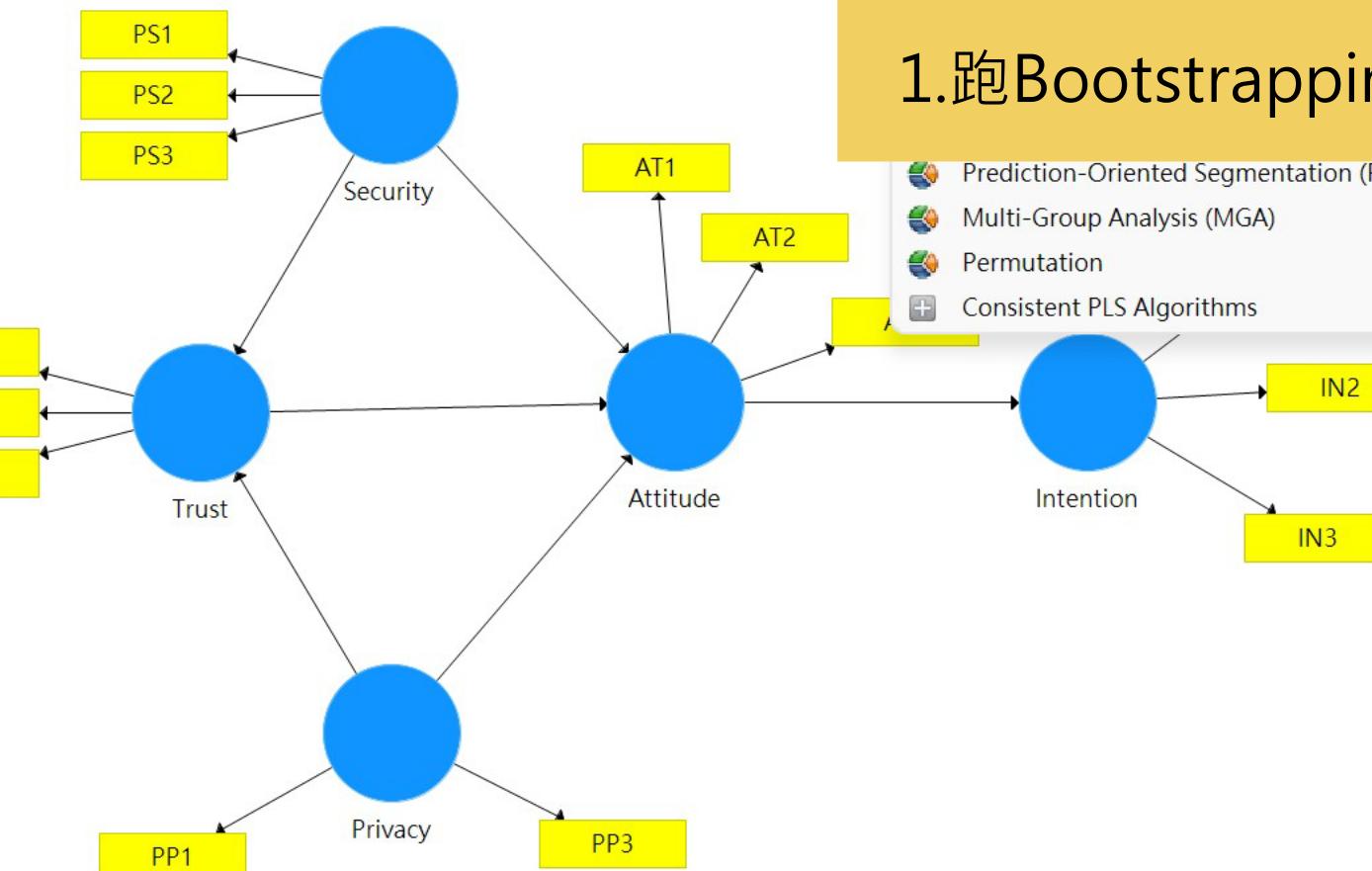
1. 跑Bootstrapping

Prediction-Oriented Segmentation (POS)

Multi-Group Analysis (MGA)

Permutation

Consistent PLS Algorithms



Project Explorer

- > ECSI
- > NFT
 - NFT
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- > PLS-SEM BOOK - Corporate Reputation Extended
- Archive

Indicators Calculation Results

Blindfolding (Run No. 6) Remove

Report

Excel

HTML

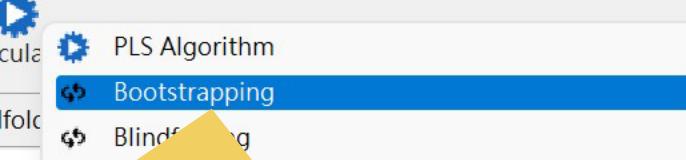
R

Data Group

Complete

Constructs

Cross Validated Redundancy

[Show defaults](#)

SmartPLS: C:\Us

File Edit View

Bootstrapping

Bootstrapping is a nonparametric procedure that allows testing the statistical significance of various PLS-SEM results such path coefficients, Cronbach's alpha, HTMT, and R² values.

Read more!

Project Explorer

ECSI

NFT

NFT

NFT對消

PLS-SEM BC

Archive

Setup Partial Least Squares Weighting

Basic Settings

Subsamples: 5000

Do Parallel Processing (checked)

Amount of Results

Advanced Settings

Confidence Interval Method: Bias-Corrected and Accelerated (BCa) Bootstrap (selected)

Test Type: Two Tailed (selected)

Significance Level: 0.05

Indicators

Blindfolding (Ru)

Report

Data Group

Constructs

Show defaults

1.設5000次

Basic Settings

Subsamples

In bootstrapping, subsamples are created with observations randomly drawn (with replacement) from the original set of data. To ensure stability of results, the number of subsamples should be large. For an initial assessment, one may use a smaller number of bootstrap subsamples (e.g., 500). For the final results preparation, however, one should use a large number of bootstrap subsamples (e.g., 5,000).

Note: Larger numbers of bootstrap subsamples increase the computation time.

Do Parallel Processing

This option runs the bootstrapping routine on multiple processors (if your computer device offers more than one core). Using parallel computing will reduce computation time.

Amount of Results

(1) Basic Bootstrapping (default)

Only a basic set of results for bootstrapping is assembled. This includes:

After Calculation: Open Full Report

Close Start Calculation

PP1 Privacy PP3

2.跑Bootstrapping

SmartPLS: C:\Users\yolan\smartpls_workspace

File Edit View Themes Calculate Info Language

Save New Project New Path Model Hide Zero Values Increase Decimals Decrease Decimals Export to Excel Export to Web Export to R

Project Explorer

NFT 對消費者行為影響之研究_100筆_CSV.txt *NFT.splsm Blindfolding (Run No. 6) Bootstrapping (Run No. 2)

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Path Coefficients

	Original ...	Sample ...	Bias	2.5%	97.5%
Attitude ...	0.721	0.719	-0.002	0.608	0.806
Privacy ...	0.180	0.191	0.011	-0.143	0.416
Privacy ...	0.237	0.238	0.001	0.046	0.416
Security ...	0.171	0.160	-0.011	-0.181	0.531
Security ...	0.573	0.573	-0.000	0.397	0.740
Trust -> ...	0.348	0.351	0.003	0.007	0.647

4. 點上方的 Confidence Intervals Bias Corrected

**5. 表格中的 2.50% 即是 95% CIUL，
表格中的 97.50% 即是 95% CIUL**

3. 點下方的 Path Coefficients

No. Indicator
20 TR
21 AT1
22 AT2
23 AT3
24 AT
25 IN1
26 IN2
27 IN3
28 IN

Final Results Histograms Base Data
[Path Coefficients](#) [Path Coefficients Histogram](#) [Setting](#)
[Total Impact Effects](#) [Indirect Effects Histogram](#) [Inner Model](#)
[Standardized Effects](#) [Total Effects Histogram](#) [Outer Model](#)

MEAN MEDIAN MIN MAX STDEV
4.91 5.00 1.00 7.00 1.40

24°C 多雲

2022/5/22

下午 01:43

Windows Taskbar icons

6. 取得 Model Fit

	Path Coefficients	| t |	p-value	Outcome Support ed	R square	f square	q square	95%CILL	95%CIUL	Model Fit
H1 : Security→Trust	0.57	6.52	0.000	Supported	0.60	0.03	1.39	0.40	0.74	SRMR=0.077
H2 : Security→Attitude	0.17	1.00	0.318	No Support ed	0.41	0.02	0.66	(0.18)	0.53	NFI=0.768
H3 : Trust→Attitude	0.33	2.23	0.026	Supported	0.41	0.08	0.54	0.01	0.65	RMS theta=0.245
H4 : Privacy→Trust	0.24	2.51	0.013	Supported					42	
H5 : Privacy→Attitude	0.18	1.29	0.196	No Support ed					42	SRMR < 0.1 or < 0.08 (Hu and Bentler, 1999)
H6 : Attitude→Intentior	0.72	14.34	0.000	Supported					81	NFI > 0.9 (Lohmöller, 1989)
										RMS_theta < 0.12 (Henseler et al., 2014)



Connect Quadratic Effect Moderating Effect Comment

Calcu PLS Algorithm
Bootstrapping

Project Explorer

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- Archive

Indicators Calculation Results

Bootstrapping (Run No. 2) Remove

Report	Excel	HTML	R
Data Group	Complete		
Inner model	T-Values		
Outer model	T-Values		
Constructs	R Square		
Highlight Paths	off		

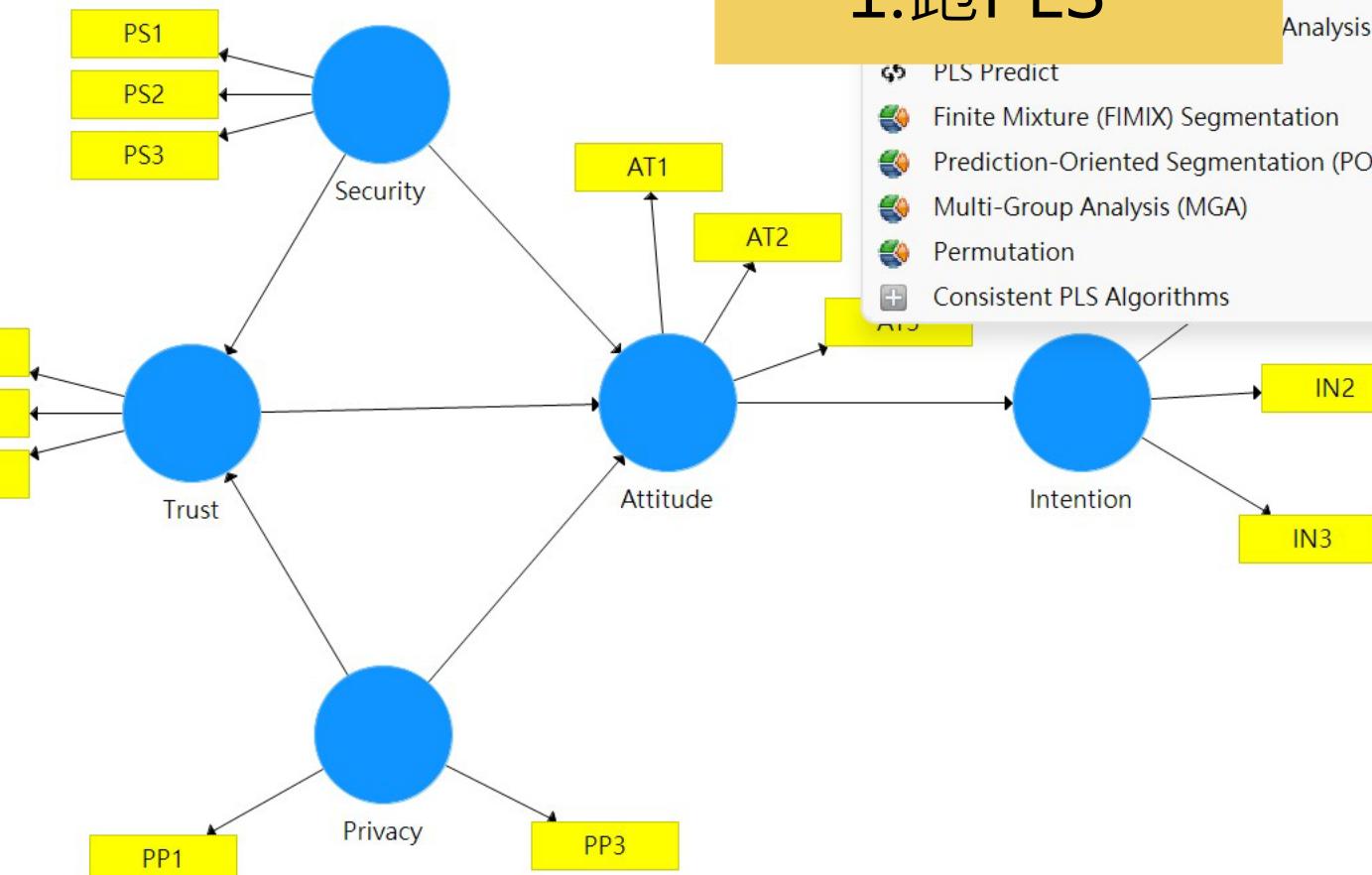
[Show defaults](#)

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1. 跑PLS

CTA)
Analysis (IPMA)

- PLS Predict
- Finite Mixture (FIMIX) Segmentation
- Prediction-Oriented Segmentation (POS)
- Multi-Group Analysis (MGA)
- Permutation
- Consistent PLS Algorithms



More Themes

Red	Orange	Yellow
Pink	Magenta	Cyan
Green	Blue	Grey

Font Size

-1	-	+1
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Bold

Italic

Border Size

-1	-	+1
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Align

Top	Center	Bottom
Left	Right	Right
Inside	Outside	Inside

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File Edit View

Project Explorer

ECSI

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PLS-SEM BC

Archive

Indicators

Bootstrapping (F

Report

Data Group

Inner model

Outer model T-Values

Constructs R Square

Highlight Paths off

Show defaults

Partial Least Squares Algorithm

The PLS path modeling method was developed by Wold (1982). In essence, the PLS algorithm is a sequence of regressions in terms of weight vectors. The weight vectors obtained at convergence satisfy fixed point equations (see Dijkstra, 2010, for a general analysis of these equations).

Read more!

Setup Weighting

Basic Settings

Weighting Scheme: Centroid (radio button), Factor (radio button), Path (radio button, selected)

Maximum Iterations: 300

Stop Criterion (10^{-X}): 7

Advanced Settings

Configure individual initial weights

Basic Settings

Weighting Scheme

PLS-SEM allows the user to apply three structural model weighting schemes:

(1) centroid weighting scheme,
(2) factor weighting scheme, and
(3) path weighting scheme (default).

While the results differ little for the alternative weighting schemes, path weighting is the recommended approach. This weighting scheme provides the highest R^2 value for endogenous latent variables and is generally applicable for all kinds of PLS path model specifications and estimations. Moreover, when the path model includes higher-order constructs (often called second-order models), researchers should usually not use the centroid weighting scheme.

Maximum Iterations

This parameter represents the maximum number of iterations that will be used for calculating the PLS results. This number should be sufficiently large (e.g., 300).

After Calculation: Open Full Report

Close Start Calculation

PP1 Privacy PP3

1. 跑PLS

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File Edit View Themes Calculate Info Language

Save New Project New Path Model Hide Zero Values Increase Decimals Decrease Decimals Export to Excel Export to Web Export to R

Project Explorer NFT對消費者行為影響之研究_100筆_CSV.txt *NFT.splsm PLS Algorithm (Run No. 4)

Model_Fit

Fit Summary rms Theta

Copy to Clipboard: Excel Format R Format

	Saturate...	Estimate...
SRMR	0.077	0.108
d_ULS	0.626	1.230
d_G	0.454	0.496
Chi-Squa...	267.369	281.808
NFI	0.768	0.756

Indicators

No.	Indicator
20	TR
21	AT1
22	AT2
23	AT3
24	AT
25	IN1
26	IN2
27	IN3
28	IN

Final Results Quality Criteria Interim Results Base Data

[Path Coefficients](#) [R Square](#) [Stop Criterion Changes](#) [Setting](#)

[Indirect Effects](#) [f Square](#) [Criterion Changes](#) [Inner Model](#)

[Total Effects](#) [Construct Reliability and Validity](#) [Outer Model](#)

[Outer Loadings](#) [Discriminant Validity](#) [Indicator Data \(Original\)](#)

[Outer Weights](#) [Collinearity Statistics \(VIF\)](#) [Standardized](#)

[Latent Variable](#) [Model Fit](#) [Correlations](#)

[Residuals](#) [Model Selection Criteria](#)

2. 點 Model Fit

MEAN MEDIAN MIN MAX STDEV MISSING

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File Edit View Themes Calculate Info Language

Save New Project New Path Model Hide Zero Values Increase Decimals Decrease Decimals Export to Excel Export to Web Export to R

Project Explorer NFT對消費者行為影響之研究_100筆_CSV.txt *NFT.splsm PLS Algorithm (Run No. 4)

Model_Fit

Fit Summary rms Theta

Copy to Clipboard: Excel Format R Format

rms Theta 0.245

3. 點 rms Theta

Indicators

No.	Indicator
20	TR
21	AT1
22	AT2
23	AT3
24	AT
25	IN1
26	IN2
27	IN3
28	IN

Final Results Quality Criteria Interim Results Base Data

[Path Coefficients](#) [R Square](#) [Stop Criterion Changes](#) [Setting](#)

[Indirect Effects](#) [f Square](#) [Inner Model](#)

[Total Effects](#) [Construct Reliability and Validity](#) [Outer Model](#)

[Outer Loadings](#) [Discriminant Validity](#) [Indicator Data \(Original\)](#)

[Outer Weights](#) [Collinearity Statistics \(VIF\)](#) [Indicator Data \(Standardized\)](#)

[Latent Variable](#) [Model Fit](#) [Indicator Data \(Correlations\)](#)

[Residuals](#) [Model Selection Criteria](#)

MEAN MEDIAN MIN MAX STDEV MISSING

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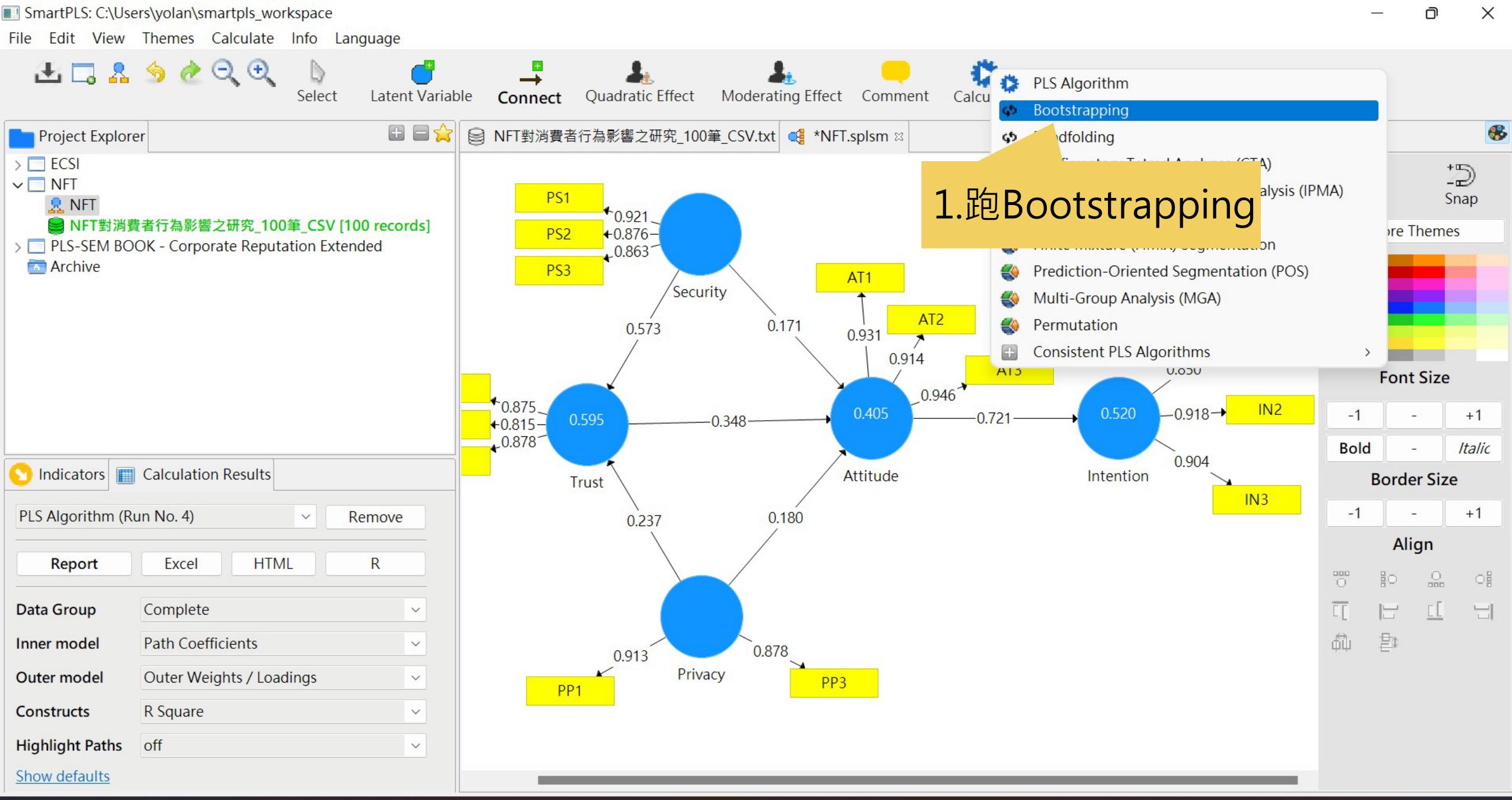
中介效果鑑定表



中介效果鑑定表

1. 取得direct effect的值，與其t值

independent variable	Intervening Variable	dependent variable	direct effect	Indirect effect	total effect	VAF	hypothesis
Security	Trust	Attitude	0.073(0.438)	0.053(0.437)	0.32	0.73	Supported
Privacy	Trust	Attitude	0.195(1.448)	0.142(1.398)	0.27	0.73	



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Bootstrapping

Bootstrapping is a nonparametric procedure that allows testing the statistical significance of various PLS-SEM results such path coefficients, Cronbach's alpha, HTMT, and R² values.

Read more!

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Archive

Setup Partial Least Squares Weighting

Basic Settings

Subsamples: 5000

Do Parallel Processing (checked)

Amount of Results

Advanced Settings

Confidence Interval Method: Bias-Corrected and Accelerated (BCa) Bootstrap (selected)

Test Type: Two Tailed (selected)

Significance Level: 0.05

Indicators

PLS Algorithm (F

Report

Data Group

Inner model

Outer model: Outer Weights / Loadings

Constructs: R Square

Highlight Paths: off

Show defaults

Basic Settings

Subsamples

In bootstrapping, subsamples are created with observations randomly drawn (with replacement) from the original set of data. To ensure stability of results, the number of subsamples should be large. For an initial assessment, one may use a smaller number of bootstrap subsamples (e.g., 500). For the final results preparation, however, one should use a large number of bootstrap subsamples (e.g., 5,000).

Note: Larger numbers of bootstrap subsamples increase the computation time.

Do Parallel Processing

This option runs the bootstrapping routine on multiple processors (if your computer device offers more than one core). Using parallel computing will reduce computation time.

Amount of Results

(1) Basic Bootstrapping (default)

Only a basic set of results for bootstrapping is assembled. This includes:

After Calculation: Open Full Report

Close Start Calculation

PP1 Privacy PP3

2.跑Bootstrapping

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Save

New Project

New Path Model

Hide Zero Values

Increase Decimals

Decrease Decimals

Export to Excel

Export to Web

Export to R

Project Explorer

NFT對消費者行為影響之研究_100筆_CSV.txt *NFT.splsm Bootstrapping (Run No. 3)

Path Coefficients

	Original ...	Sample ...	Standar...	T Statisti...	P Values
Attitude ...	0.721	0.725	0.052	13.951	0.000
Privacy ...	0.180	0.178	0.136	1.326	0.185
Privacy ...	0.237	0.237	0.099	2.391	0.017
Security ...	0.171	0.150	0.175	0.973	0.331
Security ...	0.573	0.573	0.090	6.335	0.000
Trust -> ...	0.348	0.374	0.168	2.072	0.039

Indicators

No.	Indicator
20	TR
21	AT1
22	AT2
23	AT3
24	AT
25	IN1
26	IN2
27	IN3
28	IN

MEAN MEDIAN MIN MAX STDEV MISSING

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3.點選下方的Path Coefficients

Final Results	Histograms	Base Data
Path Coefficients	Path Coefficients Histogram	Setting
Total Indirect Effects	Indirect Effects Histogram	Inner Model
Specific Indirect Effects	Total Effects Histogram	Outer Model
Total Effects		Indicator Data (Original)
Outer Loadings		Indicator Data (Standardized)
Outer Weights		



中介效果鑑定表

2. 取得indirect effect的值，與其t值

independent variable	Intervening Variable	dependent variable	direct effect	Indirect effect	total effect	VAF	hypothesis
Security	Trust	Attitude	0.073(0.438)	0.053(0.437)	0.32	0.73	Supported
Privacy	Trust	Attitude	0.195(1.448)	0.142(1.398)	0.27	0.73	



+0,0

-0,0

0,0



Project Explorer



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*NFT.splsm

Bootstrapping (Run No. 3)

Specific Indirect Effects

Mean, STDEV, T-Values...

Confidence Intervals

Confidence Intervals B...

Samples

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Excel Format

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	Original ...	Sample ...	Standar...	T Statisti...	P Values
Security ...	0.144	0.161	0.088	1.640	0.102
Privacy ...	0.059	0.061	0.037	1.587	0.113
Security ...	0.199	0.219	0.114	1.743	0.082
Privacy ...	0.082	0.083	0.050	1.654	0.099
Security ...	0.123	0.106	0.126	0.979	0.328
Privacy ...	0.130	0.131	0.101	1.283	0.200
Trust -> ...	0.251	0.274	0.129	1.947	0.052

跑Bootstrapping後，點選下方的Specific Indirect Effect

Final Results

Path Coefficients

Total Indirect Effects

Specific Indirect Effects

Total Effects

Outer Loadings

Outer Weights

Base Data

Setting

Inner Model

Outer Model

Indicator Data (Original)

Indicator Data (Standardized)

Indicators



No. Indicator

20 TR

21 AT1

22 AT2

23 AT3

24 AT

25 IN1

26 IN2

27 IN3

28 IN

MEAN MEDIAN MIN MAX STDEV MISSING

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中介效果鑑定表

3. 取得total effect的值

independent variable	Intervening Variable	dependent variable	direct effect	Indirect effect	total effect	VAF	hypothesis
Security	Trust	Attitude	0.073(0.438)	0.053(0.437)	0.32	0.73	Supported
Privacy	Trust	Attitude	0.195(1.448)	0.142(1.398)	0.27	0.73	

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Total Effects

	Original ...	Sample ...	Standar...	T Statisti...	P Values
Attitude ...	0.721	0.725	0.052	13.951	0.000
Privacy ...	0.262	0.261	0.135	1.946	0.052
Privacy ...	0.189	0.192	0.103	1.830	0.068
Privacy ...	0.237	0.237	0.099	2.391	0.017
Security ...	0.370	0.370	0.124	2.983	0.003
Security ...	0.267	0.268	0.091	2.935	0.003
Security ...	0.573	0.573	0.090	6.335	0.000
Trust -> ...	0.348	0.374	0.168	2.072	0.039
Trust -> ...	0.251	0.274	0.129	1.947	0.052

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Indicators

No.	Indicator
20	TR
21	AT1
22	AT2
23	AT3
24	AT
25	IN1
26	IN2
27	IN3
28	IN

Final Results

- [Path Coefficie...](#)
- [Total Indirec...](#)
- [Specific In...](#)
- [Total Effects](#)
- [Outer Loadings](#)
- [Outer Weights](#)

Base Data

- [Setting](#)
- [Inner Model](#)
- [Outer Model](#)
- [Indicator Data \(Original\)](#)
- [Indicator Data \(Standardized\)](#)

MEAN MEDIAN MIN MAX STDEV MISSING

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中介效果鑑定表

4. 取得VAF的值：間接效果(indirect)/整體效果(total)=VAF

independent variable	Intervening Variable	dependent variable	direct effect	Indirect effect	total effect	VAF	hypothesis
Security	Trust	Attitude	0.073(0.438)	0.053(0.437)	0.32	0.73	Supported
Privacy	Trust	Attitude	0.195(1.448)	0.142(1.398)	0.27	0.73	

中介效果鑑定表

沒有中介效果 : VAF < 20%

部分中介效果 : 20 < %VAF < 80%

完全中介效果 : VAF > 80%

independent variable	Intervening Variable	dependent variable	direct effect	Indirect effect	total effect	VAF	hypothesis
Security	Trust	Attitude	0.073(0.438)	0.053(0.437)	0.32	0.73	Supported
Privacy	Trust	Attitude	0.195(1.448)	0.142(1.398)	0.27	0.73	

中介效果鑑定表

5. t值大於1.96即顯著

independent variable	Intervening Variable	dependent variable	direct effect	Indirect effect	total effect	VAF	hypothesis
Security	Trust	Attitude	0.073(0.438)	0.053(0.437)	0.32	0.73	Supported
Privacy	Trust	Attitude	0.195(1.448)	0.142(1.398)	0.27	0.73	