國立成功大學管理學院

高階管理碩士在職專班 EMBA

企業研究方法作業

The Moderating Effects of Social Capital and Entrepreneurial Orientation on the Relationships between Knowledge Management Capability, Innovation, and Organizational Effectiveness

Linear Structure Relation (LISREL) analysis using Structure Equation Model (SEM) by AMOS
線性結構關係模式分析

指　導 教 授：　吳萬益　院長

學　　生：　第 七 組

R07954035 **戴武成**　　R07954263 **林甫穎**
R07954255 **許東讚**　　R07951087 **陳世明**
R07951338 **陳雅芳**　　R07954085 **唐修治**

中華民國九十六年四月十五日

【題目】

1. **請以圖** 1 **之架構，執行** SEM **分析** (**資料：**BRM_factor_chen.sav)**，並將結果填寫於表** 1 **之空格當中。**
2. **請根據**"**social capital**"**之水準，將樣本分成兩組(資料檔中的** qcl_2 **變數)，以圖** 1 **之架構建立** competing model**，執行** SEM **分析，並將結果填寫於表** 2 **之空格當中。**

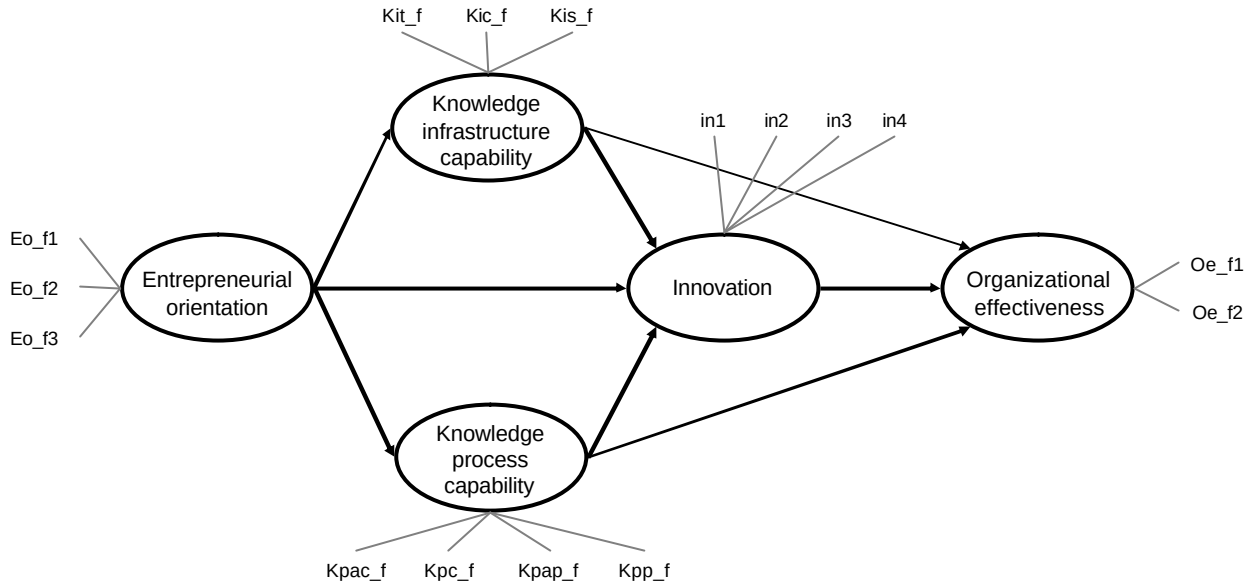
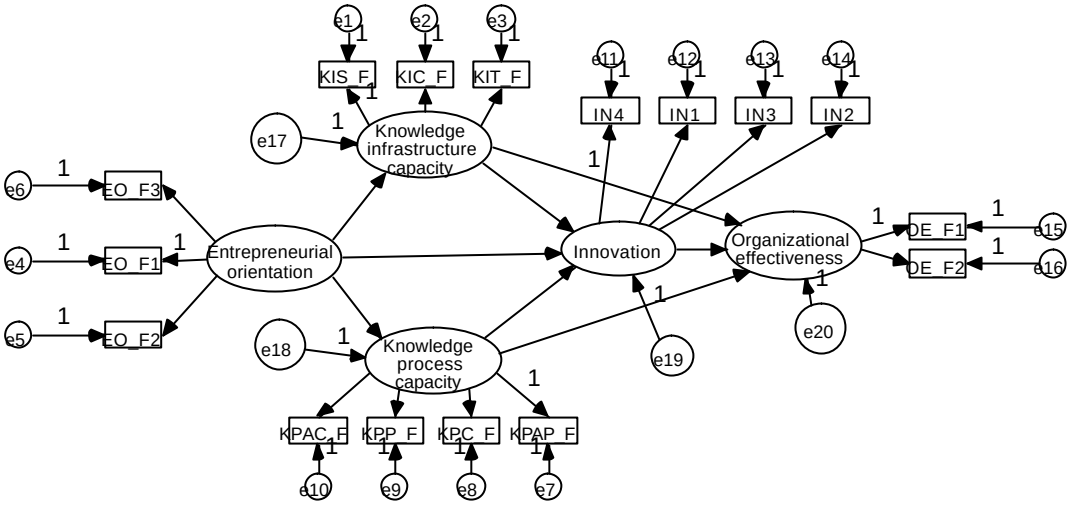


圖 1: The Structural Equation Model

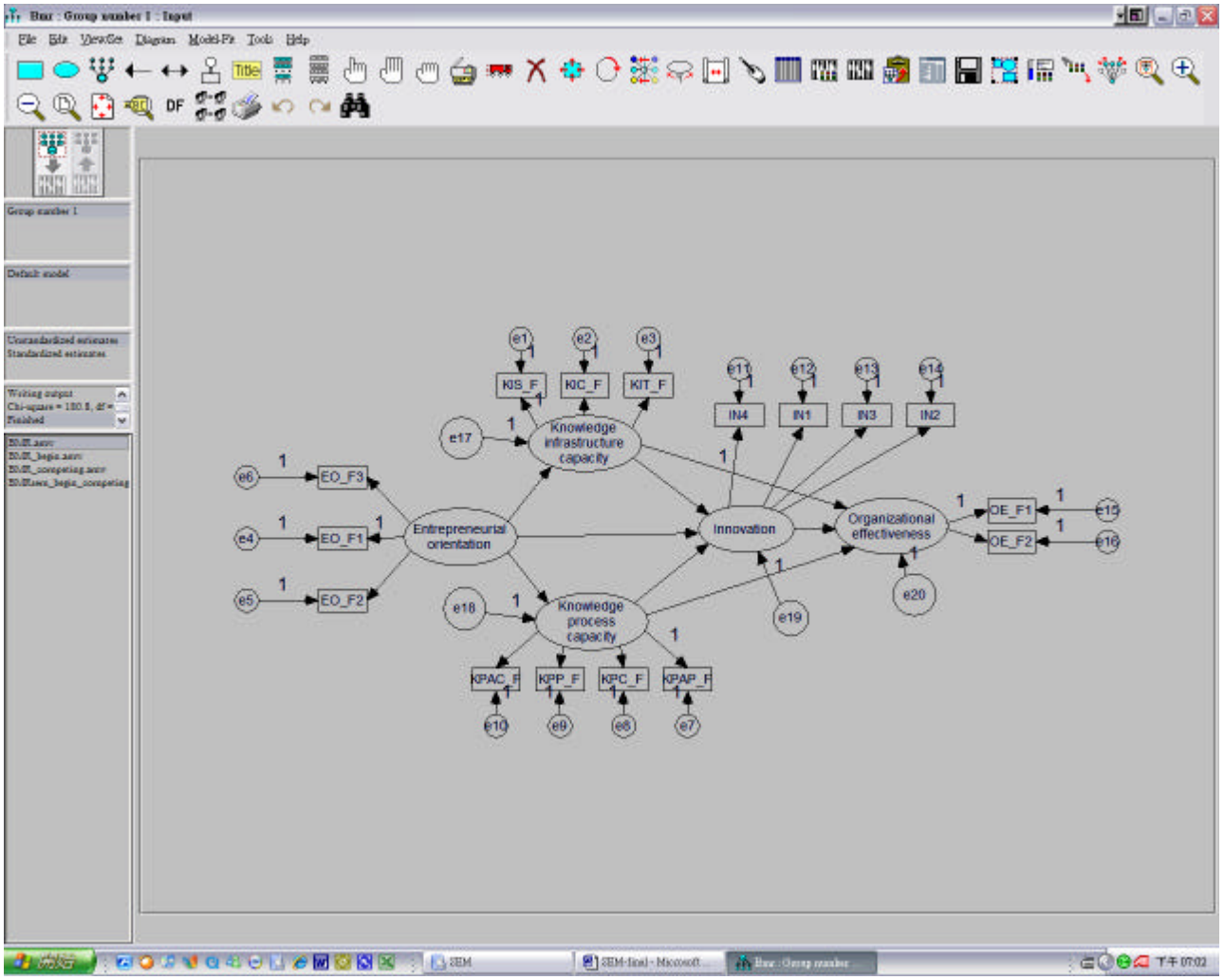
【第一部分：線性結構關係模式分析】

一． 建立結構關係模式

依據題目提供之架構，先於 AMOS 繪製一份架構如下圖：



二． 載入 BRM_ factor_chen.sav 數據資料，點選此 圖示開始計算，計算完成後可由下圖左方 Finished 獲知已經完成計算

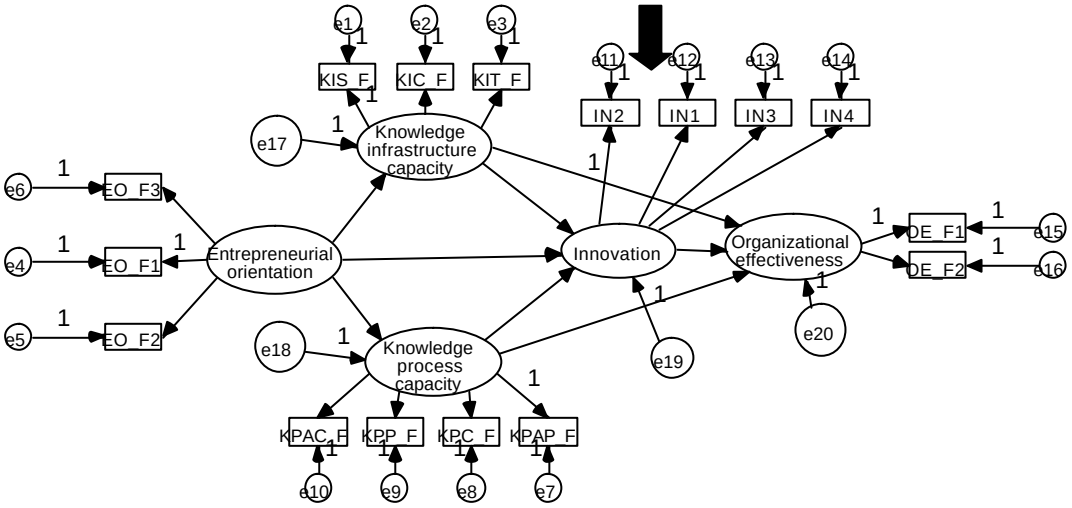


三. 點選 View Spreadsheets 獲得以下輸出資料

Regression Weights: (Group number 1 - Default model)

		Estimate	S.E.	C.R.	P	Label
Knowledge_infrastructure_capacity	<--- Entrepreneurial_orientation	.705	.085	8.277	***	par_10
Knowledge_process_capacity	<--- Entrepreneurial_orientation	.743	.076	9.778	***	par_11
Innovation	<--- Entrepreneurial_orientation	1.195	.262	4.556	***	par_9
Innovation	<--- Knowledge_process_capacity	-.277	.197	-1.405	.160	par_13
Innovation	<--- Knowledge_infrastructure_capacity	-.036	.146	-.243	.808	par_16
Organizational_effectiveness	<--- Innovation	.807	.124	6.488	***	par_12
Organizational_effectiveness	<--- Knowledge_infrastructure_capacity	.137	.103	1.336	.181	par_17
Organizational_effectiveness	<--- Knowledge_process_capacity	.060	.098	.613	.540	par_18
KIS_F	<--- Knowledge_infrastructure_capacity	1.000				
KIC_F	<--- Knowledge_infrastructure_capacity	.919	.095	9.687	***	par_1
KIT_F	<--- Knowledge_infrastructure_capacity	.785	.102	7.697	***	par_2
EO_F1	<--- Entrepreneurial_orientation	1.000				
EO_F3	<--- Entrepreneurial_orientation	.896	.091	9.808	***	par_3
KPAP_F	<--- Knowledge_process_capacity	1.000				
KPC_F	<--- Knowledge_process_capacity	.927	.062	14.881	***	par_4
KPP_F	<--- Knowledge_process_capacity	.968	.084	11.458	***	par_5
KPAC_F	<--- Knowledge_process_capacity	.907	.076	12.007	***	par_6
IN3	<--- Innovation	.982	.112	8.788	***	par_7
OE_F1	<--- Organizational_effectiveness	1.000				
OE_F2	<--- Organizational_effectiveness	.748	.079	9.452	***	par_8
IN4	<--- Innovation	1.000				
IN2	<--- Innovation	1.022	.108	9.486	***	par_14
IN1	<--- Innovation	.923	.107	8.611	***	par_15
EO_F2	<--- Entrepreneurial_orientation	.786	.109	7.235	***	par_19

四. 經由以上資料表可知 IN2(1.022)為同類因素負荷量中最大值，因此必須回到繪製圖中修正，將最大值挪移到標示 1 之欄位內，再點選此圖示開始計算，修正後如下。(因素最大值均等於 1，其他均小於 1)。



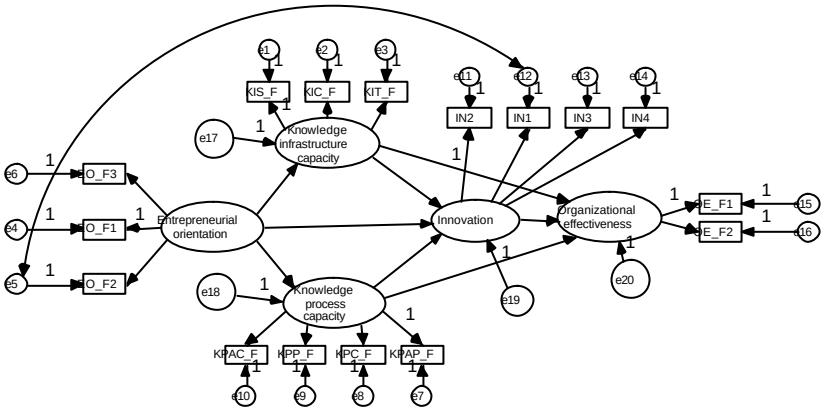
Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Knowledge_infrastructure_capacity	<---	Entrepreneurial_orientation	.696	.083	8.336	***	par_10
Knowledge_process_capacity	<---	Entrepreneurial_orientation	.727	.074	9.775	***	par_11
Innovation	<---	Entrepreneurial_orientation	1.090	.235	4.629	***	par_9
Innovation	<---	Knowledge_process_capacity	-.184	.182	-1.014	.311	par_13
Innovation	<---	Knowledge_infrastructure_capacity	.001	.148	.006	.995	par_16
Organizational_effectiveness	<---	Innovation	.716	.105	6.791	***	par_12
Organizational_effectiveness	<---	Knowledge_infrastructure_capacity	.170	.101	1.689	.091	par_17
Organizational_effectiveness	<---	Knowledge_process_capacity	.099	.095	1.047	.295	par_18
KIS_F	<---	Knowledge_infrastructure_capacity	1.000				
KIC_F	<---	Knowledge_infrastructure_capacity	.921	.095	9.643	***	par_1
KIT_F	<---	Knowledge_infrastructure_capacity	.788	.102	7.691	***	par_2
EO_F1	<---	Entrepreneurial_orientation	1.000				
EO_F3	<---	Entrepreneurial_orientation	.892	.090	9.866	***	par_3
KPAP_F	<---	Knowledge_process_capacity	1.000				
KPC_F	<---	Knowledge_process_capacity	.926	.062	14.860	***	par_4
KPP_F	<---	Knowledge_process_capacity	.968	.084	11.466	***	par_5
KPAC_F	<---	Knowledge_process_capacity	.907	.076	12.000	***	par_6
IN3	<---	Innovation	.963	.091	10.568	***	par_7
OE_F1	<---	Organizational_effectiveness	1.000				
OE_F2	<---	Organizational_effectiveness	.753	.080	9.406	***	par_8
IN2	<---	Innovation	1.000				
IN4	<---	Innovation	.977	.099	9.905	***	par_14
IN1	<---	Innovation	.894	.090	9.949	***	par_15
EO_F2	<---	Entrepreneurial_orientation	.783	.108	7.243	***	par_19

五。 Modification indices **為電腦的建議修正，以** M.I.**值決定是否修正，**
M.I.＜10 **為最適模式；**M.I.＞10 **且最大者優先增加路徑，一次增加一條路徑，**
再重新計算, 如此重複直到模式合乎要求。因此依據下表所示, 增加一條 e12 **至** e5 **路徑。**

Modification Indices (Group number 1 - Default model)
Covariances: (Group number 1 - Default model)

	M.I.	Par Change
e17 <--> e18	5.968	.097
e20 <--> e19	4.151	-.051
e15 <--> e19	4.527	-.054
e14 <--> e5	8.501	-.287
e13 <--> e20	5.480	-.092
e13 <--> e5	9.345	-.272
e13 <--> e15	4.546	-.084
e13 <--> e14	8.564	.221
e12 <--> e5	15.979	.348
e12 <--> e14	7.103	-.197
e11 <--> e19	4.208	.080
e11 <--> e12	5.074	.132
e10 <--> e13	4.896	-.113
e7 <--> e9	4.275	.070
e6 <--> e5	5.280	.208
e4 <--> e20	4.141	.061
e4 <--> e15	4.410	.063
e3 <--> e18	8.771	.140
e3 <--> e19	5.095	-.105
e2 <--> e13	5.115	.132



【線性結構關係模式分析總結】

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 136
Number of distinct parameters to be estimated: 41
Degrees of freedom (136 - 41): 95
Minimum was achieved

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	41	162.296	95	.000	1.708
Saturated model	136	.000	0		
Independence model	16	1511.212	120	.000	12.593

Regression Weights: (Group number 1 - Default model)

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Knowledge_infrastructure_capacity	<---	Entrepreneurial_orientation	.696	.083	8.336	***	par_10
Knowledge_process_capacity	<---	Entrepreneurial_orientation	.727	.074	9.775	***	par_11
Innovation	<---	Entrepreneurial_orientation	1.090	.235	4.629	***	par_9
Innovation	<---	Knowledge_process_capacity	-.184	.182	-1.014	.311	par_13
Innovation	<---	Knowledge_infrastructure_capacity	.001	.148	.006	.995	par_16
Organizational_effectiveness	<---	Innovation	.716	.105	6.791	***	par_12
Organizational_effectiveness	<---	Knowledge_infrastructure_capacity	.170	.101	1.689	.091	par_17
Organizational_effectiveness	<---	Knowledge_process_capacity	.099	.095	1.047	.295	par_18
KIS_F	<---	Knowledge_infrastructure_capacity	1.000				
KIC_F	<---	Knowledge_infrastructure_capacity	.921	.095	9.643	***	par_1
KIT_F	<---	Knowledge_infrastructure_capacity	.788	.102	7.691	***	par_2
EO_F1	<---	Entrepreneurial_orientation	1.000				
EO_F3	<---	Entrepreneurial_orientation	.892	.090	9.866	***	par_3
KPAP_F	<---	Knowledge_process_capacity	1.000				
KPC_F	<---	Knowledge_process_capacity	.926	.062	14.860	***	par_4
KPP_F	<---	Knowledge_process_capacity	.968	.084	11.466	***	par_5
KPAC_F	<---	Knowledge_process_capacity	.907	.076	12.000	***	par_6
IN3	<---	Innovation	.963	.091	10.568	***	par_7
OE_F1	<---	Organizational_effectiveness	1.000				
OE_F2	<---	Organizational_effectiveness	.753	.080	9.406	***	par_8
IN2	<---	Innovation	1.000				
IN4	<---	Innovation	.977	.099	9.905	***	par_14
IN1	<---	Innovation	.894	.090	9.949	***	par_15
EO_F2	<---	Entrepreneurial_orientation	.783	.108	7.243	***	par_19

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Knowledge_infrastructure_capacity	<---	Entrepreneurial_orientation	.783
Knowledge_process_capacity	<---	Entrepreneurial_orientation	.834
Innovation	<---	Entrepreneurial_orientation	1.066
Innovation	<---	Knowledge_process_capacity	-.157
Innovation	<---	Knowledge_infrastructure_capacity	.001
Organizational_effectiveness	<---	Innovation	.767
Organizational_effectiveness	<---	Knowledge_infrastructure_capacity	.158
Organizational_effectiveness	<---	Knowledge_process_capacity	.091
KIS_F	<---	Knowledge_infrastructure_capacity	.868
KIC_F	<---	Knowledge_infrastructure_capacity	.805
KIT_F	<---	Knowledge_infrastructure_capacity	.672
EO_F1	<---	Entrepreneurial_orientation	.881
EO_F3	<---	Entrepreneurial_orientation	.751
KPAP_F	<---	Knowledge_process_capacity	.910
KPC_F	<---	Knowledge_process_capacity	.901
KPP_F	<---	Knowledge_process_capacity	.797

			Estimate
KPAC_F	<---	Knowledge_process_capacity	.816
IN3	<---	Innovation	.801
OE_F1	<---	Organizational_effectiveness	.938
OE_F2	<---	Organizational_effectiveness	.710
IN2	<---	Innovation	.854
IN4	<---	Innovation	.769
IN1	<---	Innovation	.770
EO_F2	<---	Entrepreneurial_orientation	.606

Modification Indices (Group number 1 - Default model)

Covariances: (Group number 1 - Default model)

	M.I.	Par Change
e17 <--> e18	7.158	.112
e20 <--> e19	6.406	-.073
e5 <--> e19	5.499	-.133
e15 <--> e19	6.483	-.074
e13 <--> e20	5.830	-.096
e13 <--> e5	4.263	-.164
e13 <--> e15	4.487	-.085
e13 <--> e14	5.982	.178
e12 <--> e14	4.154	-.136
e11 <--> e5	4.219	-.143
e11 <--> e12	8.011	.148
e10 <--> e13	5.381	-.116
e7 <--> e9	4.217	.069
e6 <--> e5	8.809	.246
e6 <--> e14	4.346	.159
e6 <--> e12	4.500	-.134
e4 <--> e20	6.287	.079
e4 <--> e15	6.514	.080
e3 <--> e18	8.646	.145
e3 <--> e19	5.852	-.121
e2 <--> e13	4.875	.126

Regression Weights: (Group number 1 - Default model)

	M.I.	Par Change
OE_F1 <--- EO_F2	5.128	.079
KPAC_F <--- IN1	4.132	.096

Minimization History (Default model)

Iteration		Negative eigenvalues	Condition #	Smallest eigenvalue	Diameter	F	NTries	Ratio
0	e	11		-.734	9999.000	1495.592	0	9999.000
1	e	13		-.317	2.724	821.943	19	.461
2	e*	6		-.408	1.070	506.646	5	.828
3	e*	1		-.069	.915	286.315	5	.886
4	e	0	94.400		.755	201.446	5	.790
5	e	0	175.291		.831	176.926	1	.633
6	e	0	304.169		.471	164.389	1	.943
7	e	0	124.997		.311	162.512	1	.863
8	e	0	150.413		.093	162.298	1	1.044
9	e	0	150.497		.011	162.296	1	1.009
10	e	0	149.691		.000	162.296	1	1.000

【 Model Fit Summary 】

指標	意義	判定標準	結果	意義
CMIN (Chi-square)	卡方值	0.05<p<0.2	162.296	不佳
CMIN/DF (minimum value of discrepancy)	調整後之模式最小變異	小於 2	1.708	佳
GFI (goodness of fit index)	適合度	>0.9	.851	不佳
AGFI (adjust goodness of fit index)	自由度調整後的 GFI	>0.9	.786	不佳
NFI (normed fit index)	模式基準合適尺度	>0.9	.893	不佳
CFI (comparative fit index)	模式比較合適尺度	>0.95	.952	佳
RMR (root mean square residual)	推估後所剩下的殘插	<0.05	.077	不佳
F_0 (estimate of F_0)	模式標準誤所作的缺口估計值	90%信賴區間	.585	.312-.926
RMSEA (root mean square error of approximation)	RMR 的估計量	<0.05	.078	不佳
RFI (relative fit index)	模式相對合適尺度	>0.9	.864	不佳
IFI (incremental fit index)	模式擴大合適尺度	>0.9	.952	佳
ECVI (expect for a constant scale factor)	模式因子期望值（賦予的資訊是否充足）	90%信賴區間	2.124	1.852-2.466

【解答】

依據 Standardized Regression Weights: (Group number 1 - Default model)**所得分析資料，依序將 Standardized Coefficients 值填入下表**

依據 Regression Weights: (Group number 1 - Default model) **所得分析資料，依序將** C. R. **值填入下表**

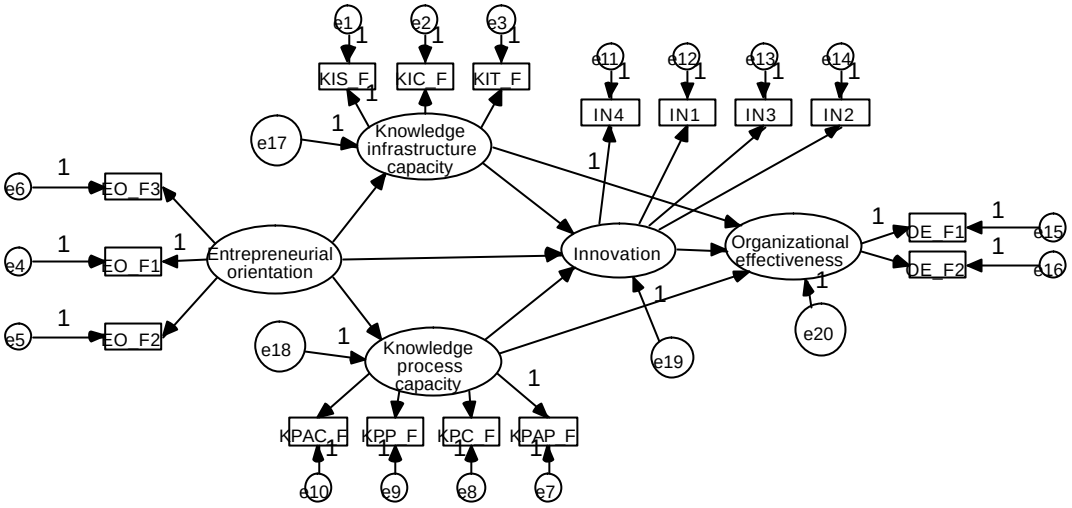
表 1: The Results of Structure Equation Model

	Relations		Standardized Coefficients	C. R.
Variables	Entrepreneurial orientation	Eo_f1	.881	-
		Eo_f2	.606 ***	7.243
		Eo_f3	.751 ***	9.866
	Knowledge infrastructure capability	Kit_f	.672 ***	7.691
		Kic_f	.805 ***	9.643
		Kis_f	.868	-
	Knowledge process capability	Kpac_f	.816 ***	12.000
		Kpc_f	.901 ***	14.860
		Kpap_f	.910	-
		Kpp_f	.797 ***	11.466
	Innovation	In1	.770 ***	9.949
		In2	.854	-
		In3	.801 ***	10.568
		In4	.769 ***	9.905
	Organizational effectiveness	Oe_f1	.938	-
		Oe_f2	.710 ***	9.406
Paths	Entrepreneurial orientation → Knowledge infrastructure capability		.783 ***	8.336
	Entrepreneurial orientation → Knowledge process capability		.834 ***	9.775
	Entrepreneurial orientation → Innovation		1.066 ***	4.629
	Knowledge infrastructure capability → Innovation		.001 .995	.006
	Knowledge process capability → Innovation		-.157 .311	-1.014
	Knowledge infrastructure capability → Organizational effectiveness		.158 .091	1.689
	Knowledge process capability → Organizational effectiveness		.091 .295	1.047
	Innovation → Organizational effectiveness		.767 ***	6.791
Fit index	Chi-Square		162.296(p=.000)	
	Degree of freedom (d. f.)		95	
	Chi-Square/ d. f.		1.708	
	GFI		.851	
	AGFI		.786	
	RMR		.077	

【第二部分：線性結構關係模式分析】

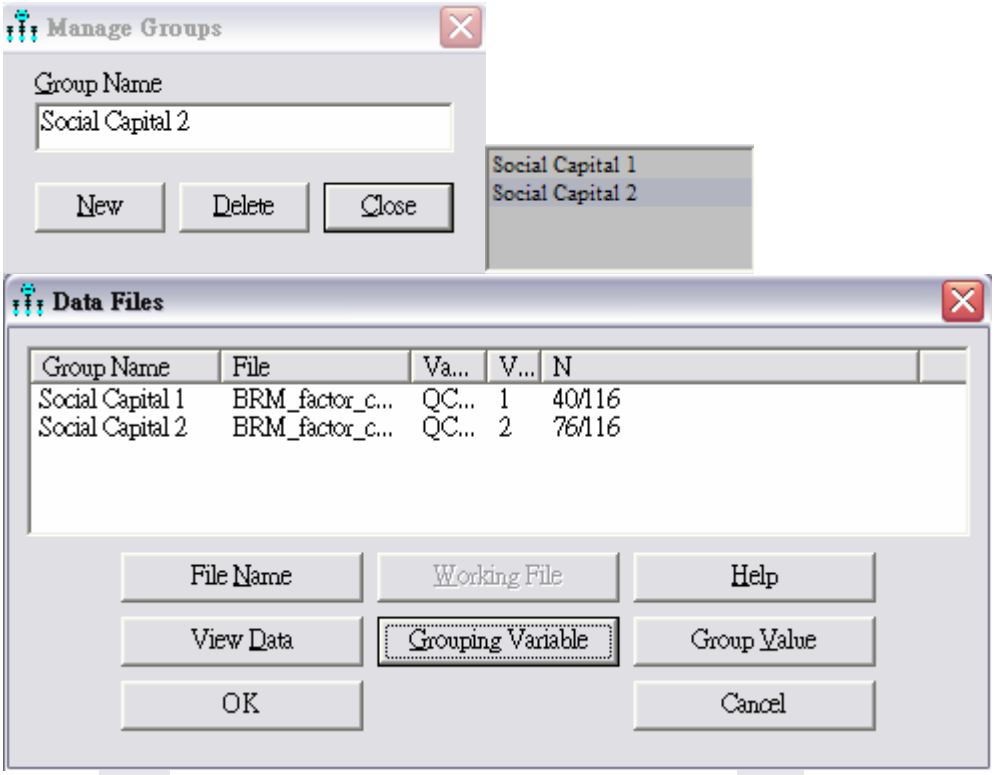
一． 建立結構關係模式

依據題目提供之架構，先於 AMOS **繪製一份架構如下圖：**

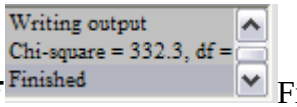


二． 不必修改，點選 Manage Groups，輸入第二個 Groups，確定視窗中出現兩組

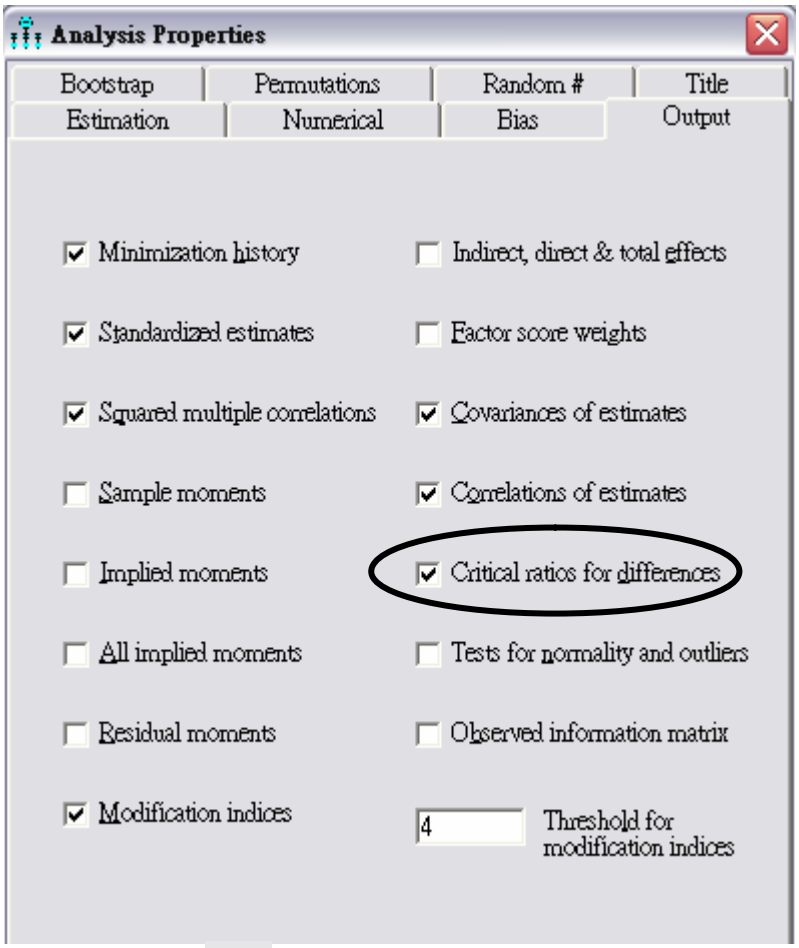
Groups。**點選此**  **圖示連結載入** BRM_ factor_chen.sav **數據資料，輸入** Grouping Variable Qcl2**，再給予兩組** Groups **的** Group Value**，確定將資料切割成** 40/116 **及** 76/116。



再點選  **勾選** Critical ratios for differences。**再點選**  **開始計算，計算完成後可由下圖左方**



Finished **獲知已經完成計算**



三. **點選** View Spreadsheets，**點選** Social Capital 1 **獲得以下輸出資料，記錄下** C.R.**及各個變項的** Label par_x (ex. KIT_F par_1), Standardized regression weights estimate.

Regression Weights: (Social Capital 1 - Default model)

		Estimate	S.E.	C.R.	P	Label
Knowledge_infrastructure_capacity	<--- Entrepreneurial_orientation	-.082	.192	-.425	.671	par_13
Knowledge_process_capacity	<--- Entrepreneurial_orientation	.558	.197	2.839	.005	par_14
Innovation	<--- Entrepreneurial_orientation	1.000				
Innovation	<--- Knowledge_process_capacity	.321	.132	2.430	.015	par_15
Innovation	<--- Knowledge_infrastructure_capacity	.125	.070	1.768	.077	par_16
Organizational_effectiveness	<--- Innovation	.813	.171	4.744	***	par_12
Organizational_effectiveness	<--- Knowledge_process_capacity	-.013	.165	-.078	.938	par_17
Organizational_effectiveness	<--- Knowledge_infrastructure_capacity	-.002	.034	-.062	.951	par_18
KIT_F	<--- Knowledge_infrastructure_capacity	.362	.177	2.041	.041	par_1
KIC_F	<--- Knowledge_infrastructure_capacity	.268	.129	2.068	.039	par_2
KIS_F	<--- Knowledge_infrastructure_capacity	1.000				
EO_F3	<--- Entrepreneurial_orientation	1.393	.213	6.537	***	par_3
EO_F2	<--- Entrepreneurial_orientation	1.095	.231	4.739	***	par_4
EO_F1	<--- Entrepreneurial_orientation	1.000				
KPC_F	<--- Knowledge_process_capacity	1.024	.130	7.897	***	par_5
KPAP_F	<--- Knowledge_process_capacity	1.000				
KPP_F	<--- Knowledge_process_capacity	1.164	.163	7.127	***	par_6
KPAC_F	<--- Knowledge_process_capacity	.972	.162	5.989	***	par_7
IN1	<--- Innovation	.778	.185	4.209	***	par_8
IN2	<--- Innovation	1.000				

			Estimate	S.E.	C.R.	P	Label
IN3	<---	Innovation	.966	.179	5.387	***	par_9
IN4	<---	Innovation	1.175	.203	5.789	***	par_10
OE_F1	<---	Organizational_effectiveness	1.000				
OE_F2	<---	Organizational_effectiveness	1.111	.207	5.371	***	par_11

Standardized Regression Weights: (Social Capital 1 - Default model)

			Estimate
Knowledge_infrastructure_capacity	<---	Entrepreneurial_orientation	-.038
Knowledge_process_capacity	<---	Entrepreneurial_orientation	.485
Innovation	<---	Entrepreneurial_orientation	.756
Innovation	<---	Knowledge_process_capacity	.280
Innovation	<---	Knowledge_infrastructure_capacity	.200
Organizational_effectiveness	<---	Innovation	.941
Organizational_effectiveness	<---	Knowledge_process_capacity	-.013
Organizational_effectiveness	<---	Knowledge_infrastructure_capacity	-.004
KIT_F	<---	Knowledge_infrastructure_capacity	.435
KIC_F	<---	Knowledge_infrastructure_capacity	.446
KIS_F	<---	Knowledge_infrastructure_capacity	1.447
EO_F3	<---	Entrepreneurial_orientation	.950
EO_F2	<---	Entrepreneurial_orientation	.707
EO_F1	<---	Entrepreneurial_orientation	.697
KPC_F	<---	Knowledge_process_capacity	.939
KPAP_F	<---	Knowledge_process_capacity	.842
KPP_F	<---	Knowledge_process_capacity	.880
KPAC_F	<---	Knowledge_process_capacity	.791
IN1	<---	Innovation	.637
IN2	<---	Innovation	.698
IN3	<---	Innovation	.780
IN4	<---	Innovation	.825
OE_F1	<---	Organizational_effectiveness	.868
OE_F2	<---	Organizational_effectiveness	.748

點選 Social Capital 2 獲得以下輸出資料，記錄下 C.R.**及各個變項的** Label par_x (ex. KIT_F par_19), Standardized regression weights estimate.

Regression Weights: (Social Capital 2 - Default model)

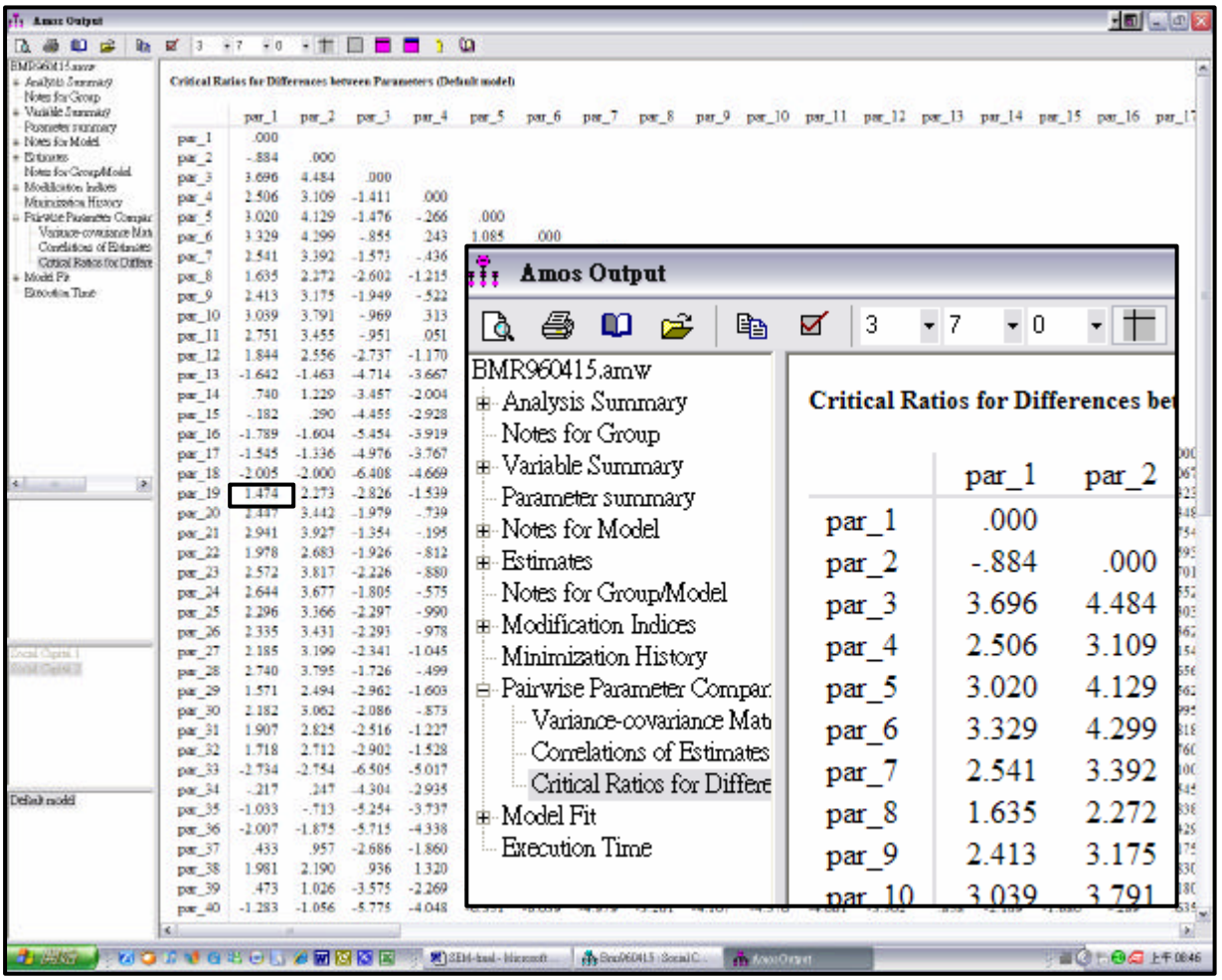
			Estimate	S.E.	C.R.	P	Label
Knowledge_infrastructure_capacity	<---	Entrepreneurial_orientation	.773	.124	6.258	***	par_31
Knowledge_process_capacity	<---	Entrepreneurial_orientation	.711	.100	7.141	***	par_32
Innovation	<---	Entrepreneurial_orientation	1.000				
Innovation	<---	Knowledge_process_capacity	-.247	.135	-1.833	.067	par_33
Innovation	<---	Knowledge_infrastructure_capacity	.314	.132	2.369	.018	par_34
Organizational_effectiveness	<---	Innovation	.858	.143	6.010	***	par_30
Organizational_effectiveness	<---	Knowledge_process_capacity	.150	.103	1.458	.145	par_35
Organizational_effectiveness	<---	Knowledge_infrastructure_capacity	-.110	.154	-.712	.477	par_36
KIT_F	<---	Knowledge_infrastructure_capacity	.686	.131	5.241	***	par_19
KIC_F	<---	Knowledge_infrastructure_capacity	.899	.130	6.922	***	par_20
KIS_F	<---	Knowledge_infrastructure_capacity	1.000				
EO_F3	<---	Entrepreneurial_orientation	1.041	.148	7.013	***	par_21
EO_F2	<---	Entrepreneurial_orientation	.858	.178	4.823	***	par_22

			Estimate	S.E.	C.R.	P	Label
EO_F1	<---	Entrepreneurial_orientation	1.000				
KPC_F	<---	Knowledge_process_capacity	.876	.093	9.439	***	par_23
KPAP_F	<---	Knowledge_process_capacity	1.000				
KPP_F	<---	Knowledge_process_capacity	.942	.130	7.246	***	par_24
KPAC_F	<---	Knowledge_process_capacity	.841	.111	7.592	***	par_25
IN1	<---	Innovation	.846	.108	7.850	***	par_26
IN2	<---	Innovation	1.000				
IN3	<---	Innovation	.825	.116	7.089	***	par_27
IN4	<---	Innovation	.963	.130	7.433	***	par_28
OE_F1	<---	Organizational_effectiveness	1.000				
OE_F2	<---	Organizational_effectiveness	.687	.107	6.417	***	par_29

Standardized Regression Weights: (Social Capital 2 - Default model)

			Estimate
Knowledge_infrastructure_capacity	<---	Entrepreneurial_orientation	.756
Knowledge_process_capacity	<---	Entrepreneurial_orientation	.763
Innovation	<---	Entrepreneurial_orientation	.857
Innovation	<---	Knowledge_process_capacity	-.197
Innovation	<---	Knowledge_infrastructure_capacity	.275
Organizational_effectiveness	<---	Innovation	.979
Organizational_effectiveness	<---	Knowledge_process_capacity	.137
Organizational_effectiveness	<---	Knowledge_infrastructure_capacity	-.110
KIT_F	<---	Knowledge_infrastructure_capacity	.608
KIC_F	<---	Knowledge_infrastructure_capacity	.780
KIS_F	<---	Knowledge_infrastructure_capacity	.838
EO_F3	<---	Entrepreneurial_orientation	.690
EO_F2	<---	Entrepreneurial_orientation	.523
EO_F1	<---	Entrepreneurial_orientation	.887
KPC_F	<---	Knowledge_process_capacity	.842
KPAP_F	<---	Knowledge_process_capacity	.900
KPP_F	<---	Knowledge_process_capacity	.713
KPAC_F	<---	Knowledge_process_capacity	.735
IN1	<---	Innovation	.734
IN2	<---	Innovation	.885
IN3	<---	Innovation	.688
IN4	<---	Innovation	.710
OE_F1	<---	Organizational_effectiveness	.937
OE_F2	<---	Organizational_effectiveness	.638

四。 Critical ratios for differences，**尋找對應的** t-value (ex. KIT_F par_1 vs. par_19)，**個人建議將表** Copy **到** Excel **比較好找。**



【 Model Fit Summary 】

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	78	332.280	194	.000	1.713
Saturated model	272	.000	0		
Independence model	32	1446.183	240	.000	6.026

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.172	.751	.651	.536
Saturated model	.000	1.000		
Independence model	.509	.222	.119	.196

【線性結構關係模式分析總結】

表 2: The Results of Competing model for Different Levels of key success factors

Relations		Model 1 - Low Level SC (n=… … … .)		Model 2 - High Level SC (n=… … …)		t-value
		Standardized Coefficients	C. R.	Standardized Coefficients	C. R.	
Variables						
Entrepreneurial orientation	Eo_f1	0.697		0.887		
	Eo_f2	0.707	4.739	0.523	4.823	-0.812
	Eo_f3	0.95	6.537	0.69	7.013	-1.354
Knowledge infrastructure capability	Kit_f	0.435	2.041	0.608	5.241	1.474
	Kic_f	0.446	2.068	0.78	6.922	3.442
	Kis_f	1.447		0.838		
Knowledge process capability	Kpac_f	0.791	5.989	0.735	7.592	-0.664
	Kpc_f	0.939	7.897	0.842	9.439	-0.932
	Kpap_f	0.842		0.9		
	Kpp_f	0.88	7.127	0.713	7.246	-1.059
Innovation	In1	0.637	4.209	0.734	7.85	0.315
	In2	0.698		0.885		
	In3	0.78	5.387	0.688	7.089	-0.661
	In4	0.825	5.789	0.71	7.433	-0.881
Organizational effectiveness	Oe_f1	0.868		0.937		
	Oe_f2	0.748	5.371	0.638	6.417	-1.82
Paths						
Entrepreneurial orientation → Knowledge infrastructure capability		-0.038		-0.425		0.756
Entrepreneurial orientation → Knowledge process capability		0.485		2.839		0.763
Entrepreneurial orientation → Innovation		0.756				0.857
Knowledge infrastructure capability → Innovation		0.2		1.768		0.275
Knowledge process capability → Innovation		0.28		2.43		-0.197
Knowledge infrastructure capability → Organizational effectiveness		-0.004		-0.062		-0.11
Knowledge process capability → Organizational effectiveness		-0.013		-0.078		0.137
Innovation → Organizational effectiveness		0.941		4.744		0.979
Fit index						
Chi-Square (p-value)		332.280(p=.000)				
Degree of freedom (d. f.)		194				
Chi-Square/ d. f.		1.713				
GFI		.751				
AGFI		.651				
RMR		.172				

參考資料：企業研究方法，page 433 **第十九章線性結構關係模式分析**