

STRUCTURAL EQUATION MODEL MODEL TWO

I have asked 400 entrepreneurs various questions regarding their attitude towards innovation and so on and asked them to rank according to following style. Their responses or data are saved in SPSS at www.sayedhossain.com

From their responses, I have developed following structural equation model using Amos. The outcome is also given below:

Ranking style

Strongly agree = 1 Agree = 2 Somewhat agree = 3 Disagree = 4 Strongly disagree = 5

Questions regarding innovation activities to entrepreneurs

Positive attitude (PA)

- Overall future will be good.
- My colleagues are good
- My health will be good in future.
- I can change the world

Profit motive (PM)

- I can gain huge from innovation
- Profit is certain
- Profit is my incentive behind my innovation activities

Sharing research (SR)

- Sharing with others provides good result
- Sharing leaks out privacy
- Sharing provides motivation.

Research facility (RF)

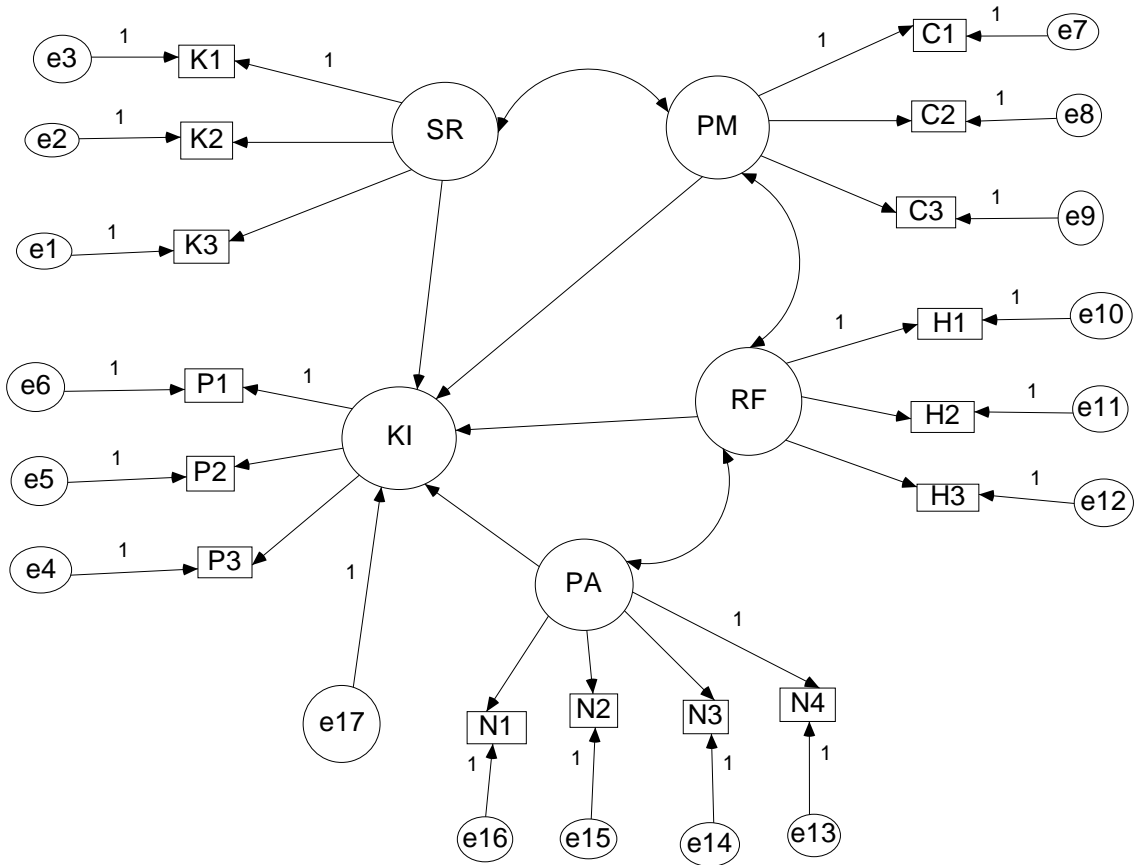
- Enough equipments are needed
- Environment needs to be friendly for research
- Conducive Govt. policy is needed.

Knowledge institution (KI)

- Should be independent
- Number of knowledge workers should be high
- Flexible office hour is needed for good research

Information: You can see the data in **Hossain Channel** at www.sayedhossain.com

MODEL SPECIFICATION



AMOS OUTCOME

INTRODUCING VARIABLES

Observed, endogenous variables

K1

K2

K3

C1

C2

C3

P1

P2

P3

H1

H2

H3

N1

N2

N3

N4

Unobserved, endogenous variables

KI

Unobserved, exogenous variables

SR

e3

e2

e1

e7

e8

e9

e6

e5

e4

e10

e11

e12

e16

e15

e14

e13

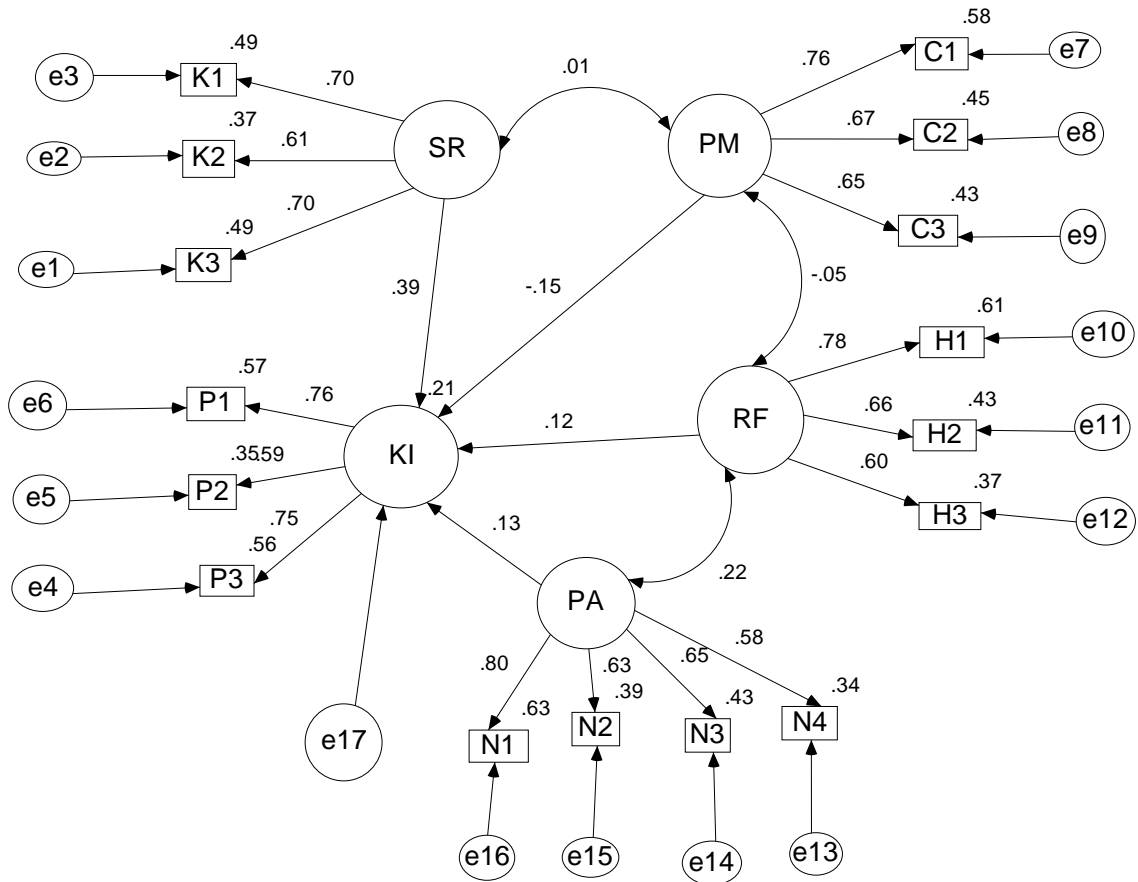
PA

PM
RF
e17

Variable counts (Group number 1)

Number of variables in your model:	38
Number of observed variables:	16
Number of unobserved variables:	22
Number of exogenous variables:	21
Number of endogenous variables:	17

STANDARDIZED ESTIMATES



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

	Estimate
KI <--- PM	-.150
KI <--- RF	.122
KI <--- PA	.128
KI <--- SR	.388
K1 <--- SR	.702
K2 <--- SR	.609
K3 <--- SR	.702
N1 <--- PA	.796
N2 <--- PA	.627
N3 <--- PA	.653
N4 <--- PA	.585
C1 <--- PM	.764
C2 <--- PM	.668
C3 <--- PM	.654
P1 <--- KI	.756
P2 <--- KI	.592
P3 <--- KI	.749
H1 <--- RF	.780
H2 <--- RF	.658
H3 <--- RF	.605

Correlations: (Group number 1 - Default model)

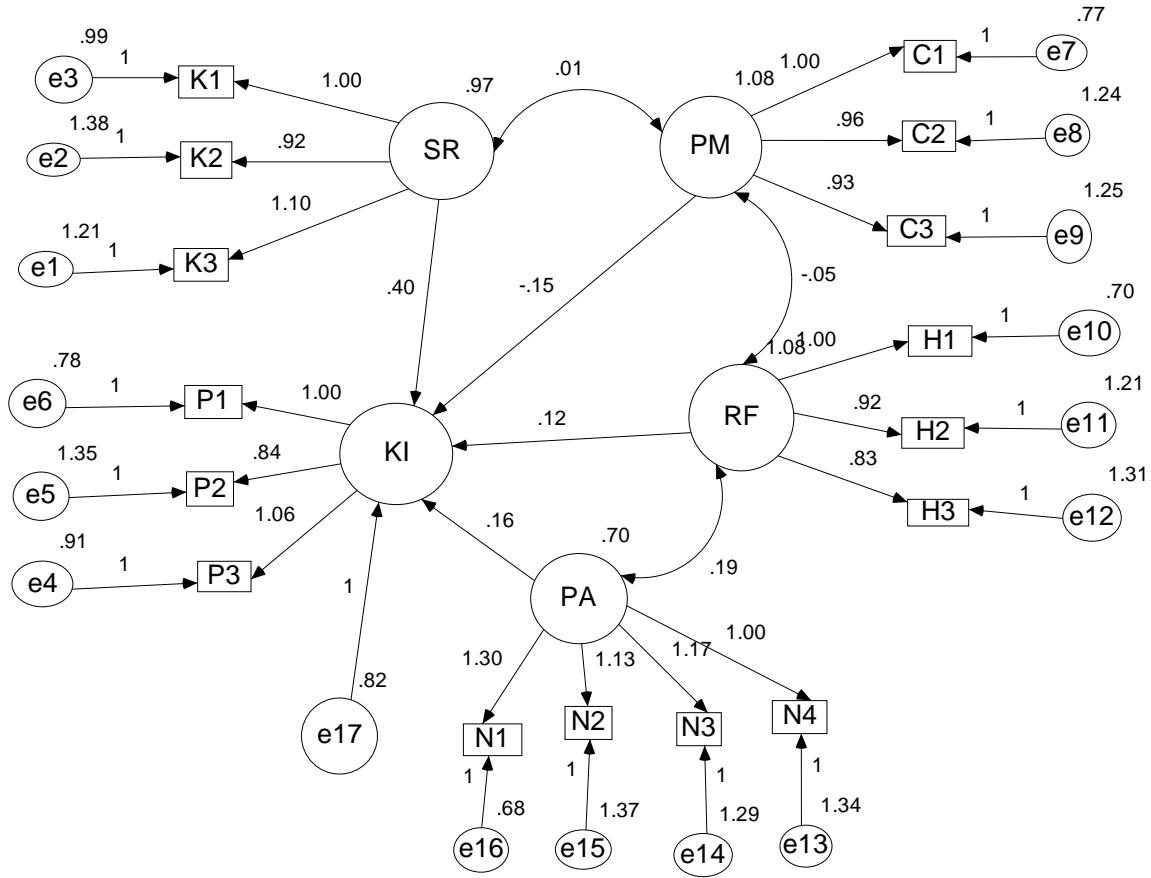
	Estimate
SR <--> PM	.009
PM <--> RF	-.047
PA <--> RF	.224

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
KI	.212
N4	.342
N3	.426
N2	.393
N1	.633
H3	.366

	Estimate
H2	.432
H1	.608
P3	.561
P2	.351
P1	.572
C3	.428
C2	.446
C1	.583
K3	.494
K2	.371
K1	.493

UN-STANDARDIZED ESTIMATES



Covariances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
SR <--> PM	.010	.070	.139	.890	par_16
PM <--> RF	-.051	.072	-.708	.479	par_17
PA <--> RF	.194	.060	3.218	.001	par_18

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
SR	.967	.153	6.337	***	par_19
PA	.695	.123	5.639	***	par_20
PM	1.084	.156	6.949	***	par_21
RF	1.082	.157	6.883	***	par_22
e17	.816	.121	6.723	***	par_23
e3	.993	.118	8.417	***	par_24
e2	1.377	.128	10.788	***	par_25
e1	1.207	.143	8.414	***	par_26
e7	.774	.114	6.778	***	par_27
e8	1.243	.128	9.721	***	par_28
e9	1.250	.124	10.089	***	par_29
e6	.776	.101	7.688	***	par_30
e5	1.354	.116	11.704	***	par_31
e4	.910	.115	7.918	***	par_32
e10	.698	.117	5.955	***	par_33
e11	1.210	.125	9.653	***	par_34
e12	1.306	.119	10.935	***	par_35
e16	.682	.095	7.144	***	par_36
e15	1.367	.119	11.440	***	par_37
e14	1.290	.117	10.997	***	par_38
e13	1.339	.111	12.011	***	par_39

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
KI <--- PM	-.147	.063	-2.334	.020	par_12
KI <--- RF	.119	.065	1.848	.065	par_13
KI <--- PA	.156	.079	1.984	.047	par_14
KI <--- SR	.402	.075	5.391	***	par_15
K1 <--- SR	1.000				
K2 <--- SR	.916	.104	8.797	***	par_1
K3 <--- SR	1.103	.122	9.033	***	par_2
N1 <--- PA	1.301	.131	9.922	***	par_3
N2 <--- PA	1.129	.124	9.079	***	par_4
N3 <--- PA	1.175	.126	9.306	***	par_5
N4 <--- PA	1.000				
C1 <--- PM	1.000				
C2 <--- PM	.960	.102	9.416	***	par_6
C3 <--- PM	.928	.099	9.382	***	par_7
P1 <--- KI	1.000				
P2 <--- KI	.841	.087	9.614	***	par_8
P3 <--- KI	1.059	.101	10.461	***	par_9
H1 <--- RF	1.000				
H2 <--- RF	.923	.104	8.917	***	par_10
H3 <--- RF	.834	.096	8.733	***	par_11

MODEL FIT

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	39	175.038	97	.000	1.805
Saturated model	136	.000	0		
Independence model	16	1623.062	120	.000	13.526

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.136	.949	.928	.677
Saturated model	.000	1.000		
Independence model	.408	.602	.549	.531

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.045	.034	.055	.777
Independence model	.177	.170	.185	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	253.038	256.509	408.705	447.705
Saturated model	272.000	284.105	814.839	950.839
Independence model	1655.062	1656.486	1718.925	1734.925

Prepared by:

Sayed Hossain
Senior Lecturer of Economics
Faculty of Management
Multimedia University, 63100 Cyberjaya
Malaysia
Email: sayed@sayedhossain.com
Personal website: <http://www.sayedhossain.com>

February 8, 2010.

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