

6. result efa

This document below are results written test and questionnaire results prepared by explanatory factor analysis. The results of written test and questionnaire is classified by realistic spatial indicators (see indicator De Moor [16]).

Results

Exploratory Factor Analysis

Kaiser-Meyer-Olkin test

MSA	
Overall MSA	0.516
R1	0.520
R2	0.449
R3	0.701
R4	0.510
R5	0.718
T1	0.782
T2	0.497
T3	0.680
T4	0.476
T5	0.583
P1	0.632
P2	0.285
P3	0.391
P4	0.472
P5	0.371

Bartlett's test

X ²	df	p
159.901	105.000	< .001

Chi-squared Test

	Value	df	p
Model	57.179	63	0.683

Factor Loadings

	Factor 1	Factor 2	Factor 3	Uniqueness
R2	0.745			0.413
R4	0.738			0.432
R1	0.682			0.422
T2	0.600			0.525
R3	0.547			0.692
R5	0.536			0.623
T1	0.499			0.615
P3	0.445		0.376	0.657
P4	0.403	0.358		0.674
P1		0.630		0.557
P5		0.600		0.638
T4		0.571		0.669
T5		0.514	-0.810	0.005
P2			0.488	0.709
T3			0.378	0.812

Note. Applied rotation method is varimax.

Factor Loadings (Structure Matrix)

	Factor 1	Factor 2	Factor 3
R1	0.682		
R2	0.745		
R3	0.547		
R4	0.738		
R5	0.536		
T1	0.499		
T2	0.600		
T3			0.378
T4		0.571	
T5		0.514	-0.810
P1		0.630	
P2			0.488
P3	0.445		0.376
P4	0.403	0.358	
P5		0.600	

Note. Applied rotation method is varimax.

Factor Characteristics

	SumSq. Loadings	Proportion var.	Cumulative
Factor 1	3.279	0.219	0.219
Factor 2	1.903	0.127	0.345
Factor 3	1.375	0.092	0.437

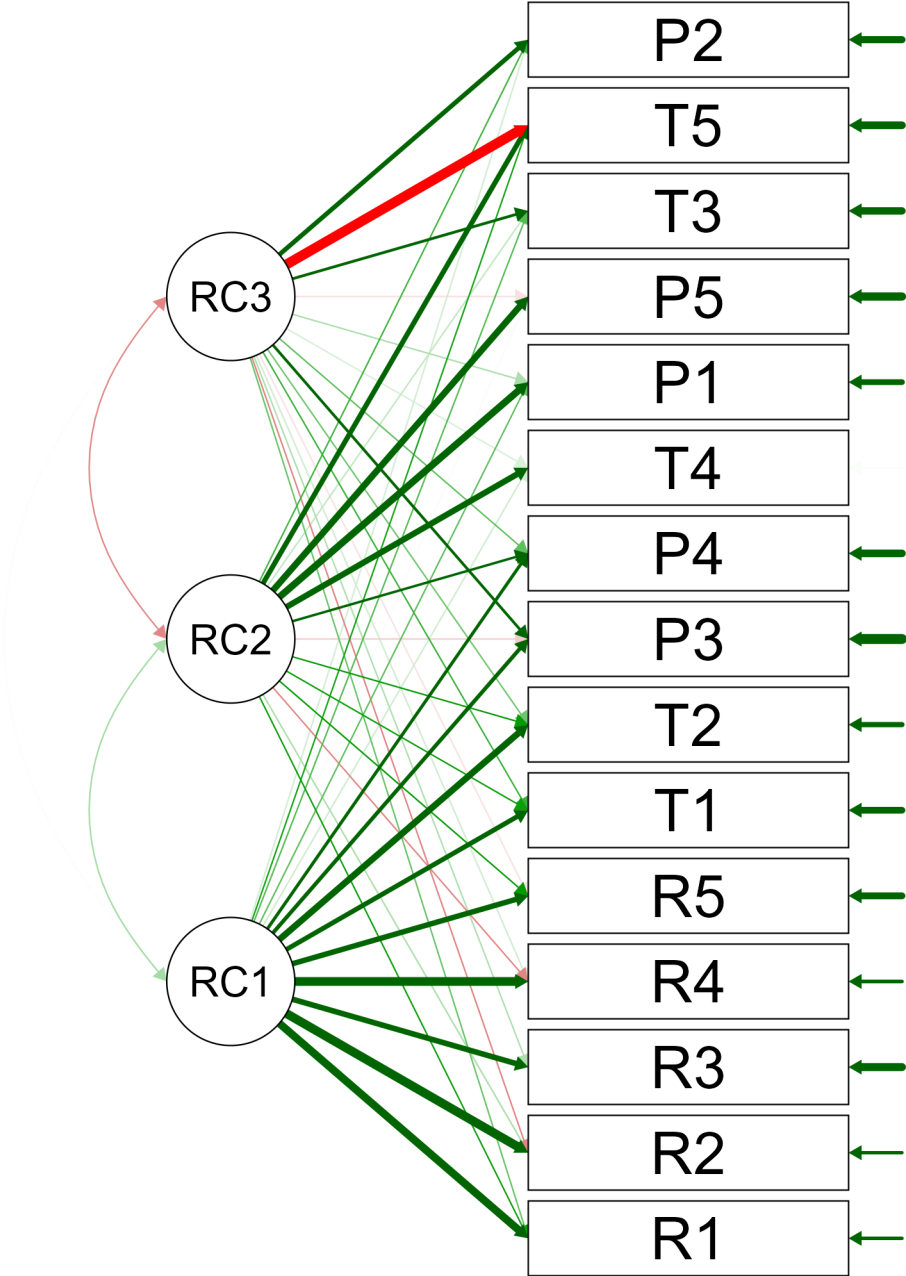
Factor Correlations

	Factor 1	Factor 2	Factor 3
Factor 1	1.000	0.106	0.004
Factor 2	0.106	1.000	-0.141
Factor 3	0.004	-0.141	1.000

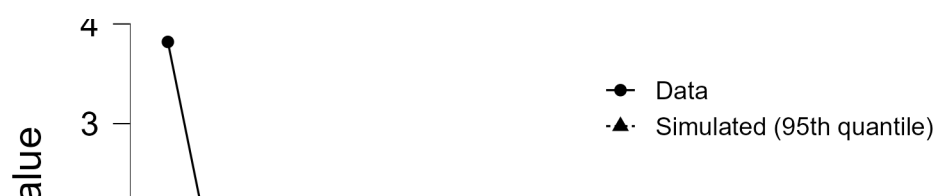
Additional fit indices

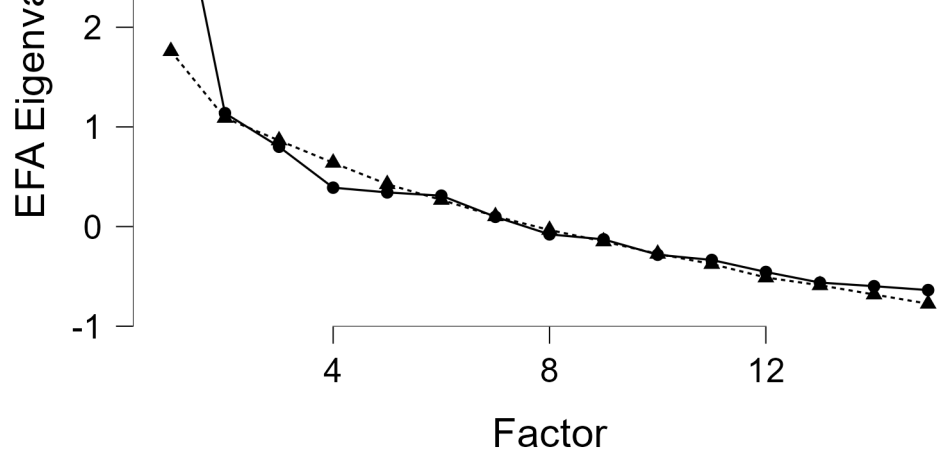
RMSEA	RMSEA 90% confidence	TLI	BIC
0.000	0 - 0.091	1.236	-157.097

Path Diagram



Scree plot





Confirmatory Factor Analysis

Model fit

Chi-square test

Model	X ²	df	p
Baseline model	39.707	10	
Factor model	2.472	5	0.781

Parameter estimates

Factor loadings

Factor	Indicator	Symbol	Estimate	Std. Error	z-value	p	95% Confidence Interval	
							Lower	Upper
Representasi	R1	λ11	0.656	0.170	3.858	< .001	0.323	0.989
	R2	λ12	0.641	0.148	4.344	< .001	0.352	0.931
	R3	λ13	0.467	0.172	2.709	0.007	0.129	0.804
	R4	λ14	0.620	0.160	3.882	< .001	0.307	0.934
	R5	λ15	0.516	0.174	2.964	0.003	0.175	0.857

Factor variances

Factor	Estimate	Std. Error	z-value	p	95% Confidence Interval	
					Lower	Upper
Representasi	1.000	0.000			1.000	1.000

Residual variances

Indicator	Estimate	Std. Error	z-value	p	95% Confidence Interval	
					Lower	Upper
R1	0.469	0.159	2.952	0.003	0.157	0.780
R2	0.295	0.119	2.480	0.013	0.062	0.529
R3	0.606	0.172	3.523	< .001	0.269	0.942
R4	0.411	0.140	2.933	0.003	0.136	0.685
R5	0.596	0.173	3.436	< .001	0.256	0.936

