

APPENDIX A:
Principle Component Analyses
of the Double-Analyses

APPENDIX A

Principle Component Analyses of the Double-Analyses from one Project

FACTOR

```
/VARIABLES ngLogSN ngLogPB ngLogAS ngLogSB ngLogAG ngLogNI ngLogBI  
ngLogFE /MISSING LISTWISE /ANALYSIS ngLogSN ngLogPB ngLogAS ngLogSB  
ngLogAG ngLogNI ngLogBI ngLogFE  
/PRINT INITIAL CORRELATION EXTRACTION ROTATION  
/PLOT EIGEN ROTATION  
/CRITERIA MINEIGEN(1) ITERATE(25)  
/EXTRACTION PC  
/CRITERIA ITERATE(25)  
/ROTATION VARIMAX  
/SAVE REG(ALL)  
/METHOD=CORRELATION .
```

Factor Analysis

Correlation Matrix

		ng Log(SN)	ng Log(PB)	ng Log(AS)	ng Log(SB)
Correlation	ng Log(SN)	1.000	.255	.267	.373
	ng Log(PB)	.255	1.000	.614	.613
	ng Log(AS)	.267	.614	1.000	.834
	ng Log(SB)	.373	.613	.834	1.000
	ng Log(AG)	.388	.589	.751	.887
	ng Log(NI)	.415	.774	.725	.759
	ng Log(BI)	.252	.440	.426	.667
	ng Log(FE)	.253	.476	.337	.167

Correlation Matrix

		ng Log(AG)	ng Log(NI)	ng Log(BI)	ng Log(FE)
Correlation	ng Log(SN)	.388	.415	.252	.253
	ng Log(PB)	.589	.774	.440	.476
	ng Log(AS)	.751	.725	.426	.337
	ng Log(SB)	.887	.759	.667	.167
	ng Log(AG)	1.000	.718	.652	.144
	ng Log(NI)	.718	1.000	.279	.256
	ng Log(BI)	.652	.279	1.000	.172
	ng Log(FE)	.144	.256	.172	1.000

Communalities

	Initial	Extraction
ng Log(SN)	1.000	.285
ng Log(PB)	1.000	.730
ng Log(AS)	1.000	.742
ng Log(SB)	1.000	.934
ng Log(AG)	1.000	.890
ng Log(NI)	1.000	.740
ng Log(BI)	1.000	.534
ng Log(FE)	1.000	.828

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	4.599	57.484	57.484
2	1.084	13.551	71.035
3	.831	10.389	81.424
4	.755	9.440	90.865
5	.412	5.148	96.013
6	.157	1.958	97.972
7	.106	1.328	99.299
8	.056	.701	100.000

Extraction Method: Principal Component Analysis.

Total Variance Explained

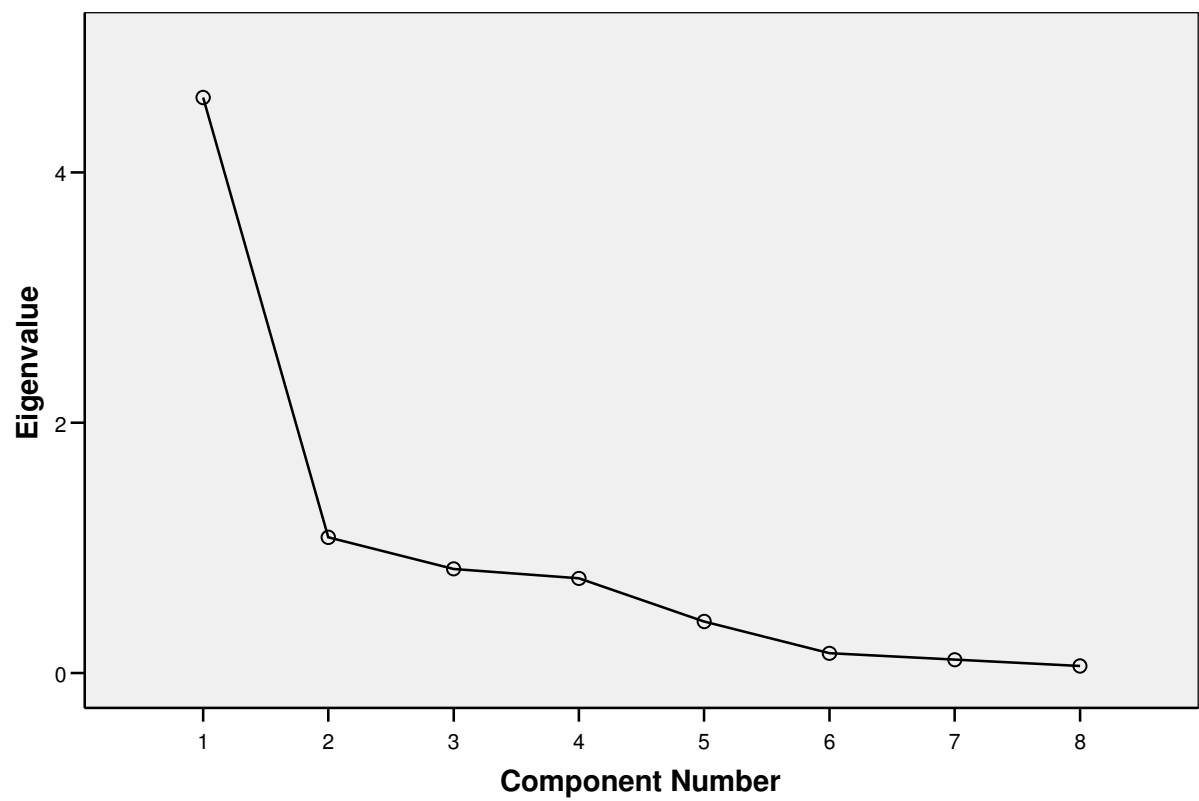
Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	4.599	57.484	57.484
2	1.084	13.551	71.035
3			
4			
5			
6			
7			
8			

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	3.780	47.247	47.247
2	1.903	23.789	71.035
3			
4			
5			
6			
7			
8			

Extraction Method: Principal Component Analysis.

Scree Plot

Component Matrix^a

	Component	
	1	2
ng Log(SN)	.486	.221
ng Log(PB)	.802	.294
ng Log(AS)	.861	-.019
ng Log(SB)	.928	-.272
ng Log(AG)	.897	-.292
ng Log(NI)	.855	.093
ng Log(BI)	.654	-.327
ng Log(FE)	.392	.821

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Rotated Component Matrix^a

	Component	
	1	2
ng Log(SN)	.319	.428
ng Log(PB)	.561	.645
ng Log(AS)	.764	.399
ng Log(SB)	.944	.210
ng Log(AG)	.927	.177
ng Log(NI)	.704	.494
ng Log(BI)	.730	.030
ng Log(FE)	-.053	.908

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

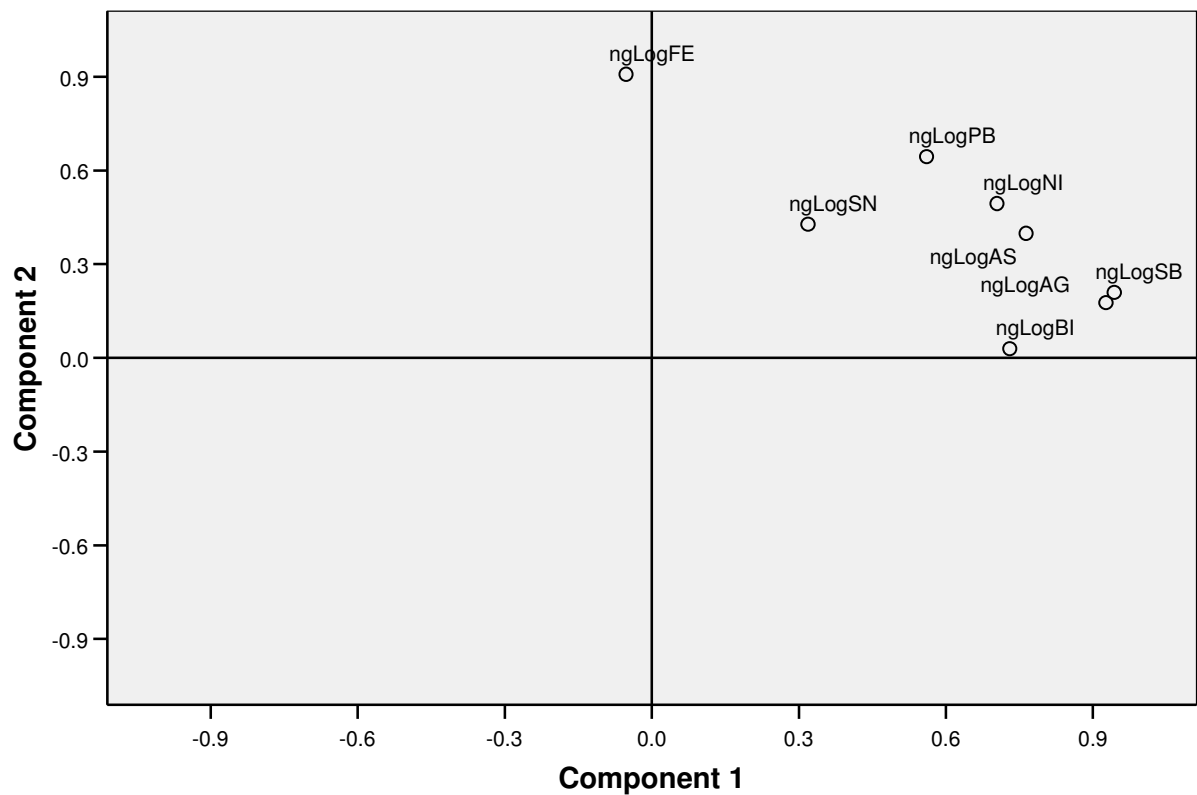
Component Transformation Matrix

Component	1	2
1	.876	.483
2	-.483	.876

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Component Plot in Rotated Space



Principle Component Analyses of the Double-Analyses from several Projects

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FACTOR
/VARIABLES ngLogSN ngLogPB ngLogAS ngLogSB ngLogAG ngLogNI ngLogBI
ngLogFE /MISSING LISTWISE /ANALYSIS ngLogSN ngLogPB ngLogAS ngLogSB
ngLogAG ngLogNI ngLogBI ngLogFE
/PRINT INITIAL CORRELATION EXTRACTION ROTATION
/PLOT EIGEN ROTATION
/CRITERIA MINEIGEN(1) ITERATE(25)
/EXTRACTION PC
/CRITERIA ITERATE(25)
/ROTATION VARIMAX
/SAVE REG(ALL)
/METHOD=CORRELATION .

```

Factor Analysis

Correlation Matrix

		ng Log(SN)	ng Log(PB)	ng Log(AS)	ng Log(SB)
Correlation	ng Log(SN)	1.000	.340	.242	.200
	ng Log(PB)	.340	1.000	.354	.402
	ng Log(AS)	.242	.354	1.000	.489
	ng Log(SB)	.200	.402	.489	1.000
	ng Log(AG)	.202	.356	.425	.782
	ng Log(NI)	.378	.636	.440	.405
	ng Log(BI)	-.059	.060	.256	.414
	ng Log(FE)	.022	.300	.191	.099

Correlation Matrix

		ng Log(AG)	ng Log(NI)	ng Log(BI)	ng Log(FE)
Correlation	ng Log(SN)	.202	.378	-.059	.022
	ng Log(PB)	.356	.636	.060	.300
	ng Log(AS)	.425	.440	.256	.191
	ng Log(SB)	.782	.405	.414	.099
	ng Log(AG)	1.000	.403	.411	.122
	ng Log(NI)	.403	1.000	-.059	.285
	ng Log(BI)	.411	-.059	1.000	.003
	ng Log(FE)	.122	.285	.003	1.000

Communalities

	Initial	Extraction
ng Log(SN)	1.000	.363
ng Log(PB)	1.000	.655
ng Log(AS)	1.000	.493
ng Log(SB)	1.000	.790
ng Log(AG)	1.000	.755
ng Log(NI)	1.000	.746
ng Log(BI)	1.000	.682
ng Log(FE)	1.000	.225

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	3.239	40.488	40.488
2	1.470	18.377	58.865
3	.990	12.370	71.235
4	.640	8.003	79.238
5	.606	7.574	86.812
6	.525	6.559	93.371
7	.324	4.045	97.417
8	.207	2.583	100.000

Extraction Method: Principal Component Analysis.

Total Variance Explained

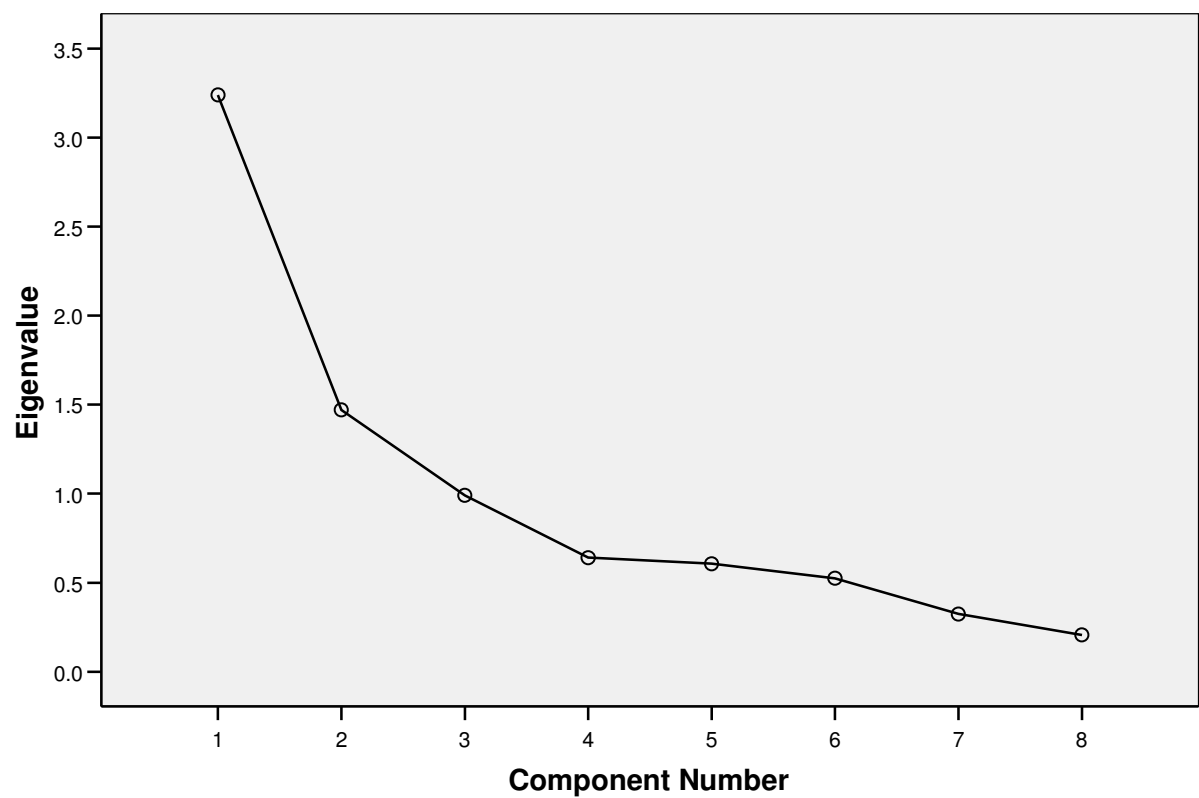
Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	3.239	40.488	40.488
2	1.470	18.377	58.865
3			
4			
5			
6			
7			
8			

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	2.400	29.998	29.998
2	2.309	28.867	58.865
3			
4			
5			
6			
7			
8			

Extraction Method: Principal Component Analysis.

Scree Plot

Component Matrix^a

	Component	
	1	2
ng Log(SN)	.444	.407
ng Log(PB)	.710	.388
ng Log(AS)	.699	-.061
ng Log(SB)	.808	-.370
ng Log(AG)	.785	-.373
ng Log(NI)	.734	.456
ng Log(BI)	.362	-.742
ng Log(FE)	.331	.339

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Rotated Component Matrix^a

	Component	
	1	2
ng Log(SN)	.042	.601
ng Log(PB)	.248	.771
ng Log(AS)	.549	.437
ng Log(SB)	.841	.288
ng Log(AG)	.826	.270
ng Log(NI)	.218	.836
ng Log(BI)	.774	-.289
ng Log(FE)	.006	.474

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Component Transformation Matrix

Component	1	2
1	.725	.689
2	-.689	.725

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Component Plot in Rotated Space