

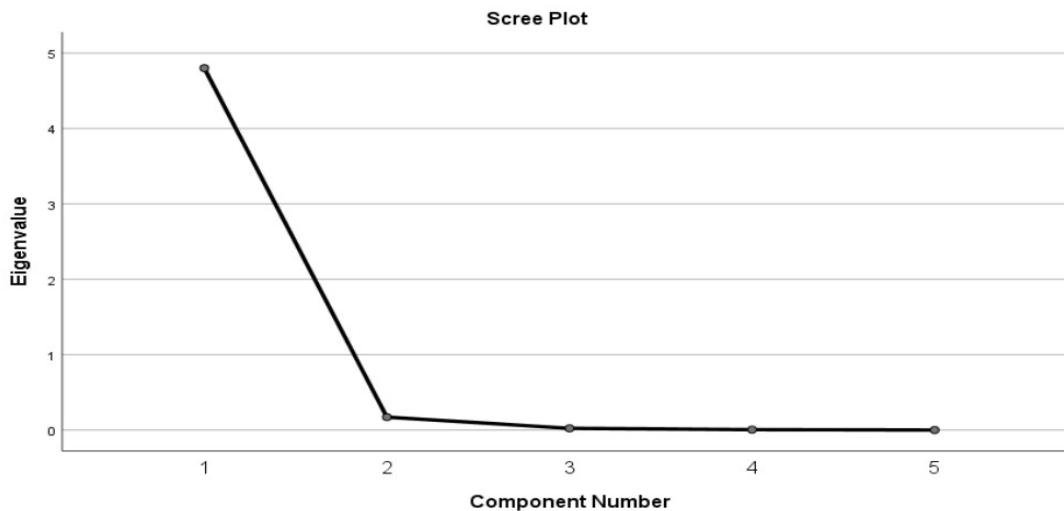


Level: L3
Instructor: Dr. Soumaya Allaoui

Exercise1:

The following table and figure represent the results of the analysis of the relationship between a set of economic variables using Principal Component Analysis (PCA).

| | | Eigenvalues | | | |
|--|--------------------|-------------|-------|---------------|--------------|
| | | Component | Total | % of Variance | Cumulative % |
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .817 | 1 | | 96 | 96 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 2 | | 3.4 | 99.4 |
| | df | 3 | | 0.49 | 99.89 |
| | Sig. | 4 | | 0.1 | 99.99 |
| | | 5 | | 0.01 | 100 |
| | | Total | 5 | 100 | |



1. Does the correlation matrix represent the identity matrix? And are the data suitable for Principal Component Analysis?
2. Calculate the eigenvalues.
3. Based on the results of the table and figure above, how many principal components are selected?