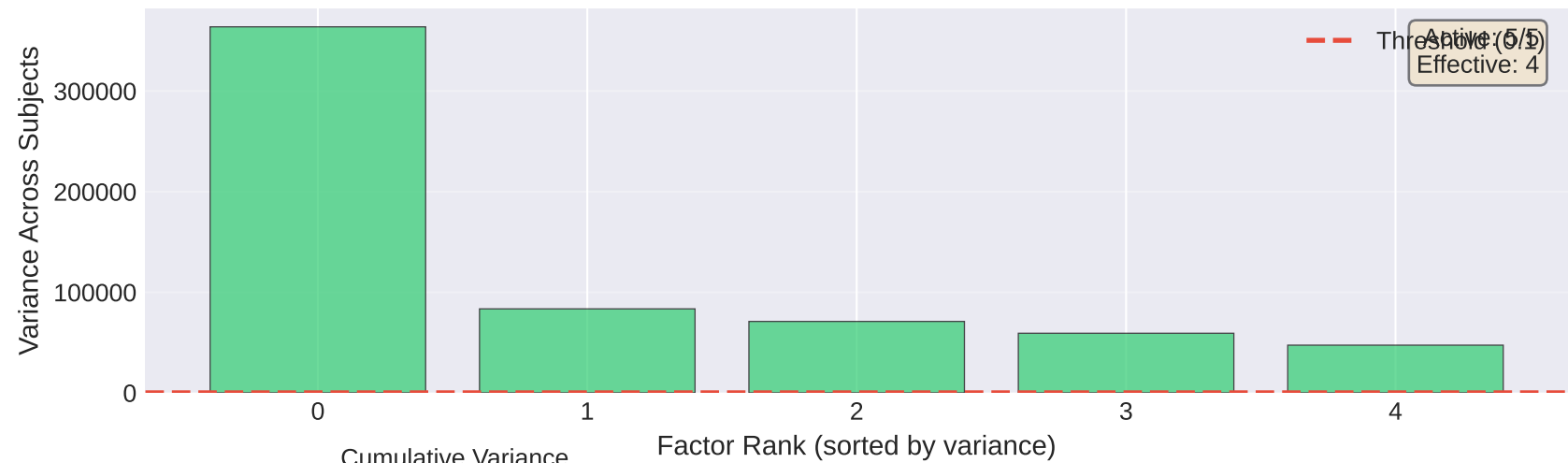
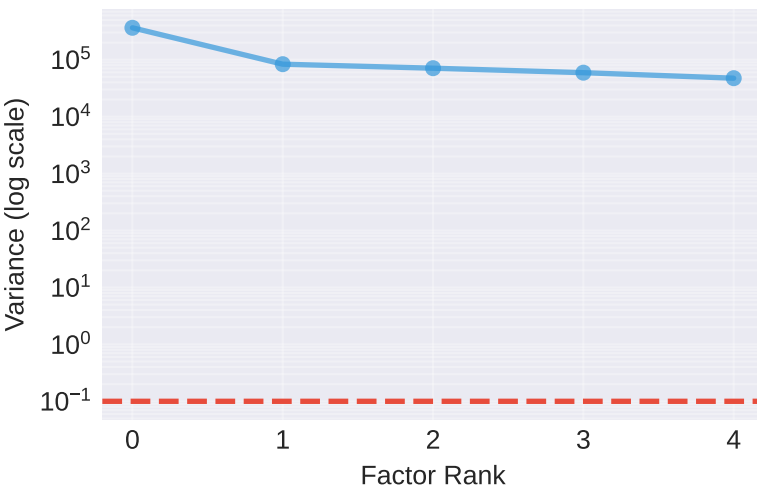


Factor Variance Analysis: ARD Shrinkage Assessment (K=5)

Factor Variance Profile (K=5): 5 Active Factors

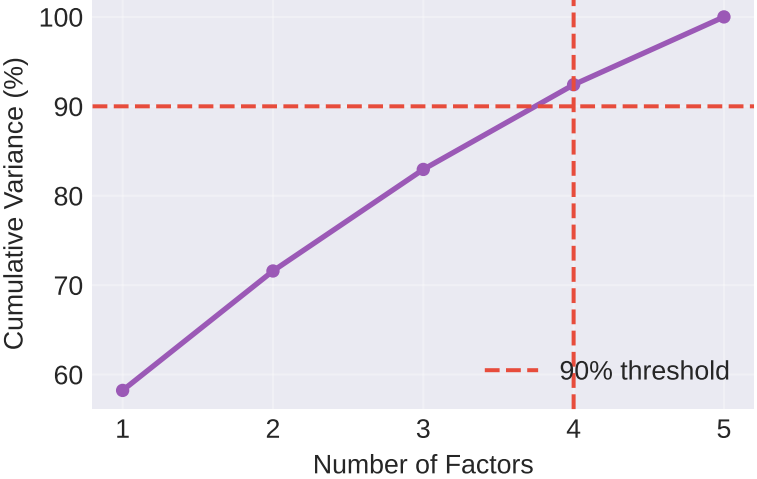


Log-Scale Variance
(Sharp drop = good ARD)

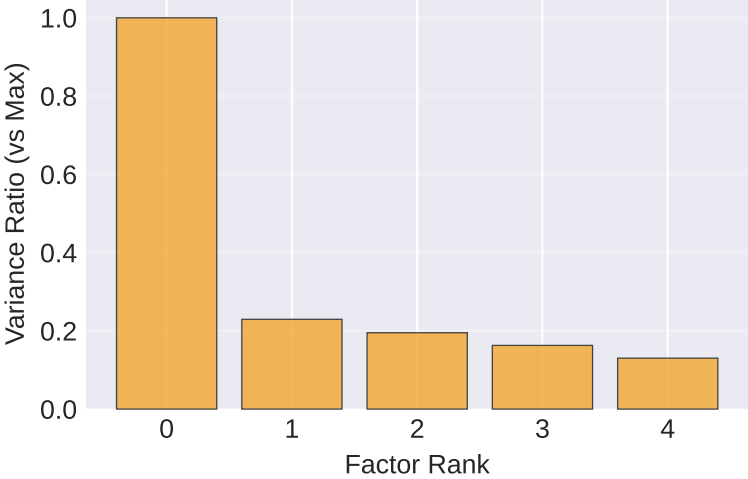


Cumulative Variance
(90% @ 4 factors)

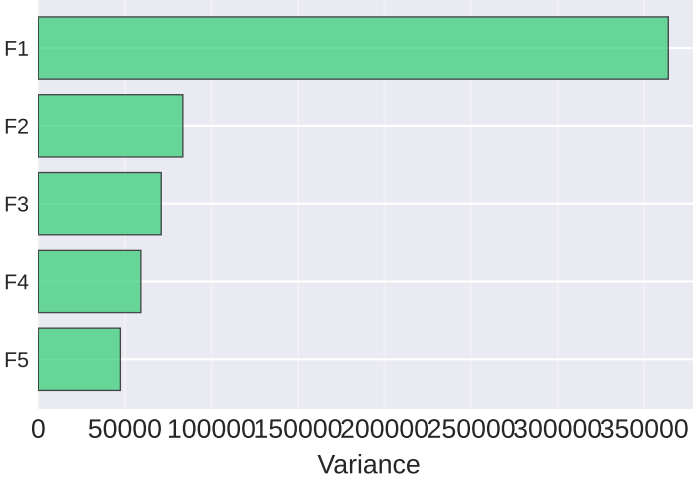
Factor Rank (sorted by variance)



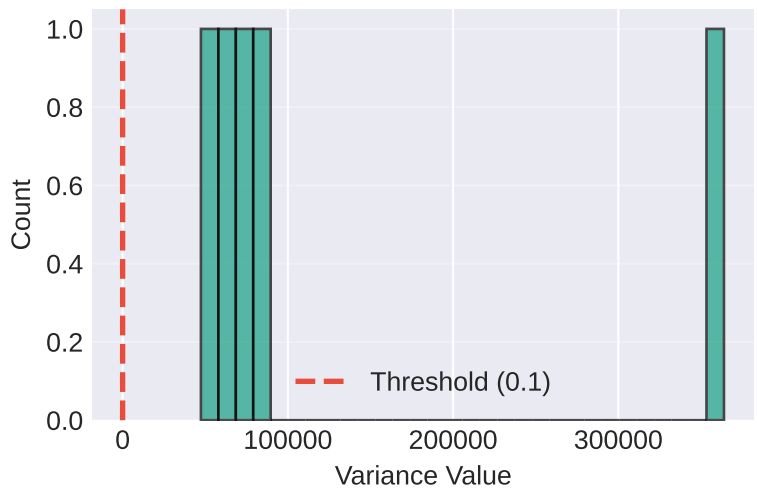
Normalized Variance Profile



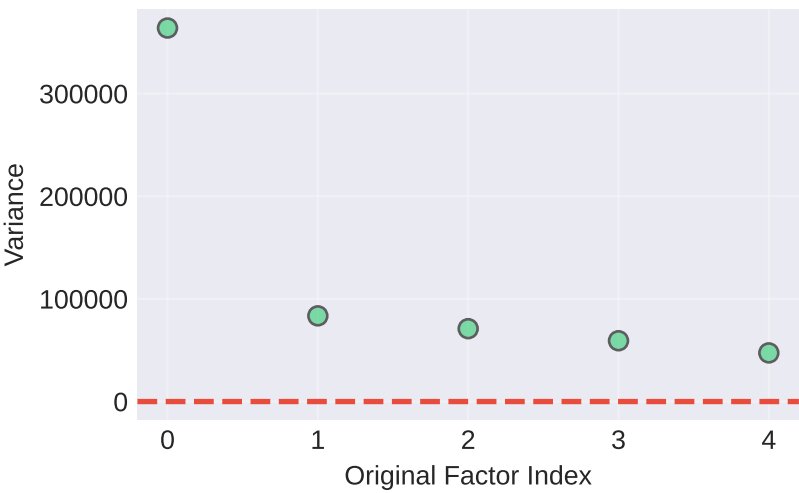
Top 5 Factors



Distribution of Factor Variances



Variance by Original Factor Order



| VARIANCE PROFILE SUMMARY | |
|--------------------------|--------------|
| ===== | |
| Total Factors (K): | 5 |
| Active Factors: | 5 |
| Effective Dim (90%): | 4 |
| Max Variance: | 363902.4062 |
| Mean Variance: | 124995.9781 |
| Median Variance: | 70987.1250 |
| Top 3 Variances: | |
| #1: | 363902.4062 |
| #2: | 83481.8516 |
| #3: | 70987.1250 |
| ARD Shrinkage: | N/A (K < 10) |
| Shrinkage Ratio: | nan |
| INTERPRETATION: | |
| Poor shrinkage suggests: | |
| • Convergence issues | |
| • Overfitting | |
| • Need longer sampling | |