

Clustering method	Purity method	Penalization				
		0	0.25	0.5	1	2
Single	Max	299	88	3	1	1
	Threshold	300	300	300	298	1
	Entropy	300	97	18	2	1
	Gini-Simpson	300	299	125	3	1
Complete	Max	299	103	4	1	1
	Threshold	299	299	297	223	1
	Entropy	300	300	90	2	1
	Gini-Simpson	300	300	299	13	1
Average	Max	290	98	4	1	1
	Threshold	298	298	294	294	1
	Entropy	300	270	18	2	1
	Gini-Simpson	300	295	270	2	1
Median	Max	290	175	3	1	1
	Threshold	300	300	300	265	1
	Entropy	300	175	3	2	1
	Gini-Simpson	300	290	175	3	1
Ward	Max	296	283	139	1	1
	Threshold	292	292	292	262	19
	Entropy	298	296	139	48	5
	Gini-Simpson	298	297	296	139	46
Ward ²	Max	278	278	7	1	1
	Threshold	296	296	296	296	118
	Entropy	300	287	164	5	1
	Gini-Simpson	300	287	287	147	1

Table 1: Comparison of number of optimal clusters for MCA data found by 6 clustering (single/minimal, complete/maximal, average and median linkage and two implementations of Ward method) and 4 purity methods (maximum, threshold, entropy and Gini-Simpson index). Unlike with the non-transformed variables, there is an apparent lack of cluster stability, at least for a number of cluster in single and double digits. All the stable number of optimal clusters (either discovered by more than one purity method or stable accross different penalizations of single method) are close to the tested maximum of 300 clusters and the only semi-succesfull methods seems to be the median linkage with 175 clusters and ward.D method with 139 clusters.