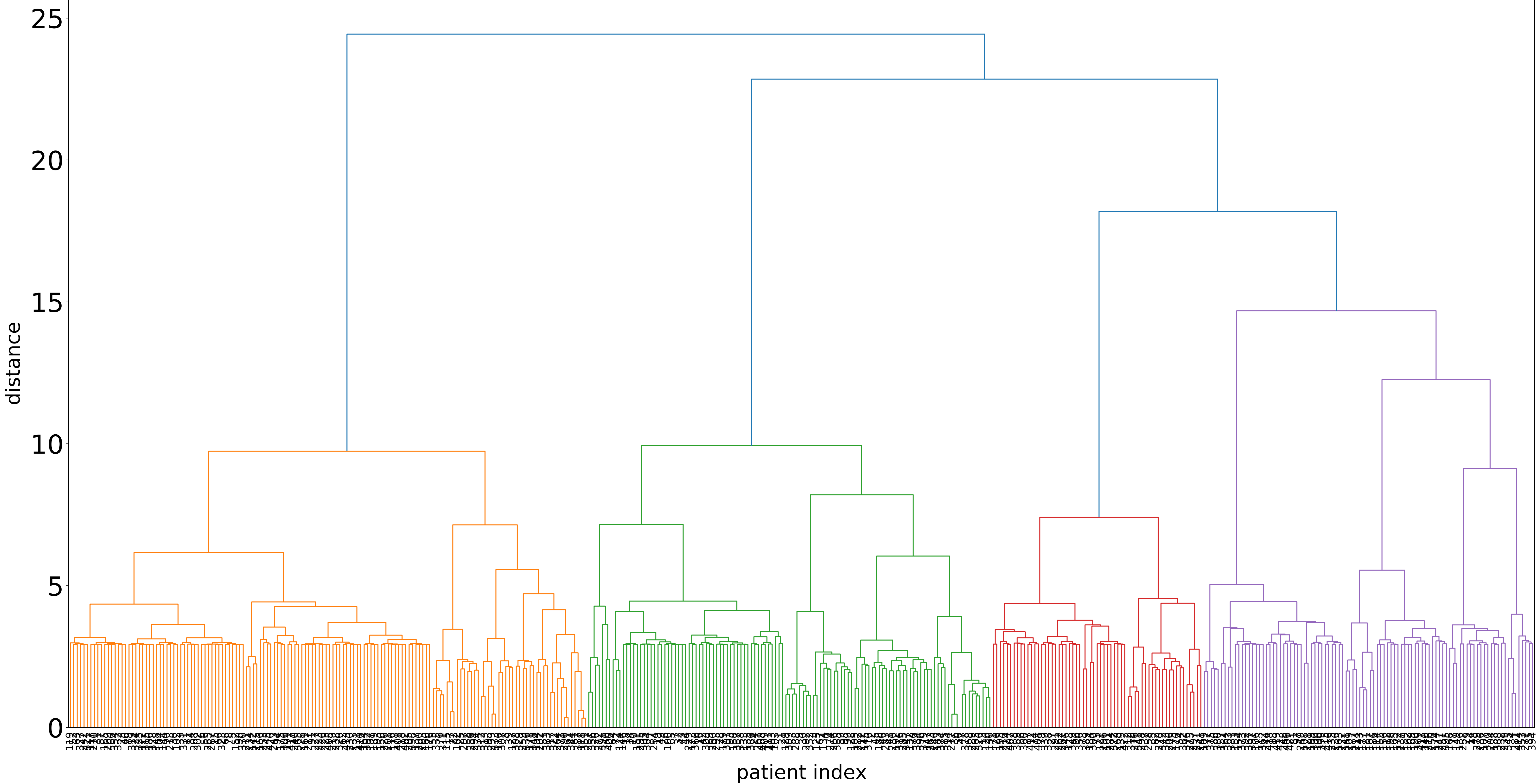


Hierarchical Clustering Dendrogram - gap: 0.00, Tp: 0.25, ward link

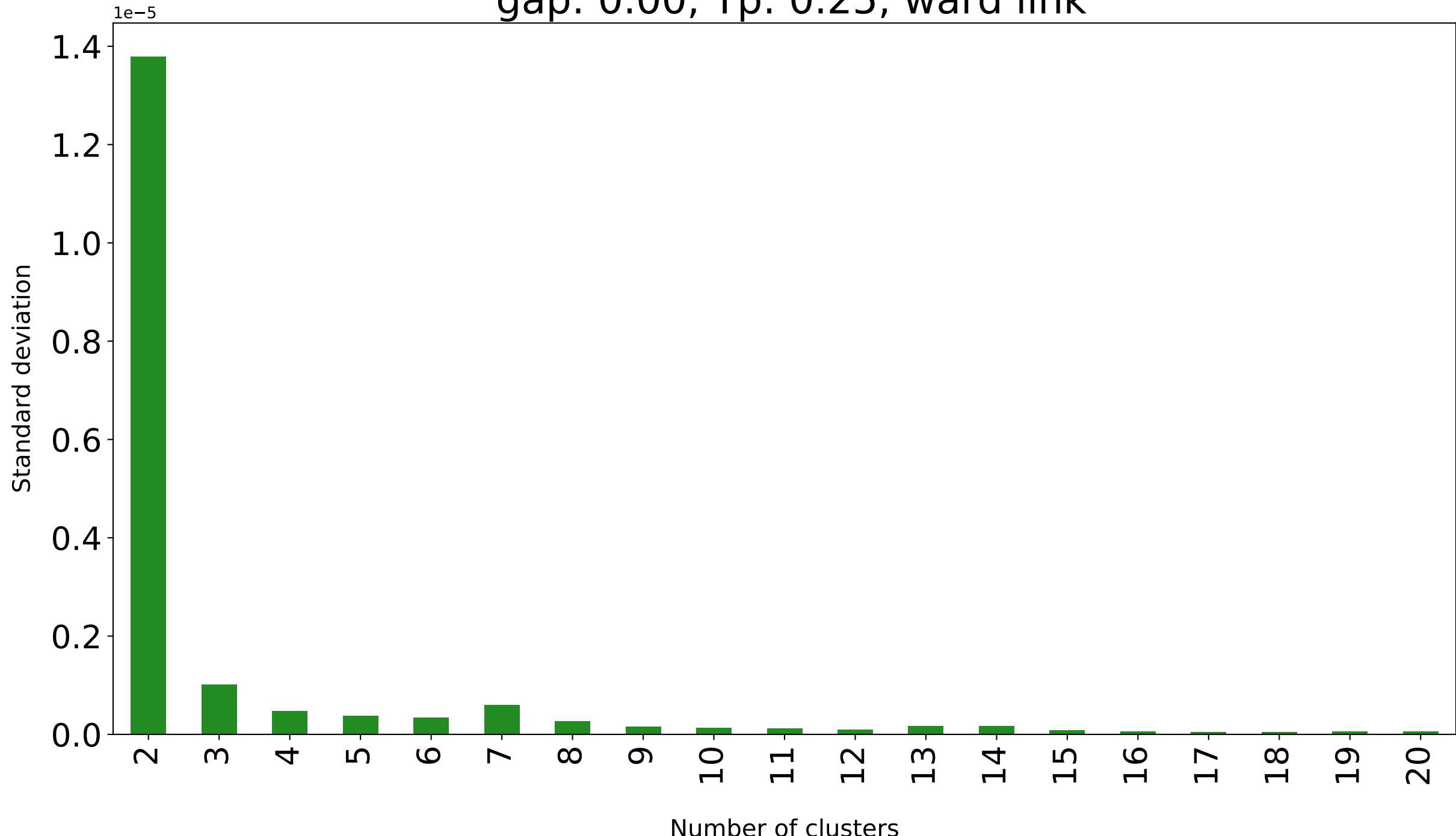


Cophenetic Correlation Coefficient: 0.6074444948287754

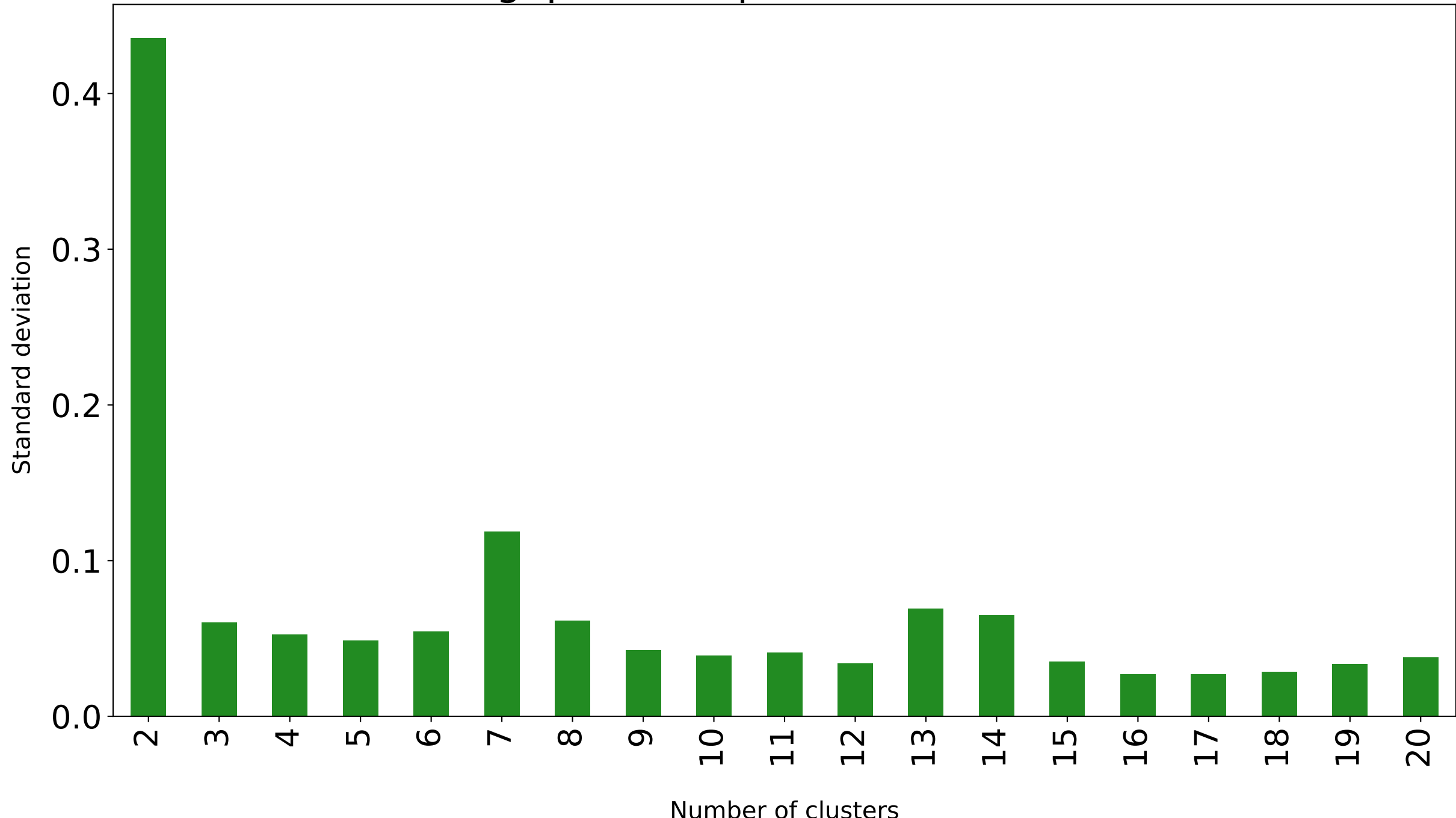
Average values of five clustering indices
gap: 0.00, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99998	0.72029	0.59985	0.35076	0.21122	0.34822	0.71974	0.66522	0.72084	6e-05	0.56085	0.48749	0.0365	0.11626	0.14731
3.0	1.0	0.95281	0.91226	0.93191	0.02447	0.92859	0.95277	0.19905	0.95284	0.00016	0.93917	0.8447	0.12739	0.13512	0.12315
4.0	1.0	0.94865	0.90453	0.93339	0.02909	0.92934	0.94858	0.2249	0.94872	0.00018	0.94604	0.83178	0.18229	0.14855	0.12315
5.0	1.0	0.94748	0.9021	0.93923	0.03347	0.93011	0.94731	0.23477	0.94766	0.0002	0.94939	0.82724	0.21818	0.15623	0.12315
6.0	1.0	0.94844	0.90424	0.93063	0.03323	0.93286	0.94805	0.22193	0.94882	0.0002	0.95327	0.83255	0.42	0.16299	0.12315
7.0	1.0	0.8167	0.70116	0.75516	0.1073	0.77278	0.81608	0.47285	0.81732	0.00019	0.86898	0.56142	1.09649	0.12747	0.12315
8.0	1.0	0.91262	0.84177	0.92691	0.05766	0.8969	0.9116	0.3158	0.91365	0.00028	0.94728	0.73611	1.09649	0.10917	0.12315
9.0	1.0	0.92992	0.87082	0.91278	0.04904	0.91806	0.92974	0.27886	0.9301	0.00029	0.96024	0.77657	1.09649	0.12678	0.12315
10.0	1.0	0.93396	0.87774	0.92178	0.04927	0.92353	0.93384	0.28371	0.93408	0.00031	0.96463	0.78692	1.09649	0.11342	0.12315
11.0	1.0	0.92241	0.85773	0.91681	0.06111	0.91103	0.92225	0.32469	0.92256	0.00032	0.9611	0.75578	1.09649	0.10763	0.12315
12.0	1.0	0.93442	0.878	0.9202	0.05953	0.92532	0.93421	0.29988	0.93464	0.00034	0.96843	0.78585	1.25	0.1008	0.15072
13.0	1.0	0.90766	0.83362	0.8658	0.07185	0.89644	0.90553	0.33791	0.9098	0.00035	0.95924	0.72757	1.25	0.1066	0.15072
14.0	1.0	0.87642	0.7821	0.89369	0.08274	0.86397	0.87455	0.3907	0.87832	0.00042	0.95446	0.65132	1.25	0.10049	0.15072
15.0	1.0	0.90935	0.83478	0.91109	0.06732	0.90099	0.90901	0.34914	0.90969	0.00046	0.96964	0.71977	1.30435	0.09385	0.15072
16.0	1.0	0.91428	0.84285	0.91337	0.06902	0.90666	0.91416	0.36014	0.91439	0.00048	0.97236	0.73059	1.30435	0.0924	0.15072
17.0	1.0	0.9173	0.84808	0.91648	0.06687	0.91018	0.91723	0.35079	0.91737	0.00049	0.97409	0.7385	1.30435	0.08959	0.15072
18.0	1.0	0.91385	0.84229	0.91208	0.06909	0.90664	0.91377	0.35916	0.91393	0.0005	0.97372	0.73002	1.30435	0.09516	0.15072
19.0	1.0	0.90678	0.83068	0.89489	0.07669	0.8992	0.90663	0.3787	0.90694	0.00051	0.97227	0.71364	2.0	0.09528	0.15072
20.0	1.0	0.89053	0.80378	0.86375	0.08817	0.88193	0.8901	0.41584	0.89096	0.00051	0.96842	0.67569	2.0	0.0976	0.15072

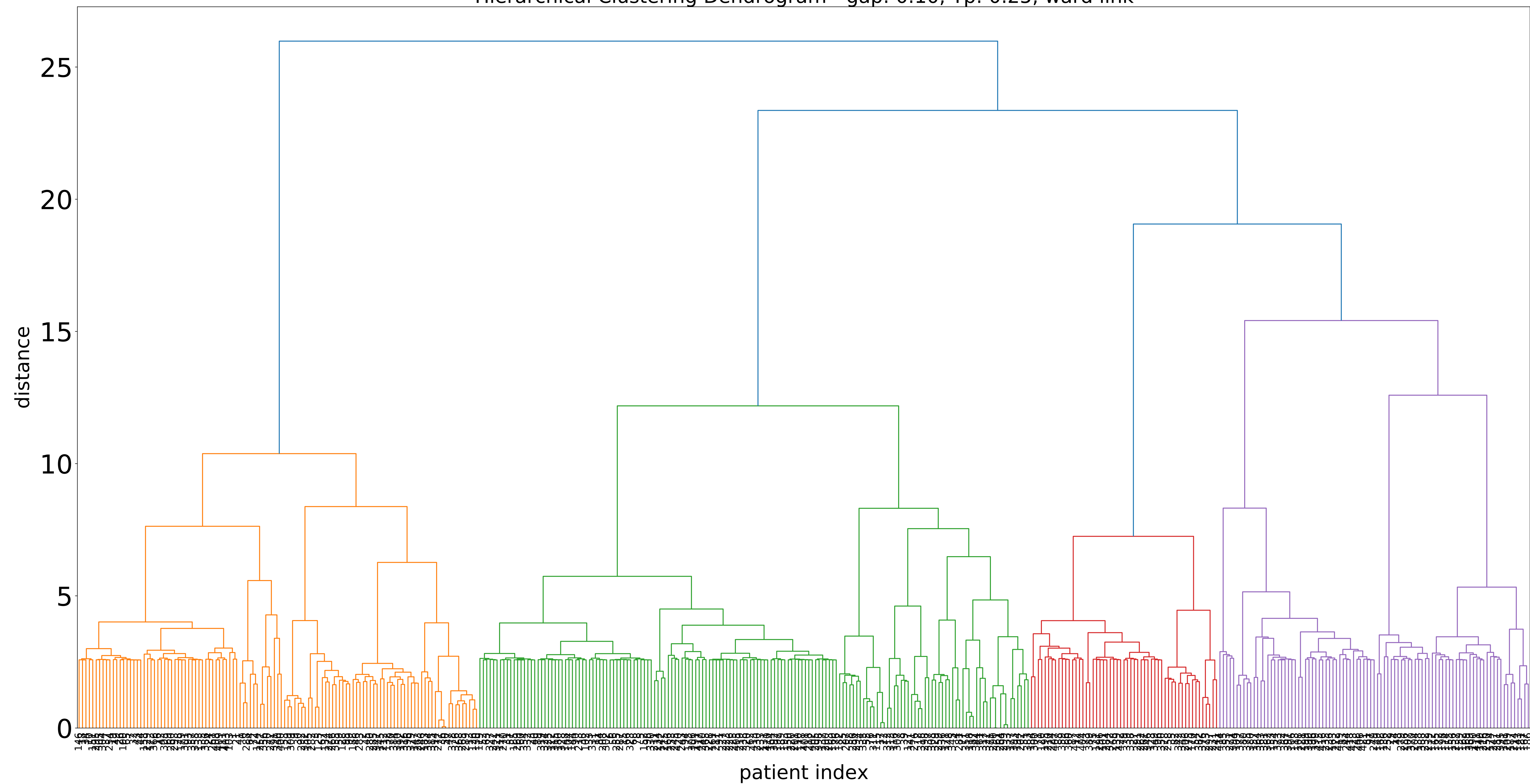
Standard deviation of Adjusted Rand versus number of clusters
gap: 0.00, Tp: 0.25, ward link



Standard deviation of Huberts index versus number of clusters
gap: 0.00, Tp: 0.25, ward link



Hierarchical Clustering Dendrogram - gap: 0.10, Tp: 0.25, ward link

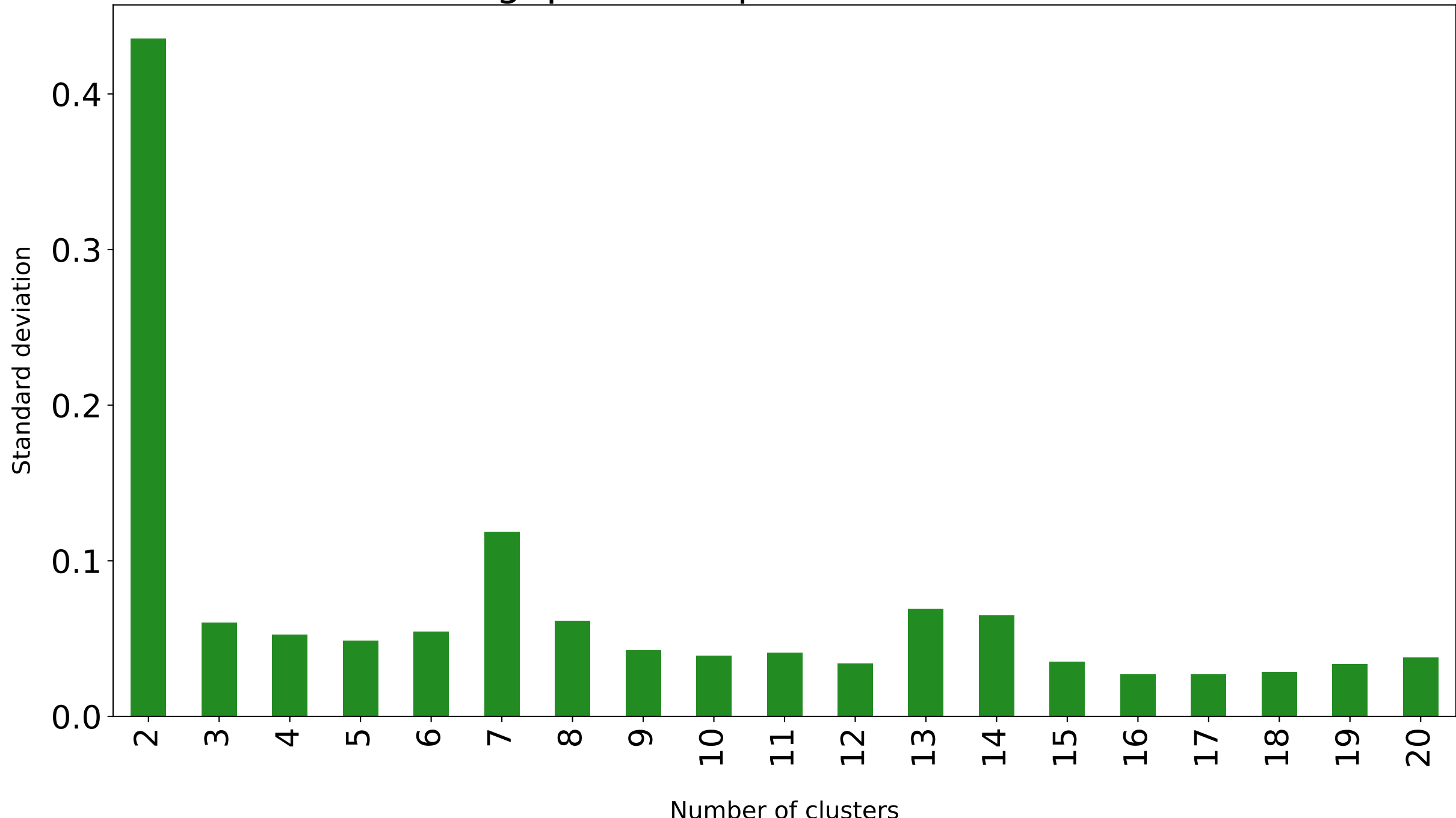


Cophenetic Correlation Coefficient: 0.6443940571372577

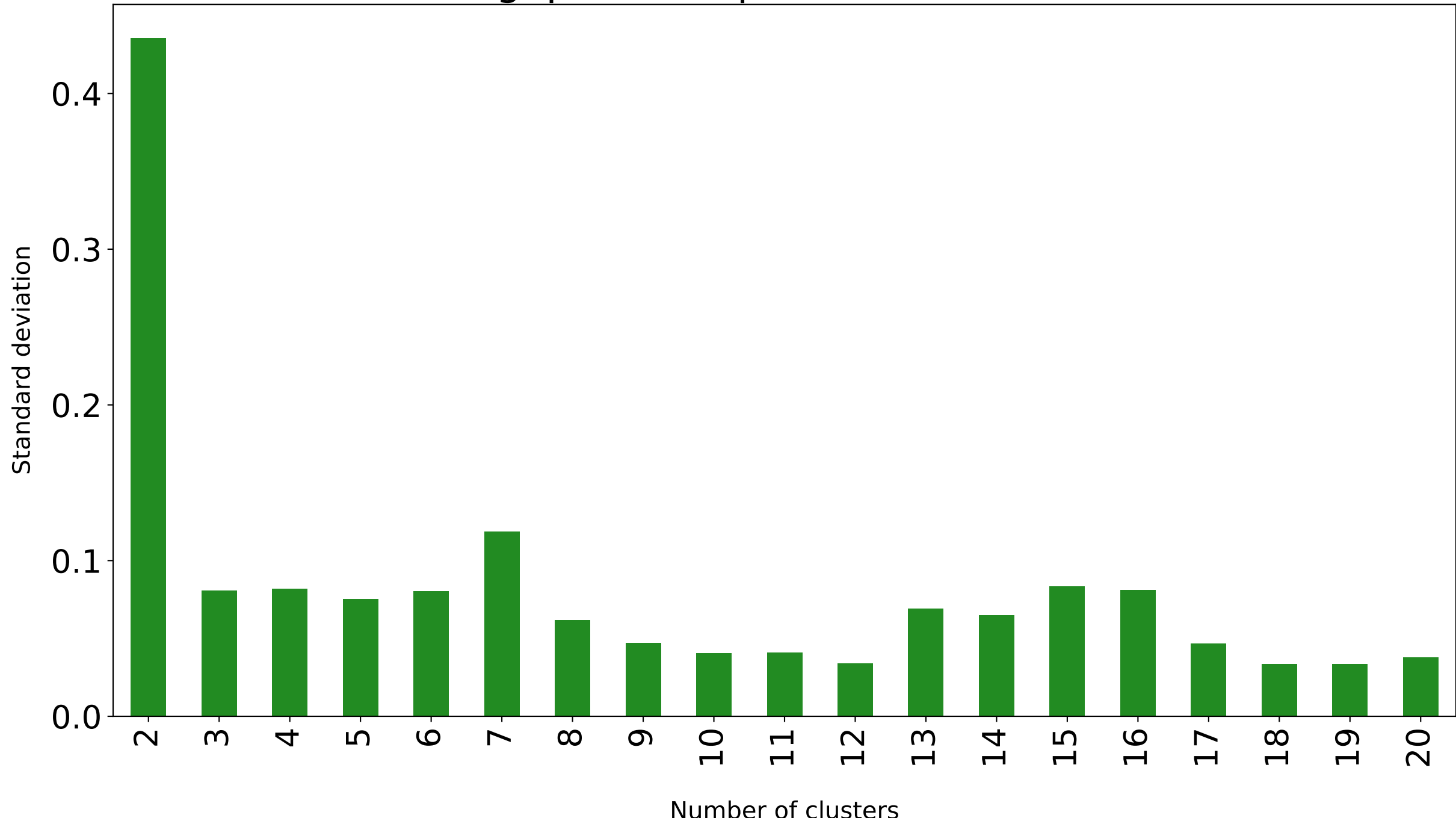
Average values of five clustering indices
gap: 0.10, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.90516	0.85476	0.77906	0.06874	0.77579	0.90487	0.27949	0.90545	0.00013	0.83714	0.7935	0.09121	0.16534	0.10083
3.0	1.0	0.91331	0.84441	0.87153	0.04511	0.86879	0.91327	0.33135	0.91335	0.00015	0.89092	0.73896	0.28767	0.1564	0.10562
4.0	1.0	0.91246	0.8436	0.86343	0.05065	0.8786	0.91228	0.3512	0.91264	0.00017	0.90834	0.73918	0.38462	0.17492	0.10562
5.0	1.0	0.90805	0.83554	0.85803	0.05675	0.87721	0.90761	0.37672	0.90848	0.00018	0.9122	0.72646	0.46667	0.18542	0.10562
6.0	1.0	0.89992	0.82144	0.82538	0.0604	0.86927	0.89834	0.38079	0.9015	0.00019	0.909	0.70859	0.63913	0.20993	0.10562
7.0	1.0	0.87566	0.78993	0.84766	0.07739	0.84652	0.87535	0.41803	0.87597	0.00022	0.91164	0.67353	0.63913	0.17074	0.10562
8.0	1.0	0.87623	0.78242	0.87308	0.08177	0.85375	0.87557	0.45573	0.87689	0.00026	0.92639	0.6496	0.86333	0.1535	0.10663
9.0	1.0	0.87654	0.7819	0.86923	0.08843	0.85582	0.8762	0.47979	0.87688	0.00027	0.93132	0.64613	0.875	0.14073	0.10663
10.0	1.0	0.88867	0.80106	0.86156	0.08407	0.87083	0.88846	0.44753	0.88887	0.00029	0.94029	0.67178	0.875	0.15678	0.10663
11.0	1.0	0.89291	0.8075	0.86397	0.09071	0.87679	0.8927	0.46724	0.89312	0.0003	0.94539	0.67996	0.875	0.16295	0.10663
12.0	1.0	0.90385	0.82518	0.87878	0.0925	0.89021	0.9037	0.44961	0.90401	0.00032	0.95325	0.70433	0.875	0.14926	0.10663
13.0	1.0	0.90796	0.83185	0.88243	0.09847	0.89545	0.90777	0.46091	0.90814	0.00033	0.95677	0.71371	0.875	0.15007	0.10663
14.0	1.0	0.91985	0.85355	0.90538	0.09232	0.90976	0.91927	0.42044	0.92044	0.00035	0.96445	0.75022	0.875	0.14537	0.10663
15.0	1.0	0.88294	0.79466	0.8353	0.11357	0.86967	0.88018	0.47399	0.88572	0.00036	0.95152	0.67504	0.875	0.13828	0.10981
16.0	1.0	0.83107	0.71014	0.73606	0.12222	0.81375	0.82506	0.49396	0.83714	0.00036	0.9346	0.56536	0.875	0.13699	0.10981
17.0	1.0	0.8943	0.80999	0.90696	0.09276	0.88506	0.89331	0.43405	0.8953	0.00047	0.96597	0.68603	0.875	0.12882	0.10981
18.0	1.0	0.90344	0.82505	0.89804	0.08805	0.89526	0.90329	0.42155	0.90359	0.00049	0.97023	0.70518	2.0	0.13256	0.13223
19.0	1.0	0.90719	0.83118	0.90139	0.08446	0.89955	0.90714	0.40715	0.90723	0.0005	0.97218	0.71371	2.0	0.12793	0.13223
20.0	1.0	0.91314	0.84111	0.91129	0.08158	0.90617	0.91307	0.38987	0.9132	0.00052	0.97453	0.72828	2.0	0.13248	0.13223

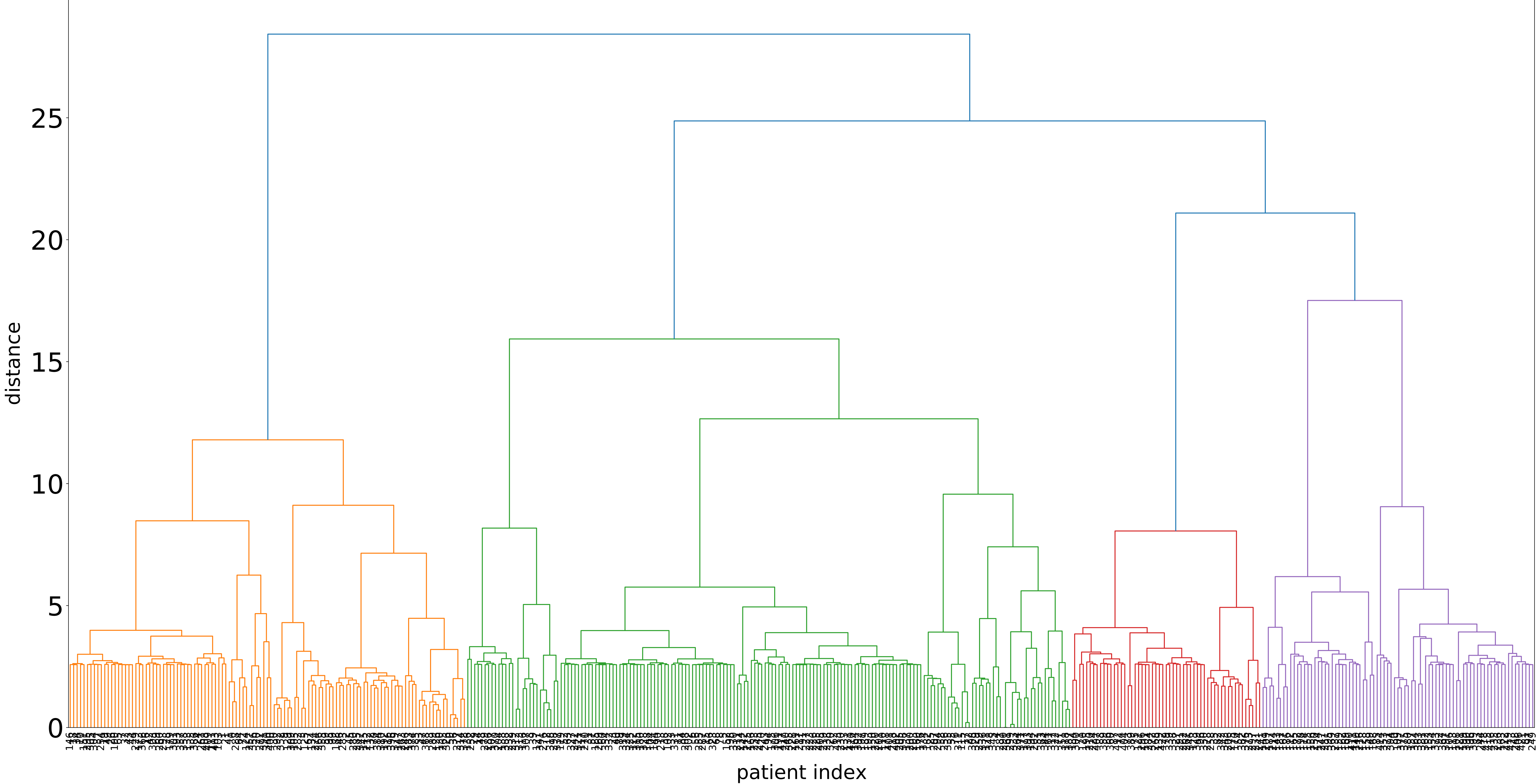
Standard deviation of Adjusted Rand versus number of clusters
gap: 0.10, Tp: 0.25, ward link



Standard deviation of Huberts index versus number of clusters
gap: 0.10, Tp: 0.25, ward link



Hierarchical Clustering Dendrogram - gap: 0.20, Tp: 0.25, ward link

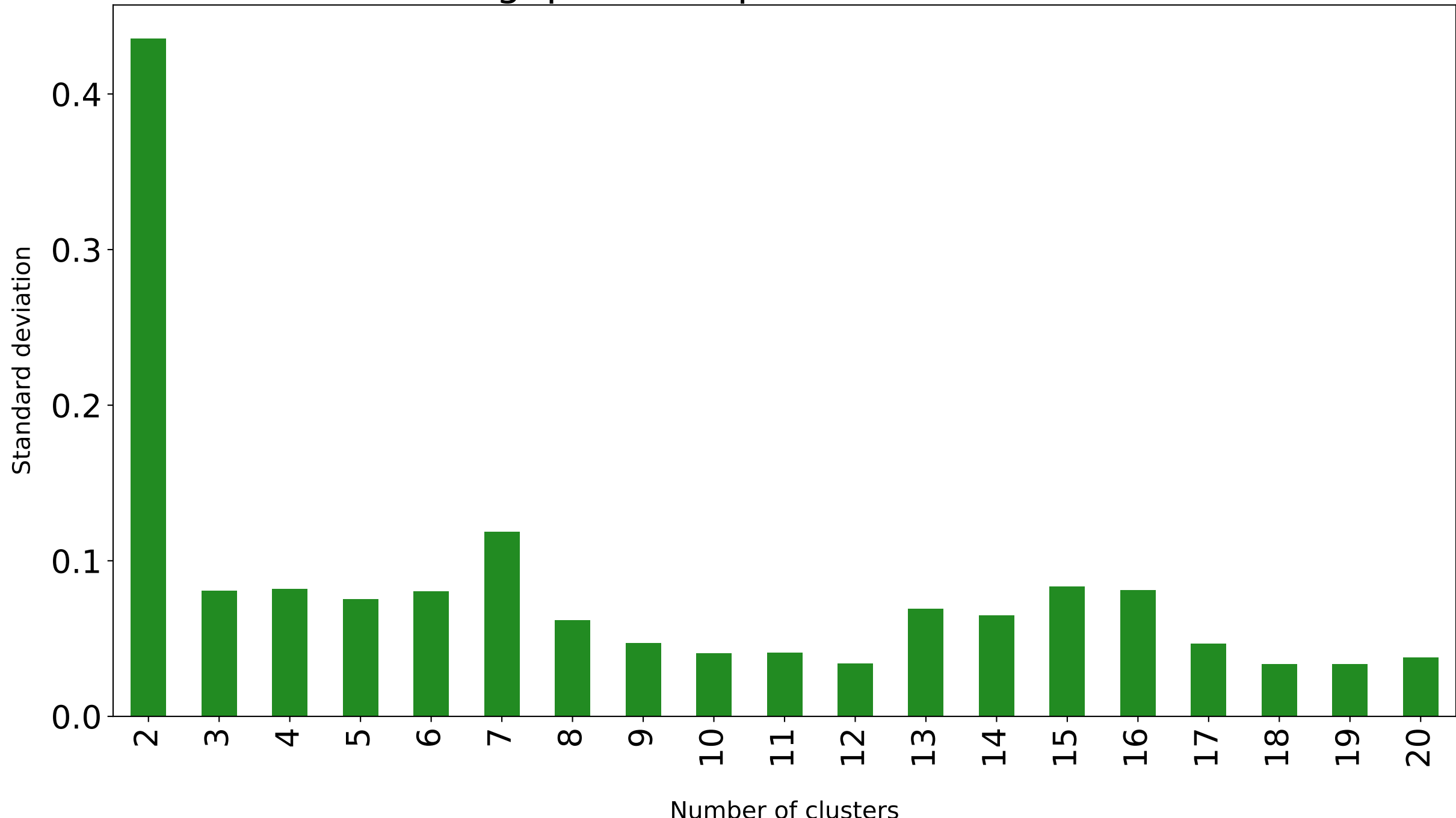


Cophenetic Correlation Coefficient: 0.6521323813451348

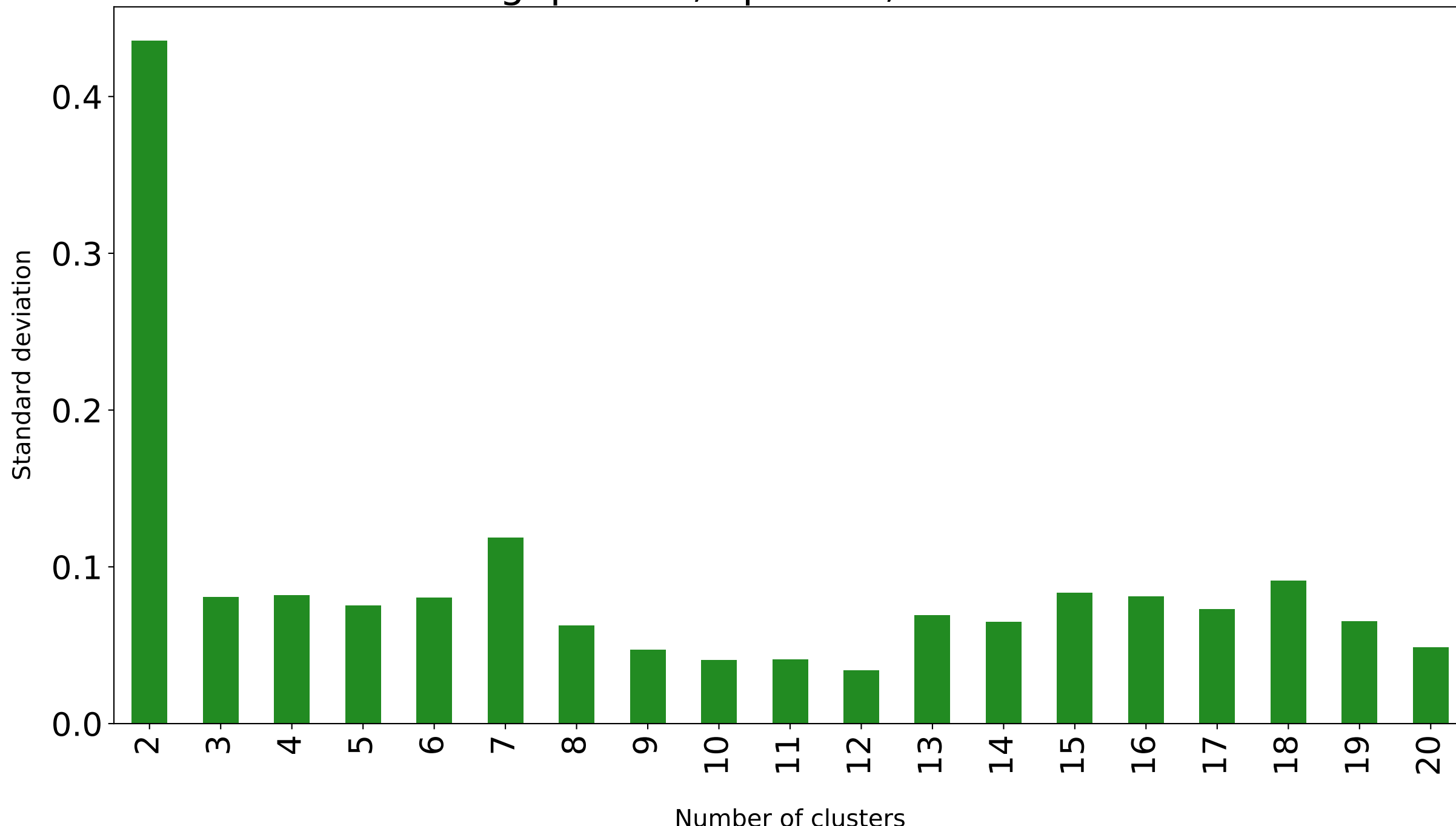
Average values of five clustering indices
gap: 0.20, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.90907	0.85436	0.7797	0.06377	0.78266	0.90877	0.30375	0.90938	0.00013	0.8345	0.78112	0.09061	0.17531	0.14127
3.0	1.0	0.84829	0.73943	0.76395	0.08089	0.76966	0.84824	0.51835	0.84835	0.00013	0.81388	0.59121	0.26119	0.16132	0.15248
4.0	1.0	0.8456	0.73483	0.74794	0.08756	0.78491	0.84496	0.5617	0.84624	0.00015	0.83967	0.58594	0.44304	0.18848	0.15248
5.0	1.0	0.84926	0.73919	0.74531	0.08956	0.79617	0.84791	0.55439	0.85061	0.00016	0.85289	0.59135	0.63636	0.21598	0.15248
6.0	1.0	0.86892	0.77156	0.81498	0.09148	0.83127	0.8679	0.54358	0.86996	0.00019	0.88889	0.63718	0.63636	0.19539	0.15248
7.0	1.0	0.84694	0.74463	0.82349	0.10581	0.81206	0.84647	0.57311	0.84741	0.00021	0.89395	0.61084	0.63636	0.16677	0.15248
8.0	1.0	0.85198	0.74412	0.86211	0.11161	0.82559	0.85084	0.6006	0.85313	0.00025	0.91333	0.59894	0.63636	0.15286	0.15248
9.0	1.0	0.86317	0.76066	0.85383	0.11388	0.84039	0.86281	0.6035	0.86352	0.00027	0.92465	0.61735	0.63636	0.16595	0.15248
10.0	1.0	0.87039	0.77183	0.86195	0.11448	0.85023	0.87014	0.60312	0.87064	0.00029	0.93246	0.63176	0.63636	0.15867	0.15248
11.0	1.0	0.88192	0.79005	0.85734	0.11026	0.86434	0.88176	0.56864	0.88209	0.0003	0.94057	0.65608	0.63636	0.17424	0.15248
12.0	1.0	0.89591	0.81239	0.8769	0.10988	0.88127	0.89579	0.53941	0.89602	0.00032	0.94993	0.68653	0.63636	0.15797	0.15248
13.0	1.0	0.90191	0.82194	0.8738	0.10638	0.88857	0.90172	0.50862	0.90211	0.00033	0.95397	0.69978	0.63636	0.16611	0.15248
14.0	1.0	0.92237	0.85648	0.91306	0.09623	0.91228	0.92231	0.4593	0.92244	0.00035	0.9649	0.75063	0.63636	0.16133	0.15248
15.0	1.0	0.924	0.85939	0.91109	0.10321	0.91439	0.92387	0.46901	0.92412	0.00036	0.96639	0.75539	0.63636	0.15637	0.16146
16.0	1.0	0.92868	0.8688	0.91846	0.09257	0.92021	0.92805	0.43223	0.92933	0.00037	0.96977	0.77409	0.63636	0.15443	0.16146
17.0	1.0	0.91041	0.83937	0.87702	0.09714	0.90045	0.90857	0.44295	0.91227	0.00038	0.96357	0.73641	2.0	0.15855	0.19034
18.0	1.0	0.87108	0.77525	0.80411	0.10916	0.85798	0.86665	0.47244	0.87558	0.00038	0.95046	0.6529	2.0	0.15442	0.19034
19.0	1.0	0.86878	0.76927	0.89716	0.1041	0.85742	0.86621	0.47771	0.87138	0.00047	0.95735	0.63437	2.0	0.14351	0.19034
20.0	1.0	0.89194	0.80615	0.9035	0.09355	0.88309	0.89079	0.44592	0.8931	0.0005	0.96709	0.68102	2.0	0.14782	0.19034

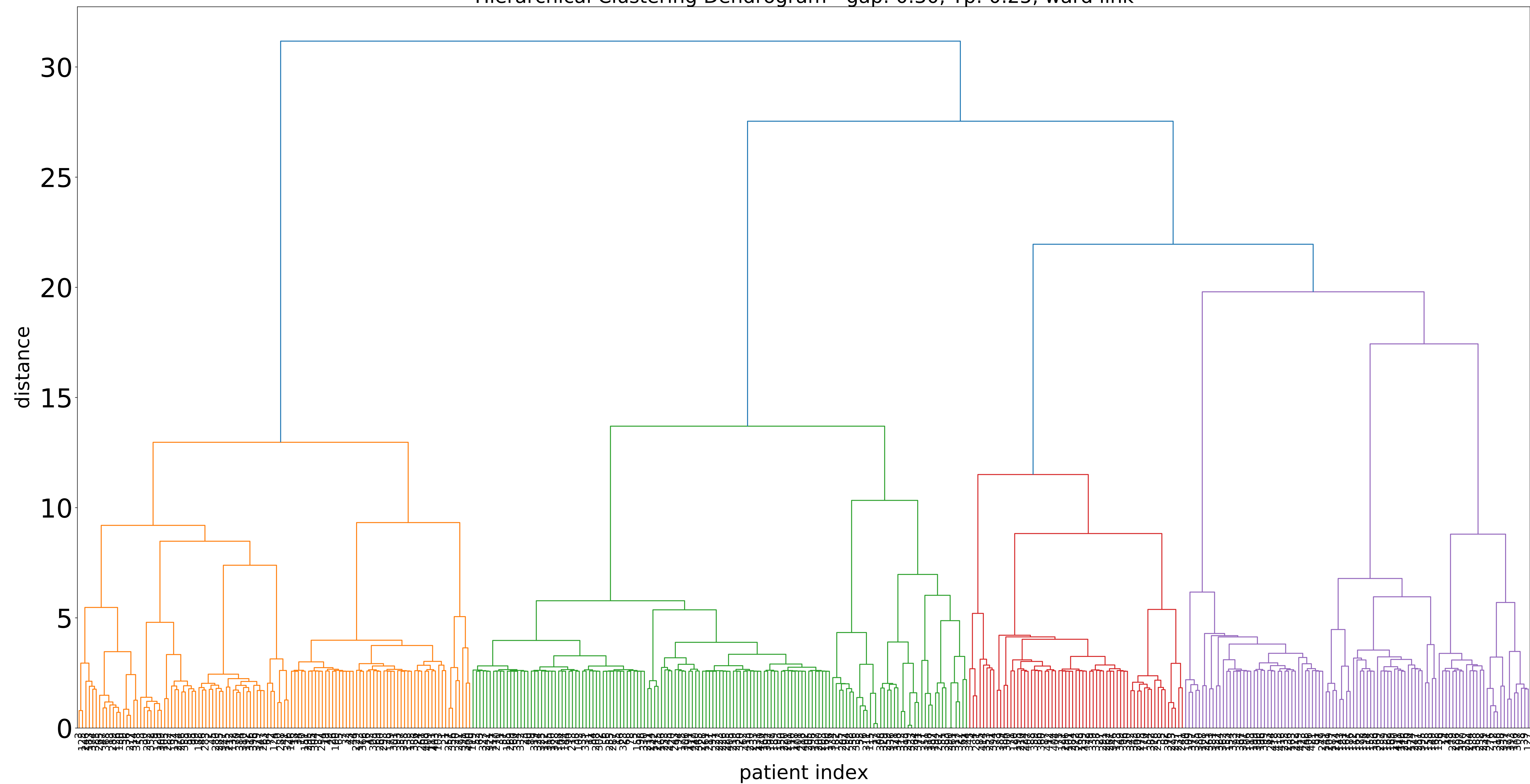
Standard deviation of Adjusted Rand versus number of clusters
gap: 0.20, Tp: 0.25, ward link



Standard deviation of Huberts index versus number of clusters
gap: 0.20, Tp: 0.25, ward link



Hierarchical Clustering Dendrogram - gap: 0.30, Tp: 0.25, ward link

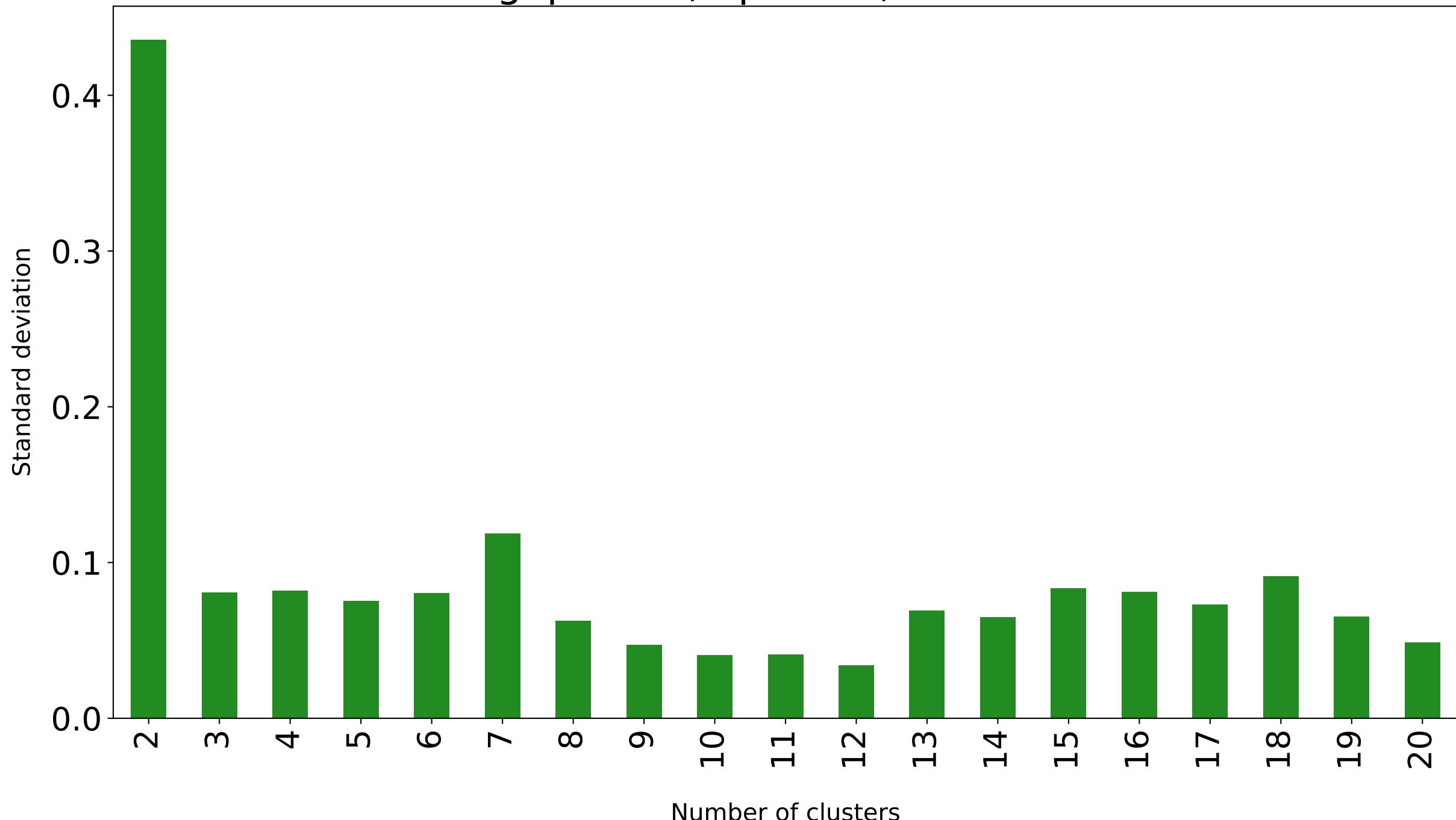


Cophenetic Correlation Coefficient: 0.6457931300621561

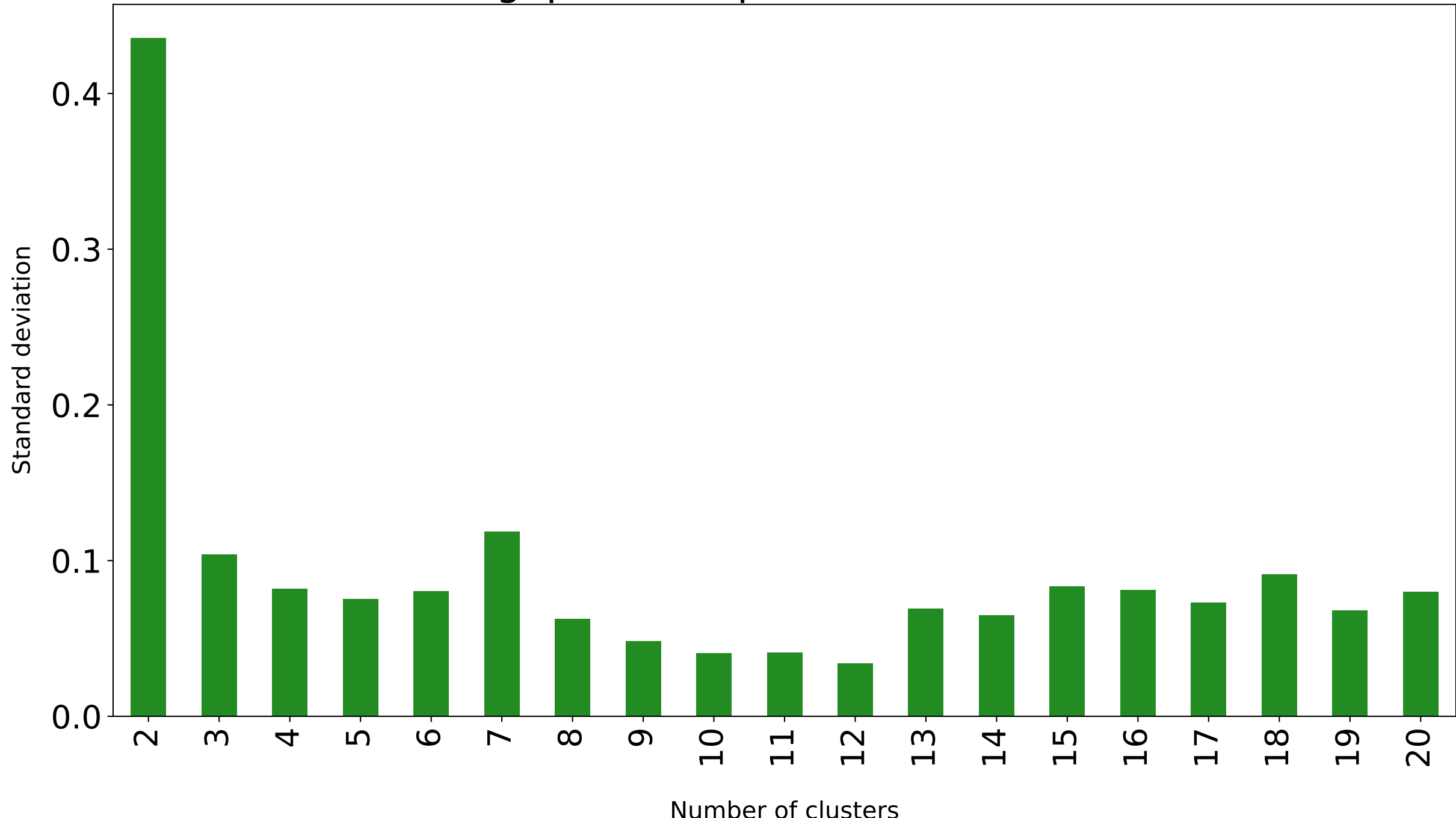
Average values of five clustering indices
gap: 0.30, Tp: 0.25, ward link

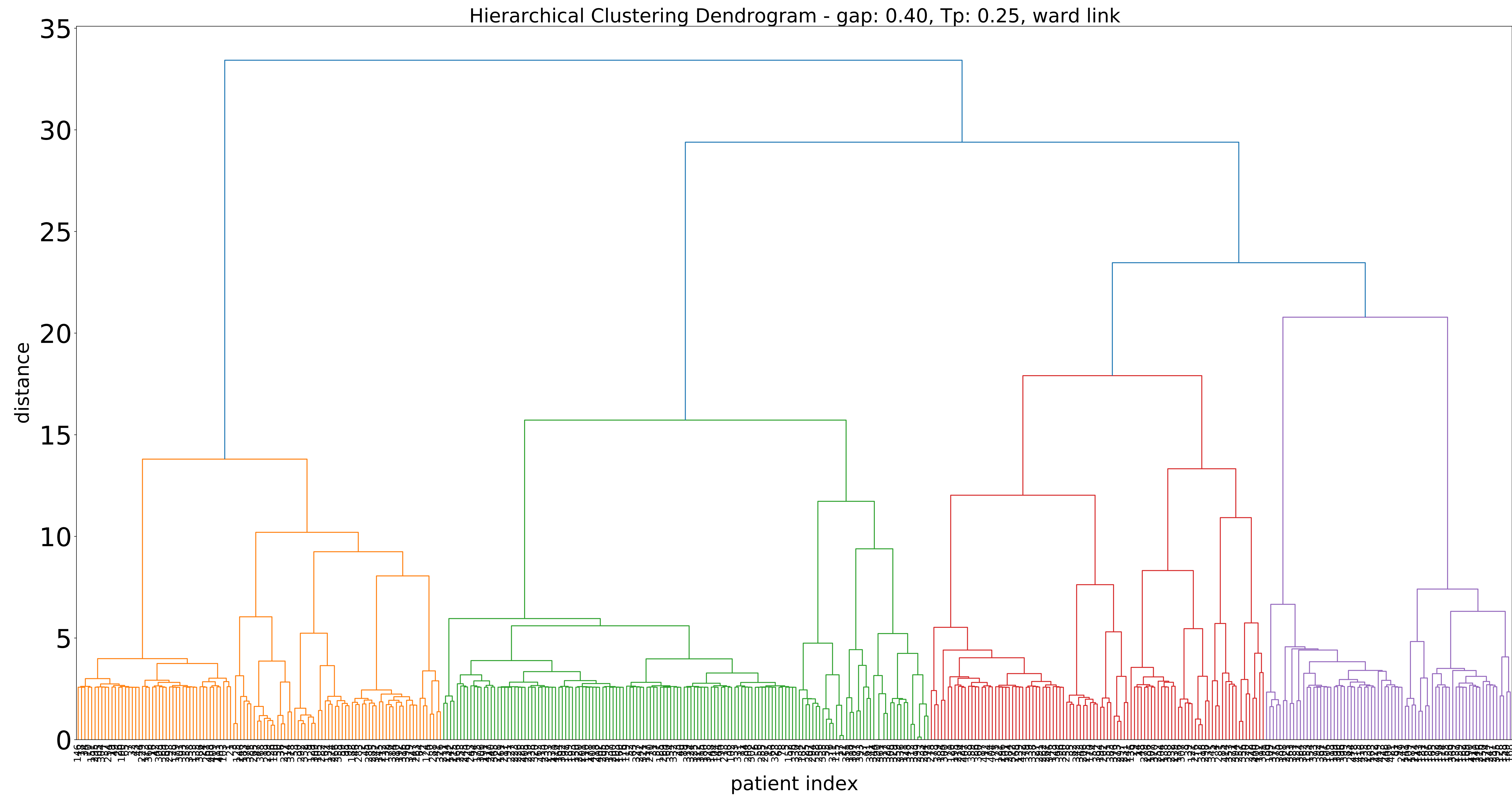
k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.92427	0.87359	0.81387	0.05172	0.81903	0.92397	0.2767	0.92457	0.00013	0.85552	0.80115	0.06796	0.1857	0.17132
3.0	1.0	0.87752	0.7876	0.81634	0.06559	0.81417	0.87745	0.44701	0.87758	0.00014	0.84904	0.66005	0.21341	0.17637	0.18434
4.0	1.0	0.85414	0.74893	0.81617	0.08839	0.79993	0.85391	0.58086	0.85438	0.00016	0.85442	0.60512	0.34653	0.18208	0.18609
5.0	1.0	0.86401	0.76366	0.8475	0.08991	0.82023	0.86336	0.55191	0.86467	0.00017	0.87569	0.62465	0.35	0.20046	0.18609
6.0	1.0	0.86113	0.75899	0.80079	0.09481	0.82217	0.85996	0.55453	0.8623	0.00019	0.8844	0.61995	0.51852	0.21125	0.18993
7.0	1.0	0.84363	0.73743	0.81178	0.10755	0.80831	0.84317	0.57679	0.84408	0.00021	0.89207	0.59801	0.51852	0.18324	0.18993
8.0	1.0	0.84903	0.73998	0.8482	0.11255	0.82223	0.84829	0.60464	0.84977	0.00025	0.91248	0.59321	0.51852	0.16851	0.19298
9.0	1.0	0.8732	0.7769	0.85939	0.1045	0.85213	0.87294	0.54816	0.87345	0.00027	0.93024	0.63976	0.51852	0.17588	0.19298
10.0	1.0	0.88156	0.78954	0.85812	0.10253	0.86283	0.88136	0.53659	0.88177	0.00029	0.93728	0.65564	0.51852	0.18653	0.20498
11.0	1.0	0.8881	0.79966	0.8546	0.10338	0.87119	0.88781	0.51442	0.88838	0.0003	0.94277	0.6691	2.0	0.18128	0.20498
12.0	1.0	0.88532	0.79496	0.86256	0.11935	0.86907	0.88517	0.5607	0.88547	0.00031	0.94457	0.66165	2.0	0.17597	0.20498
13.0	1.0	0.90037	0.81944	0.88959	0.11147	0.88698	0.90027	0.5242	0.90046	0.00033	0.95386	0.69588	2.0	0.17015	0.20498
14.0	1.0	0.9152	0.84414	0.90018	0.09866	0.90412	0.91512	0.46699	0.91528	0.00035	0.96153	0.73177	2.0	0.16873	0.20498
15.0	1.0	0.93136	0.87192	0.93012	0.08891	0.92273	0.93128	0.43834	0.93143	0.00037	0.96977	0.77425	2.0	0.16332	0.20498
16.0	1.0	0.93482	0.87832	0.93022	0.08643	0.92682	0.93471	0.42022	0.93493	0.00037	0.97184	0.78514	2.0	0.16427	0.20498
17.0	1.0	0.93697	0.88235	0.93109	0.09041	0.92944	0.93678	0.4231	0.93717	0.00038	0.97334	0.79229	2.0	0.16245	0.23382
18.0	1.0	0.93421	0.87849	0.92539	0.08937	0.92668	0.9337	0.41474	0.93472	0.00039	0.97305	0.78909	2.0	0.15854	0.23382
19.0	1.0	0.9193	0.85439	0.8982	0.09343	0.91063	0.91792	0.42537	0.92069	0.00039	0.96834	0.7577	2.0	0.1631	0.23382
20.0	1.0	0.90277	0.82694	0.86017	0.09683	0.89284	0.90019	0.42996	0.90538	0.0004	0.96293	0.72128	2.0	0.16951	0.26795

Standard deviation of Adjusted Rand versus number of clusters
gap: 0.30, Tp: 0.25, ward link



Standard deviation of Huberts index versus number of clusters
gap: 0.30, Tp: 0.25, ward link



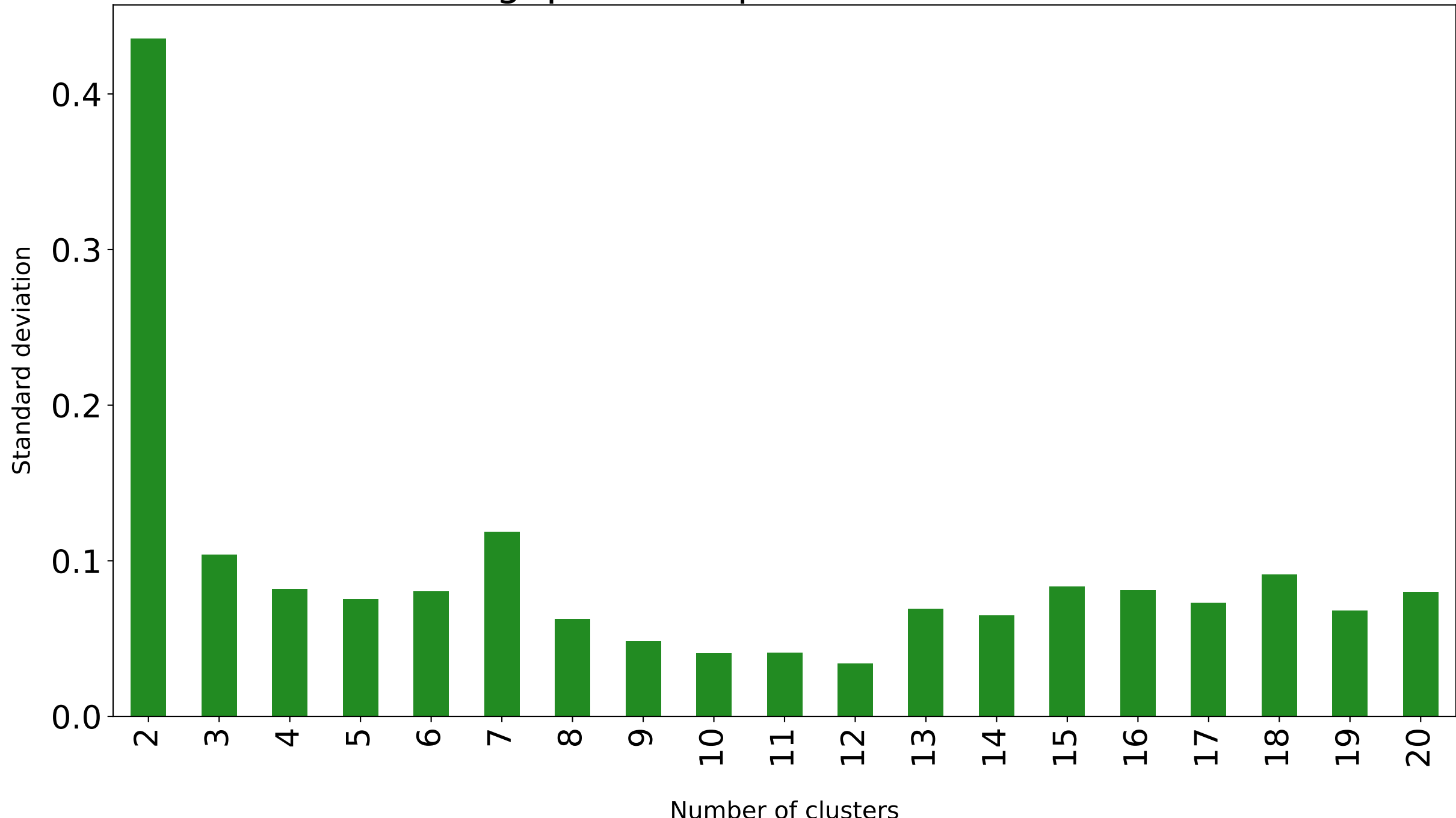


Cophenetic Correlation Coefficient: 0.6231327609033663

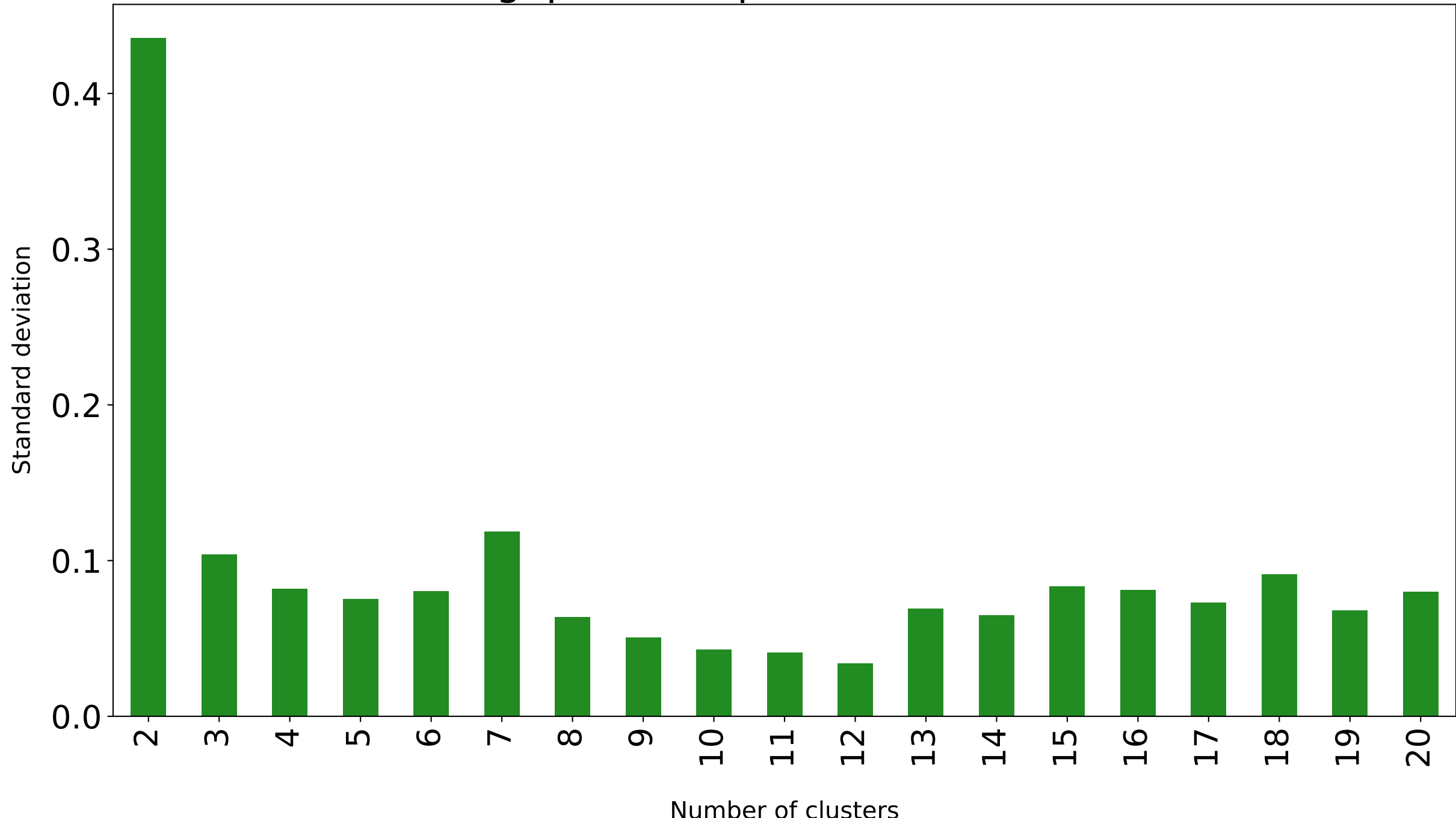
Average values of five clustering indices
gap: 0.40, Tp: 0.25, ward link

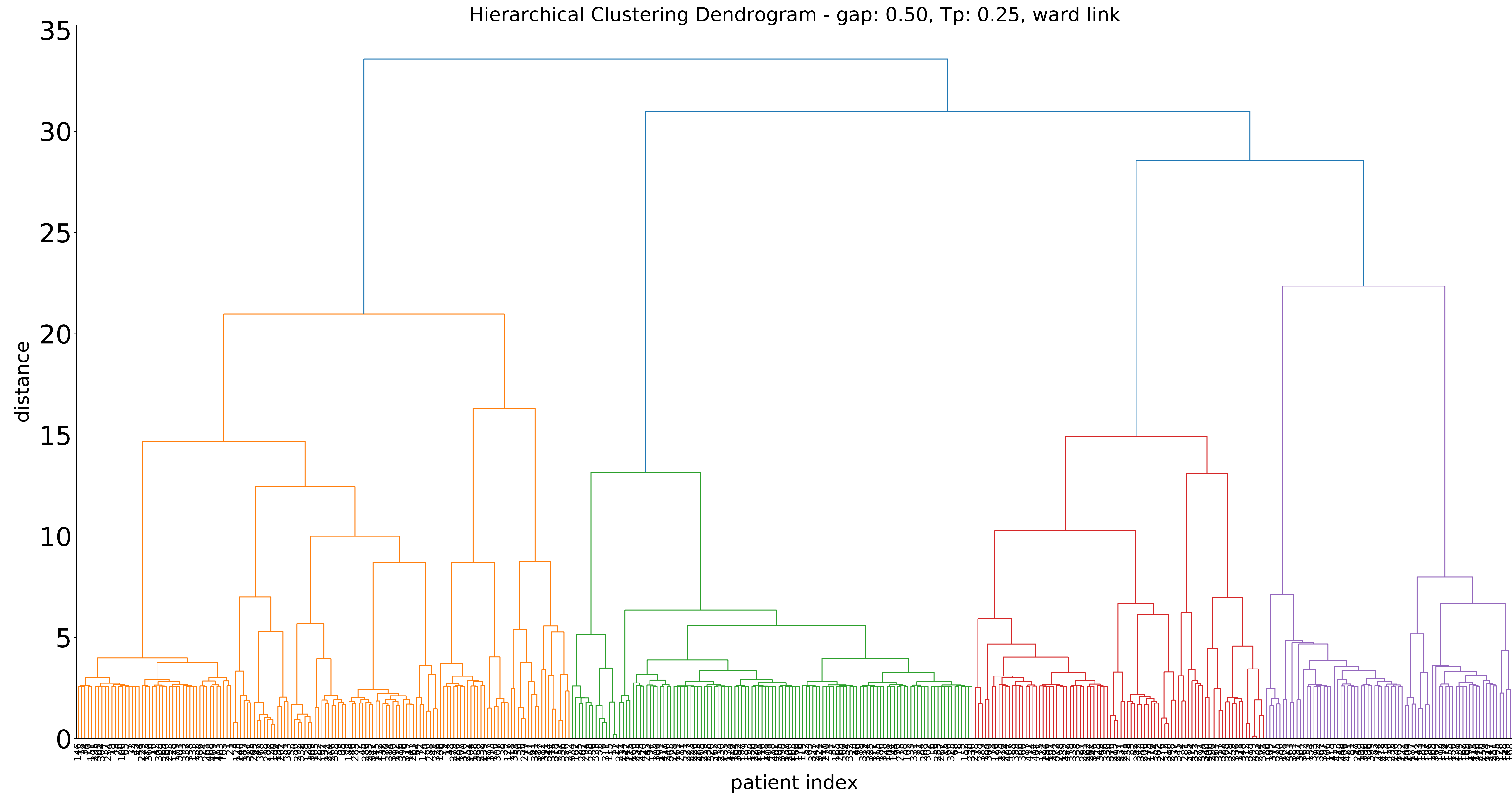
k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.9225	0.8681	0.77815	0.05228	0.81246	0.92196	0.28013	0.92304	0.00013	0.84768	0.79008	0.05063	0.20014	0.19452
3.0	1.0	0.85822	0.75678	0.77871	0.07611	0.78467	0.85817	0.49876	0.85826	0.00014	0.82614	0.61738	0.18605	0.18435	0.21071
4.0	1.0	0.82526	0.70504	0.78695	0.10872	0.76099	0.82489	0.63481	0.82564	0.00015	0.82863	0.54893	0.29224	0.17841	0.21967
5.0	1.0	0.82525	0.70535	0.76666	0.11647	0.7684	0.82474	0.64506	0.82576	0.00016	0.84215	0.5501	0.33333	0.2228	0.21967
6.0	1.0	0.84415	0.73331	0.79453	0.11033	0.80123	0.84328	0.62563	0.84502	0.00018	0.87341	0.58608	0.4	0.19924	0.21967
7.0	1.0	0.83966	0.72988	0.82616	0.11872	0.80441	0.83903	0.62854	0.8403	0.00021	0.89117	0.58605	0.4	0.17653	0.21967
8.0	1.0	0.83715	0.72215	0.84446	0.12526	0.8084	0.83614	0.64383	0.83817	0.00025	0.90608	0.57127	0.4	0.16508	0.21967
9.0	1.0	0.86514	0.76428	0.85703	0.11546	0.84278	0.86477	0.59777	0.8655	0.00027	0.92601	0.62307	1.0	0.15949	0.22306
10.0	1.0	0.86172	0.75835	0.85757	0.12596	0.84035	0.86138	0.61929	0.86206	0.00029	0.92844	0.61414	1.0	0.1486	0.22306
11.0	1.0	0.87541	0.77956	0.86438	0.11774	0.85702	0.87523	0.58426	0.87559	0.0003	0.93784	0.64159	1.0	0.16793	0.22385
12.0	1.0	0.88141	0.78867	0.85304	0.11413	0.86442	0.88124	0.55636	0.88159	0.00031	0.94217	0.65309	1.33333	0.17888	0.23962
13.0	1.0	0.89945	0.81778	0.89015	0.11535	0.88596	0.89936	0.54309	0.89954	0.00033	0.95349	0.69319	1.33333	0.17764	0.20702
14.0	1.0	0.90975	0.83478	0.89328	0.10989	0.89794	0.90967	0.51843	0.90984	0.00035	0.95903	0.71753	2.0	0.18377	0.24126
15.0	1.0	0.92841	0.86667	0.92536	0.09833	0.9194	0.92834	0.47835	0.92847	0.00036	0.96848	0.76575	2.0	0.17221	0.24126
16.0	1.0	0.93722	0.88217	0.93197	0.08996	0.92947	0.93718	0.43685	0.93726	0.00037	0.97279	0.79023	2.0	0.17808	0.24126
17.0	1.0	0.94068	0.88843	0.9339	0.08733	0.93349	0.94064	0.4186	0.94071	0.00038	0.97469	0.80059	2.0	0.17834	0.24126
18.0	1.0	0.93954	0.88641	0.92799	0.08871	0.93234	0.9395	0.42182	0.93959	0.00039	0.97457	0.79735	2.0	0.17333	0.24126
19.0	1.0	0.94167	0.89038	0.93065	0.08457	0.9349	0.94157	0.4029	0.94178	0.00039	0.97598	0.80439	2.0	0.16838	0.25454
20.0	1.0	0.94337	0.89337	0.93376	0.08252	0.93693	0.94325	0.39296	0.94349	0.0004	0.97709	0.80929	2.0	0.17608	0.25454

Standard deviation of Adjusted Rand versus number of clusters
gap: 0.40, Tp: 0.25, ward link



Standard deviation of Huberts index versus number of clusters
gap: 0.40, Tp: 0.25, ward link



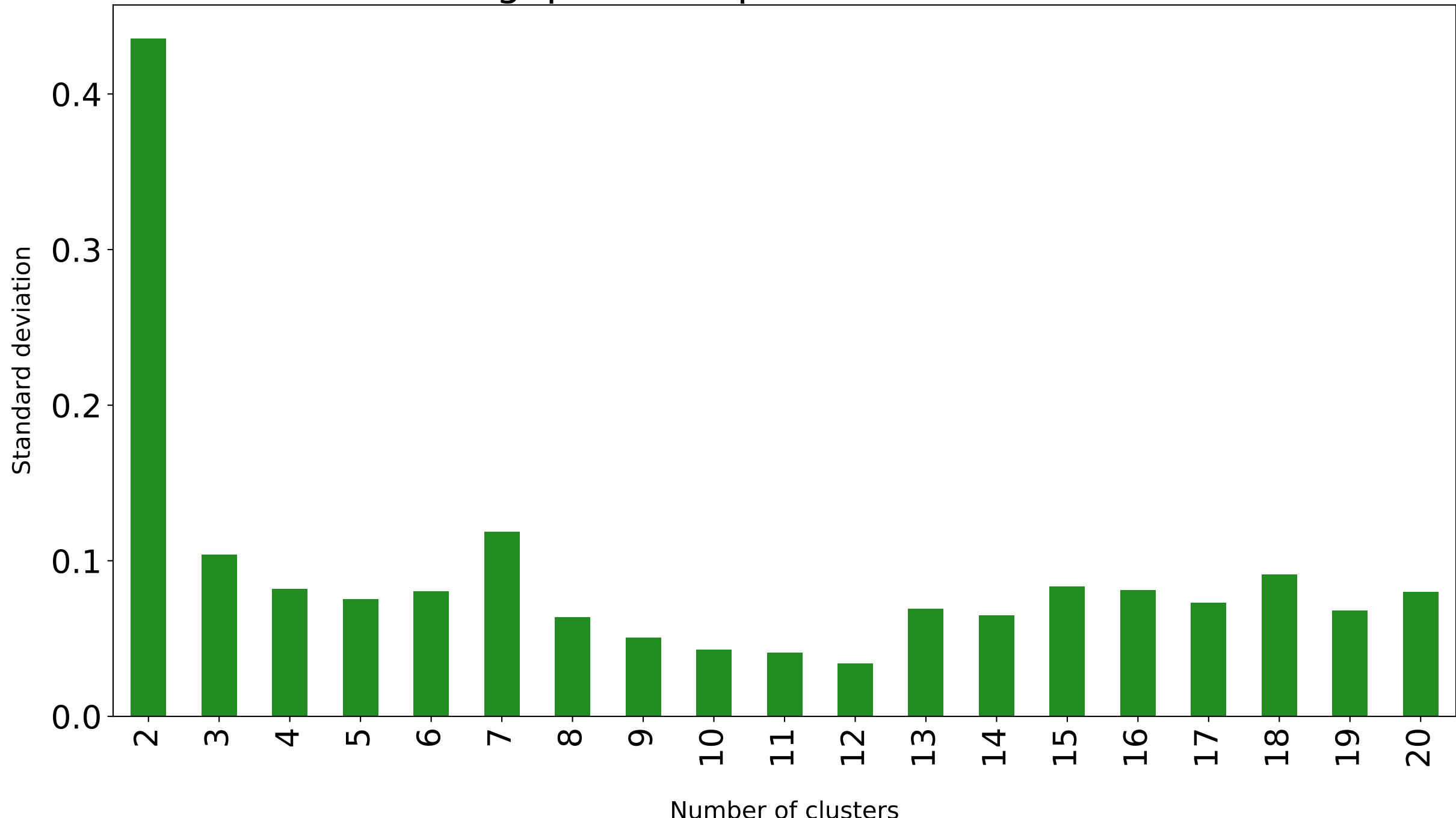


Cophenetic Correlation Coefficient: 0.6345468445636064

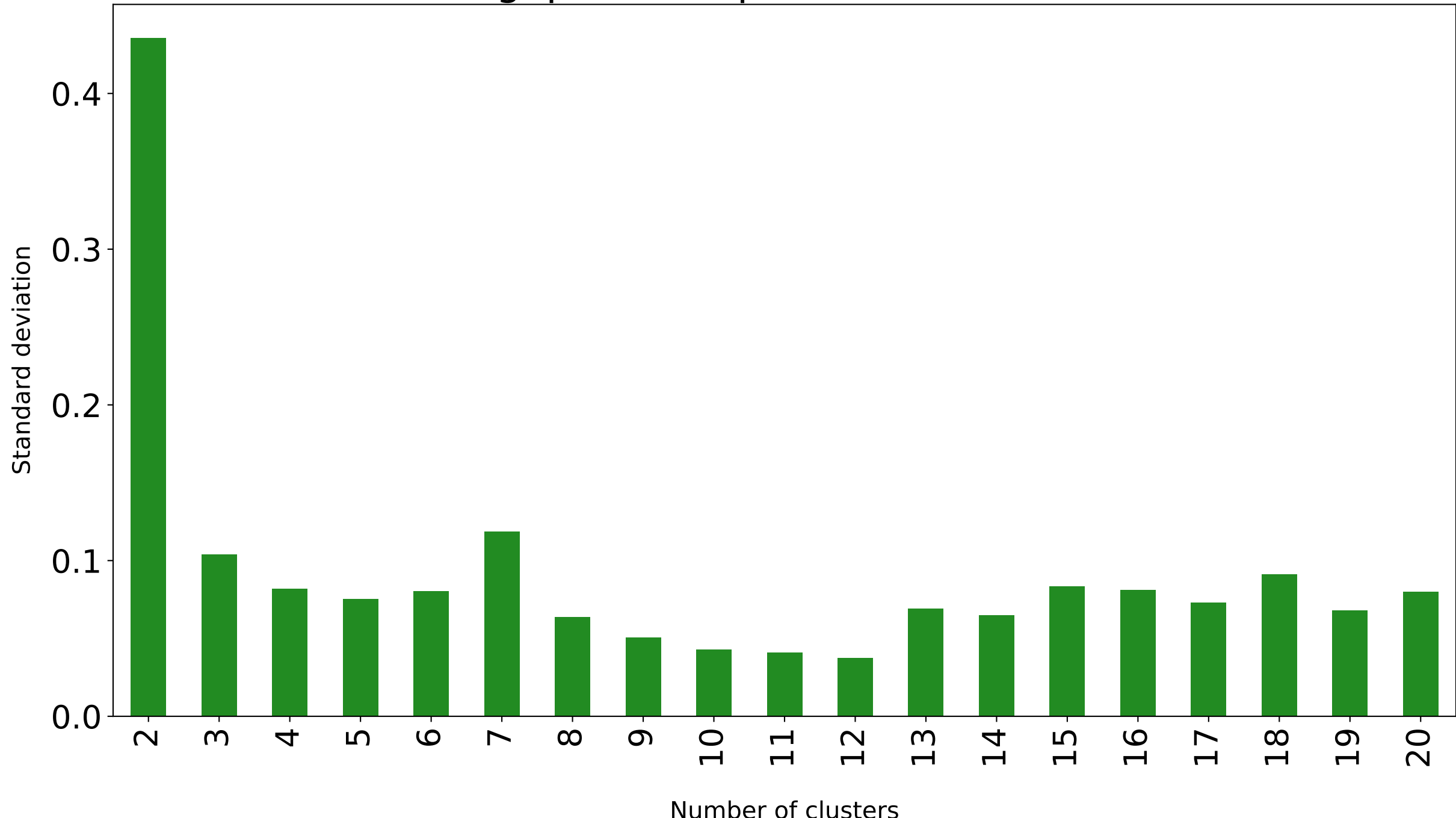
Average values of five clustering indices
gap: 0.50, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.85159	0.74802	0.72678	0.09887	0.65965	0.85065	0.511	0.85253	0.00011	0.7192	0.6078	0.09247	0.14876	0.19581
3.0	1.0	0.77329	0.63387	0.66266	0.12882	0.65636	0.77316	0.74883	0.77342	0.00012	0.73475	0.46863	0.09247	0.16013	0.19581
4.0	1.0	0.76216	0.61868	0.68999	0.13569	0.67376	0.76188	0.77975	0.76245	0.00013	0.77247	0.45216	0.18493	0.17927	0.19581
5.0	1.0	0.75352	0.6066	0.66592	0.14157	0.67172	0.75293	0.78373	0.75411	0.00014	0.78128	0.43885	0.28125	0.22991	0.19581
6.0	1.0	0.78904	0.6535	0.754	0.14146	0.73314	0.78816	0.77224	0.78991	0.00017	0.83709	0.48959	0.57692	0.20436	0.18211
7.0	1.0	0.80017	0.66902	0.71773	0.14256	0.75283	0.79899	0.76175	0.80136	0.00019	0.85692	0.5078	1.0	0.21627	0.20677
8.0	1.0	0.78578	0.64628	0.67816	0.16243	0.74299	0.7829	0.79858	0.78868	0.00021	0.86355	0.48177	1.0	0.1988	0.20677
9.0	1.0	0.82719	0.70636	0.77429	0.13654	0.79733	0.8266	0.7152	0.82777	0.00025	0.90266	0.5492	1.0	0.18114	0.20677
10.0	1.0	0.8686	0.76901	0.84948	0.12132	0.84796	0.86841	0.62179	0.8688	0.00028	0.93105	0.6278	1.0	0.18839	0.20677
11.0	1.0	0.87713	0.78219	0.8422	0.11706	0.85852	0.87686	0.59604	0.8774	0.0003	0.93725	0.64519	1.0	0.19898	0.20677
12.0	1.0	0.88665	0.79772	0.86427	0.12255	0.87055	0.88651	0.5968	0.8868	0.00031	0.94515	0.6668	1.0	0.18124	0.20035
13.0	1.0	0.89663	0.81323	0.89379	0.11948	0.88286	0.89649	0.57557	0.89677	0.00033	0.95247	0.68711	1.0	0.17879	0.20035
14.0	1.0	0.91717	0.84729	0.92461	0.1072	0.90663	0.91698	0.52895	0.91737	0.00036	0.96314	0.73654	1.0	0.16739	0.20035
15.0	1.0	0.92702	0.86437	0.9265	0.10103	0.91791	0.92695	0.49999	0.9271	0.00037	0.96807	0.76248	2.0	0.16793	0.23743
16.0	1.0	0.93486	0.87805	0.93178	0.09632	0.92689	0.93482	0.46848	0.93491	0.00037	0.97196	0.78379	2.0	0.16843	0.23743
17.0	1.0	0.93956	0.88642	0.93252	0.09059	0.93228	0.93953	0.43909	0.93959	0.00038	0.97435	0.79726	2.0	0.17738	0.23743
18.0	1.0	0.94315	0.89284	0.93815	0.08833	0.93645	0.94312	0.42529	0.94319	0.00039	0.97629	0.80772	2.0	0.17242	0.2493
19.0	1.0	0.9408	0.88858	0.93574	0.09001	0.93396	0.94075	0.43377	0.94084	0.0004	0.97577	0.80073	2.0	0.18022	0.2493
20.0	1.0	0.93958	0.88651	0.92864	0.09241	0.9327	0.93951	0.43537	0.93965	0.0004	0.97558	0.79774	2.0	0.18377	0.2493

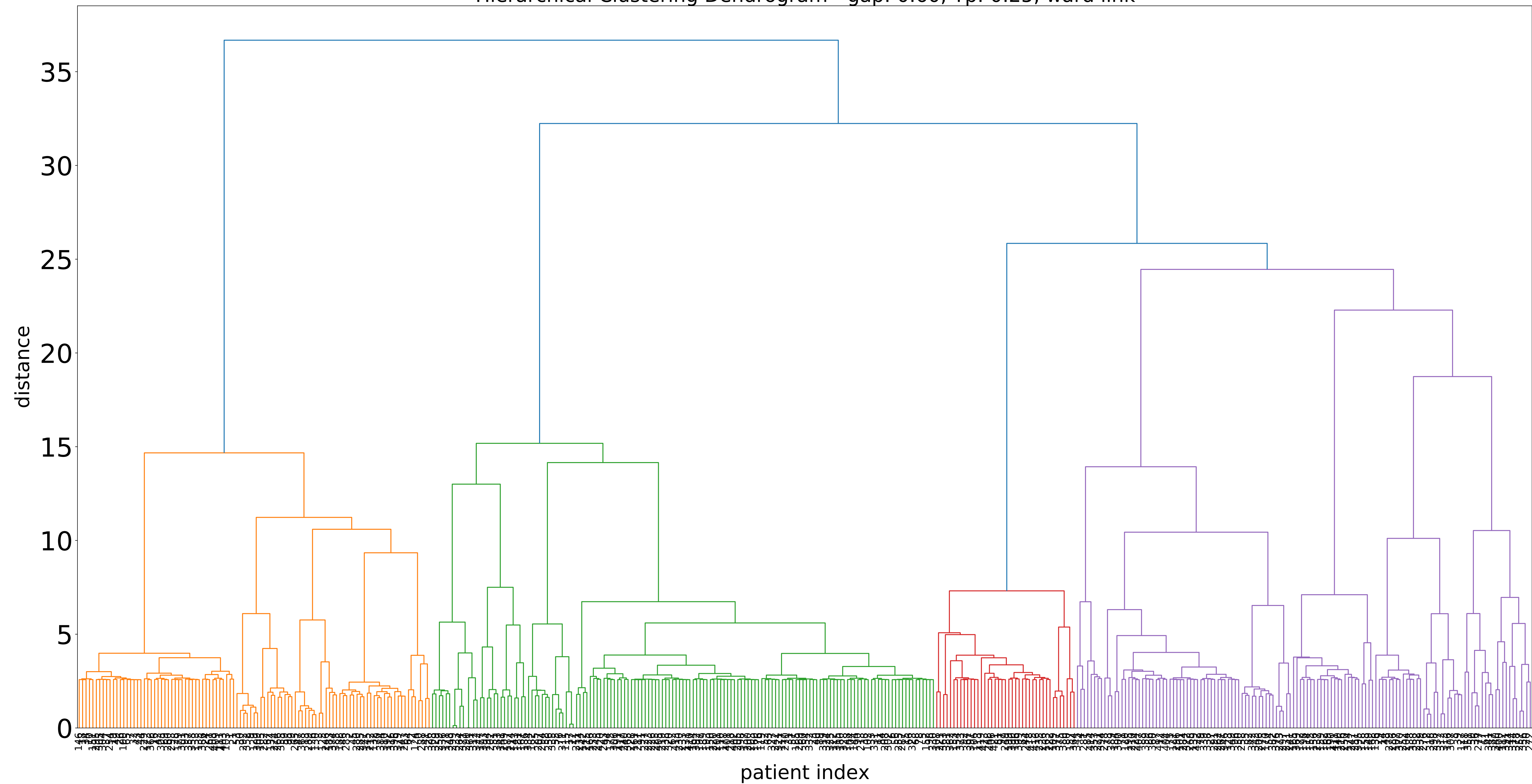
Standard deviation of Adjusted Rand versus number of clusters
gap: 0.50, Tp: 0.25, ward link



Standard deviation of Huberts index versus number of clusters
gap: 0.50, Tp: 0.25, ward link



Hierarchical Clustering Dendrogram - gap: 0.60, Tp: 0.25, ward link

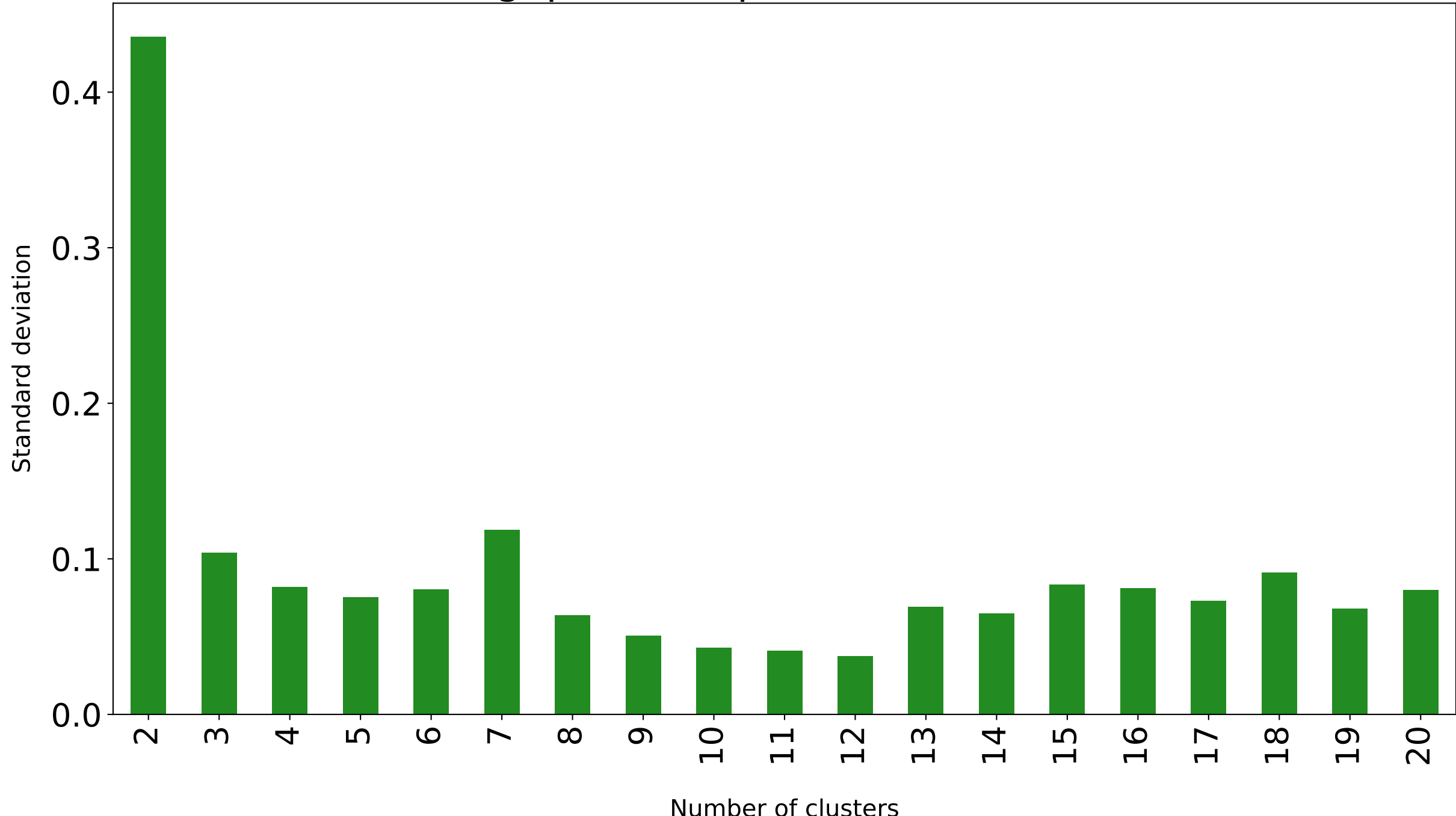


Cophenetic Correlation Coefficient: 0.6122170144326434

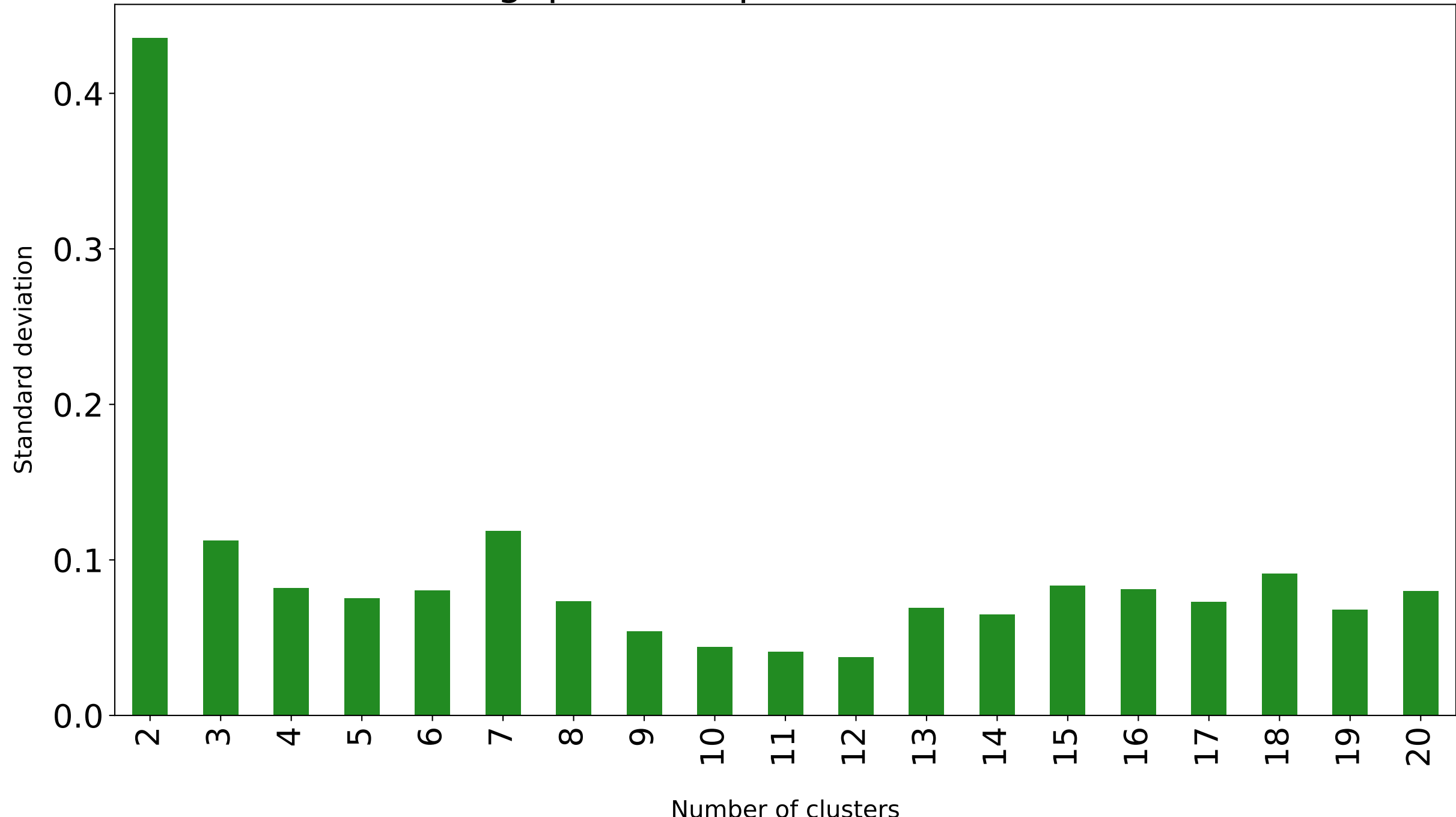
Average values of five clustering indices
gap: 0.60, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.88993	0.81571	0.6818	0.07453	0.72935	0.88909	0.37663	0.89077	0.00012	0.78584	0.71414	0.0514	0.20968	0.16675
3.0	1.00001	0.7701	0.63128	0.6429	0.13148	0.64887	0.76998	0.7553	0.77022	0.00011	0.72912	0.46757	0.22126	0.19097	0.16675
4.0	1.0	0.70777	0.54943	0.57983	0.19824	0.59409	0.70747	0.96829	0.70808	0.00012	0.71912	0.38089	0.28947	0.22138	0.16675
5.0	1.0	0.77269	0.63154	0.71817	0.15496	0.70166	0.77202	0.86364	0.77336	0.00015	0.80435	0.465	0.47143	0.20946	0.16675
6.0	1.0	0.78747	0.65118	0.70282	0.14822	0.72947	0.78643	0.82632	0.78851	0.00017	0.83209	0.48702	0.47826	0.22218	0.1962
7.0	1.0	0.7747	0.63138	0.65152	0.1556	0.71961	0.77149	0.84955	0.77792	0.00018	0.83325	0.46576	1.1	0.22088	0.19633
8.0	1.0	0.78412	0.64665	0.69003	0.17383	0.74072	0.7821	0.84963	0.78615	0.00021	0.8633	0.48445	1.1	0.19088	0.19896
9.0	1.0	0.81113	0.68422	0.76377	0.15694	0.77824	0.81069	0.79269	0.81157	0.00024	0.89372	0.52407	1.1	0.1762	0.19896
10.0	1.0	0.85041	0.74128	0.83192	0.13985	0.82692	0.85017	0.69853	0.85065	0.00028	0.92192	0.59231	1.1	0.19061	0.19896
11.0	1.0	0.87065	0.77235	0.8499	0.1328	0.85137	0.8705	0.63971	0.8708	0.0003	0.93505	0.63238	1.375	0.19547	0.19896
12.0	1.0	0.87688	0.78187	0.8474	0.12855	0.85911	0.87668	0.61585	0.87709	0.00031	0.93966	0.64475	1.375	0.195	0.19896
13.0	1.0	0.89278	0.80732	0.87946	0.12382	0.87813	0.89266	0.59514	0.8929	0.00033	0.94973	0.67941	1.375	0.1873	0.19896
14.0	1.0	0.89727	0.81442	0.88192	0.12316	0.88379	0.89716	0.58399	0.89738	0.00034	0.95342	0.68898	1.375	0.18615	0.19322
15.0	1.0	0.90211	0.8222	0.87851	0.11917	0.88955	0.90198	0.56278	0.90224	0.00035	0.95637	0.69979	2.0	0.18408	0.24066
16.0	1.0	0.92935	0.86835	0.92825	0.10344	0.9207	0.92929	0.49186	0.92942	0.00037	0.96962	0.76846	2.0	0.18293	0.24066
17.0	1.0	0.94128	0.88937	0.94041	0.09084	0.93424	0.94123	0.43573	0.94133	0.00038	0.97514	0.80183	2.0	0.18944	0.24066
18.0	1.0	0.94774	0.90103	0.94687	0.08618	0.94158	0.9477	0.40593	0.94778	0.00039	0.9782	0.82109	2.0	0.18803	0.24066
19.0	1.0	0.94743	0.90054	0.94019	0.0839	0.94131	0.94739	0.39617	0.94747	0.0004	0.9783	0.82048	2.0	0.18196	0.24066
20.0	1.0	0.94586	0.89765	0.94369	0.08494	0.93971	0.94579	0.40053	0.94592	0.0004	0.97813	0.81566	2.0	0.18013	0.24066

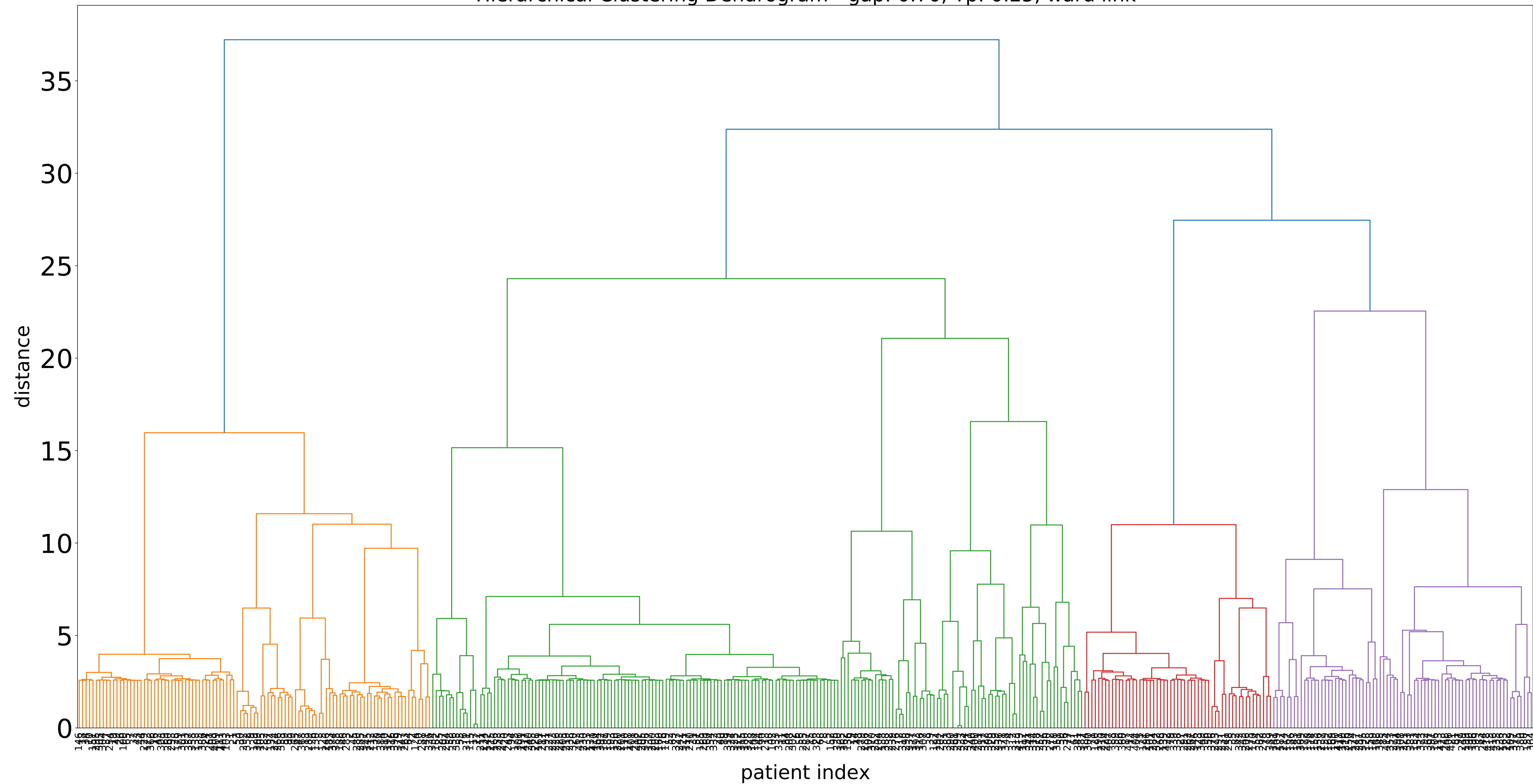
Standard deviation of Adjusted Rand versus number of clusters
gap: 0.60, Tp: 0.25, ward link



Standard deviation of Huberts index versus number of clusters
gap: 0.60, Tp: 0.25, ward link



Hierarchical Clustering Dendrogram - gap: 0.70, Tp: 0.25, ward link

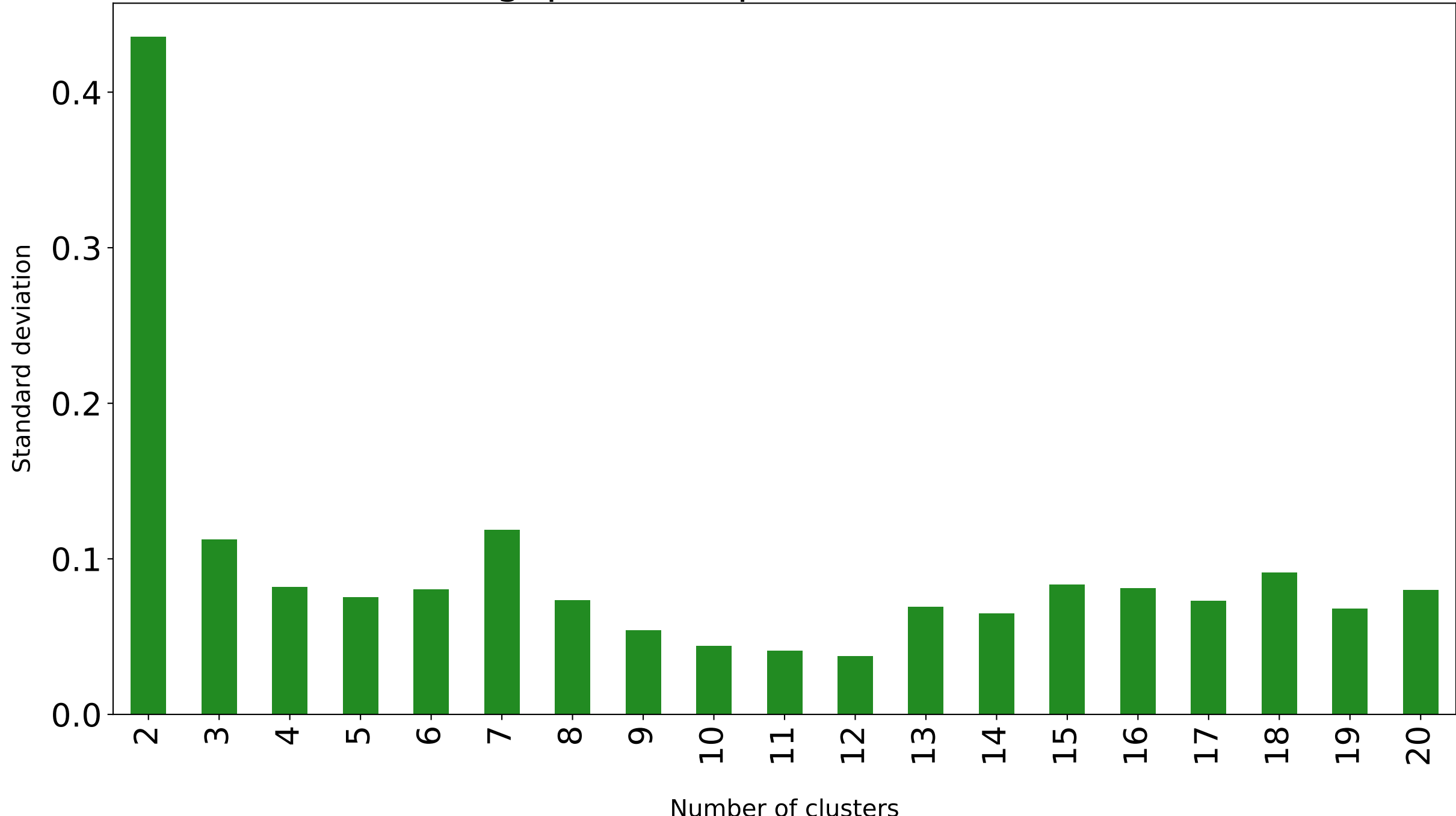


Cophenetic Correlation Coefficient: 0.6148151353582699

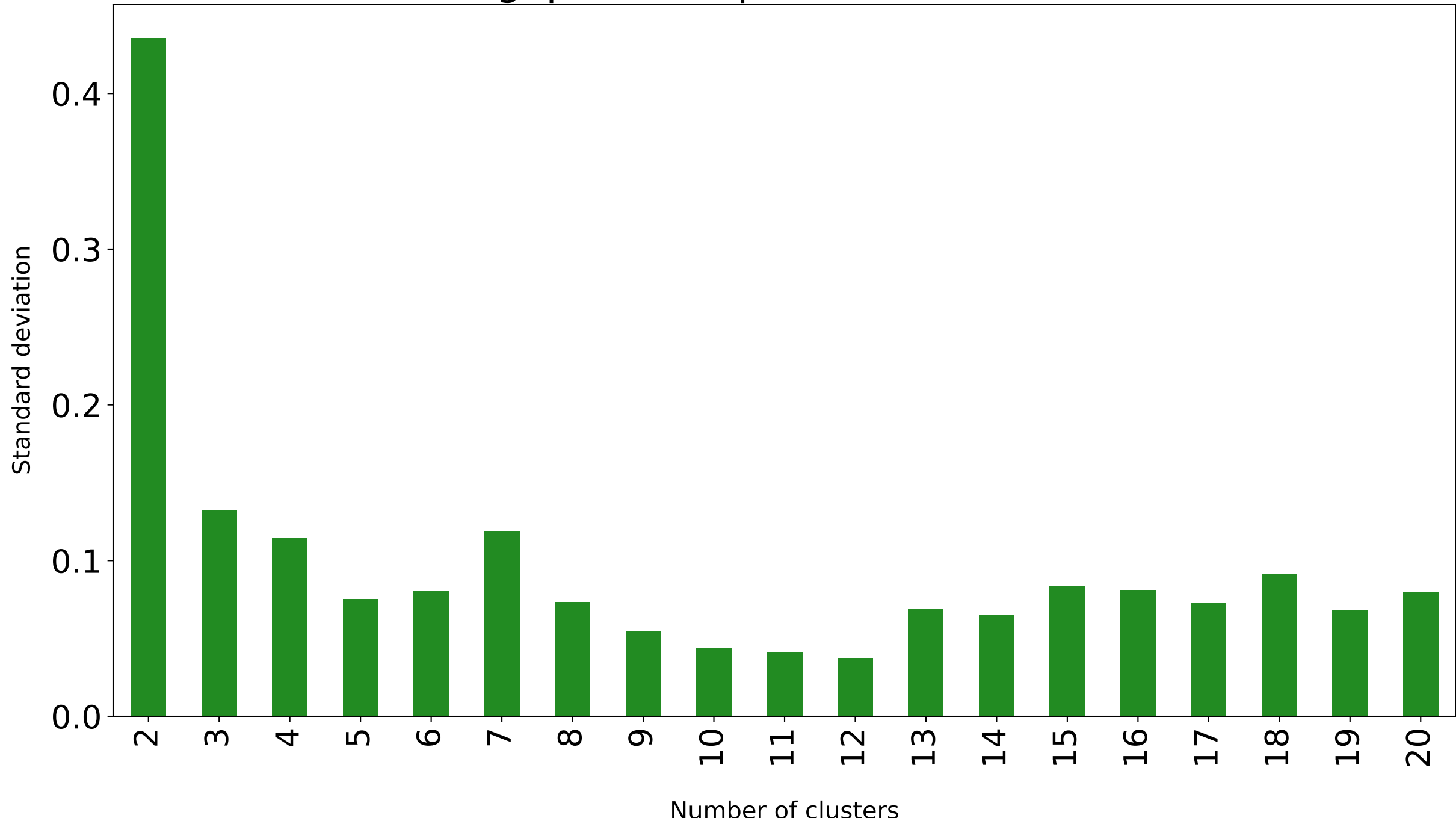
Average values of five clustering indices
gap: 0.70, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.89233	0.81903	0.69107	0.07367	0.73659	0.8914	0.36961	0.89326	0.00012	0.78991	0.71885	0.03738	0.20724	0.16675
3.0	1.00001	0.77804	0.64403	0.64373	0.12821	0.65851	0.77781	0.68479	0.77827	0.00011	0.73532	0.4851	0.12632	0.18492	0.18867
4.0	1.0	0.76857	0.62971	0.62658	0.13493	0.67514	0.76719	0.73418	0.76997	0.00013	0.76533	0.46941	0.12632	0.21821	0.18867
5.0	1.0	0.77215	0.62993	0.75249	0.16414	0.70682	0.77064	0.80161	0.77366	0.00016	0.81405	0.46396	0.33803	0.18399	0.18867
6.0	1.0	0.80248	0.6729	0.76836	0.13813	0.7531	0.80181	0.71654	0.80315	0.00019	0.85338	0.51248	0.33803	0.21306	0.18867
7.0	1.0	0.81986	0.69867	0.77089	0.13154	0.78025	0.81914	0.70153	0.82058	0.00021	0.8779	0.54472	0.42857	0.20532	0.19903
8.0	1.0	0.79565	0.66154	0.69907	0.15358	0.75526	0.79341	0.76683	0.79791	0.00021	0.87134	0.5003	1.05263	0.19443	0.19984
9.0	1.0	0.82786	0.70826	0.77677	0.13174	0.79844	0.82736	0.69761	0.82835	0.00025	0.9041	0.55294	1.05263	0.18145	0.19984
10.0	1.0	0.87871	0.78534	0.8635	0.11335	0.86002	0.87856	0.59035	0.87887	0.00029	0.93726	0.65053	1.05263	0.19592	0.19984
11.0	1.0	0.88501	0.79501	0.85808	0.11147	0.86798	0.88486	0.56833	0.88517	0.0003	0.94235	0.66296	1.05263	0.21049	0.19984
12.0	1.0	0.89382	0.80897	0.88063	0.11287	0.87895	0.89371	0.56745	0.89393	0.00032	0.94915	0.68168	1.05263	0.20093	0.19984
13.0	1.0	0.89731	0.81464	0.88321	0.11441	0.88348	0.89721	0.56473	0.89741	0.00033	0.9524	0.68961	1.05263	0.19704	0.19445
14.0	1.0	0.90949	0.83427	0.91506	0.10947	0.89794	0.90928	0.53724	0.9097	0.00035	0.9597	0.71711	1.05263	0.19092	0.19445
15.0	1.0	0.92005	0.85232	0.91779	0.10193	0.91004	0.91997	0.50216	0.92014	0.00036	0.965	0.74396	2.0	0.18835	0.2335
16.0	1.0	0.93188	0.87278	0.93027	0.09214	0.92354	0.93181	0.45369	0.93195	0.00037	0.9707	0.77547	2.0	0.19334	0.2335
17.0	1.0	0.94101	0.88891	0.93833	0.0851	0.93393	0.94097	0.41439	0.94106	0.00038	0.975	0.80113	2.0	0.19014	0.2335
18.0	1.0	0.94491	0.89595	0.94133	0.08645	0.93841	0.94487	0.41178	0.94494	0.00039	0.97701	0.81273	2.0	0.19027	0.2335
19.0	1.0	0.94836	0.90229	0.94621	0.08252	0.94239	0.94832	0.39298	0.9484	0.0004	0.97884	0.82359	2.0	0.18848	0.2383
20.0	1.0	0.94419	0.89481	0.93482	0.08609	0.93784	0.94413	0.40483	0.94426	0.0004	0.97742	0.8114	2.0	0.19134	0.2383

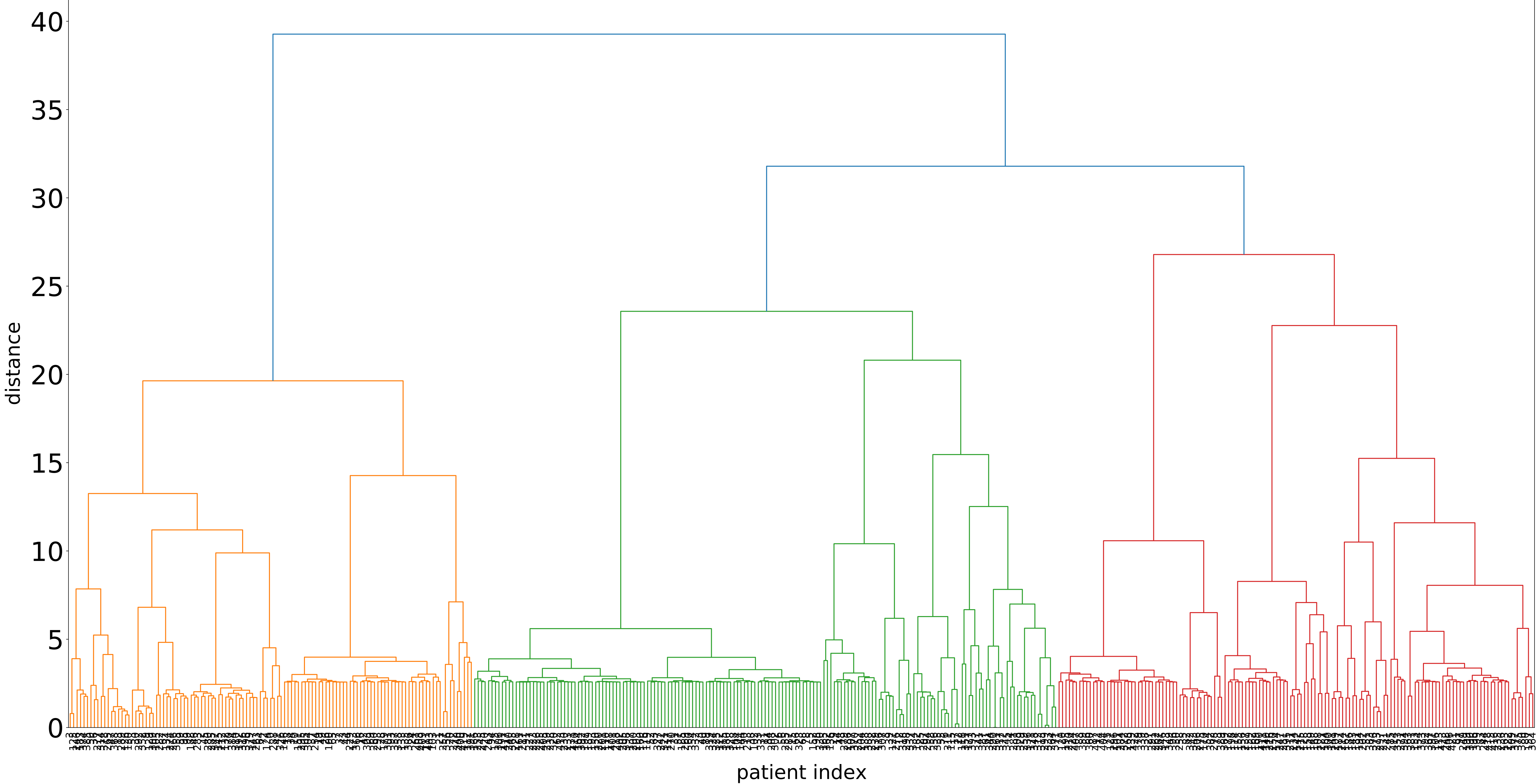
Standard deviation of Adjusted Rand versus number of clusters
gap: 0.70, Tp: 0.25, ward link



Standard deviation of Huberts index versus number of clusters
gap: 0.70, Tp: 0.25, ward link



Hierarchical Clustering Dendrogram - gap: 0.80, Tp: 0.25, ward link

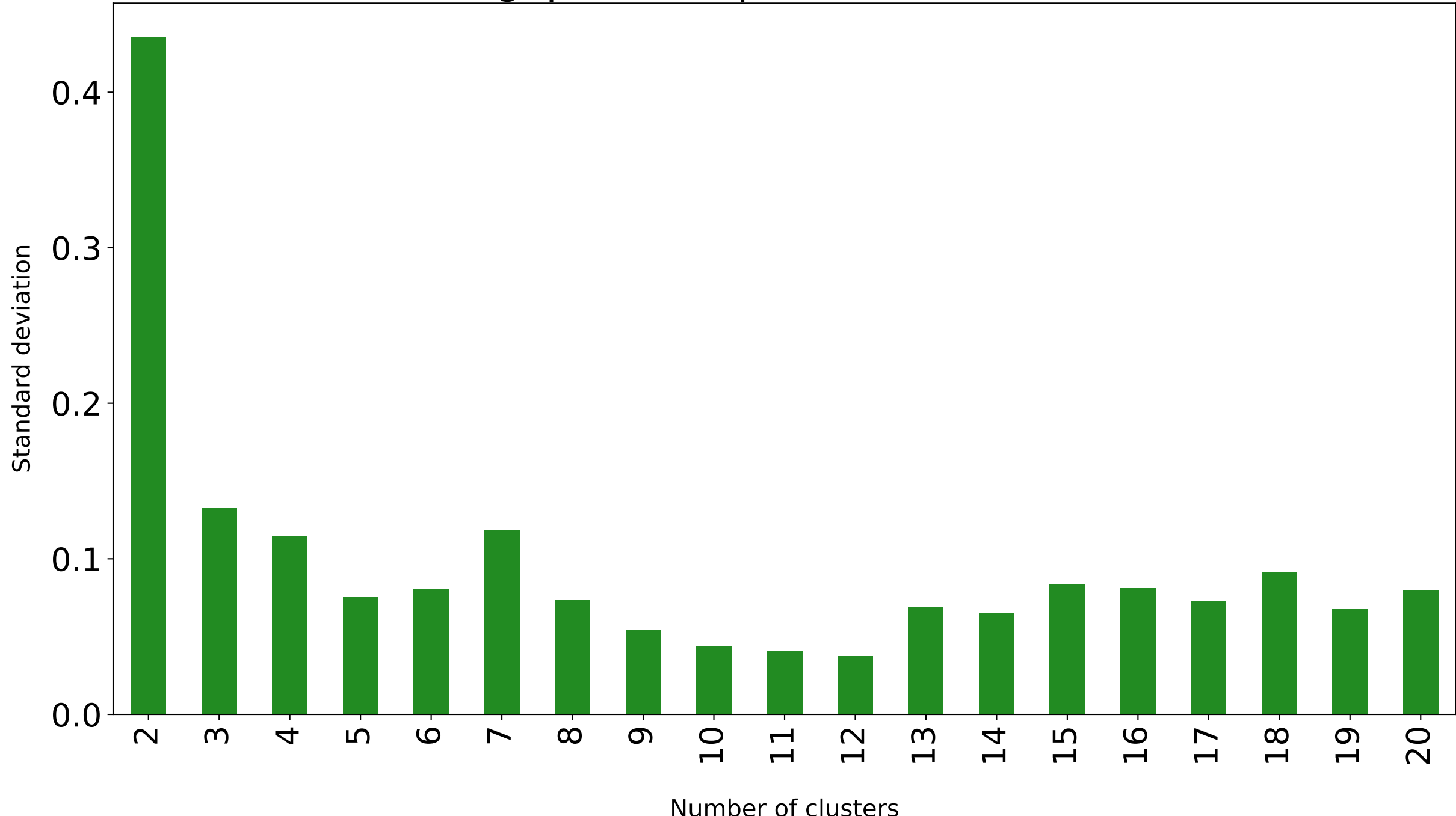


Cophenetic Correlation Coefficient: 0.5974043453956946

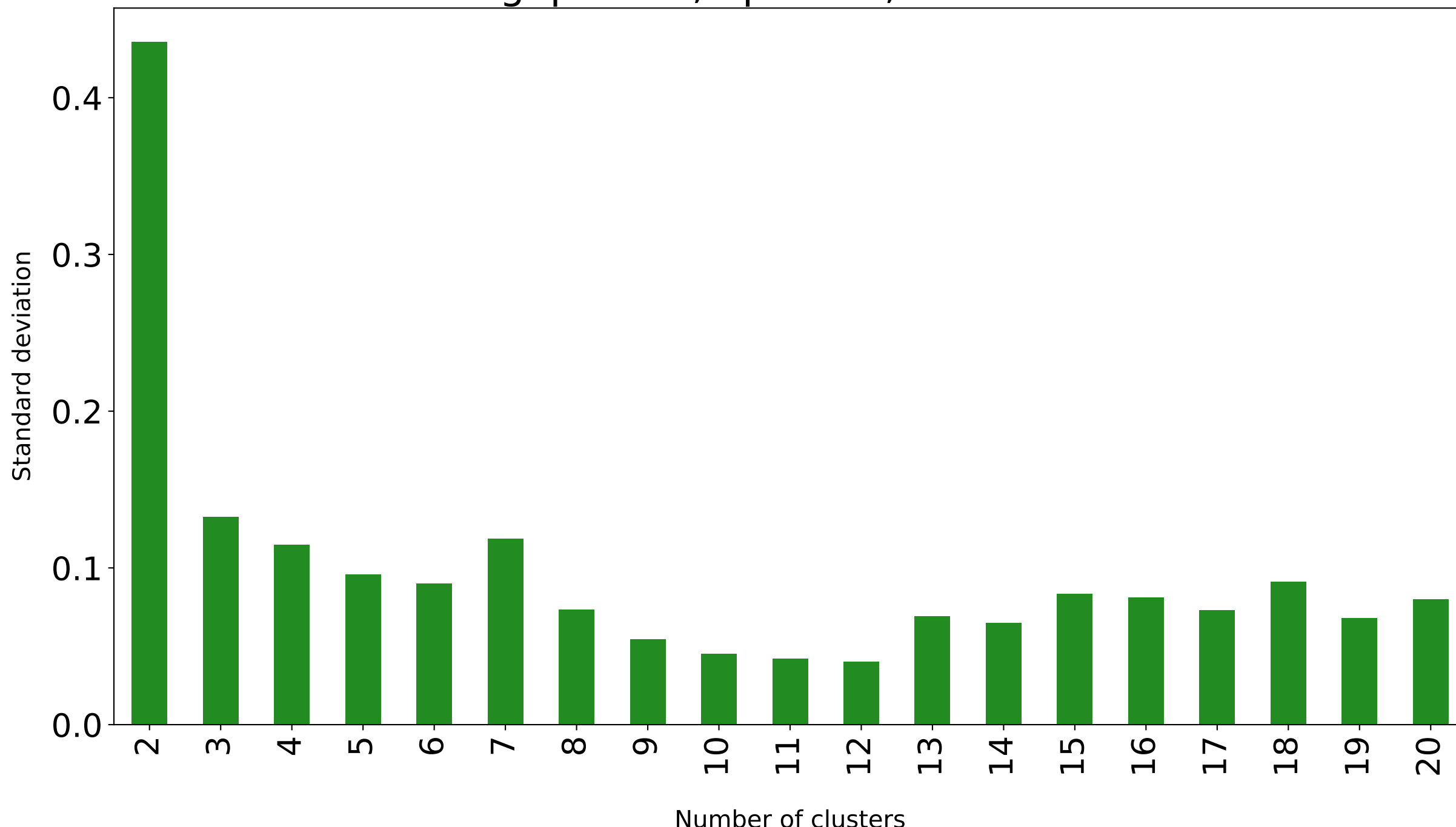
Average values of five clustering indices
gap: 0.80, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.90353	0.8398	0.77637	0.06606	0.77007	0.90313	0.34324	0.90393	0.00013	0.81728	0.75099	0.10256	0.19597	0.19395
3.0	1.0	0.80002	0.67273	0.7018	0.11336	0.69499	0.7998	0.68231	0.80024	0.00012	0.76141	0.51535	0.14201	0.17357	0.22736
4.0	1.0	0.78531	0.65181	0.67595	0.12957	0.7007	0.78484	0.77352	0.78577	0.00014	0.78502	0.49123	0.14201	0.20324	0.22736
5.0	1.0	0.76029	0.61784	0.71992	0.16209	0.69158	0.75936	0.84218	0.76123	0.00016	0.80728	0.45456	0.35294	0.17426	0.22736
6.0	1.0	0.78837	0.65577	0.74092	0.15595	0.73681	0.78799	0.84261	0.78875	0.00018	0.84766	0.49523	0.35294	0.19082	0.22736
7.0	1.0	0.79147	0.65927	0.72601	0.15287	0.74672	0.7907	0.8296	0.79224	0.0002	0.86273	0.49938	0.46154	0.19227	0.22736
8.0	1.0	0.8035	0.67406	0.79241	0.14877	0.76924	0.80293	0.82132	0.80406	0.00024	0.88955	0.51311	0.46154	0.19125	0.22736
9.0	1.0	0.81693	0.6927	0.7901	0.14641	0.787	0.81673	0.80571	0.81713	0.00026	0.90222	0.5336	0.46154	0.20799	0.22736
10.0	1.0	0.84585	0.73458	0.82708	0.13509	0.82229	0.84568	0.72043	0.84601	0.00028	0.92151	0.58377	0.46154	0.19888	0.22736
11.0	1.0	0.85585	0.74955	0.8348	0.13289	0.83486	0.85569	0.68042	0.85601	0.0003	0.92932	0.6026	2.0	0.19149	0.22736
12.0	1.0	0.86105	0.75733	0.85633	0.13957	0.84209	0.86083	0.6902	0.86127	0.00031	0.93534	0.61247	2.0	0.1945	0.19134
13.0	1.0	0.86296	0.76027	0.84821	0.13979	0.84479	0.86283	0.68624	0.86309	0.00032	0.93782	0.61607	2.0	0.1961	0.23097
14.0	1.0	0.86972	0.77067	0.85019	0.13551	0.85291	0.86959	0.65404	0.86984	0.00033	0.94217	0.62962	2.0	0.21045	0.23097
15.0	1.0	0.88081	0.78802	0.87235	0.12836	0.86604	0.88068	0.62832	0.88094	0.00035	0.94876	0.65265	2.0	0.19945	0.23097
16.0	1.0	0.90145	0.82126	0.90822	0.11392	0.88972	0.90121	0.56407	0.90169	0.00037	0.95879	0.6991	2.0	0.19329	0.23097
17.0	1.0	0.90988	0.83543	0.91188	0.1034	0.89931	0.90973	0.52107	0.91002	0.00038	0.9628	0.71972	2.0	0.1921	0.23097
18.0	1.0	0.92014	0.85282	0.92245	0.09328	0.91097	0.92001	0.47449	0.92028	0.00039	0.96756	0.74569	2.0	0.19803	0.23097
19.0	1.0	0.9279	0.86625	0.93006	0.08716	0.91976	0.92778	0.43996	0.92801	0.0004	0.97115	0.76648	2.0	0.19542	0.23097
20.0	1.0	0.93503	0.87831	0.94252	0.08677	0.92788	0.93488	0.41935	0.93518	0.00041	0.97447	0.78456	2.0	0.1889	0.23097

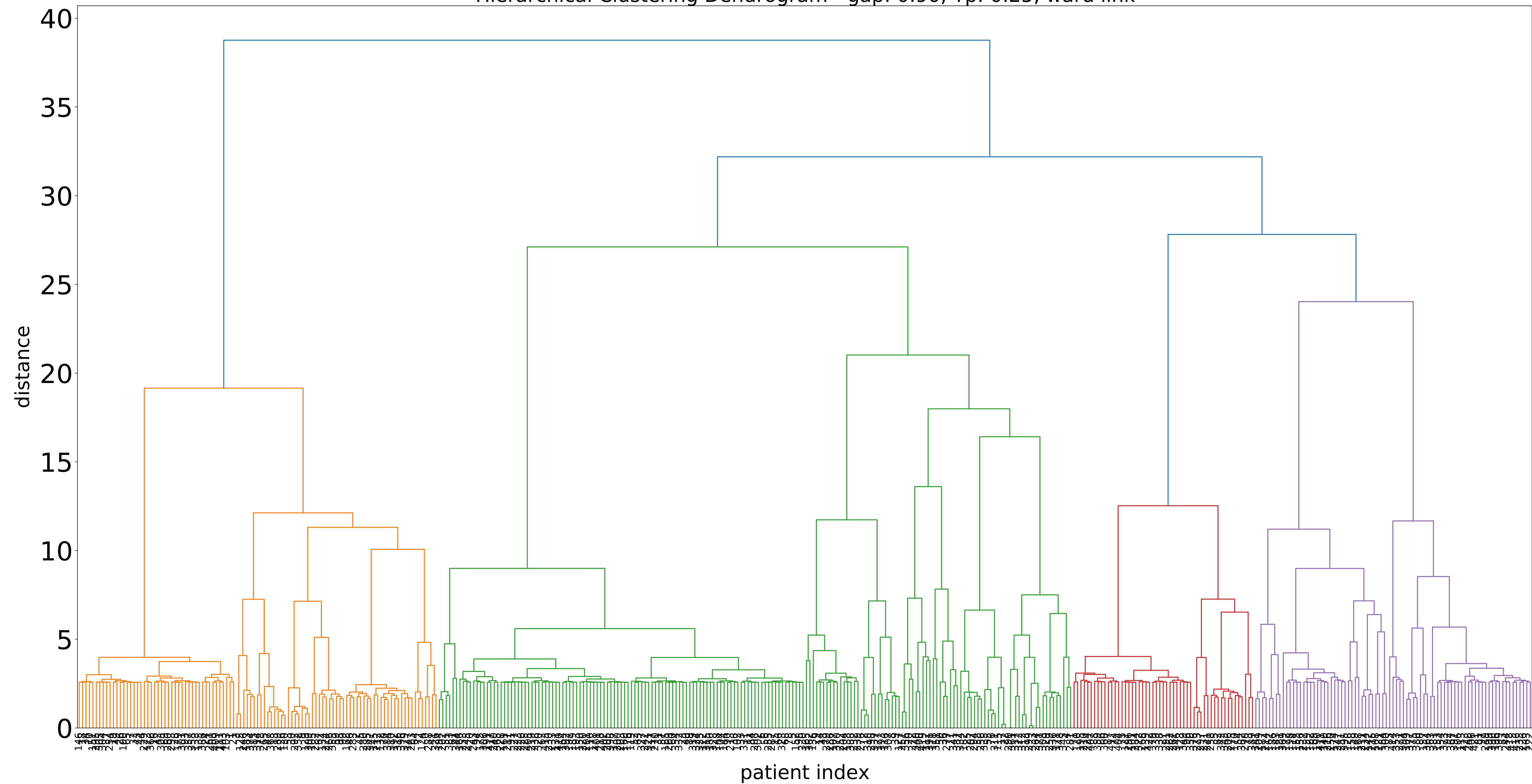
Standard deviation of Adjusted Rand versus number of clusters
gap: 0.80, Tp: 0.25, ward link



Standard deviation of Huberts index versus number of clusters
gap: 0.80, Tp: 0.25, ward link



Hierarchical Clustering Dendrogram - gap: 0.90, Tp: 0.25, ward link

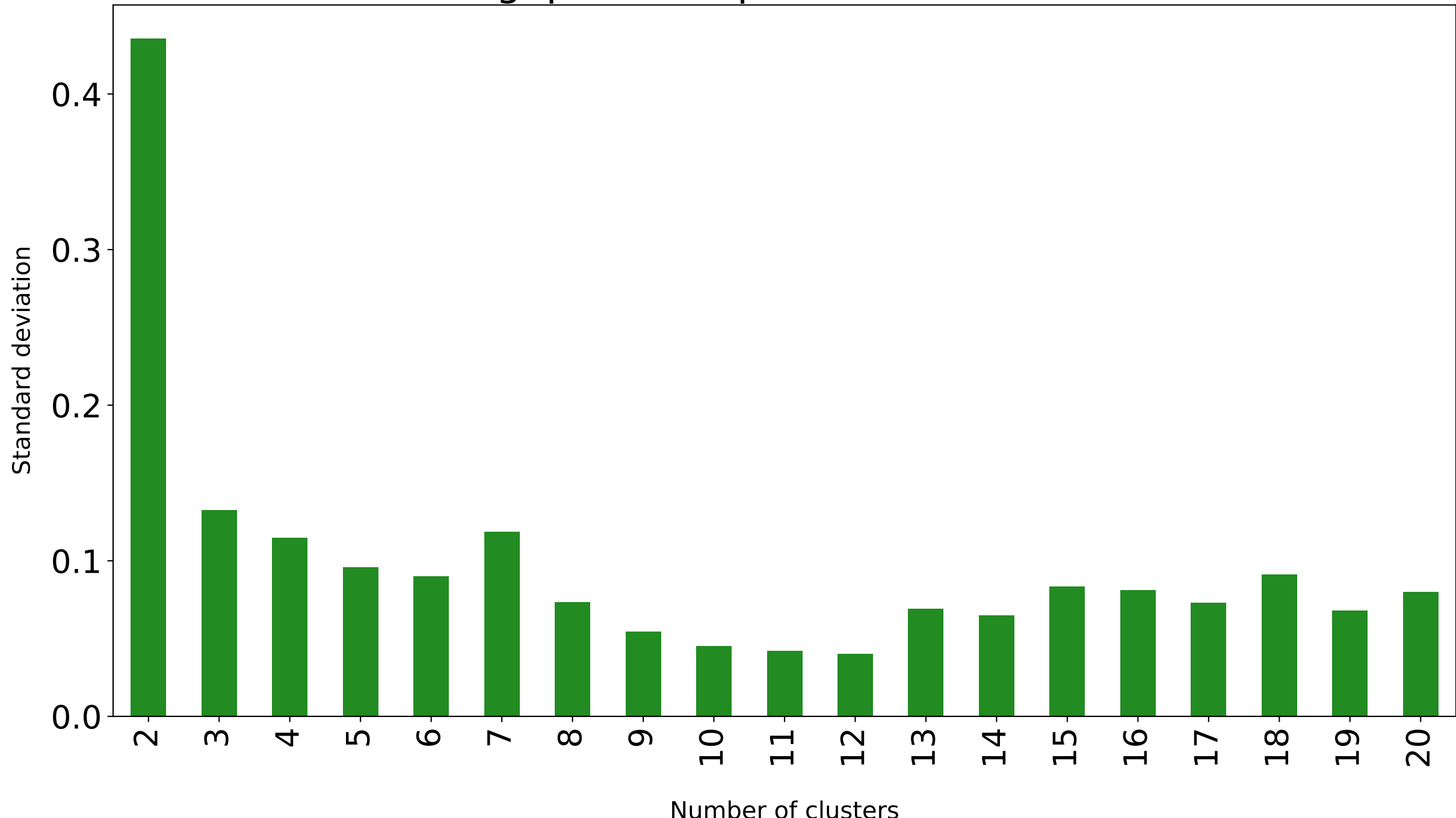


Cophenetic Correlation Coefficient: 0.584622149912175

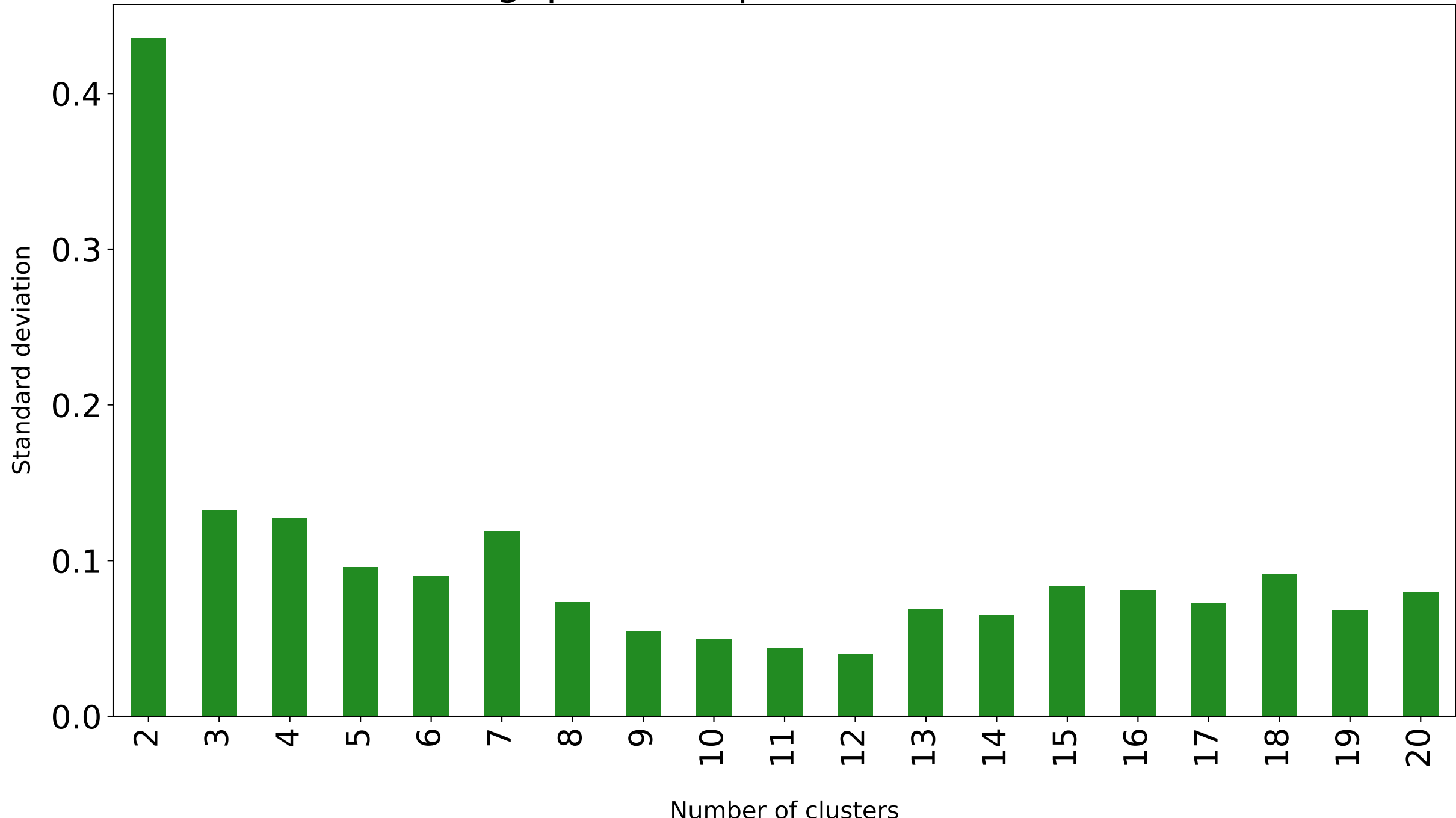
Average values of five clustering indices
gap: 0.90, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.90974	0.84896	0.74603	0.06197	0.7778	0.90906	0.3216	0.91043	0.00013	0.82401	0.76389	0.03762	0.20437	0.17799
3.0	1.0	0.80294	0.67688	0.68866	0.11063	0.69712	0.80275	0.64094	0.80314	0.00012	0.76155	0.52039	0.19459	0.17941	0.19145
4.0	1.0	0.76759	0.63023	0.63431	0.13465	0.67426	0.76658	0.7561	0.76859	0.00013	0.76667	0.471	0.19459	0.2102	0.19145
5.0	1.0	0.78915	0.65595	0.75799	0.1412	0.73099	0.78836	0.75939	0.78994	0.00017	0.83317	0.49524	0.46154	0.17594	0.19145
6.0	1.0	0.8007	0.67269	0.75871	0.13694	0.75344	0.80038	0.74677	0.80102	0.00019	0.8588	0.51435	0.46154	0.19976	0.19145
7.0	1.0	0.80253	0.67396	0.74472	0.1395	0.76216	0.80189	0.76292	0.80317	0.00021	0.87426	0.51537	0.64286	0.1904	0.1897
8.0	1.0	0.82489	0.70459	0.80899	0.12427	0.79458	0.82454	0.71197	0.82524	0.00025	0.90174	0.54892	0.64286	0.19438	0.1897
9.0	1.0	0.84632	0.73598	0.82387	0.12231	0.82149	0.84612	0.67951	0.84651	0.00027	0.91809	0.58693	1.05882	0.17844	0.21064
10.0	1.0	0.8533	0.74624	0.81868	0.11899	0.83064	0.85307	0.65895	0.85353	0.00028	0.92446	0.59958	1.05882	0.21097	0.21064
11.0	1.0	0.85491	0.74749	0.80152	0.11808	0.83328	0.85425	0.6431	0.85557	0.00029	0.92694	0.60018	2.0	0.21753	0.24806
12.0	1.0	0.8526	0.74386	0.80519	0.11972	0.83178	0.85209	0.64028	0.85311	0.0003	0.92925	0.59502	2.0	0.21264	0.24806
13.0	1.0	0.86095	0.75673	0.82629	0.12147	0.84228	0.86069	0.63594	0.86121	0.00032	0.93612	0.61103	2.0	0.20651	0.22893
14.0	1.0	0.87032	0.77107	0.83076	0.11359	0.85341	0.86996	0.59475	0.87068	0.00033	0.94166	0.62979	2.0	0.20754	0.22893
15.0	1.0	0.87971	0.78565	0.83778	0.10636	0.86442	0.87925	0.55497	0.88017	0.00034	0.94685	0.64927	2.0	0.21915	0.22893
16.0	1.0	0.89261	0.80662	0.86221	0.09855	0.87944	0.89235	0.52502	0.89287	0.00036	0.95399	0.67802	2.0	0.21481	0.22893
17.0	1.0	0.90196	0.82208	0.87504	0.09172	0.89024	0.90174	0.48879	0.90218	0.00037	0.95886	0.70018	2.0	0.21541	0.23964
18.0	1.0	0.90703	0.83046	0.87893	0.08673	0.89611	0.90679	0.45924	0.90726	0.00038	0.96154	0.71234	2.0	0.21092	0.23964
19.0	1.0	0.93344	0.87606	0.93193	0.08332	0.92597	0.93335	0.41456	0.93353	0.0004	0.97347	0.78219	2.0	0.20316	0.23964
20.0	1.0	0.94146	0.88985	0.94521	0.08006	0.93506	0.94135	0.38729	0.94158	0.00041	0.97712	0.8034	2.0	0.19783	0.23964

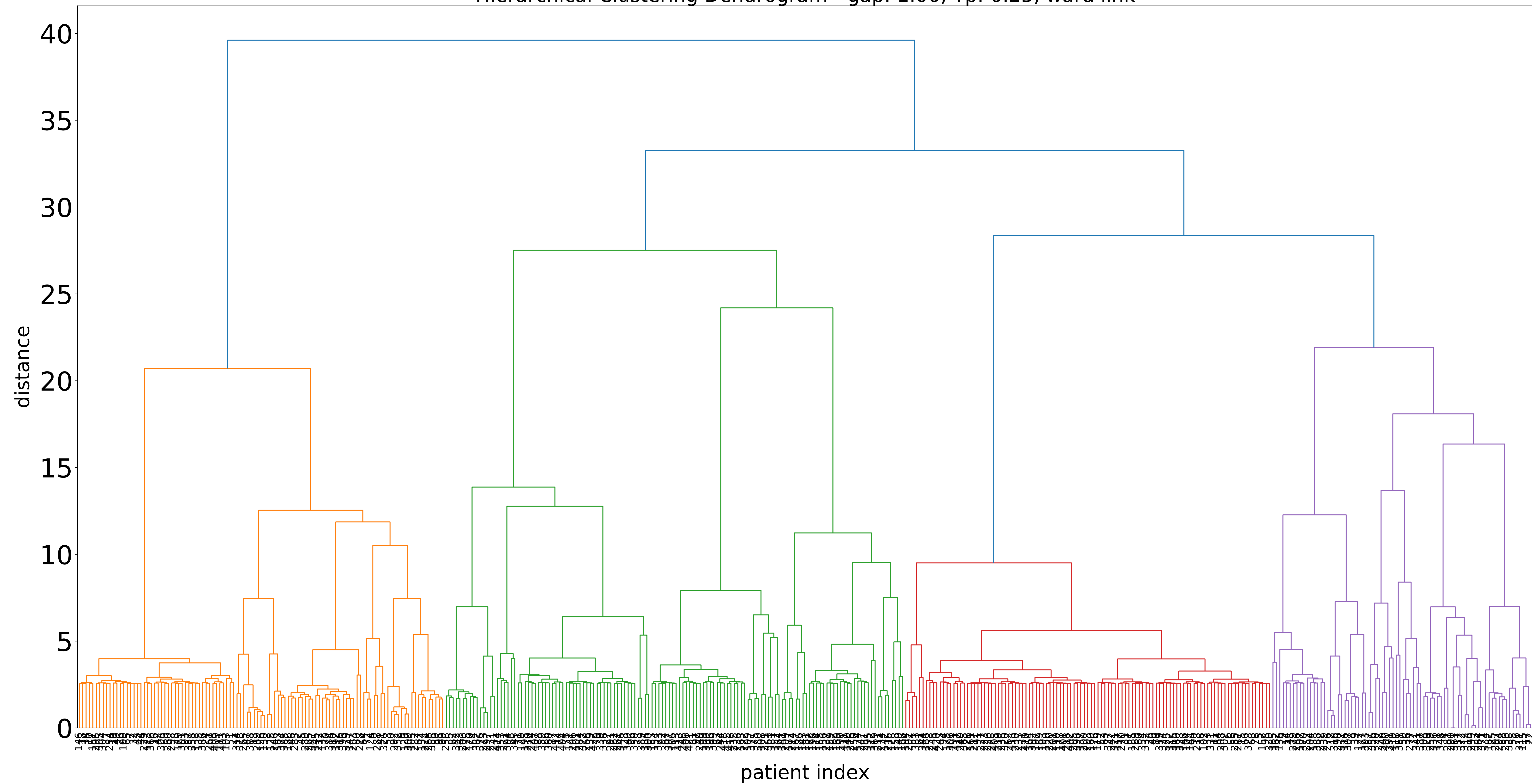
Standard deviation of Adjusted Rand versus number of clusters
gap: 0.90, Tp: 0.25, ward link



Standard deviation of Huberts index versus number of clusters
gap: 0.90, Tp: 0.25, ward link



Hierarchical Clustering Dendrogram - gap: 1.00, Tp: 0.25, ward link

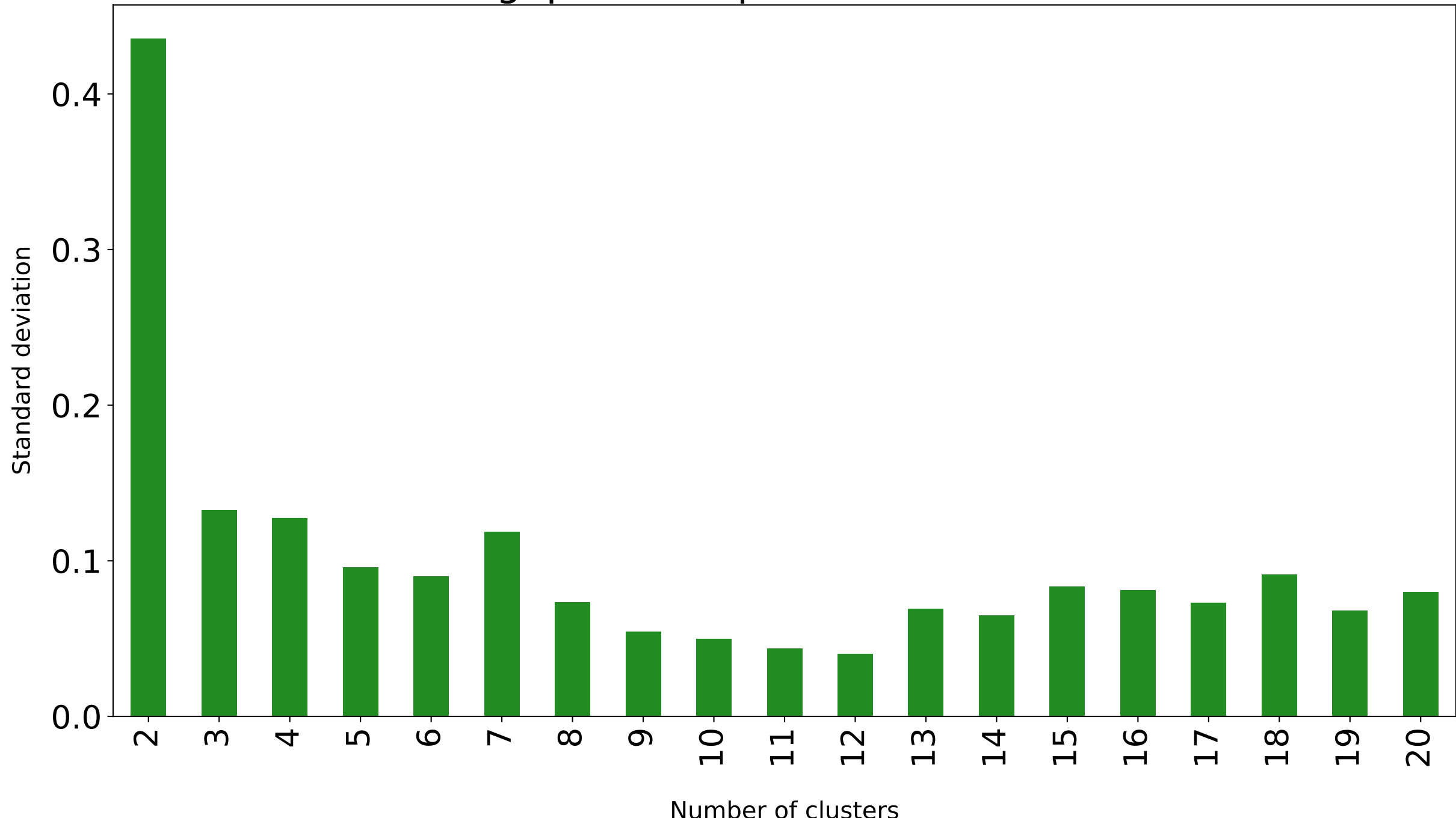


Cophenetic Correlation Coefficient: 0.5779002217677486

Average values of five clustering indices
gap: 1.00, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.87255	0.79303	0.66275	0.08994	0.6929	0.87167	0.43726	0.87343	0.00012	0.76301	0.68916	0.09969	0.20192	0.17737
3.0	1.00001	0.78017	0.64749	0.65713	0.12923	0.66091	0.77981	0.72743	0.78052	0.00011	0.73725	0.48911	0.17486	0.18017	0.21189
4.0	1.0	0.72734	0.57721	0.65709	0.18433	0.62845	0.72676	0.89695	0.72792	0.00013	0.74805	0.4133	0.49123	0.15054	0.21189
5.0	1.0	0.77938	0.64251	0.74182	0.14875	0.71943	0.77891	0.81425	0.77985	0.00017	0.82825	0.47918	0.49123	0.16979	0.21189
6.0	1.0	0.77717	0.64018	0.71872	0.15507	0.7244	0.77681	0.82682	0.77753	0.00018	0.84335	0.47726	0.49123	0.2052	0.21189
7.0	1.0	0.78261	0.64591	0.70522	0.15269	0.73815	0.78169	0.82762	0.78352	0.0002	0.86202	0.48309	0.57143	0.19679	0.21005
8.0	1.0	0.82055	0.69801	0.79189	0.12985	0.78958	0.82034	0.74491	0.82076	0.00025	0.89976	0.5401	0.57143	0.20512	0.21005
9.0	1.0	0.83951	0.7249	0.80314	0.12584	0.81358	0.83928	0.70789	0.83974	0.00027	0.91449	0.57152	1.66667	0.19058	0.21005
10.0	1.0	0.84285	0.72948	0.79541	0.12516	0.81851	0.84243	0.69704	0.84326	0.00028	0.91886	0.57707	1.66667	0.22402	0.21005
11.0	1.0	0.84571	0.7336	0.80329	0.12611	0.82321	0.84538	0.69043	0.84603	0.00029	0.92423	0.58172	1.66667	0.2262	0.21005
12.0	1.0	0.85049	0.73998	0.79342	0.12147	0.82931	0.84971	0.66092	0.85127	0.0003	0.92781	0.58954	2.0	0.23058	0.245
13.0	1.0	0.85725	0.74963	0.79454	0.11748	0.83771	0.85619	0.63193	0.85831	0.00031	0.93263	0.60148	2.0	0.23571	0.245
14.0	1.0	0.86754	0.76616	0.82091	0.11972	0.85027	0.867	0.63097	0.86807	0.00033	0.94029	0.62273	2.0	0.22894	0.22709
15.0	1.0	0.8751	0.77764	0.82637	0.11267	0.85924	0.87446	0.59191	0.87574	0.00034	0.94471	0.6376	2.0	0.22993	0.22709
16.0	1.0	0.889	0.80047	0.85563	0.10692	0.87544	0.88872	0.55904	0.88929	0.00035	0.95259	0.66889	2.0	0.22296	0.22709
17.0	1.0	0.89692	0.81336	0.86614	0.10216	0.88461	0.89666	0.5335	0.89718	0.00037	0.95679	0.68693	2.0	0.2241	0.2402
18.0	1.0	0.90347	0.82404	0.86876	0.09666	0.89216	0.90315	0.50661	0.90379	0.00037	0.96009	0.70217	2.0	0.22257	0.2402
19.0	1.0	0.90842	0.83221	0.87399	0.09338	0.8979	0.90808	0.4843	0.90876	0.00038	0.96271	0.71398	2.0	0.2181	0.2402
20.0	1.0	0.94063	0.88826	0.93465	0.08651	0.9341	0.94057	0.4221	0.94068	0.00041	0.97673	0.80022	2.0	0.21111	0.2402

Standard deviation of Adjusted Rand versus number of clusters
gap: 1.00, Tp: 0.25, ward link



Standard deviation of Huberts index versus number of clusters
gap: 1.00, Tp: 0.25, ward link

