

# Cluster Datagotchi

Données du pilot1-2021

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## 1 Définir le nombre de clusters

### 1.1 PCA et sélection des variables

Pour déterminer quelles variables sont les moins pertinentes à conserver à partir des résultats de l'analyse en composantes principales (PCA), nous pouvons examiner leurs coefficients dans les premiers axes principaux (PC1 à PC4). Les variables ayant des coefficients proches de zéro pour ces axes peuvent être considérées comme faiblement contributives à la variance des données globales. En général, on garde les variables ayant des coefficients élevés (en valeur absolue) sur au moins un des premiers axes, car cela signifie qu'elles expliquent une part significative de la variance.

Importance of components:

	PC1	PC2	PC3	PC4	PC5	PC6	PC7
Standard deviation	1.84665	1.71199	1.65399	1.56294	1.48884	1.47278	1.40043
Proportion of Variance	0.03667	0.03152	0.02942	0.02627	0.02383	0.02332	0.02109
Cumulative Proportion	0.03667	0.06818	0.09760	0.12387	0.14770	0.17102	0.19211
	PC8	PC9	PC10	PC11	PC12	PC13	PC14
Standard deviation	1.35739	1.31134	1.30065	1.2868	1.24466	1.21792	1.2123
Proportion of Variance	0.01981	0.01849	0.01819	0.0178	0.01666	0.01595	0.0158
Cumulative Proportion	0.21192	0.23041	0.24860	0.2664	0.28307	0.29902	0.3148
	PC15	PC16	PC17	PC18	PC19	PC20	PC21
Standard deviation	1.19248	1.16877	1.16078	1.14317	1.13550	1.1330	1.12631
Proportion of Variance	0.01529	0.01469	0.01449	0.01405	0.01386	0.0138	0.01364
Cumulative Proportion	0.33011	0.34480	0.35929	0.37334	0.38720	0.4010	0.41465
	PC22	PC23	PC24	PC25	PC26	PC27	PC28
Standard deviation	1.11569	1.1122	1.09902	1.09485	1.08976	1.07950	1.07616
Proportion of Variance	0.01338	0.0133	0.01299	0.01289	0.01277	0.01253	0.01245
Cumulative Proportion	0.42803	0.4413	0.45432	0.46721	0.47998	0.49251	0.50496
	PC29	PC30	PC31	PC32	PC33	PC34	PC35
Standard deviation	1.06925	1.06560	1.05817	1.05733	1.05170	1.04573	1.04147
Proportion of Variance	0.01229	0.01221	0.01204	0.01202	0.01189	0.01176	0.01166
Cumulative Proportion	0.51726	0.52947	0.54151	0.55353	0.56542	0.57718	0.58884
	PC36	PC37	PC38	PC39	PC40	PC41	PC42
Standard deviation	1.03372	1.0299	1.02855	1.02320	1.01519	1.01463	1.01003
Proportion of Variance	0.01149	0.0114	0.01138	0.01126	0.01108	0.01107	0.01097
Cumulative Proportion	0.60033	0.6117	0.62311	0.63437	0.64545	0.65652	0.66749
	PC43	PC44	PC45	PC46	PC47	PC48	PC49
Standard deviation	1.00426	1.00163	0.99844	0.99448	0.98958	0.98052	0.97579
Proportion of Variance	0.01084	0.01079	0.01072	0.01063	0.01053	0.01034	0.01024
Cumulative Proportion	0.67833	0.68912	0.69984	0.71048	0.72101	0.73134	0.74158
	PC50	PC51	PC52	PC53	PC54	PC55	PC56
Standard deviation	0.97066	0.96882	0.96509	0.95903	0.95202	0.95013	0.94097
Proportion of Variance	0.01013	0.01009	0.01001	0.00989	0.00975	0.00971	0.00952
Cumulative Proportion	0.75171	0.76181	0.77182	0.78171	0.79146	0.80116	0.81068
	PC57	PC58	PC59	PC60	PC61	PC62	PC63
Standard deviation	0.93881	0.93647	0.92737	0.92253	0.91400	0.90907	0.90806
Proportion of Variance	0.00948	0.00943	0.00925	0.00915	0.00898	0.00889	0.00887
Cumulative Proportion	0.82016	0.82959	0.83884	0.84799	0.85697	0.86586	0.87472
	PC64	PC65	PC66	PC67	PC68	PC69	PC70
Standard deviation	0.90295	0.8944	0.88304	0.87118	0.86714	0.85239	0.84220
Proportion of Variance	0.00877	0.0086	0.00838	0.00816	0.00809	0.00781	0.00763
Cumulative Proportion	0.88349	0.8921	0.90048	0.90864	0.91672	0.92454	0.93216
	PC71	PC72	PC73	PC74	PC75	PC76	PC77
Standard deviation	0.82823	0.81689	0.80725	0.79144	0.77432	0.75159	0.73859
Proportion of Variance	0.00738	0.00718	0.00701	0.00674	0.00645	0.00607	0.00587
Cumulative Proportion	0.93954	0.94671	0.95372	0.96046	0.96690	0.97298	0.97884
	PC78	PC79	PC80	PC81	PC82	PC83	PC84
Standard deviation	0.70499	0.68355	0.58736	0.52478	0.38423	0.34347	0.34259
Proportion of Variance	0.00534	0.00502	0.00371	0.00296	0.00159	0.00127	0.00126

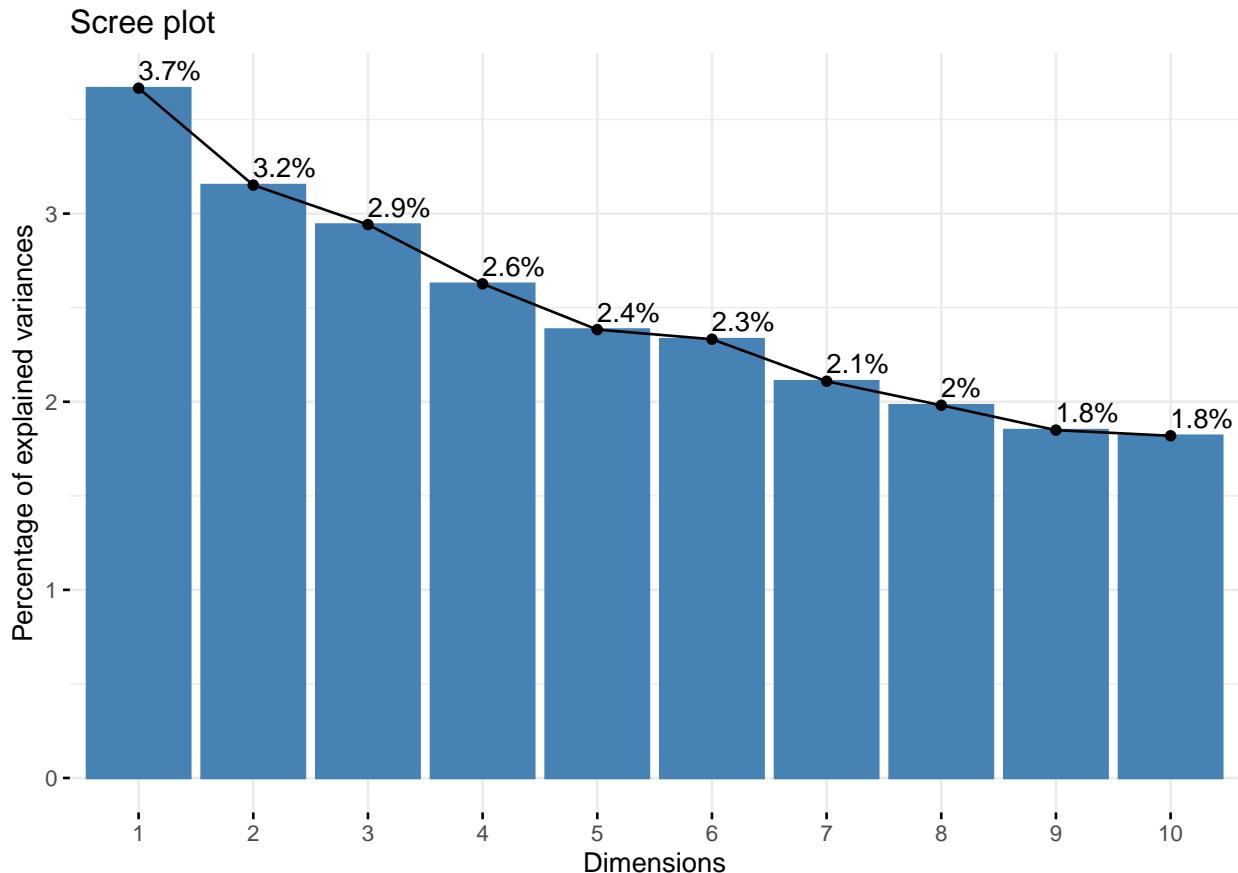
Cumulative Proportion	0.98419	0.98921	0.99292	0.99588	0.99747	0.99874	1.00000
	PC85	PC86	PC87	PC88	PC89		
Standard deviation	3.561e-14	2.15e-14	9.598e-15	7.802e-15	4.87e-15		
Proportion of Variance	0.000e+00	0.00e+00	0.000e+00	0.000e+00	0.00e+00		
Cumulative Proportion	1.000e+00	1.00e+00	1.000e+00	1.000e+00	1.00e+00		
	PC90	PC91	PC92	PC93			
Standard deviation	4.049e-15	3.944e-15	2.871e-15	1.586e-15			
Proportion of Variance	0.000e+00	0.000e+00	0.000e+00	0.000e+00			
Cumulative Proportion	1.000e+00	1.000e+00	1.000e+00	1.000e+00			
	PC1	PC2	PC3				
act_transport_Car	0.082244482	-0.0008158413	2.273700e-01				
act_transport_SUV	0.019894073	-0.0623210400	6.431475e-02				
act_transport_Moto	-0.046337875	-0.0698957271	-1.515432e-02				
act_transport_Walk	-0.025237815	0.0659489607	-2.162209e-01				
act_transport_Bicycle	-0.048081485	-0.0365110503	-5.994739e-02				
act_transport_PublicTransportation	-0.090793726	0.0487384812	-1.468377e-01				
act_transport_Taxi	-0.031029688	-0.0275583279	-8.195927e-02				
age34m	-0.303016444	0.1025959800	-1.371803e-02				
age3554	-0.040596280	-0.0591021507	9.542881e-02				
age55p	0.321446960	-0.0363544784	-8.222613e-02				
langFr	0.069209652	-0.0033299676	8.724691e-02				
langEn	-0.043233484	-0.0334324621	-1.067376e-01				
ses_languageOther	-0.051334300	0.0541013927	1.123363e-02				
male	0.057678209	-0.4179372601	-7.366292e-02				
female	-0.056401240	0.4179698693	7.366198e-02				
ses_genderOther	-0.018322758	-0.0010206291	-8.353285e-05				
incomeLow	0.006421024	0.0571198545	-2.729459e-01				
incomeHigh	-0.062268769	-0.0624060448	3.000477e-01				
immigrant	-0.092070748	0.0125913869	-2.853818e-03				
act_VisitsMuseumsGaleries	-0.189214055	-0.0312009621	2.179194e-02				
act_Fishing	-0.151858882	-0.3020900749	2.683892e-02				
act_Hunting	-0.186576767	-0.2763395967	1.121189e-02				
act_MotorizedOutdoorActivities	-0.221705015	-0.2304397869	7.314457e-02				
act_Volunteering	-0.128625800	-0.0272867660	4.830393e-02				
act_Walk	-0.020519390	0.0288893132	-3.517023e-02				
act_Gym	-0.189490597	-0.0704140669	1.126524e-01				
act_TeamSport	-0.144108973	-0.1576828289	7.347934e-02				
act_Run	-0.222499211	-0.0852688703	8.727033e-02				
act_Yoga	-0.221805690	0.0724719198	1.492100e-02				
act_None	0.142992756	0.0223395757	-7.873628e-02				
act_Other	0.035918935	0.0144556401	5.123931e-02				
app_swag_Formel	-0.074166115	-0.0270177151	-6.501913e-03				
app_swag_Classique	-0.031705578	0.0209512257	2.089585e-02				
app_swag_Casual	0.203299072	0.0512505597	5.040718e-02				
app_swag_Sport	-0.090762211	-0.0828033781	2.434048e-02				
app_swag_Chic	-0.083885961	0.0214089450	7.794005e-03				
app_swag_VintageHippBoheme	-0.115669963	0.0070145259	-9.124581e-02				

app_swag_Other	-0.038097289	0.0040757267	-7.884430e-02
app_swag_Rock	-0.069991935	-0.0750213693	-5.165105e-02
app_noTattoo	0.148058624	-0.0082876348	4.041443e-02
ses_hetero	0.148231581	-0.0071397671	2.535363e-01
ses_gai	-0.046165271	-0.0255726140	-1.656189e-01
ses_bisex	-0.133602928	0.0254566379	-1.665362e-01
cons_brand_MaR	0.042641397	-0.0648838497	-2.670666e-02
cons_brand_BInd	-0.010062833	-0.0314619784	1.774578e-03
cons_brand_OnlineOnly	-0.036305172	-0.0028028073	-4.974679e-02
cons_brand_ChainesB	-0.106179906	0.1471493978	1.889913e-01
cons_brand_GSurf	0.121712883	-0.1277238097	-4.292557e-02
cons_brand_Frip	-0.048779648	0.0624820391	-1.104352e-01
cons_brand_Other	0.030858180	0.0265566921	-7.041706e-02
cons_coffee_place_noCoffee	0.194517843	0.0691792974	-2.356282e-02
cons_coffee_TimH	-0.042977285	-0.0735070335	-3.691988e-02
cons_coffee_Other	-0.017356032	-0.0118717313	-6.267554e-03
cons_coffee_Starbucks	-0.144789499	0.0711502308	1.019683e-01
cons_coffee_SC	-0.033632730	-0.0319119388	-2.365709e-02
cons_coffee_McDo	-0.034022278	-0.0742805409	2.563842e-02
cons_coffee_place_ind	0.017713770	0.0273560668	-1.016545e-02
cons_Meat	0.161077785	-0.1507720487	1.252185e-01
cons_Vege	-0.145044742	0.1319059389	-1.024668e-01
cons_Vegan	-0.067737876	0.0706479694	-7.197080e-02
ses_dwelling_app	-0.037724965	0.0467045985	-2.280343e-01
ses_dwelling_loft	-0.054397643	-0.0378396382	-3.251427e-02
ses_dwelling_condo	-0.047680537	0.0076231699	-5.686339e-02
ses_dwelling_tour	-0.040377325	0.0028800271	-9.418271e-02
ses_dwelling_detachedHouse	0.086115557	-0.0523002650	3.079095e-01
ses_dwelling_semiDetached	-0.018802689	0.0056909973	-2.872205e-02
ses_dwelling_coop	0.028669525	-0.0099033349	-5.301808e-02
ses_dwelling_HLM	-0.006420454	0.0247073132	-6.878421e-02
ses_dwelling_mobile	0.045010889	-0.0167901430	-6.792913e-02
ses_dwelling_other	0.030260073	0.0132932307	-7.376668e-02
cons_noDrink	0.048952629	0.1149746763	-9.453444e-02
cons_redWineDrink	0.058665088	-0.0073739967	1.874784e-02
cons_whiteWineDrink	0.022092127	0.0824651629	3.718489e-02
cons_roseDrink	-0.034124248	0.0393190592	2.734943e-02
cons_sparklingDrink	-0.022218980	0.0233994242	3.632226e-02
cons_regBeers	0.023194335	-0.2193314757	-8.635241e-02
cons_microBeers	-0.037093719	-0.0757527262	4.597706e-02
cons_spiritDrink	-0.008857928	-0.0560026654	-1.229705e-03
cons_cocktailsDrink	-0.103187910	0.1111551596	7.434471e-02
cons_Smoke	-0.021543645	-0.1018774357	-1.736477e-01
cons_SmokeStopping	-0.081414987	-0.0957101194	-5.297727e-02
cons_SmokeStopped	0.164068295	-0.1159740070	-9.473080e-02
cons_SmokeNever	-0.081906380	0.2120597868	2.182970e-01
cons_VapeNation	-0.067315772	-0.0255129999	-2.905270e-02
educBHS	0.024881388	-0.0369634201	-9.097442e-02

educUniv	-0.093256049	0.0055044971	1.848593e-01
op_voteIntent_Lib	-0.006650597	-0.0281590969	1.033162e-02
op_voteIntent_Cons	0.050436946	-0.1169508294	1.060812e-01
op_voteIntent_Ndp	-0.107520333	0.0748789738	-1.054182e-01
op_voteIntent_Bloc	0.090191204	-0.0314407194	-1.464385e-03
op_voteIntent_Green	-0.060855279	0.0147747737	-2.496935e-02
op_voteIntent_PPC	-0.027648153	-0.0539982649	-1.870859e-02
op_voteIntent_NoVote	-0.001223794	0.0535350342	-4.777511e-02
		PC4	
act_transport_Car	-0.0921274628		
act_transport_SUV	-0.0579860122		
act_transport_Moto	-0.0093502654		
act_transport_Walk	0.1285568223		
act_transport_Bicycle	0.0463754841		
act_transport_PublicTransportation	0.0669747674		
act_transport_Taxi	-0.0354746714		
age34m	-0.0897654128		
age3554	-0.0681230160		
age55p	0.1510405355		
langFr	-0.2244421696		
langEn	0.1043800612		
ses_languageOther	0.2185566383		
male	0.2354222325		
female	-0.2349532524		
ses_genderOther	-0.0064468796		
incomeLow	-0.1338307726		
incomeHigh	0.0982790092		
immigrant	0.2239042424		
act_VisitsMuseumsGaleries	0.2225478976		
act_Fishing	-0.1531621675		
act_Hunting	-0.1417938355		
act_MotorizedOutdoorActivities	-0.1835523099		
act_Volunteering	0.1029725704		
act_Walk	0.0848722351		
act_Gym	0.0525855140		
act_TeamSport	-0.0208623633		
act_Run	0.0452835501		
act_Yoga	0.0116462653		
act_None	-0.1351947439		
act_Other	0.0579571235		
app_swag_Formel	0.0452598196		
app_swag_Classique	0.0033568422		
app_swag_Casual	0.0143929707		
app_swag_Sport	-0.0006032122		
app_swag_Chic	0.0321755013		
app_swag_VintageHippBoheme	-0.0474382996		
app_swag_Other	-0.0316392504		
app_swag_Rock	-0.0366020005		

app_noTattoo	0.2566156242
ses_hetero	-0.1062704090
ses_gai	0.1687234571
ses_bisex	-0.0064257018
cons_brand_MaR	0.1813627919
cons_brand_BInd	0.0417411008
cons_brand_OnlineOnly	-0.0529358570
cons_brand_ChainesB	0.0112016147
cons_brand_GSurf	-0.1200624212
cons_brand_Frip	-0.0998923919
cons_brand_Other	-0.0012743141
cons_coffee_place_noCoffee	0.0839271439
cons_coffee_TimH	-0.1570654742
cons_coffee_Other	0.0440504355
cons_coffee_Starbucks	0.0614882098
cons_coffee_SC	0.0403525457
cons_coffee_McDo	-0.0172906025
cons_coffee_place_ind	-0.0020844083
cons_Meat	-0.0889038742
cons_Vege	0.0864554964
cons_Vegan	0.0253709763
ses_dwelling_app	-0.0728557793
ses_dwelling_loft	0.0154370798
ses_dwelling_condo	0.1816929655
ses_dwelling_tour	0.0825479328
ses_dwelling_detachedHouse	-0.0815170180
ses_dwelling_semiDetached	0.0052667463
ses_dwelling_coop	0.0002467205
ses_dwelling_HLM	-0.0413076206
ses_dwelling_mobile	-0.0509575978
ses_dwelling_other	-0.0211983282
cons_noDrink	-0.0453302632
cons_redWineDrink	0.1347680913
cons_whiteWineDrink	-0.0092755635
cons_roseDrink	-0.0212068963
cons_sparklingDrink	0.0067106356
cons_regBeers	-0.0520883781
cons_microBeers	0.0918210965
cons_spiritDrink	-0.0213046990
cons_cocktailsDrink	-0.0983461172
cons_Smoke	-0.1422598676
cons_SmokeStopping	-0.0556648716
cons_SmokeStopped	-0.0056972678
cons_SmokeNever	0.1287408196
cons_VapeNation	-0.0567552990
educBHS	-0.0829007140
educUniv	0.2101655892
op_voteIntent_Lib	0.1731700844

op_voteIntent_Cons	-0.0112822488
op_voteIntent_Ndp	-0.0174317158
op_voteIntent_Bloc	-0.0191995603
op_voteIntent_Green	-0.0410395348
op_voteIntent_PPC	-0.0314629917
op_voteIntent_NoVote	-0.0410008668

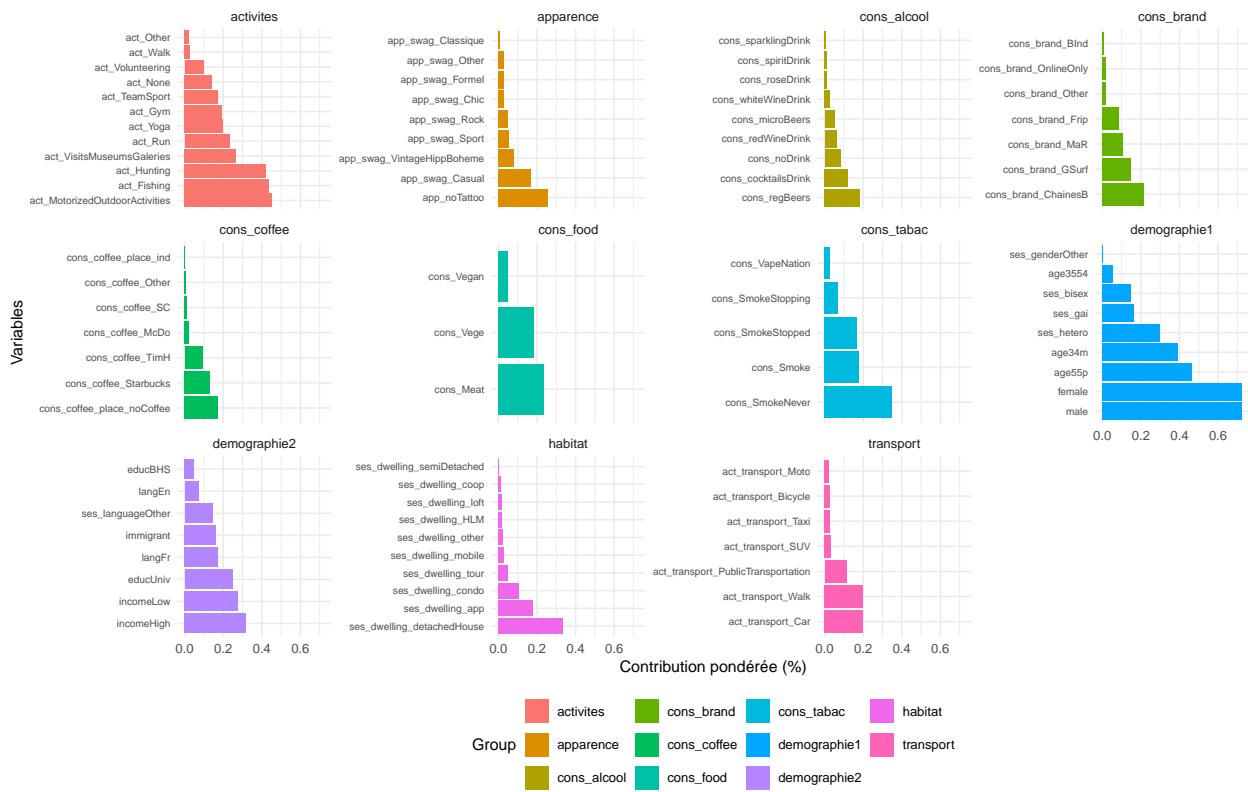


Les résultats de l'analyse en composantes principales montrent la variance expliquée par chaque axe. Dans ce cas, nous choisissons de retenir les quatre premiers axes, qui expliquent la majorité de la variance dans les données.

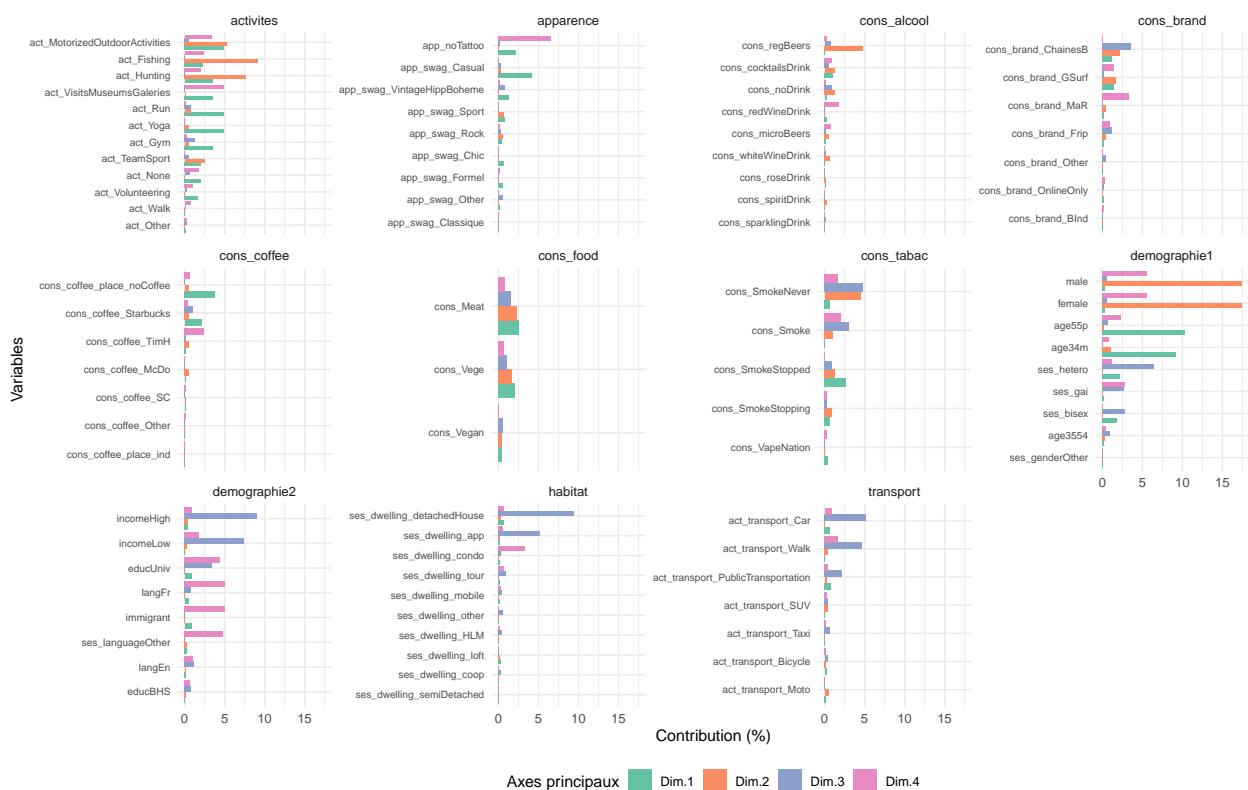
### 1.1.1 Contribution des variables et corrélation

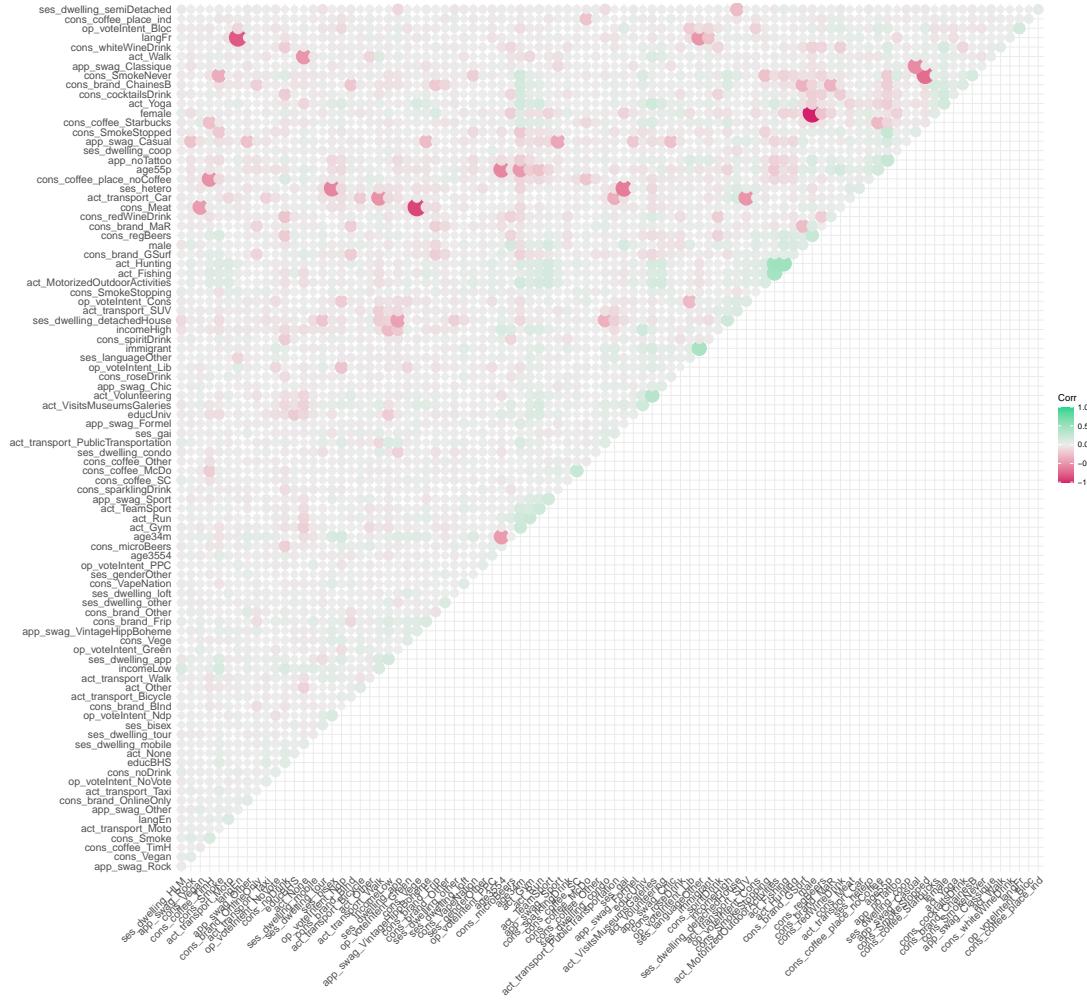
Les variables ayant des coefficients élevés sur ces axes sont les plus importantes pour expliquer la variance des données. Par exemple, les variables qui ont une forte contribution dans le premier ou deuxième axe doivent être retenues, tandis que celles avec une faible contribution sur les premiers axes peuvent être considérées comme moins pertinentes.

### Contributions pondérées des variables aux axes



### Contributions des variables par axe





Variable1	Variable2	Correlation
act_transport_SUV	act_transport_Car	-0.48577503683492
act_transport_Hike	act_transport_Car	0.51494520900068
act_transport_Car	act_transport_SUV	0.4882728232682492
act_transport_Car	act_transport_Walk	-0.514045599990000
age9554	age34m	-0.400075867003692
age9554	age34n	-0.400075867003692
age34m	age3554	-0.400075867003692
age34n	age3554	-0.400075867003692
age9554	age55p	-0.5670456797003778
age34m	age55p	-0.49915034118326
age34n	age55p	-0.5179456797003778
langEn	langFr	-0.79574609231977
ses_languageOther	langFr	-0.487435450955129
langFr	langEn	-0.79574609231977
langFr	ses_languageOther	-0.487435450955129
female	male	-0.99791347274797
act_None	female	-0.99791347274797
act_Wake	act_Walk	-0.49209661817799
app_swag_Casual	app_swag_Classique	-0.54046404455862
app_swag_Classique	app_swag_Casual	-0.54046404455862
ses_gal	ses_hetero	-0.62139970839994
ses_hetero	ses_hetero	-0.58571083999405
ses_hetero	ses_gal	-0.62129970839994
ses_hetero	ses_hetero	-0.58571083999405
cons_coffee_TimH	cons_coffee_place_noCoffee	-0.50597352563298
cons_coffee_place_noCoffee	cons_coffee_TimH	-0.50597352563298
cons_Vegan	cons_Meat	-0.60311648287173
cons_Meat	cons_Vege	-0.45700571849387
cons_Meat	cons_Vegan	-0.45700571849387
ses_dwelling_detachedHouse	ses_dwelling_detachedHouse	-0.42068059212734
ses_dwelling_app	ses_dwelling_detachedHouse	-0.42068059212734
cons_SmokeNever	cons_SmokeStopped	-0.7026477065269
cons_SmokeStopped	cons_SmokeNever	-0.7026477065269
immigrant	ses_languageOther	-0.30704914397
ses_languageOther	immigrant	0.30704914397
act_Hunting	act_Fishing	0.49204865158295
act_MotorizedOutdoorActivities	act_Fishing	0.44579344724629
act_Fishing	act_Hunting	0.44579344724629
act_MotorizedOutdoorActivities	act_Hunting	0.47210840947931
act_Fishing	act_MotorizedOutdoorActivities	0.44579344724629
act_Hunting	act_MotorizedOutdoorActivities	0.47210840947931

## 1.2 Variables sélectionnées

### 1.2.1 Sélection variables activité

**act\_VisitsMuseumsGalleries, act\_Volunteering, act\_Yoga, act\_Run, act\_Gym** ont des contributions intéressantes à au moins 1 des 4 dimensions et ne sont pas corrélées

entre-elles.

**act\_MotorizedOutdoorActivities**, **act\_Fishing**, et **act\_Hunting** ont de très bonnes contributions mais sont corrélées entre-elles. **act\_MotorizedOutdoorActivities** est conservée car elle a la plus grande contribution pondérée.

### **1.2.2 Sélection variables apparence**

**app\_noTattoo**, **app\_swag\_Casual** et **app\_swag\_VintageHippBoheme**

### **1.2.3 Sélection variables cons\_alcool**

**cons\_regBeers**, **cons\_cocktailsDrink**, **cons\_microBeers**, **cons\_redWineDrink**, **cons\_noDrink**

### **1.2.4 Sélection variables cons\_brand**

**cons\_brand\_ChainesB**, **cons\_brand\_GSurf**, **cons\_brand\_MaR**, **cons\_brand\_Frip**

### **1.2.5 Sélection variables cons\_coffee**

**cons\_coffee\_Starbucks** **cons\_coffee\_place\_noCoffee** et **cons\_coffee\_TimH** sont sélectionnées

### **1.2.6 Sélection variables cons\_food**

**cons\_Meat** et **cons\_Vege** sont sélectionnées.

### **1.2.7 Sélection variables cons\_tabac**

**cons\_SmokeNever** est sélectionnée, était corrélée avec **cons\_SmokeStopped** **cons\_Smoke** aussi sélectionnée car pas corrélée?

### **1.2.8 Sélection variables demographie**

**immigrant** et **educUniv** sont sélectionnées

**age34m** et **age55p** sont sélectionnées,

**male** et **female** sont parfaitement corrélées, **male** a une contribution légèrement supérieure

**ses\_hetero**, **ses\_gai**, **ses\_bisex** sont sélectionnées

**langFr**, **langEN** et **ses\_languageOther** sont sélectionnées

**incomeLow** et **incomeHigh** sont sélectionnées

### 1.2.9 Sélection variables habitat

**ses\_dwelling\_condo**, **ses\_dwelling\_app** et **ses\_dwelling\_detachedHouse** sont sélectionnées

### 1.2.10 Sélection variables transport

**act\_transport\_PublicTransportation**, **act\_transport\_Walk** et **act\_transport\_Car** sont sélectionnées

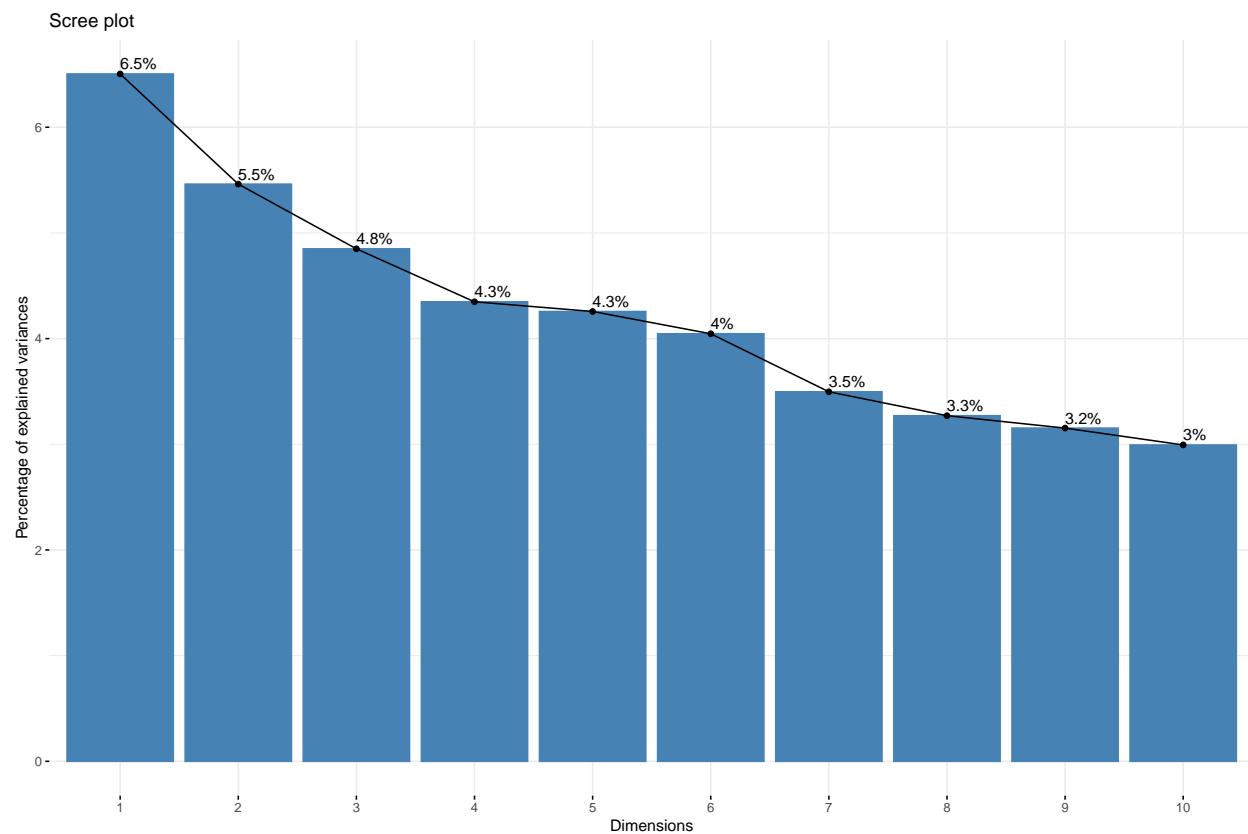
## 1.3 PCA sur variables sélectionnées

Importance of components:

	PC1	PC2	PC3	PC4	PC5	PC6	PC7
Standard deviation	1.71085	1.56775	1.4773	1.39884	1.38401	1.34932	1.25443
Proportion of Variance	0.06504	0.05462	0.0485	0.04348	0.04257	0.04046	0.03497
Cumulative Proportion	0.06504	0.11966	0.1682	0.21164	0.25421	0.29467	0.32964
	PC8	PC9	PC10	PC11	PC12	PC13	PC14
Standard deviation	1.21318	1.19119	1.16069	1.14802	1.11822	1.08412	1.07608
Proportion of Variance	0.03271	0.03153	0.02994	0.02929	0.02779	0.02612	0.02573
Cumulative Proportion	0.36234	0.39388	0.42381	0.45310	0.48089	0.50701	0.53274
	PC15	PC16	PC17	PC18	PC19	PC20	PC21
Standard deviation	1.0670	1.05442	1.04601	1.04299	1.02190	1.00419	1.00197
Proportion of Variance	0.0253	0.02471	0.02431	0.02417	0.02321	0.02241	0.02231
Cumulative Proportion	0.5580	0.58275	0.60706	0.63123	0.65444	0.67685	0.69916
	PC22	PC23	PC24	PC25	PC26	PC27	PC28
Standard deviation	0.98342	0.95872	0.94931	0.92768	0.92428	0.8899	0.85620
Proportion of Variance	0.02149	0.02043	0.02003	0.01912	0.01898	0.0176	0.01629
Cumulative Proportion	0.72065	0.74107	0.76110	0.78023	0.79921	0.8168	0.83310
	PC29	PC30	PC31	PC32	PC33	PC34	PC35
Standard deviation	0.85588	0.84138	0.82845	0.80286	0.77508	0.77101	0.75505
Proportion of Variance	0.01628	0.01573	0.01525	0.01432	0.01335	0.01321	0.01267
Cumulative Proportion	0.84938	0.86511	0.88036	0.89468	0.90803	0.92124	0.93391
	PC36	PC37	PC38	PC39	PC40	PC41	PC42
Standard deviation	0.73359	0.67669	0.61527	0.59382	0.57163	0.53701	0.51815
Proportion of Variance	0.01196	0.01018	0.00841	0.00784	0.00726	0.00641	0.00597
Cumulative Proportion	0.94587	0.95605	0.96446	0.97230	0.97956	0.98597	0.99193
	PC43	PC44	PC45				
Standard deviation	0.49581	0.34239	2.154e-15				
Proportion of Variance	0.00546	0.00261	0.0000e+00				
Cumulative Proportion	0.99739	1.00000	1.0000e+00				
	PC1	PC2	PC3				
act_VisitsMuseumsGaleries	0.22682950	-0.01646744	0.212911527				
act_Volunteering	0.14296543	-0.04813213	0.116555327				
act_Yoga	0.25406420	0.02242444	0.008785530				
act_Run	0.24604666	-0.05866290	-0.028838225				
act_Gym	0.22536928	-0.09103727	-0.034161906				
act_MotorizedOutdoorActivities	0.16013692	-0.04775882	-0.165574880				

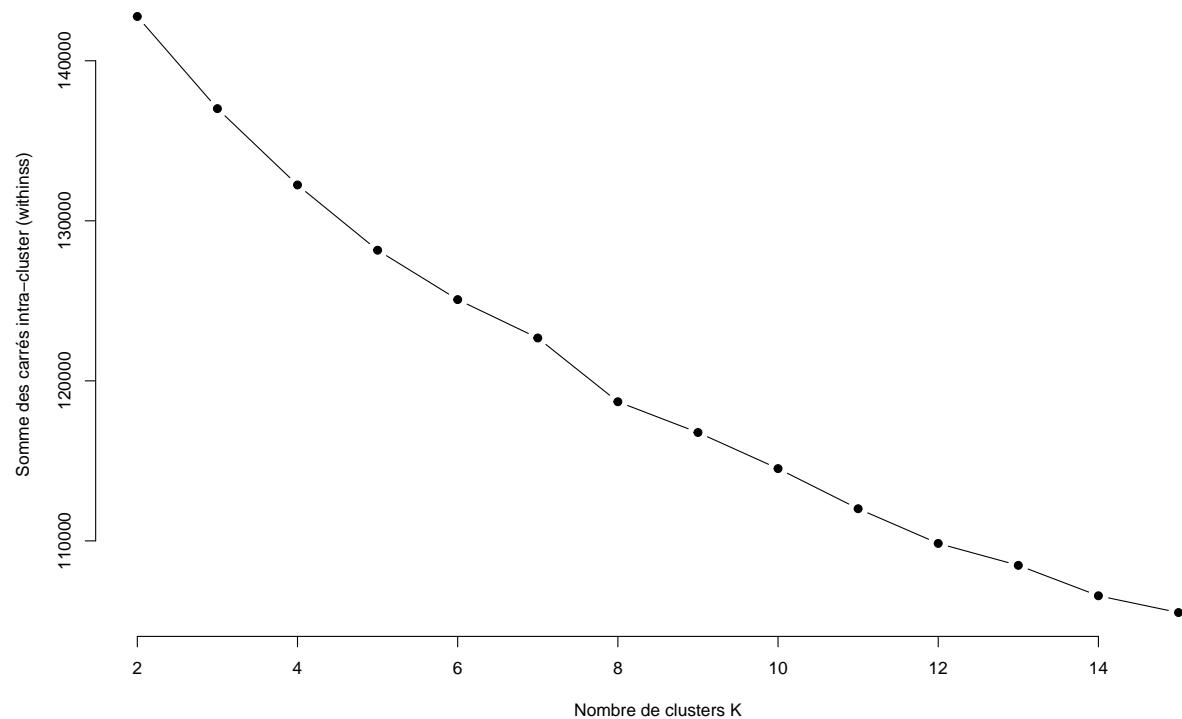
act_None	-0.17427288	0.06950548	-0.053162953
app_noTattoo	-0.13039860	-0.05369621	0.302320546
app_swag_Casual	-0.15484169	-0.07898239	0.038726617
app_swag_VintageHippBoheme	0.10922819	0.12024765	-0.046191082
cons_regBeers	-0.08045441	0.08318226	-0.081981182
cons_cocktailsDrink	0.13446928	-0.05860696	-0.133827527
cons_microBeers	0.06031791	-0.07457353	0.033992659
cons_redWineDrink	-0.04202277	-0.05311082	0.160326802
cons_noDrink	-0.06403165	0.12140750	0.004750628
cons_brand_ChainesB	0.18001858	-0.17215387	-0.059445294
cons_brand_GSurf	-0.18489184	0.04250414	-0.073723832
cons_brand_MaR	-0.03376372	0.01621178	0.167117118
cons_brand_Frip	0.03022238	0.13649234	-0.050396733
cons_coffee_Starbucks	0.19704762	-0.09604556	0.021430475
cons_coffee_place_noCoffee	-0.19187516	-0.01121135	0.155689082
cons_coffee_TimH	0.01320008	0.06720248	-0.181581576
cons_Meat	-0.20722726	-0.15440022	-0.073655775
cons_Vege	0.20042429	0.14442282	0.072764296
cons_SmokeNever	0.13029169	-0.18412411	0.066160393
cons_Smoke	-0.05328286	0.21301420	-0.131652340
immigrant	0.12324877	0.03515033	0.271343357
educUniv	0.15874886	-0.18993954	0.171761871
educBHS	-0.06526220	0.09209207	-0.068174080
age55p	-0.33142971	0.01277801	0.239303036
age34m	0.33015847	0.03854762	-0.214128773
male	-0.08649711	0.02181144	0.108729033
ses_hetero	-0.13857804	-0.22196441	-0.010099117
ses_gai	0.07807930	0.16566871	0.064971613
langEn	0.02463751	0.13501023	0.253748400
langFr	-0.07810987	-0.13176514	-0.401084170
ses_languageOther	0.09305558	0.02111304	0.292838246
incomeHigh	0.11234910	-0.31926480	0.051293738
incomeLow	-0.05051232	0.30599126	-0.124705027
ses_dwelling_condo	0.08641764	0.07688984	0.173833187
ses_dwelling_detachedHouse	-0.09026621	-0.33485898	-0.020680362
ses_dwelling_app	0.02116282	0.27915546	-0.140771784
act_transport_PublicTransportation	0.10560295	0.18956825	0.028331602
act_transport_Car	-0.08157503	-0.28688084	-0.102676388
act_transport_Walk	0.03406115	0.24979599	0.121016486
	PC4		
act_VisitsMuseumsGaleries	-0.16803736		
act_Volunteering	-0.14870813		
act_Yoga	0.01717637		
act_Run	0.04908709		
act_Gym	0.03438308		
act_MotorizedOutdoorActivities	0.05600647		
act_None	0.09441885		
app_noTattoo	-0.03056000		

app_swag_Casual	0.01739817
app_swag_VintageHippBoheme	-0.02533078
cons_regBeers	0.10905707
cons_cocktailsDrink	0.06685135
cons_microBeers	-0.05132157
cons_redWineDrink	-0.18957844
cons_noDrink	0.10746310
cons_brand_ChainesB	0.07878909
cons_brand_GSurf	0.09235021
cons_brand_MaR	-0.11581651
cons_brand_Frip	-0.06586464
cons_coffee_Starbucks	0.02317948
cons_coffee_place_noCoffee	-0.21680224
cons_coffee_TimH	0.25472920
cons_Meat	0.17998293
cons_Vege	-0.17840852
cons_SmokeNever	-0.02666344
cons_Smoke	0.09553850
immigrant	0.18928276
educUniv	-0.11284262
educBHS	0.09472068
age55p	-0.14484069
age34m	0.07919231
male	-0.04155589
ses_hetero	0.19874415
ses_gai	-0.23383740
langEn	0.34521772
langFr	-0.47163715
ses_languageOther	0.27625927
incomeHigh	-0.03798740
incomeLow	0.01911020
ses_dwelling_condo	-0.03473816
ses_dwelling_detachedHouse	0.02732126
ses_dwelling_app	-0.04583601
act_transport_PublicTransportation	0.02802798
act_transport_Car	0.10572291
act_transport_Walk	-0.17297251

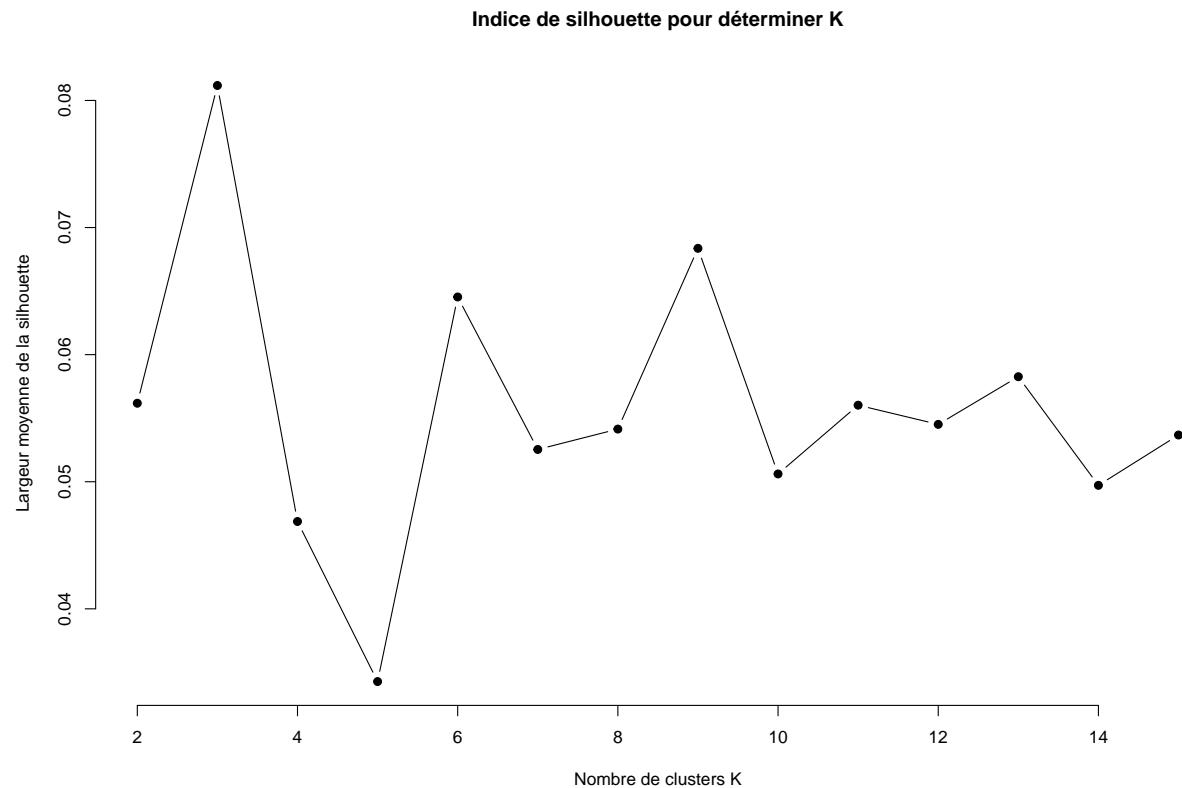


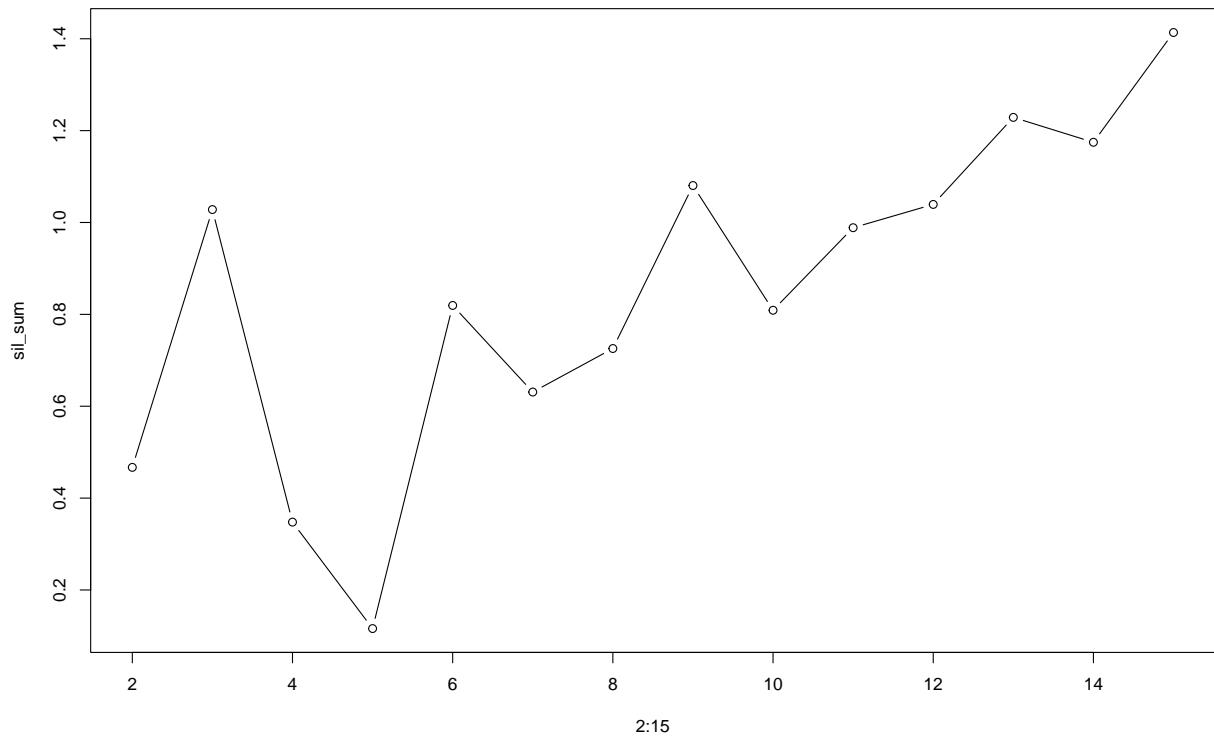
## 1.4 Méthode du coude

Méthode du coude pour déterminer K

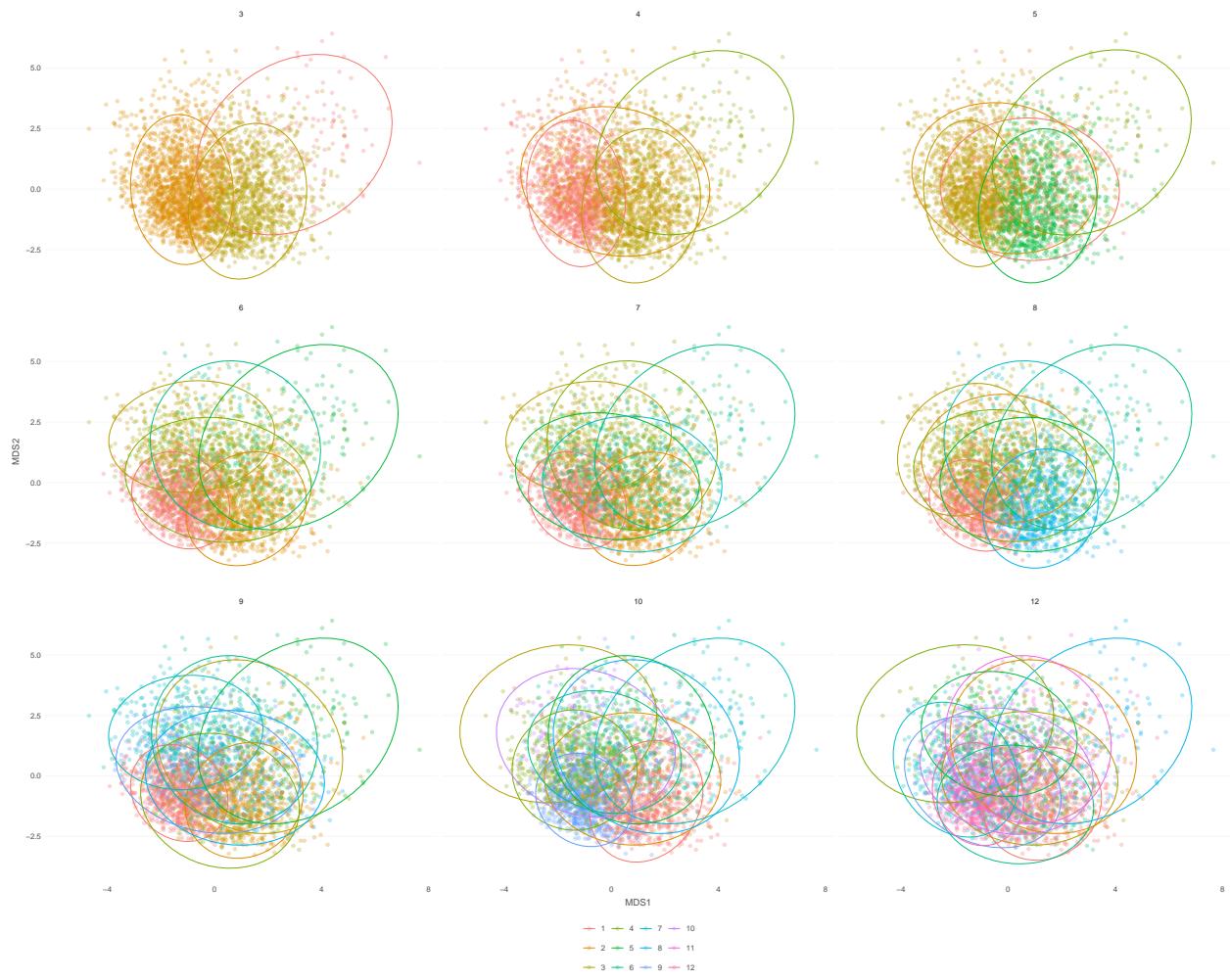


## 1.5 Silhouette





## 1.6 Nombre de cluster



## 1.7 répondants par cluster

Table 1: Nombre de répondants par cluster

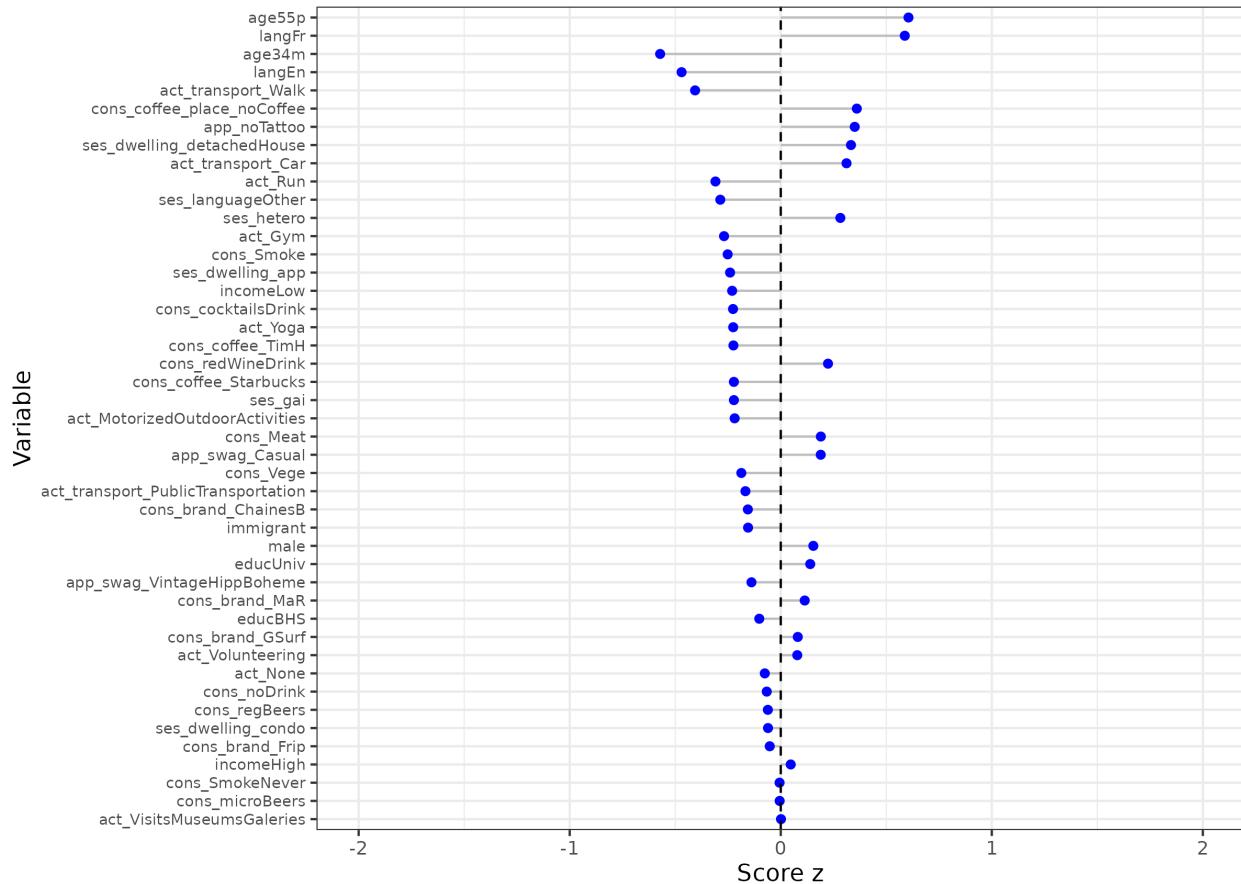
	Cluster_1	Cluster_2	Cluster_3	Cluster_4	Cluster_5	Cluster_6	Cluster_7	Cluster_8	Cluster_9	Cluster_10	Cluster_11	Cluster_12
k = 3	134	1809	1379									
k = 4	1346	808	1051	117								
k = 5	241	571	1343	116	1051							
k = 6	1038	823	478	724	113	146						
k = 7	1032	821	461	146	518	112	232					
k = 8	886	278	397	521	230	112	146	752				
k = 9	926	702	96	260	112	142	403	225	456			
k = 10	780	223	34	569	142	312	112	96	815	239		
k = 12	555	96	221	34	295	241	247	112	225	412	142	742

10 clusters

## 2 Description des Clusters

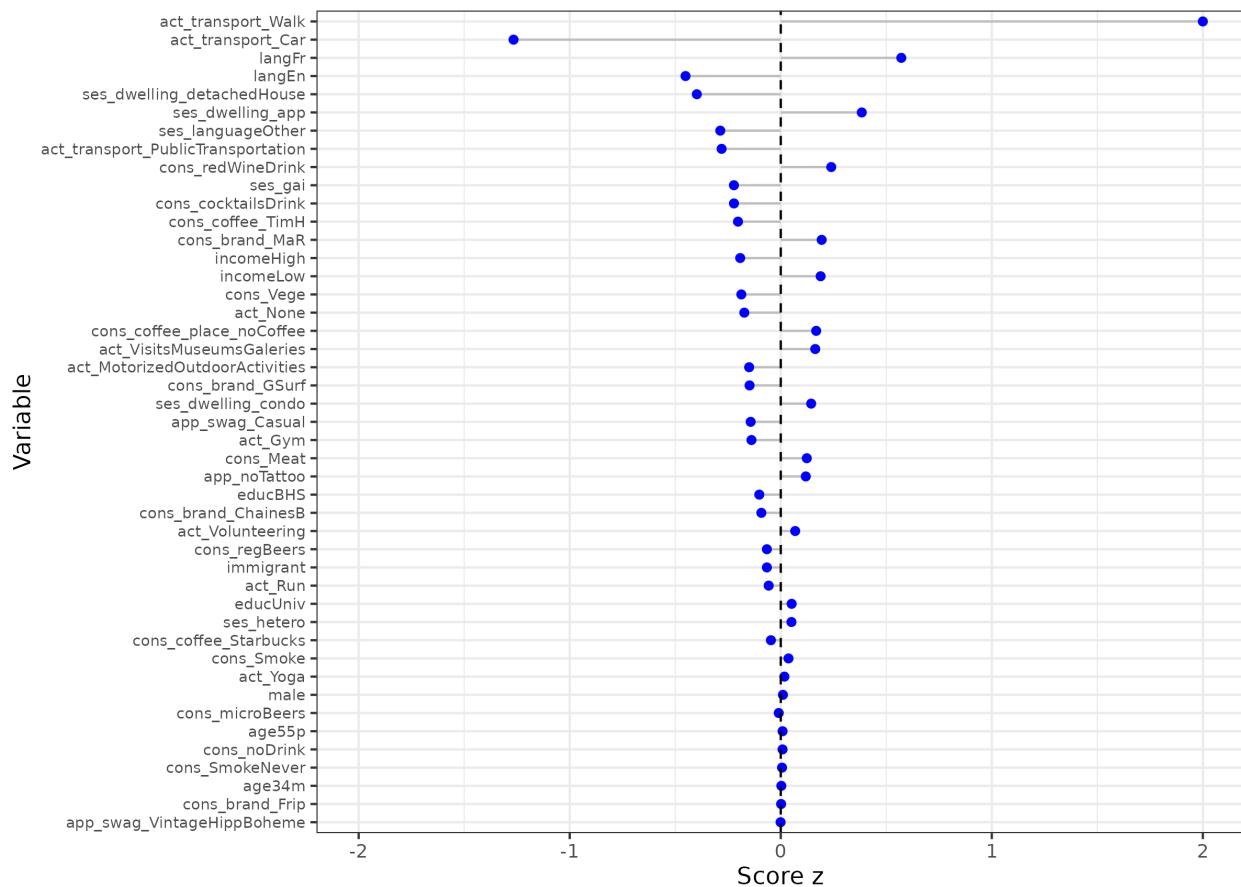
### 2.1 Cluster 1 :

Scores z des variables pour le cluster 1

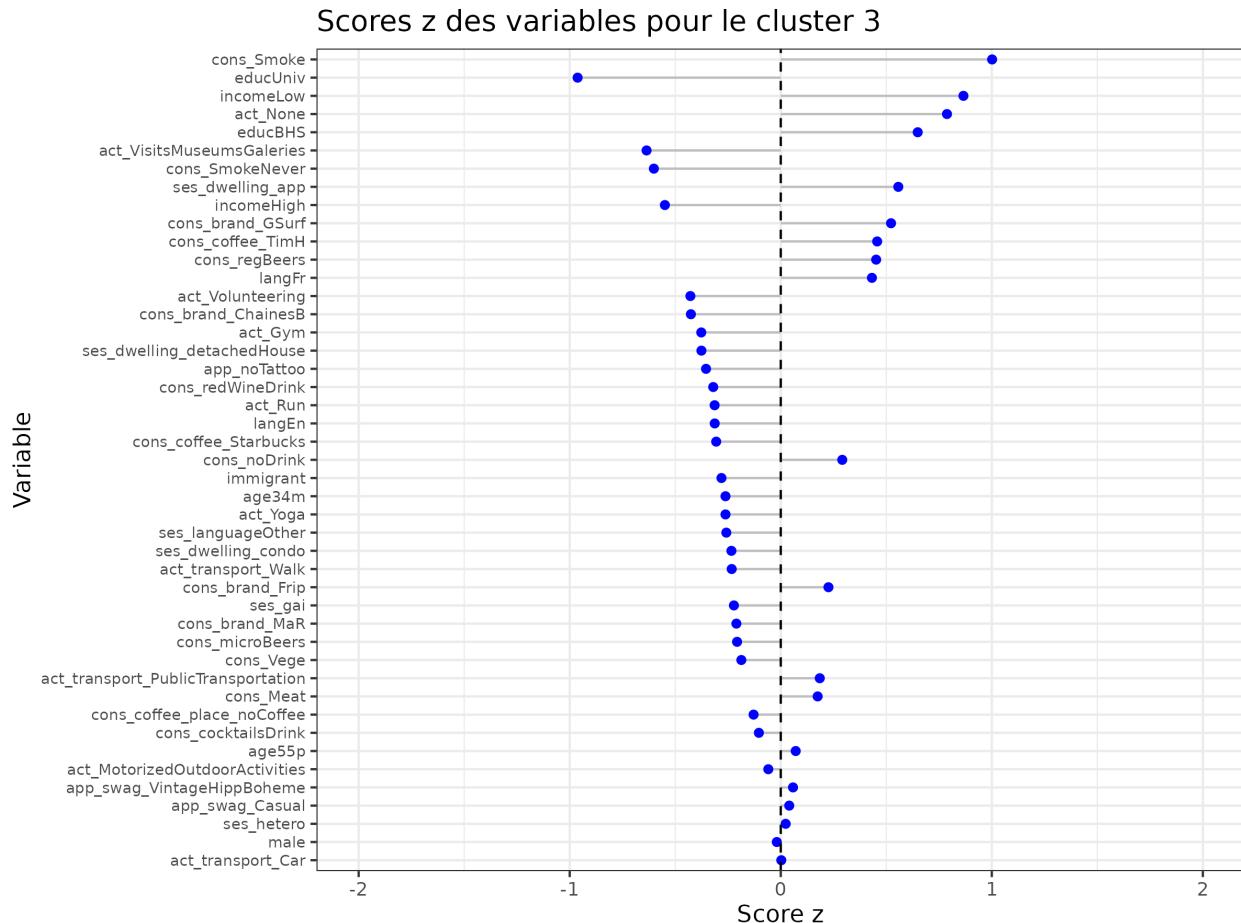


## 2.2 Cluster 2 : Jeunes hommes éduqués, amateurs de bières artisanales et de mode de vie actif

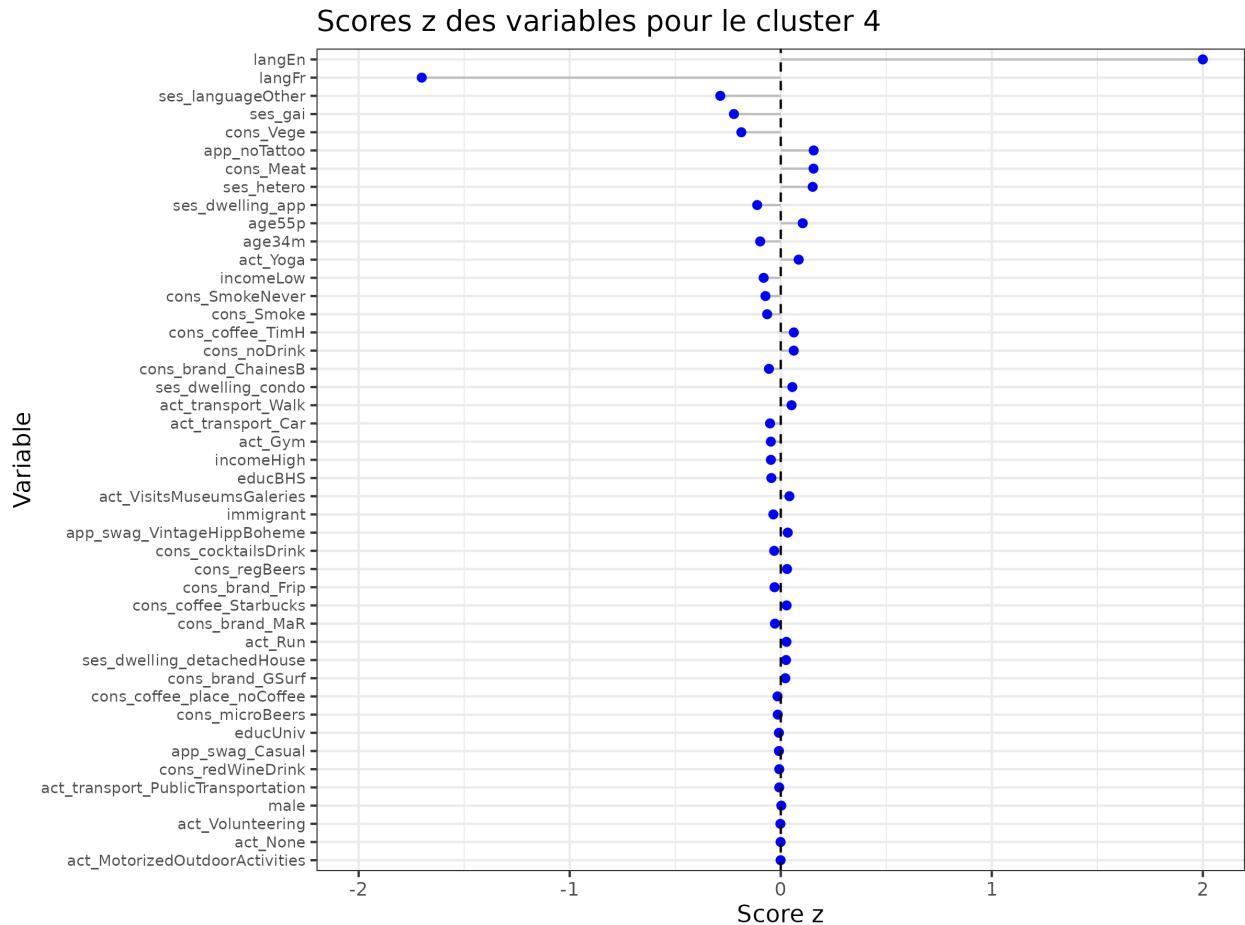
Scores z des variables pour le cluster 2



## 2.3 Cluster 3 : Individus sobres, peu diplômés, et enclins à un style de vie simple

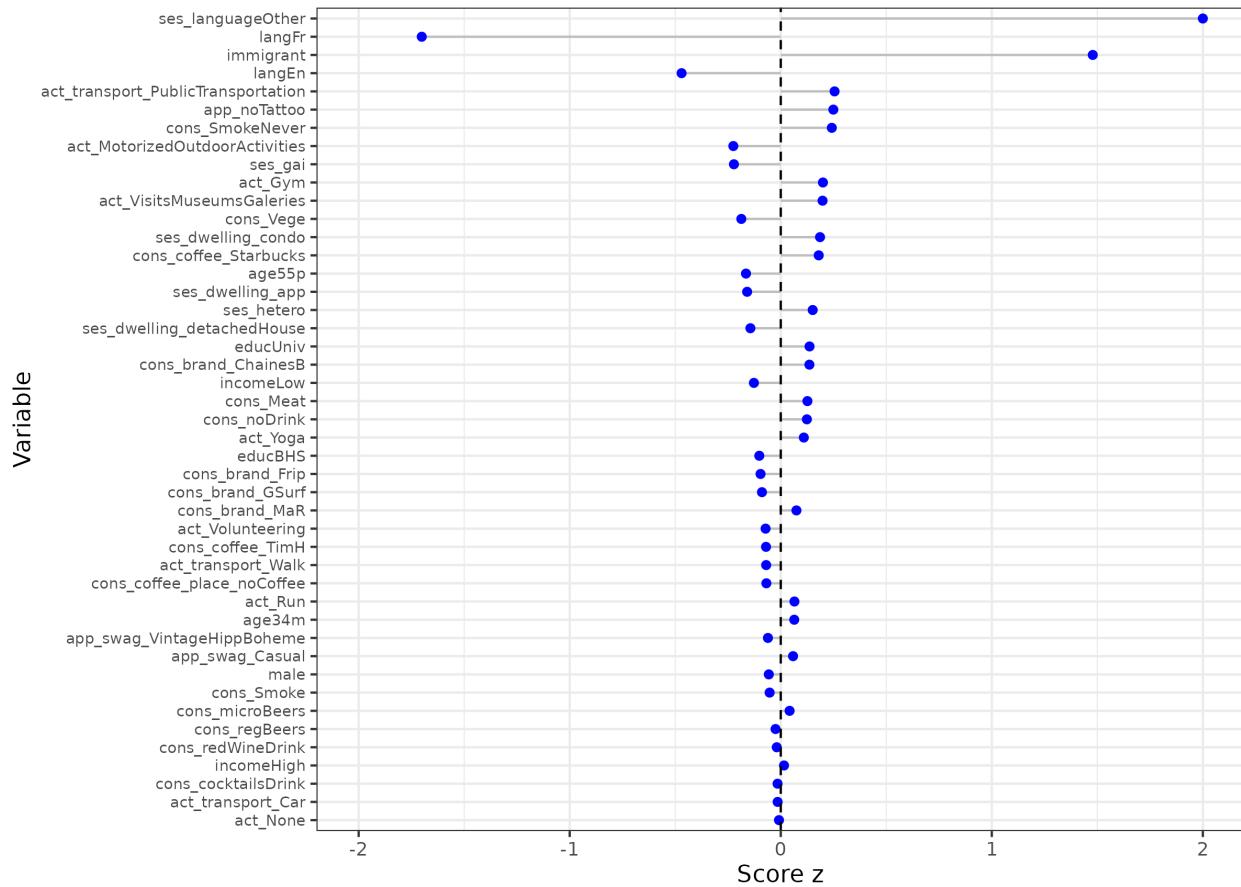


## 2.4 Cluster 4 : Jeunes femmes au style vintage, actives culturellement et modérées dans leur consommation de viande

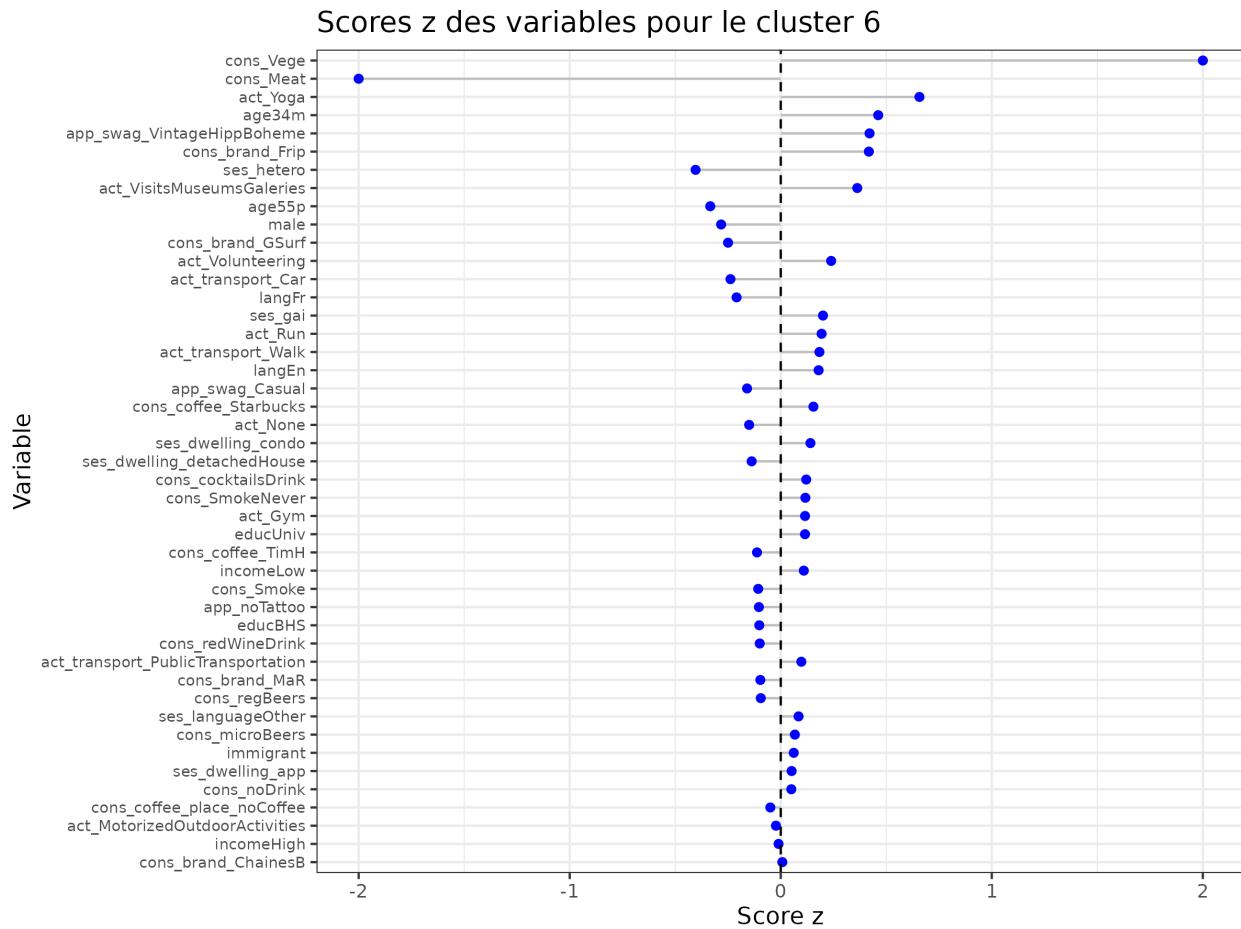


## 2.5 Cluster 5 : Seniors traditionnels et consommateurs de vin rouge

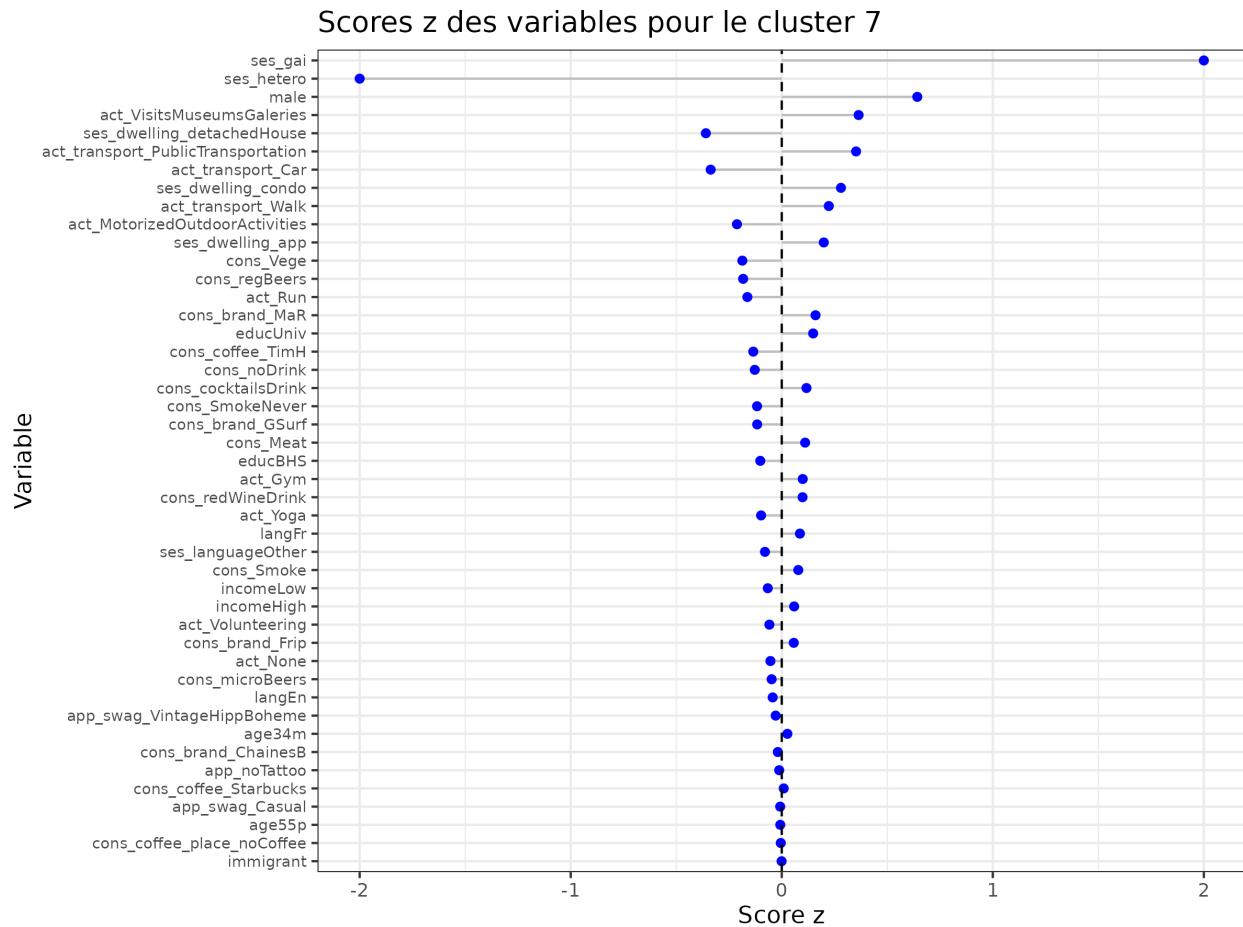
Scores z des variables pour le cluster 5



## 2.6 Cluster 6 : Hommes francophones amateurs de bière régulièr



## 2.7 Cluster 7 : Jeunes urbains adeptes des transports publics



## 2.8 Cluster 8 : Femmes francophones, éduquées et consommatrices de cocktails

