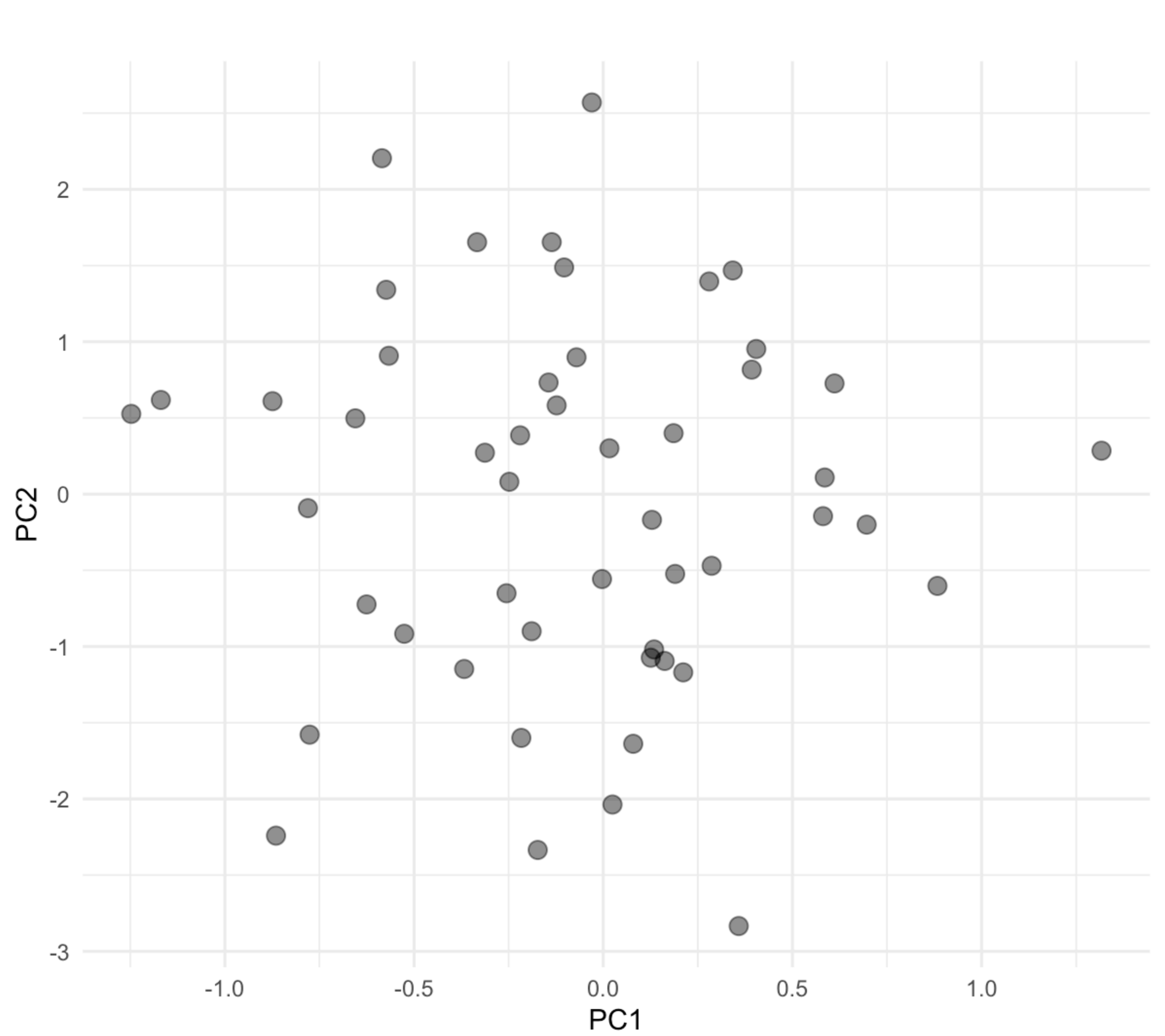
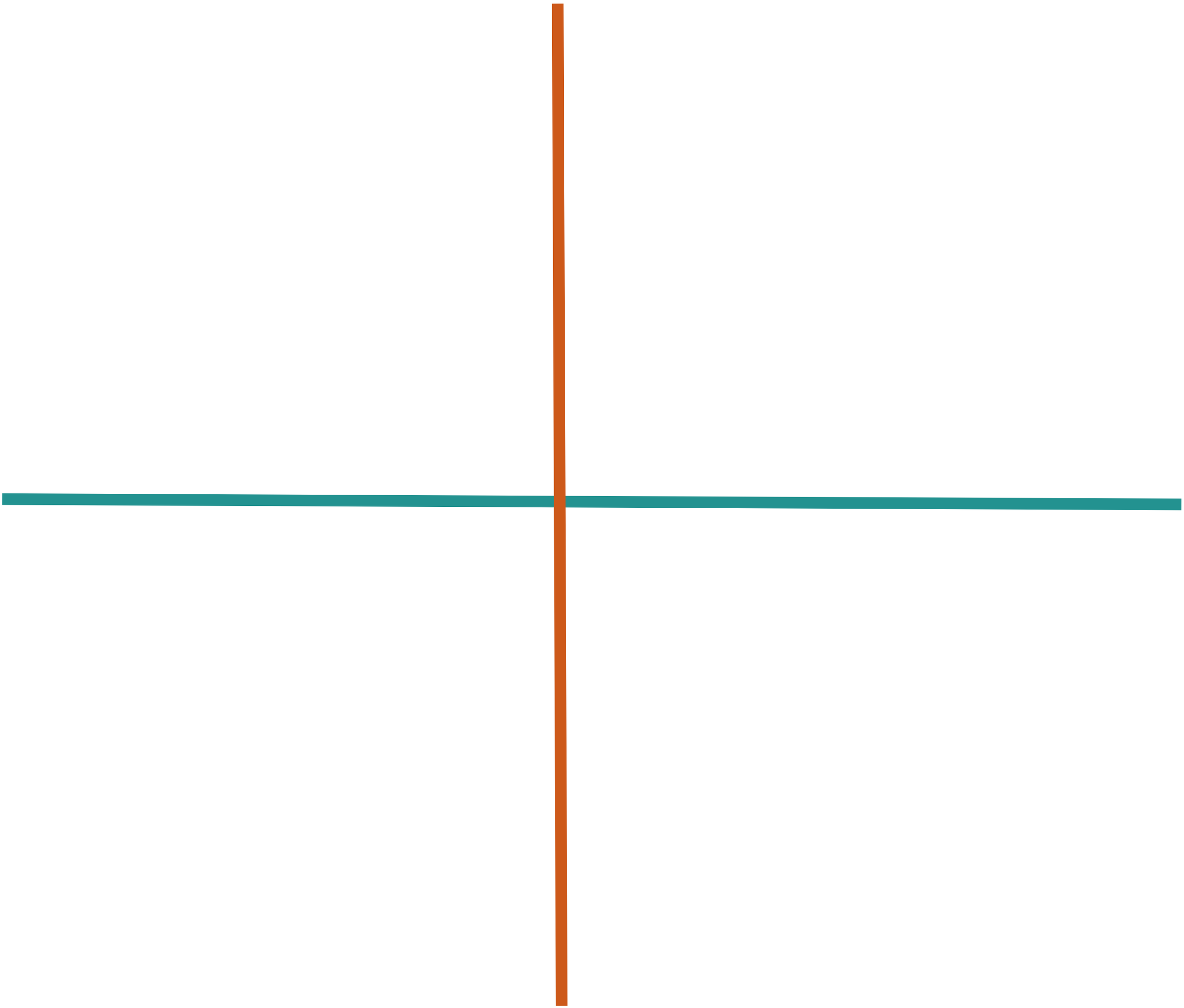

2
1
0
-1
-2
-3
PC2
-1.0
-0.5
0.0
0.5
1.0
PC1


Example



X and Y contribute equally (0.71), so PC1 represents an overall trend

X and Y contribute oppositely (0.71 and -0.71), so PC2 measures the difference between them

$$\text{eigenvect}_1 = \begin{bmatrix} 0.71 \\ 0.71 \end{bmatrix}$$

$$\text{eigenvect}_2 = \begin{bmatrix} 0.71 \\ -0.71 \end{bmatrix}$$

Example

$$\text{eigenvect}_1 = \begin{bmatrix} 0.71 \\ 0.71 \end{bmatrix}$$

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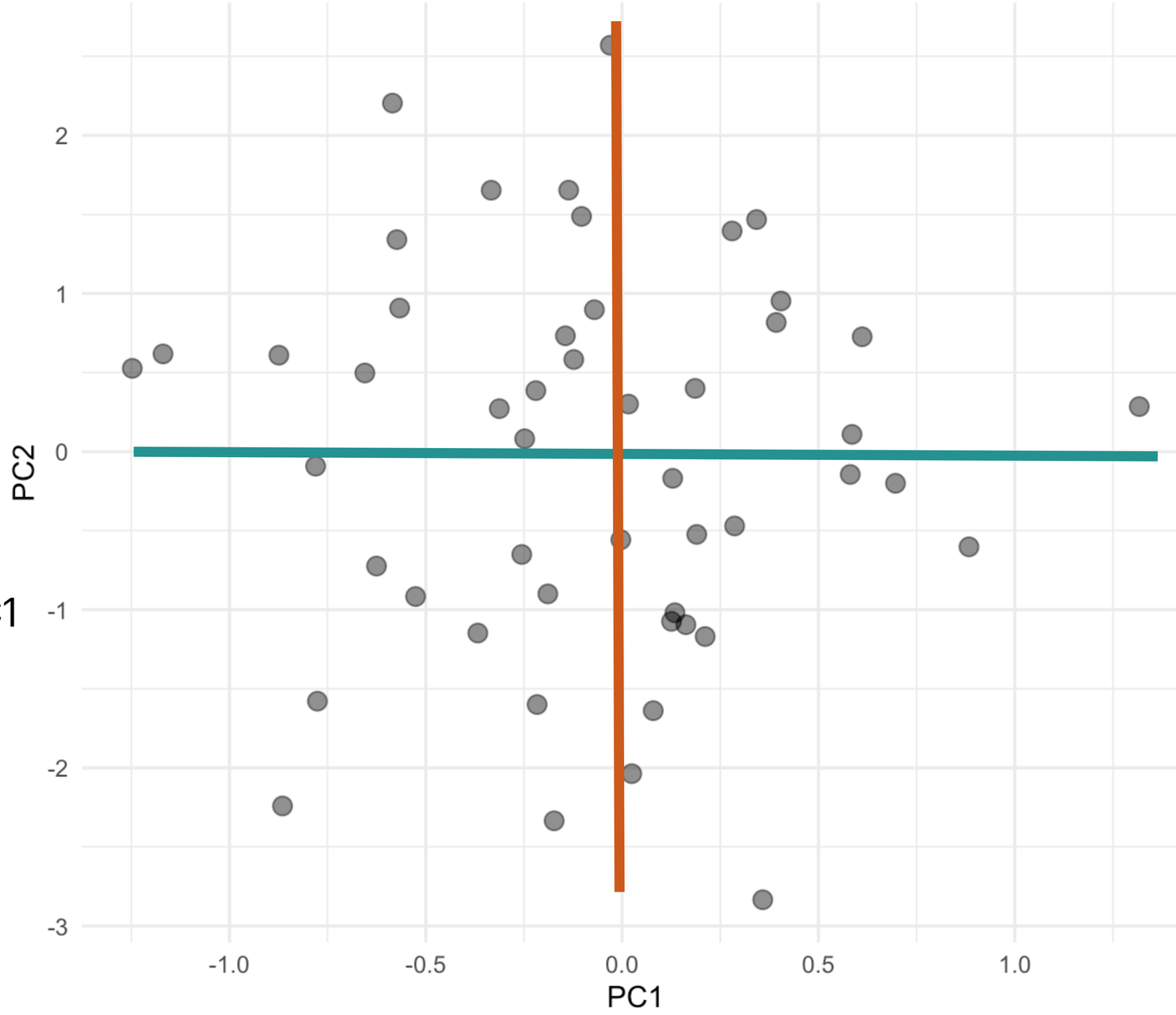

Example: Loadings

Variable	PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8
Income	0.314	0.145	-0.676	-0.347	-0.241	0.494	0.018	-0.030
Education	0.237	0.444	-0.401	0.240	0.622	-0.357	0.103	0.057
Age	0.484	-0.135	-0.004	-0.212	-0.175	-0.487	-0.657	-0.052
Residence	0.466	-0.277	0.091	0.116	-0.035	-0.085	0.487	-0.662
Employ	0.459	-0.304	0.122	-0.017	-0.014	-0.023	0.368	0.739
Savings	0.404	0.219	0.366	0.436	0.143	0.568	-0.348	-0.017
Debt	-0.067	-0.585	-0.078	-0.281	0.681	0.245	-0.196	-0.075
Credit cards	-0.123	-0.452	-0.468	0.703	-0.195	-0.022	-0.158	0.058