

Supplementary Figure 7

Cluster/population associations: Heatmaps representing the odds ratios of clusters/population associations for each gene, and for both country and continent are shown. The cells are coloured based on the logarithmic value of the correspondent odds ratios, and the absolute values are reported. Significant cluster/population associations are marked by blue borders. Clusters with less than 3 isolates were excluded from the analysis.

The heatmaps were generated for both max CGS and max MCC cuts.

BDLF4 : grouping per country – max CGS

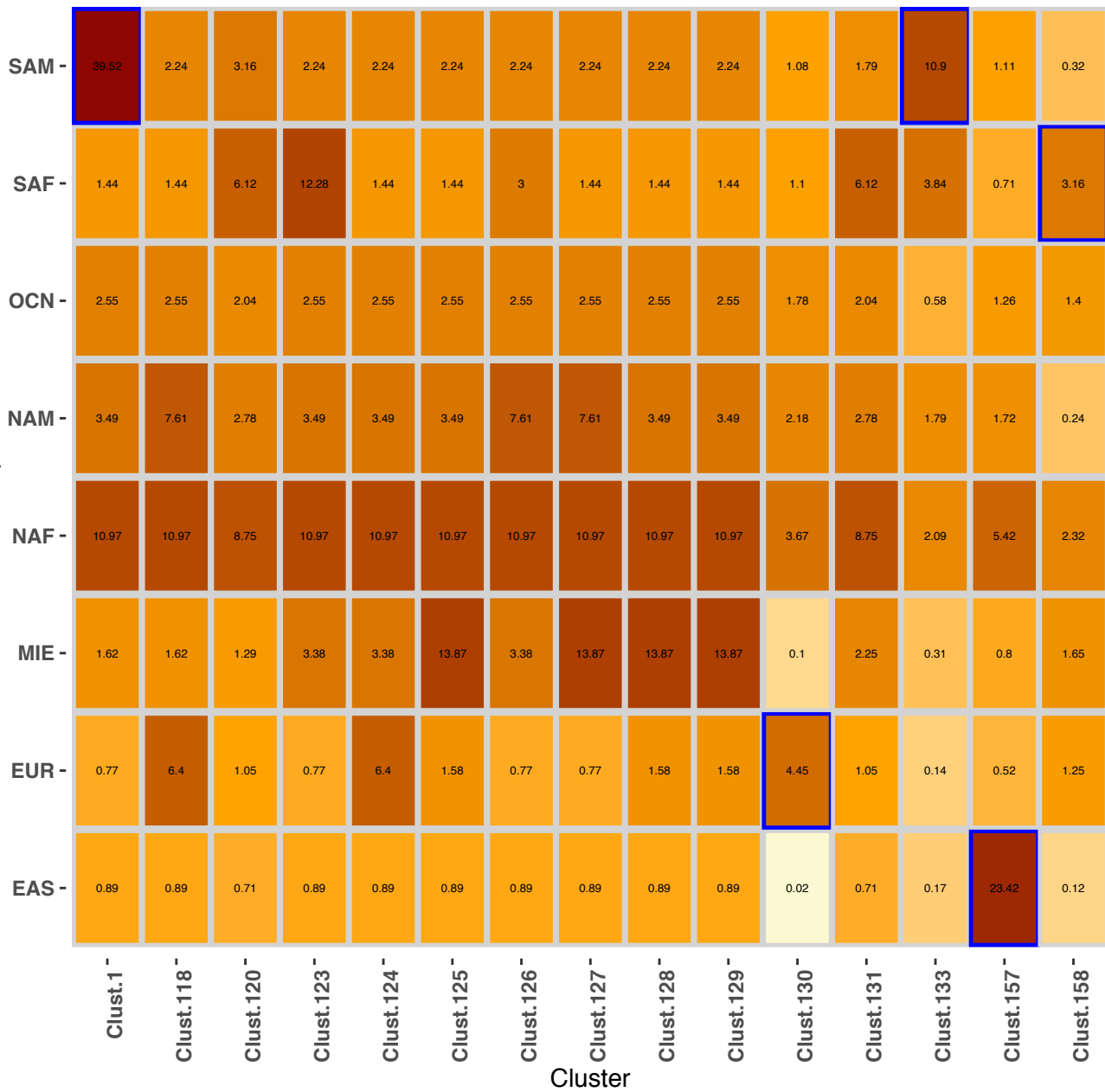
| Pop | | Cluster | | | | | | | | | | | | | | |
|-----|---|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | Clust.1 | Clust.118 | Clust.120 | Clust.123 | Clust.124 | Clust.125 | Clust.126 | Clust.127 | Clust.128 | Clust.129 | Clust.130 | Clust.131 | Clust.133 | Clust.157 | Clust.158 |
| WG | - | 2.74 | 2.74 | 2.19 | 5.88 | 5.88 | 24.44 | 5.88 | 2.74 | 2.74 | 24.44 | 0.09 | 3.9 | 0.52 | 1.35 | 2.36 |
| USA | - | 3.49 | 7.61 | 2.78 | 3.49 | 3.49 | 3.49 | 7.61 | 7.61 | 3.49 | 3.49 | 2.18 | 2.78 | 1.79 | 1.72 | 0.24 |
| UK | - | 1.58 | 13.52 | 1.26 | 1.58 | 1.58 | 1.58 | 1.58 | 1.58 | 1.58 | 1.58 | 3.56 | 2.19 | 0.3 | 1.09 | 1.16 |
| UG | - | 12.57 | 12.57 | 10.03 | 12.57 | 12.57 | 12.57 | 12.57 | 12.57 | 12.57 | 12.57 | 1.34 | 10.03 | 9.91 | 6.21 | 1.14 |
| TW | - | 14.71 | 14.71 | 11.73 | 14.71 | 14.71 | 14.71 | 14.71 | 14.71 | 14.71 | 14.71 | 0.43 | 11.73 | 2.81 | 7.27 | 0.92 |
| TU | - | 4.47 | 4.47 | 3.57 | 4.47 | 4.47 | 4.47 | 4.47 | 42.62 | 42.62 | 4.47 | 0.15 | 3.57 | 0.85 | 2.21 | 0.7 |
| SK | - | 44.62 | 44.62 | 35.6 | 44.62 | 44.62 | 44.62 | 44.62 | 44.62 | 44.62 | 44.62 | 1.32 | 35.6 | 8.53 | 22.06 | 2.78 |
| SA | - | 17.7 | 17.7 | 14.12 | 17.7 | 17.7 | 17.7 | 59 | 17.7 | 17.7 | 17.7 | 0.52 | 14.12 | 6.26 | 8.75 | 1.91 |
| PO | - | 7.91 | 7.91 | 12.85 | 7.91 | 19.33 | 7.91 | 7.91 | 7.91 | 19.33 | 19.33 | 0.23 | 6.31 | 1.51 | 3.91 | 2.51 |
| PN | - | 7.23 | 7.23 | 5.77 | 7.23 | 7.23 | 7.23 | 7.23 | 7.23 | 7.23 | 7.23 | 0.21 | 5.77 | 1.38 | 3.57 | 0.45 |
| NG | - | 29.67 | 29.67 | 23.67 | 29.67 | 29.67 | 29.67 | 29.67 | 29.67 | 29.67 | 29.67 | 0.88 | 23.67 | 5.67 | 14.67 | 17.38 |
| NAF | - | 10.97 | 10.97 | 8.75 | 10.97 | 10.97 | 10.97 | 10.97 | 10.97 | 10.97 | 10.97 | 3.67 | 8.75 | 2.09 | 5.42 | 2.32 |
| KE | - | 2.96 | 2.96 | 13.24 | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 | 0.93 | 13.24 | 3.69 | 1.46 | 3.2 |
| JP | - | 7.91 | 7.91 | 6.31 | 7.91 | 7.91 | 7.91 | 7.91 | 7.91 | 7.91 | 7.91 | 0.23 | 6.31 | 1.51 | 3.91 | 0.49 |
| IT | - | 2.96 | 2.96 | 2.36 | 2.96 | 6.37 | 6.37 | 2.96 | 2.96 | 2.96 | 2.96 | 6.33 | 2.36 | 0.56 | 1.46 | 0.98 |
| IN | - | 2.96 | 2.96 | 2.36 | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 | 0.09 | 2.36 | 0.56 | 37.61 | 0.2 |
| HK | - | 7.23 | 7.23 | 5.77 | 7.23 | 7.23 | 7.23 | 7.23 | 7.23 | 7.23 | 7.23 | 0.21 | 5.77 | 1.38 | 3.57 | 0.45 |
| GH | - | 12.57 | 12.57 | 10.03 | 176.5 | 12.57 | 12.57 | 12.57 | 12.57 | 12.57 | 12.57 | 5.53 | 10.03 | 2.4 | 6.21 | 0.78 |
| GE | - | 44.62 | 44.62 | 35.6 | 44.62 | 44.62 | 44.62 | 44.62 | 44.62 | 44.62 | 44.62 | 5.37 | 35.6 | 8.53 | 22.06 | 2.78 |
| FR | - | 44.62 | 44.62 | 35.6 | 44.62 | 44.62 | 44.62 | 44.62 | 44.62 | 44.62 | 44.62 | 5.37 | 35.6 | 8.53 | 22.06 | 2.78 |
| CO | - | 8.72 | 8.72 | 6.96 | 8.72 | 8.72 | 8.72 | 8.72 | 8.72 | 8.72 | 8.72 | 1.35 | 6.96 | 30.09 | 4.31 | 0.54 |
| CH | - | 3.34 | 3.34 | 2.66 | 3.34 | 3.34 | 3.34 | 3.34 | 3.34 | 3.34 | 3.34 | 0.1 | 2.66 | 0.64 | 2.39 | 0.23 |
| BR | - | 12.57 | 12.57 | 23.4 | 12.57 | 12.57 | 12.57 | 12.57 | 12.57 | 12.57 | 12.57 | 2.73 | 10.03 | 2.4 | 6.21 | 0.78 |
| BO | - | 155.56 | 7.23 | 5.77 | 7.23 | 7.23 | 7.23 | 7.23 | 7.23 | 7.23 | 7.23 | 0.59 | 5.77 | 1.84 | 3.57 | 0.45 |
| AU | - | 4.02 | 4.02 | 3.21 | 4.02 | 4.02 | 4.02 | 4.02 | 4.02 | 4.02 | 4.02 | 4.43 | 3.21 | 0.94 | 1.99 | 2.61 |
| AR | - | 8.72 | 8.72 | 6.96 | 8.72 | 8.72 | 8.72 | 8.72 | 8.72 | 8.72 | 8.72 | 0.76 | 6.96 | 10.47 | 4.31 | 1.64 |
| AF | - | 10.97 | 10.97 | 8.75 | 10.97 | 10.97 | 10.97 | 10.97 | 10.97 | 10.97 | 10.97 | 1.07 | 8.75 | 2.09 | 5.42 | 4.44 |

BDLF4 : grouping per country – Max MCC

| Pop | Cluster | | | | | | | | | |
|-------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | Clust.1 | Clust.47 | Clust.53 | Clust.57 | Clust.58 | Clust.59 | Clust.64 | Clust.65 | Clust.69 | Clust.70 |
| WG - | 0.28 | 0.34 | 2.74 | 2.74 | 1.03 | 0.35 | 1.82 | 2.74 | 1.35 | 2.36 |
| USA - | 0.36 | 0.5 | 32 | 7.61 | 2.32 | 1.14 | 2.31 | 32 | 1.72 | 0.24 |
| UK - | 0.38 | 0.22 | 1.58 | 13.52 | 2.23 | 0.2 | 1.05 | 1.58 | 1.09 | 1.16 |
| UG - | 1.31 | 1.55 | 12.57 | 12.57 | 0.84 | 6.31 | 8.33 | 12.57 | 6.21 | 1.14 |
| TW - | 6.73 | 18.98 | 14.71 | 14.71 | 0.27 | 1.89 | 9.75 | 14.71 | 7.27 | 0.92 |
| TU - | 0.46 | 0.55 | 10 | 4.47 | 0.84 | 0.57 | 2.96 | 4.47 | 2.21 | 0.7 |
| SK - | 19.24 | 5.52 | 44.62 | 44.62 | 0.84 | 5.72 | 29.58 | 44.62 | 22.06 | 2.78 |
| SA - | 1.85 | 2.19 | 17.7 | 17.7 | 1.7 | 4.06 | 11.73 | 17.7 | 8.75 | 1.91 |
| PO - | 0.82 | 0.98 | 7.91 | 7.91 | 1.13 | 1.01 | 5.24 | 7.91 | 3.91 | 2.51 |
| PN - | 0.96 | 0.89 | 7.23 | 7.23 | 0.13 | 0.93 | 4.79 | 7.23 | 3.57 | 0.45 |
| NG - | 3.1 | 3.67 | 29.67 | 29.67 | 0.56 | 3.8 | 19.67 | 29.67 | 14.67 | 17.38 |
| NAF - | 1.14 | 1.35 | 10.97 | 10.97 | 2.29 | 1.41 | 14.54 | 10.97 | 5.42 | 2.32 |
| KE - | 0.31 | 0.36 | 2.96 | 2.96 | 1.17 | 2.24 | 1.96 | 2.96 | 1.46 | 3.2 |
| JP - | 7.11 | 13.58 | 7.91 | 7.91 | 0.15 | 1.01 | 5.24 | 7.91 | 3.91 | 0.49 |
| IT - | 0.31 | 0.36 | 2.96 | 2.96 | 5.49 | 0.38 | 1.96 | 6.37 | 1.46 | 0.98 |
| IN - | 20.66 | 1.48 | 2.96 | 2.96 | 0.05 | 0.38 | 1.96 | 2.96 | 37.61 | 0.2 |
| HK - | 2.2 | 0.89 | 7.23 | 7.23 | 0.13 | 11.81 | 65.06 | 7.23 | 3.57 | 0.45 |
| GH - | 1.31 | 1.55 | 12.57 | 12.57 | 12.32 | 1.61 | 8.33 | 12.57 | 6.21 | 0.78 |
| GE - | 4.66 | 5.52 | 44.62 | 44.62 | 3.39 | 5.72 | 29.58 | 44.62 | 22.06 | 2.78 |
| FR - | 4.66 | 5.52 | 44.62 | 44.62 | 3.39 | 5.72 | 29.58 | 44.62 | 22.06 | 2.78 |
| CO - | 0.91 | 1.08 | 8.72 | 8.72 | 0.84 | 17.83 | 5.78 | 8.72 | 4.31 | 0.54 |
| CH - | 1.41 | 49.69 | 3.34 | 3.34 | 0.06 | 1.08 | 2.21 | 3.34 | 2.39 | 0.23 |
| BR - | 1.95 | 1.55 | 12.57 | 12.57 | 3.45 | 1.61 | 17.5 | 12.57 | 6.21 | 0.78 |
| BO - | 3.85 | 0.89 | 7.23 | 7.23 | 0.37 | 4.86 | 4.79 | 7.23 | 3.57 | 0.45 |
| AU - | 0.42 | 0.5 | 4.02 | 4.02 | 3.36 | 0.61 | 2.67 | 4.02 | 1.99 | 2.61 |
| AR - | 0.91 | 1.08 | 8.72 | 8.72 | 0.47 | 6.52 | 5.78 | 8.72 | 4.31 | 1.64 |
| AF - | 1.14 | 1.35 | 10.97 | 10.97 | 1.27 | 1.41 | 7.27 | 10.97 | 5.42 | 4.44 |

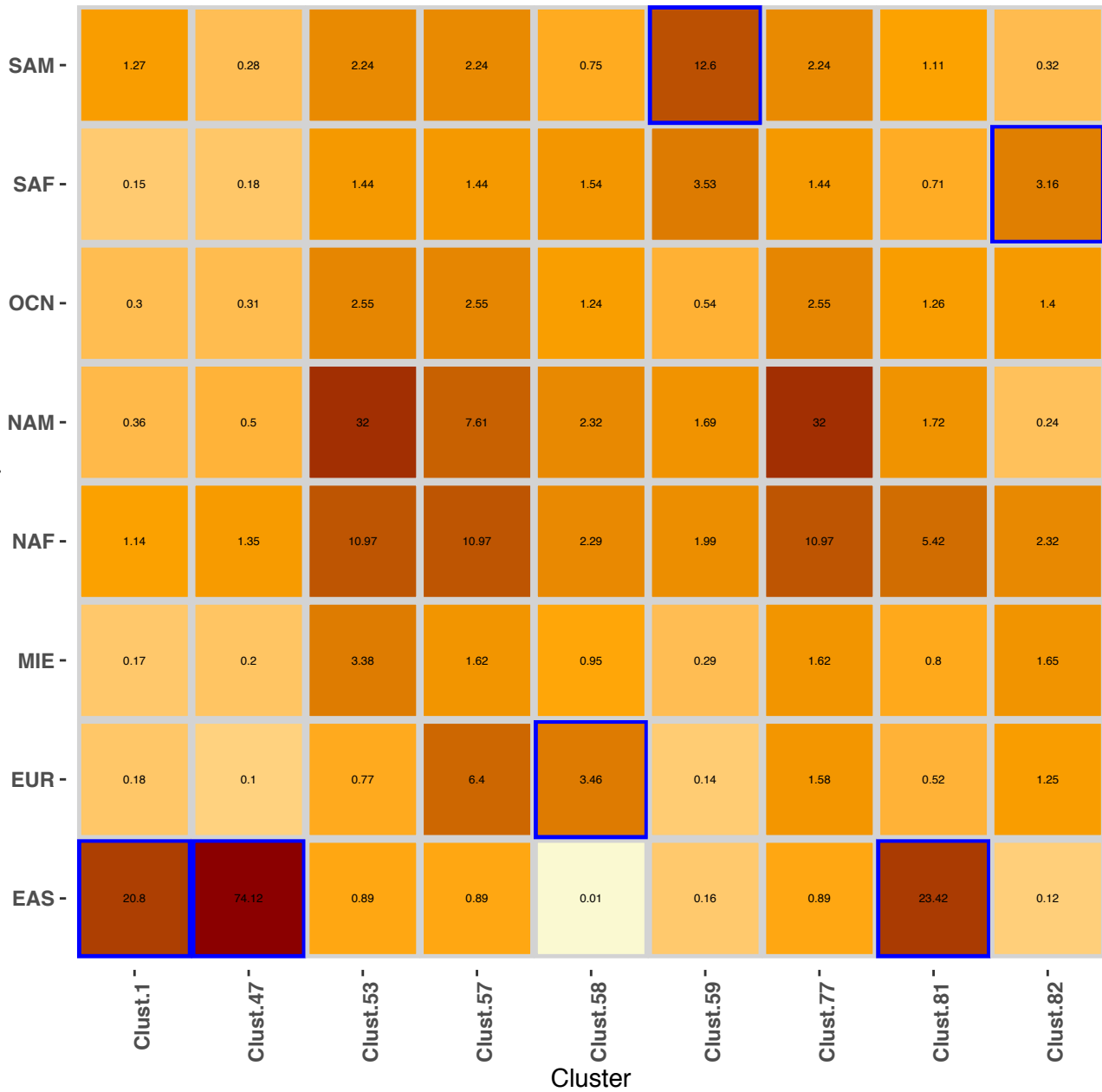
BDLF4 : grouping per continent – max CGS

Pop



BDLF4 : grouping per continent – Max MCC

Pop



BGLF4 : grouping per country – max CGS

Pop

| WG - | 0.18 | 2.75 | 0.71 | 1.56 | 38.19 | 5.89 | 1.04 | 2.75 | 26.4 | 2.26 | 1.08 | 1.2 | 12.22 | 2.19 | 2.19 |
|-------|-----------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| USA - | 0.27 | 3.66 | 0.94 | 2.07 | 2.92 | 3.66 | 5.79 | 3.66 | 2.07 | 0.64 | 1.44 | 5.55 | 2.92 | 2.92 | 5.33 |
| UK - | 0.53 | 1.66 | 0.43 | 0.94 | 1.33 | 1.66 | 0.5 | 1.66 | 0.94 | 0.98 | 2 | 0.73 | 1.33 | 1.33 | 2.31 |
| UG - | 0.82 | 12.61 | 3.26 | 7.14 | 10.06 | 12.61 | 3.78 | 35.3 | 7.14 | 1.31 | 4.96 | 5.52 | 10.06 | 10.06 | 10.06 |
| TW - | 9.4 | 14.75 | 3.81 | 8.36 | 11.77 | 14.75 | 4.42 | 14.75 | 8.36 | 1.64 | 5.8 | 6.46 | 11.77 | 11.77 | 11.77 |
| TU - | 0.29 | 4.49 | 1.16 | 2.54 | 3.58 | 42.75 | 1.78 | 4.49 | 10.59 | 0.81 | 1.76 | 7.02 | 6.67 | 3.58 | 6.67 |
| SK - | 11.92 | 44.75 | 11.57 | 25.36 | 35.7 | 44.75 | 13.42 | 44.75 | 25.36 | 3.19 | 17.6 | 19.61 | 35.7 | 35.7 | 35.7 |
| SA - | 1.15 | 17.75 | 4.59 | 10.06 | 14.16 | 17.75 | 5.32 | 17.75 | 10.06 | 1.27 | 6.98 | 16.67 | 14.16 | 14.16 | 14.16 |
| PO - | 0.51 | 7.93 | 2.05 | 4.49 | 6.33 | 7.93 | 8.53 | 7.93 | 4.49 | 1.66 | 4.76 | 5.46 | 6.33 | 6.33 | 6.33 |
| PN - | 0.47 | 7.25 | 1.87 | 409.5 | 5.78 | 7.25 | 2.17 | 7.25 | 4.11 | 0.52 | 2.85 | 3.18 | 5.78 | 130.88 | 5.78 |
| NG - | 1.94 | 29.75 | 7.69 | 16.86 | 23.73 | 29.75 | 8.92 | 29.75 | 16.86 | 20.04 | 11.7 | 13.04 | 23.73 | 23.73 | 23.73 |
| NAF - | 0.71 | 11 | 2.84 | 6.23 | 19.5 | 11 | 3.3 | 11 | 6.23 | 2.68 | 4.33 | 4.82 | 8.78 | 8.78 | 8.78 |
| KE - | 0.19 | 2.96 | 0.76 | 1.68 | 2.36 | 2.96 | 0.89 | 6.38 | 1.68 | 3.09 | 1.16 | 1.3 | 2.36 | 2.36 | 2.36 |
| JP - | 18.55 | 7.25 | 1.87 | 4.11 | 5.78 | 7.25 | 2.17 | 7.25 | 4.11 | 0.52 | 2.85 | 3.18 | 5.78 | 5.78 | 5.78 |
| IT - | 0.19 | 2.96 | 0.76 | 1.68 | 2.36 | 2.96 | 7.09 | 2.96 | 1.68 | 0.5 | 31.52 | 1.8 | 2.36 | 2.36 | 2.36 |
| IN - | 1.04 | 53.6 | 358.93 | 1.68 | 2.36 | 2.96 | 0.89 | 2.96 | 1.68 | 0.23 | 1.16 | 1.8 | 2.36 | 4.24 | 2.36 |
| HK - | 88.57 | 7.25 | 1.87 | 4.11 | 5.78 | 7.25 | 2.17 | 7.25 | 4.11 | 0.52 | 2.85 | 3.18 | 5.78 | 5.78 | 5.78 |
| GH - | 0.82 | 12.61 | 3.26 | 7.14 | 10.06 | 12.61 | 3.78 | 12.61 | 7.14 | 0.9 | 4.96 | 5.52 | 10.06 | 10.06 | 10.06 |
| GE - | 2.92 | 44.75 | 11.57 | 25.36 | 35.7 | 44.75 | 13.42 | 44.75 | 25.36 | 3.19 | 17.6 | 19.61 | 35.7 | 35.7 | 35.7 |
| FR - | 2.92 | 44.75 | 11.57 | 25.36 | 35.7 | 44.75 | 13.42 | 44.75 | 25.36 | 3.19 | 17.6 | 19.61 | 35.7 | 35.7 | 35.7 |
| CO - | 0.43 | 6.67 | 1.72 | 3.78 | 5.32 | 6.67 | 2 | 15.77 | 3.78 | 0.47 | 2.62 | 2.92 | 5.32 | 5.32 | 5.32 |
| CH - | 35.01 | 3.35 | 0.86 | 1.9 | 2.67 | 3.35 | 1 | 3.35 | 1.9 | 0.58 | 1.32 | 1.47 | 2.67 | 2.67 | 4.84 |
| BR - | 1.19 | 12.61 | 3.26 | 7.14 | 10.06 | 12.61 | 3.78 | 12.61 | 7.14 | 0.9 | 4.96 | 5.52 | 10.06 | 10.06 | 10.06 |
| BO - | 0.47 | 7.25 | 1.87 | 4.11 | 5.78 | 7.25 | 2.17 | 7.25 | 4.11 | 0.52 | 2.85 | 3.18 | 5.78 | 5.78 | 5.78 |
| AU - | 0.26 | 4.04 | 1.04 | 2.29 | 3.22 | 4.04 | 1.58 | 4.04 | 2.29 | 2.31 | 1.59 | 1.77 | 3.22 | 3.22 | 3.22 |
| AR - | 0.57 | 8.75 | 2.26 | 4.96 | 6.98 | 8.75 | 2.62 | 8.75 | 4.96 | 1.9 | 3.44 | 3.83 | 14.54 | 6.98 | 6.98 |
| AF - | 0.71 | 11 | 2.84 | 6.23 | 8.78 | 11 | 3.3 | 11 | 6.23 | 5.15 | 4.33 | 4.82 | 8.78 | 8.78 | 8.78 |
| | Clust.6 - | Clust.49 - | Clust.50 - | Clust.51 - | Clust.52 - | Clust.53 - | Clust.73 - | Clust.77 - | Clust.141 - | Clust.142 - | Clust.145 - | Clust.181 - | Clust.184 - | Clust.185 - | Clust.186 - |

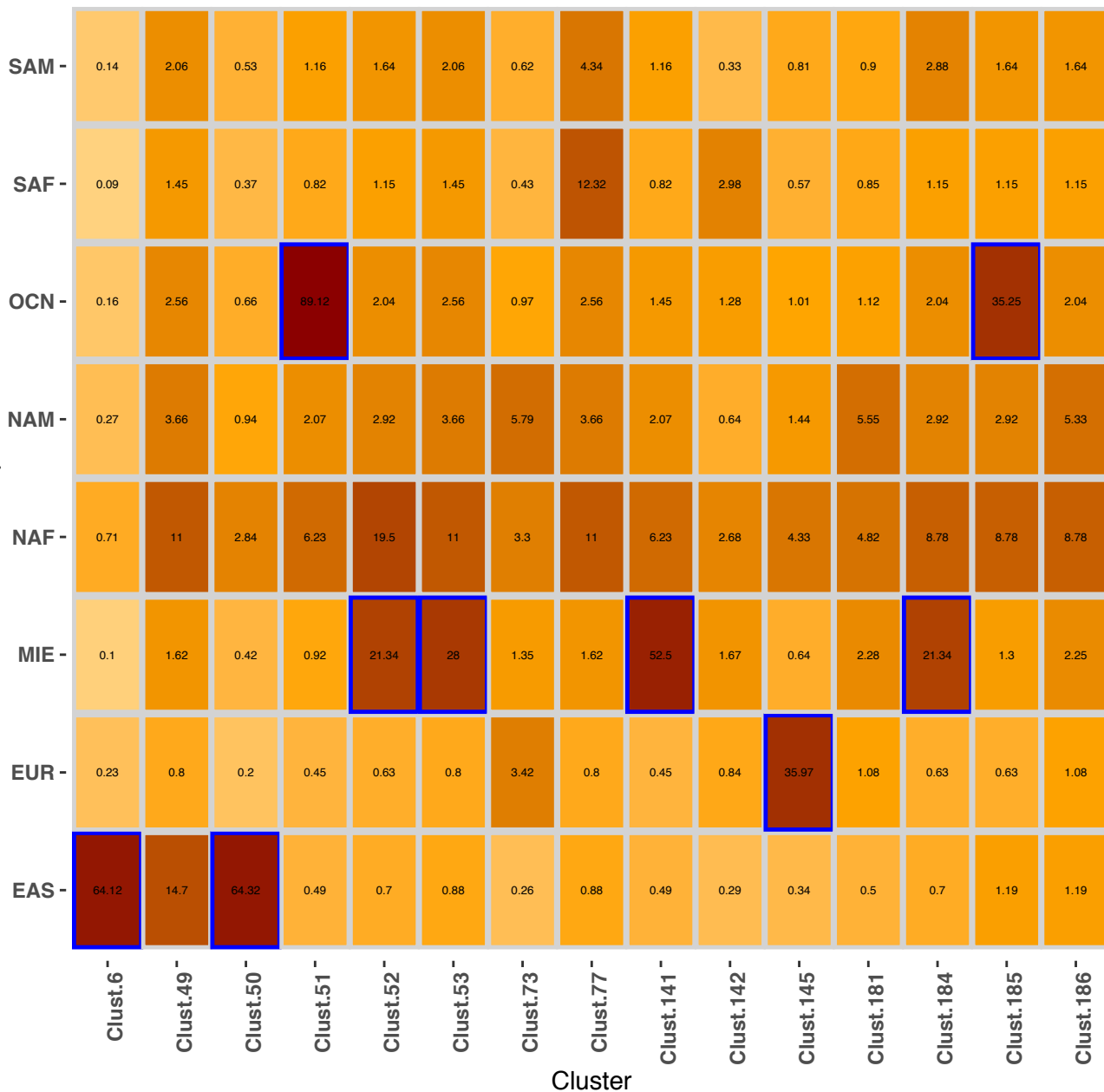
Cluster

BGLF4 : grouping per country – Max MCC

| Pop | | Cluster | | | | | | | | | | | | | |
|-------|--|---------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | Clust.6 | Clust.49 | Clust.50 | Clust.51 | Clust.52 | Clust.69 | Clust.73 | Clust.137 | Clust.138 | Clust.141 | Clust.177 | Clust.180 | Clust.181 | Clust.182 |
| WG - | | 0.18 | 2.75 | 0.71 | 1.56 | 17.55 | 0.81 | 2.75 | 26.4 | 2.26 | 1.08 | 1.2 | 12.22 | 2.19 | 2.19 |
| USA - | | 0.27 | 3.66 | 0.94 | 2.07 | 1.81 | 4.3 | 3.66 | 2.07 | 0.64 | 1.44 | 5.55 | 2.92 | 2.92 | 5.33 |
| UK - | | 0.53 | 1.66 | 0.43 | 0.94 | 0.82 | 0.4 | 1.66 | 0.94 | 0.98 | 2 | 0.73 | 1.33 | 1.33 | 2.31 |
| UG - | | 0.82 | 12.61 | 3.26 | 7.14 | 6.23 | 3.04 | 35.3 | 7.14 | 1.31 | 4.96 | 5.52 | 10.06 | 10.06 | 10.06 |
| TW - | | 9.4 | 14.75 | 3.81 | 8.36 | 7.29 | 3.56 | 14.75 | 8.36 | 1.64 | 5.8 | 6.46 | 11.77 | 11.77 | 11.77 |
| TU - | | 0.29 | 4.49 | 1.16 | 2.54 | 8.45 | 1.38 | 4.49 | 10.59 | 0.81 | 1.76 | 7.02 | 6.67 | 3.58 | 6.67 |
| SK - | | 11.92 | 44.75 | 11.57 | 25.36 | 22.12 | 10.81 | 44.75 | 25.36 | 3.19 | 17.6 | 19.61 | 35.7 | 35.7 | 35.7 |
| SA - | | 1.15 | 17.75 | 4.59 | 10.06 | 8.78 | 4.29 | 17.75 | 10.06 | 1.27 | 6.98 | 16.67 | 14.16 | 14.16 | 14.16 |
| PO - | | 0.51 | 7.93 | 2.05 | 4.49 | 3.92 | 6.5 | 7.93 | 4.49 | 1.66 | 4.76 | 5.46 | 6.33 | 6.33 | 6.33 |
| PN - | | 0.47 | 7.25 | 1.87 | 409.5 | 3.58 | 1.75 | 7.25 | 4.11 | 0.52 | 2.85 | 3.18 | 5.78 | 130.88 | 5.78 |
| NG - | | 1.94 | 29.75 | 7.69 | 16.86 | 14.71 | 7.19 | 29.75 | 16.86 | 20.04 | 11.7 | 13.04 | 23.73 | 23.73 | 23.73 |
| NAF - | | 0.71 | 11 | 2.84 | 6.23 | 9.67 | 2.66 | 11 | 6.23 | 2.68 | 4.33 | 4.82 | 8.78 | 8.78 | 8.78 |
| KE - | | 0.19 | 2.96 | 0.76 | 1.68 | 1.46 | 0.71 | 6.38 | 1.68 | 3.09 | 1.16 | 1.3 | 2.36 | 2.36 | 2.36 |
| JP - | | 18.55 | 7.25 | 1.87 | 4.11 | 3.58 | 1.75 | 7.25 | 4.11 | 0.52 | 2.85 | 3.18 | 5.78 | 5.78 | 5.78 |
| IT - | | 0.19 | 2.96 | 0.76 | 1.68 | 1.46 | 5.11 | 2.96 | 1.68 | 0.5 | 31.52 | 1.8 | 2.36 | 2.36 | 2.36 |
| IN - | | 1.04 | 53.6 | 358.93 | 1.68 | 1.46 | 0.71 | 2.96 | 1.68 | 0.23 | 1.16 | 1.8 | 2.36 | 4.24 | 2.36 |
| HK - | | 88.57 | 7.25 | 1.87 | 4.11 | 3.58 | 1.75 | 7.25 | 4.11 | 0.52 | 2.85 | 3.18 | 5.78 | 5.78 | 5.78 |
| GH - | | 0.82 | 12.61 | 3.26 | 7.14 | 6.23 | 3.04 | 12.61 | 7.14 | 0.9 | 4.96 | 5.52 | 10.06 | 10.06 | 10.06 |
| GE - | | 2.92 | 44.75 | 11.57 | 25.36 | 22.12 | 10.81 | 44.75 | 25.36 | 3.19 | 17.6 | 19.61 | 35.7 | 35.7 | 35.7 |
| FR - | | 2.92 | 44.75 | 11.57 | 25.36 | 22.12 | 10.81 | 44.75 | 25.36 | 3.19 | 17.6 | 19.61 | 35.7 | 35.7 | 35.7 |
| CO - | | 0.43 | 6.67 | 1.72 | 3.78 | 3.3 | 1.61 | 15.77 | 3.78 | 0.47 | 2.62 | 2.92 | 5.32 | 5.32 | 5.32 |
| CH - | | 35.01 | 3.35 | 0.86 | 1.9 | 1.66 | 0.81 | 3.35 | 1.9 | 0.58 | 1.32 | 1.47 | 2.67 | 2.67 | 4.84 |
| BR - | | 1.19 | 12.61 | 3.26 | 7.14 | 6.23 | 3.04 | 12.61 | 7.14 | 0.9 | 4.96 | 5.52 | 10.06 | 10.06 | 10.06 |
| BO - | | 0.47 | 7.25 | 1.87 | 4.11 | 3.58 | 1.75 | 7.25 | 4.11 | 0.52 | 2.85 | 3.18 | 5.78 | 5.78 | 5.78 |
| AU - | | 0.26 | 4.04 | 1.04 | 2.29 | 1.99 | 7.5 | 4.04 | 2.29 | 2.31 | 1.59 | 1.77 | 3.22 | 3.22 | 3.22 |
| AR - | | 0.57 | 8.75 | 2.26 | 4.96 | 4.33 | 2.11 | 8.75 | 4.96 | 1.9 | 3.44 | 3.83 | 14.54 | 6.98 | 6.98 |
| AF - | | 0.71 | 11 | 2.84 | 6.23 | 5.44 | 2.66 | 11 | 6.23 | 5.15 | 4.33 | 4.82 | 8.78 | 8.78 | 8.78 |

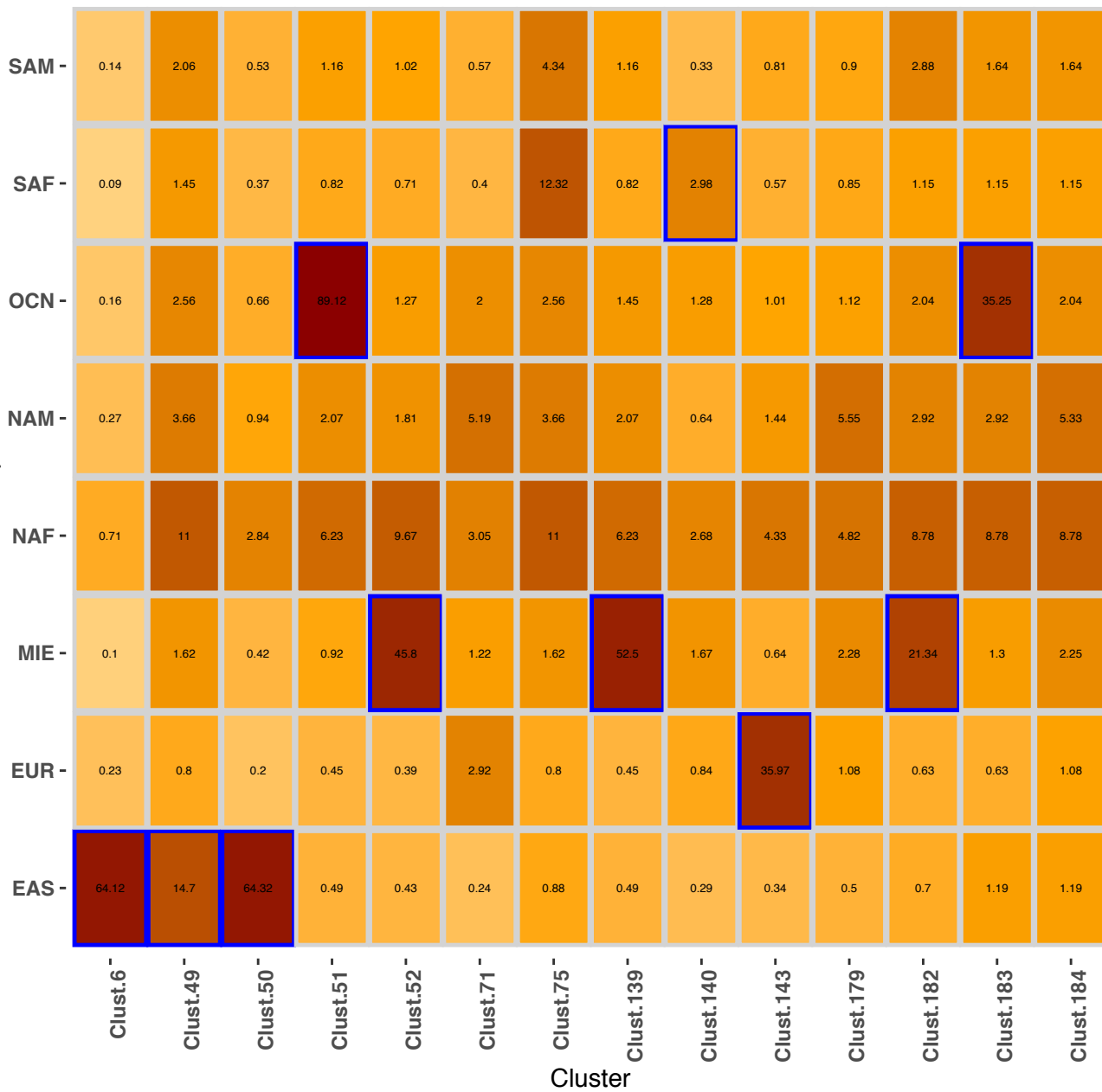
BGLF4 : grouping per continent – max CGS

Pop



BGLF4 : grouping per continent – Max MCC

Pop

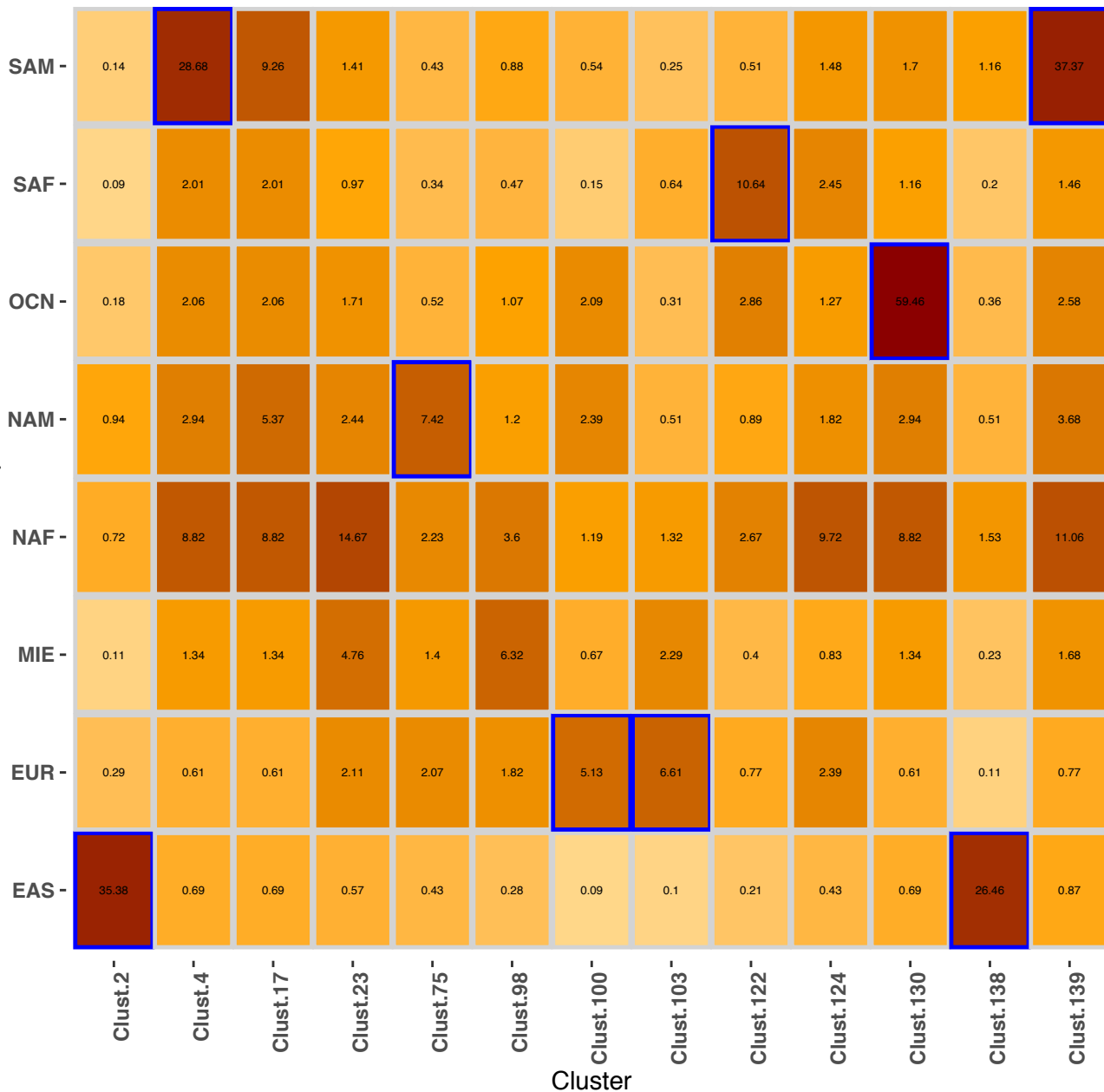


BHRF1 : grouping per country – Max MCC

| | Clust.2 | Clust.4 | Clust.17 | Clust.23 | Clust.75 | Clust.101 | Clust.103 | Clust.106 | Clust.156 | Clust.164 | Clust.165 |
|-------|---------|---------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| WG - | 0.18 | 2.29 | 2.29 | 3.06 | 1.53 | 24.06 | 0.31 | 1.55 | 2.29 | 0.4 | 2.87 |
| USA - | 0.94 | 2.94 | 5.37 | 2.44 | 7.42 | 1.61 | 2.39 | 0.49 | 2.94 | 0.51 | 3.68 |
| UK - | 0.65 | 1.24 | 1.24 | 1.03 | 3.51 | 0.91 | 2.72 | 1.12 | 1.24 | 0.24 | 1.56 |
| UG - | 0.82 | 10.11 | 23.6 | 8.4 | 2.56 | 5.56 | 1.37 | 1.69 | 10.11 | 1.76 | 12.68 |
| TW - | 25.83 | 11.83 | 11.83 | 9.83 | 2.99 | 6.5 | 1.6 | 1.98 | 11.83 | 2.06 | 14.83 |
| TU - | 0.29 | 3.6 | 3.6 | 5.01 | 1.13 | 1.98 | 2.1 | 1.6 | 3.6 | 0.62 | 4.51 |
| SK - | 12 | 35.9 | 35.9 | 29.83 | 9.08 | 19.72 | 4.85 | 6 | 35.9 | 6.24 | 45 |
| SA - | 1.16 | 39.56 | 14.24 | 11.83 | 6.71 | 7.82 | 1.92 | 2.38 | 14.24 | 2.47 | 17.85 |
| PO - | 0.52 | 6.36 | 6.36 | 5.29 | 1.61 | 5.49 | 4.61 | 5.88 | 6.36 | 1.1 | 7.98 |
| PN - | 0.47 | 5.82 | 5.82 | 4.83 | 1.47 | 3.19 | 0.78 | 0.97 | 220.62 | 1.01 | 7.29 |
| NG - | 1.95 | 23.87 | 23.87 | 19.83 | 6.04 | 13.11 | 3.23 | 3.99 | 23.87 | 4.15 | 29.92 |
| NAF - | 0.72 | 8.82 | 8.82 | 14.67 | 2.23 | 4.85 | 1.19 | 1.47 | 8.82 | 1.53 | 11.06 |
| KE - | 0.19 | 2.38 | 2.38 | 1.98 | 0.6 | 1.31 | 0.32 | 1.62 | 2.38 | 0.41 | 2.98 |
| JP - | 83.17 | 5.35 | 5.35 | 4.45 | 1.35 | 2.94 | 0.72 | 0.89 | 5.35 | 0.93 | 6.71 |
| IT - | 0.19 | 2.38 | 2.38 | 8.88 | 0.72 | 1.31 | 4.17 | 17.12 | 2.38 | 0.41 | 2.98 |
| IN - | 1.8 | 2.38 | 2.38 | 1.98 | 1.6 | 1.31 | 0.32 | 0.4 | 2.38 | 18.4 | 2.98 |
| HK - | 2.32 | 5.82 | 5.82 | 4.83 | 1.47 | 3.19 | 0.78 | 0.97 | 5.82 | 49.48 | 7.29 |
| GH - | 0.82 | 10.11 | 10.11 | 8.4 | 2.56 | 5.56 | 1.37 | 1.69 | 10.11 | 1.76 | 12.68 |
| GE - | 2.93 | 35.9 | 35.9 | 29.83 | 9.08 | 19.72 | 4.85 | 6 | 35.9 | 6.24 | 45 |
| FR - | 2.93 | 35.9 | 35.9 | 29.83 | 9.08 | 19.72 | 4.85 | 6 | 35.9 | 6.24 | 45 |
| CO - | 0.44 | 10.55 | 5.35 | 4.45 | 1.35 | 2.94 | 0.72 | 0.89 | 5.35 | 0.93 | 6.71 |
| CH - | 26.91 | 2.69 | 2.69 | 2.23 | 0.68 | 1.48 | 0.36 | 0.45 | 2.69 | 1.19 | 3.37 |
| BR - | 0.82 | 10.11 | 10.11 | 8.4 | 2.56 | 5.56 | 1.37 | 1.69 | 10.11 | 1.76 | 12.68 |
| BO - | 0.52 | 12.96 | 43.88 | 5.29 | 1.61 | 3.49 | 0.86 | 1.06 | 6.36 | 3.43 | 177 |
| AU - | 0.3 | 3.24 | 3.24 | 2.69 | 0.82 | 2.53 | 3.75 | 0.54 | 3.24 | 0.56 | 4.06 |
| AR - | 0.57 | 14.62 | 7.02 | 5.83 | 1.77 | 3.86 | 2.98 | 1.17 | 7.02 | 1.64 | 8.8 |
| AF - | 0.72 | 8.82 | 8.82 | 7.33 | 2.23 | 4.85 | 1.19 | 1.47 | 8.82 | 1.53 | 11.06 |

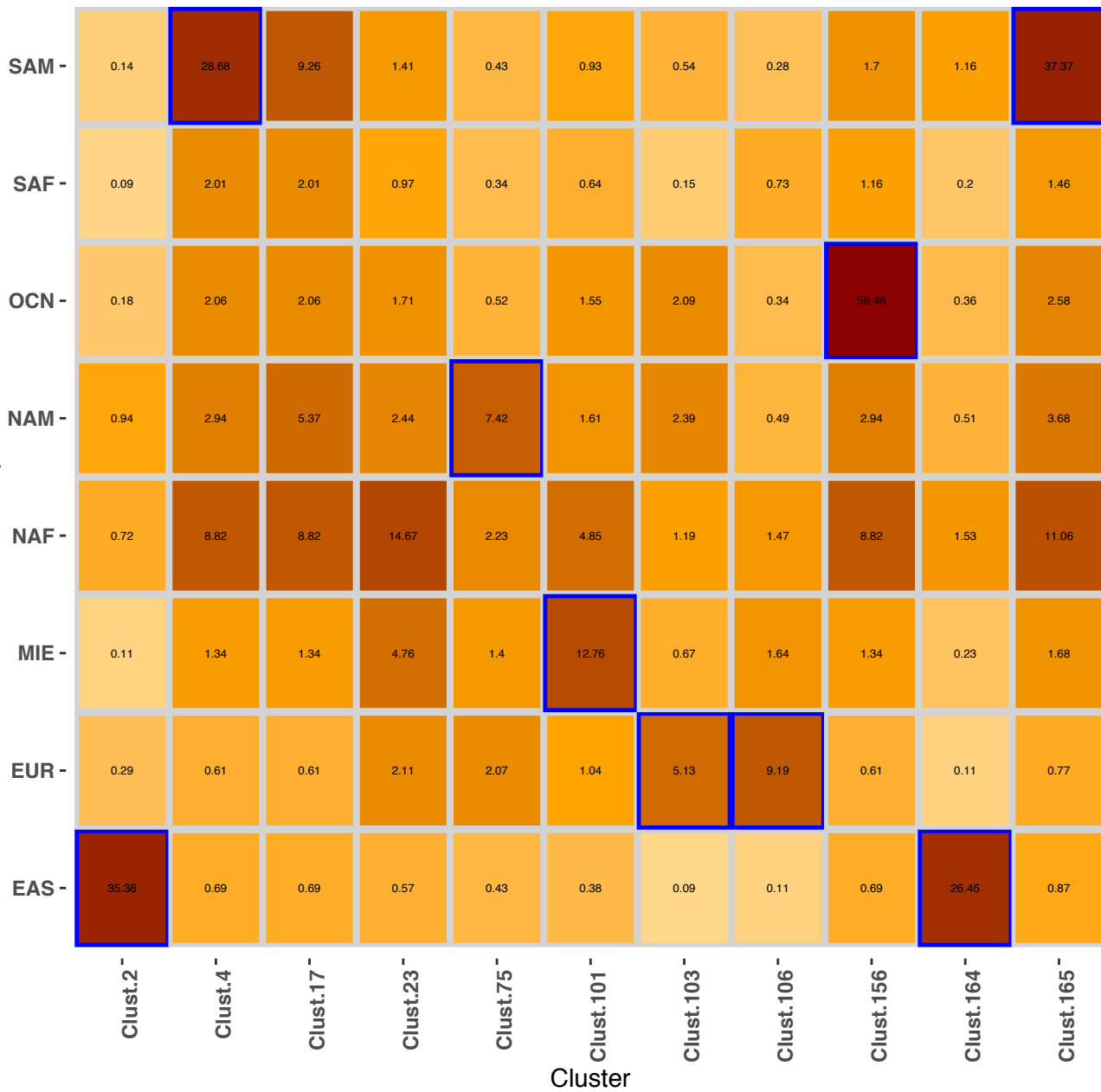
BHRF1 : grouping per continent – max CGS

Pop



BHRF1 : grouping per continent – Max MCC

Pop



BRLF1 : grouping per country – max CGS

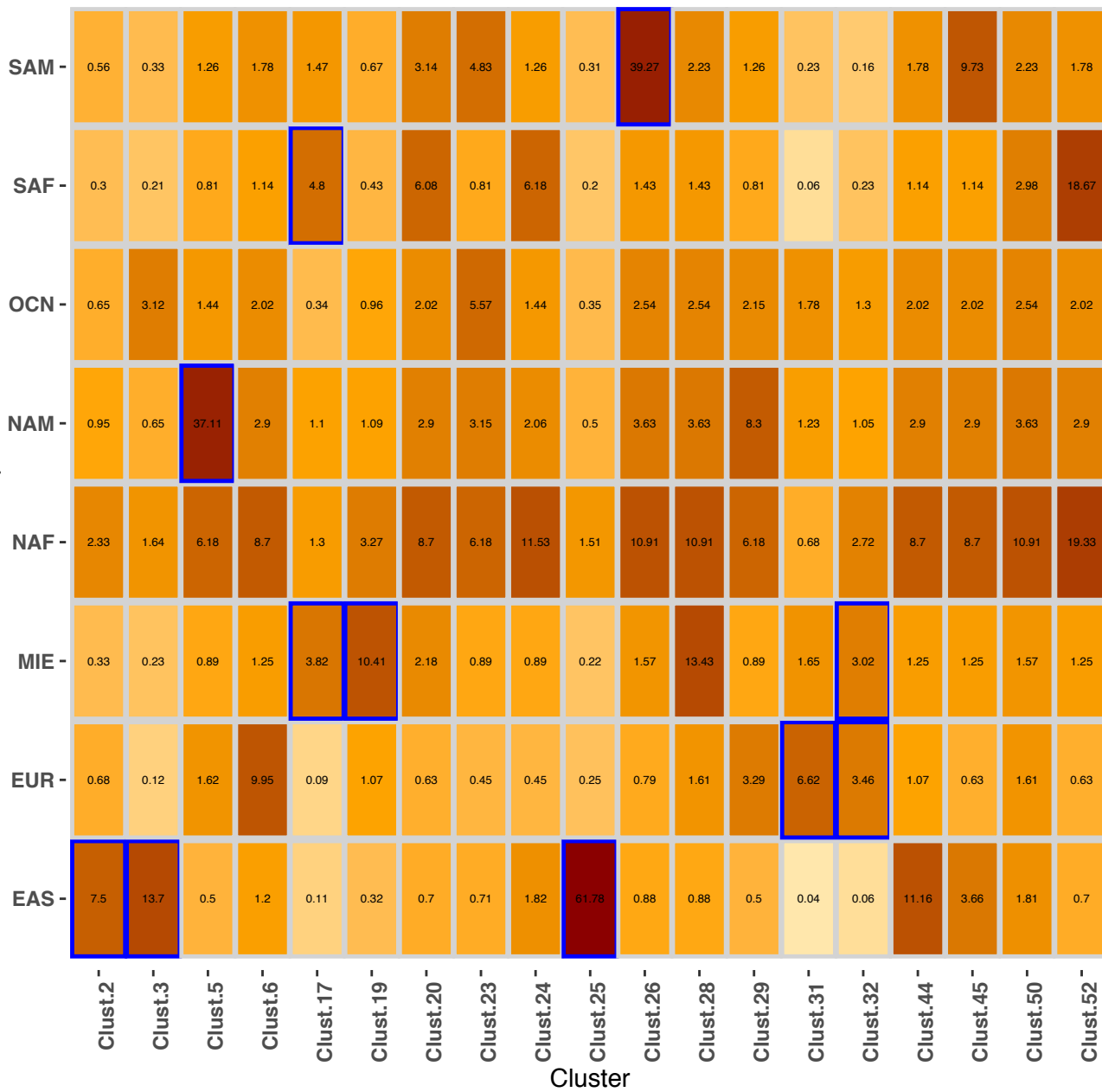
| Pop | | Cluster | | | | | | | | | | | | | | | | | | |
|-------|--|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | | Clust.2 | Clust.3 | Clust.5 | Clust.6 | Clust.37 | Clust.39 | Clust.40 | Clust.43 | Clust.44 | Clust.45 | Clust.46 | Clust.48 | Clust.49 | Clust.51 | Clust.52 | Clust.64 | Clust.65 | Clust.70 | Clust.72 |
| WG - | | 0.56 | 0.39 | 1.49 | 2.1 | 12.92 | 13.42 | 3.74 | 1.49 | 1.49 | 0.36 | 2.63 | 2.63 | 1.49 | 1.88 | 2.19 | 2.1 | 2.1 | 2.63 | 2.1 |
| USA - | | 0.95 | 0.65 | 37.11 | 2.9 | 1.29 | 1.09 | 2.9 | 3.15 | 2.06 | 0.5 | 3.63 | 3.63 | 8.3 | 1.23 | 1.05 | 2.9 | 2.9 | 3.63 | 2.9 |
| UK - | | 1.49 | 0.25 | 1.36 | 21.7 | 0.59 | 0.49 | 1.31 | 0.93 | 0.93 | 0.55 | 1.65 | 1.65 | 7.19 | 3.21 | 1.75 | 2.29 | 1.31 | 3.44 | 1.31 |
| UG - | | 2.67 | 1.88 | 7.08 | 9.97 | 4.45 | 3.75 | 23.27 | 7.08 | 7.08 | 1.73 | 12.5 | 12.5 | 7.08 | 0.57 | 0.91 | 9.97 | 9.97 | 12.5 | 9.97 |
| TW - | | 3.12 | 2.2 | 8.29 | 11.67 | 5.21 | 4.38 | 11.67 | 8.29 | 17.4 | 2.02 | 14.62 | 14.62 | 8.29 | 0.67 | 1.07 | 11.67 | 11.67 | 14.62 | 11.67 |
| TU - | | 0.95 | 0.67 | 2.52 | 3.55 | 5.19 | 1.76 | 3.55 | 2.52 | 2.52 | 0.61 | 4.45 | 42.38 | 2.52 | 1.19 | 3.65 | 3.55 | 3.55 | 4.45 | 3.55 |
| SK - | | 40.24 | 6.68 | 25.14 | 35.4 | 15.82 | 13.31 | 35.4 | 25.14 | 25.14 | 6.15 | 44.38 | 44.38 | 25.14 | 2.03 | 3.24 | 35.4 | 35.4 | 44.38 | 35.4 |
| SA - | | 3.76 | 2.65 | 9.97 | 14.04 | 43.25 | 5.28 | 14.04 | 9.97 | 9.97 | 2.44 | 17.6 | 17.6 | 9.97 | 0.8 | 1.28 | 14.04 | 14.04 | 17.6 | 14.04 |
| PO - | | 1.68 | 1.18 | 4.45 | 6.27 | 2.8 | 16.14 | 6.27 | 4.45 | 4.45 | 1.09 | 7.86 | 19.22 | 4.45 | 1.8 | 2.96 | 6.27 | 6.27 | 7.86 | 6.27 |
| PN - | | 1.53 | 14.39 | 4.07 | 5.73 | 2.56 | 2.15 | 5.73 | 19.06 | 4.07 | 0.99 | 7.19 | 7.19 | 4.07 | 0.33 | 0.52 | 5.73 | 5.73 | 7.19 | 5.73 |
| NG - | | 6.3 | 4.44 | 16.71 | 23.53 | 10.52 | 8.85 | 23.53 | 16.71 | 211.8 | 4.09 | 29.5 | 29.5 | 16.71 | 1.35 | 2.15 | 23.53 | 23.53 | 29.5 | 23.53 |
| NAF - | | 2.33 | 1.64 | 6.18 | 8.7 | 3.89 | 3.27 | 8.7 | 6.18 | 11.53 | 1.51 | 10.91 | 10.91 | 6.18 | 0.68 | 2.72 | 8.7 | 8.7 | 10.91 | 19.33 |
| KE - | | 0.62 | 0.44 | 1.66 | 2.34 | 1.05 | 0.88 | 4.21 | 1.66 | 1.66 | 0.4 | 2.94 | 2.94 | 1.66 | 0.13 | 0.21 | 2.34 | 2.34 | 2.94 | 2.34 |
| JP - | | 28 | 1.18 | 4.45 | 6.27 | 2.8 | 2.36 | 6.27 | 4.45 | 4.45 | 1.44 | 7.86 | 7.86 | 4.45 | 0.36 | 0.57 | 12.78 | 12.78 | 7.86 | 6.27 |
| IT - | | 0.62 | 0.44 | 2.51 | 2.34 | 1.05 | 0.88 | 2.34 | 1.66 | 1.66 | 0.4 | 2.94 | 2.94 | 1.66 | 7.46 | 4.67 | 2.34 | 2.34 | 2.94 | 2.34 |
| IN - | | 0.76 | 58.73 | 1.66 | 4.21 | 1.05 | 1.12 | 2.34 | 1.66 | 1.66 | 0.47 | 2.94 | 2.94 | 1.66 | 0.15 | 0.21 | 2.34 | 2.34 | 6.33 | 2.34 |
| HK - | | 4.92 | 1.08 | 4.07 | 5.73 | 2.56 | 2.15 | 5.73 | 4.07 | 4.07 | 87.35 | 7.19 | 7.19 | 4.07 | 0.33 | 0.52 | 5.73 | 5.73 | 7.19 | 5.73 |
| GH - | | 2.67 | 1.88 | 7.08 | 9.97 | 4.45 | 3.75 | 9.97 | 7.08 | 7.08 | 1.73 | 12.5 | 12.5 | 7.08 | 0.57 | 0.91 | 9.97 | 9.97 | 35 | 87.5 |
| GE - | | 9.47 | 6.68 | 25.14 | 35.4 | 15.82 | 13.31 | 35.4 | 25.14 | 25.14 | 6.15 | 44.38 | 44.38 | 25.14 | 8.26 | 3.24 | 35.4 | 35.4 | 44.38 | 35.4 |
| FR - | | 9.47 | 6.68 | 25.14 | 35.4 | 15.82 | 13.31 | 35.4 | 25.14 | 25.14 | 6.15 | 44.38 | 44.38 | 25.14 | 8.26 | 3.24 | 35.4 | 35.4 | 44.38 | 35.4 |
| CO - | | 1.68 | 1.18 | 4.45 | 6.27 | 2.8 | 2.36 | 12.78 | 4.45 | 4.45 | 1.09 | 7.86 | 7.86 | 4.45 | 0.36 | 0.57 | 6.27 | 6.27 | 7.86 | 6.27 |
| CH - | | 1.93 | 1.29 | 1.88 | 2.65 | 1.18 | 0.99 | 2.65 | 2.86 | 2.86 | 29.18 | 3.32 | 3.32 | 1.88 | 0.15 | 0.24 | 15.09 | 4.8 | 3.32 | 2.65 |
| BR - | | 4.2 | 1.88 | 7.08 | 9.97 | 4.45 | 3.75 | 9.97 | 7.08 | 7.08 | 1.73 | 12.5 | 12.5 | 7.08 | 0.57 | 0.91 | 9.97 | 9.97 | 12.5 | 9.97 |
| BO - | | 1.53 | 1.08 | 4.07 | 5.73 | 2.56 | 2.15 | 5.73 | 19.06 | 4.07 | 0.99 | 154.67 | 7.19 | 4.07 | 0.91 | 0.52 | 5.73 | 11.47 | 7.19 | 5.73 |
| AU - | | 1.06 | 0.6 | 2.27 | 3.19 | 1.42 | 1.56 | 3.19 | 2.27 | 2.27 | 0.55 | 4 | 4 | 3.51 | 3.72 | 2.35 | 3.19 | 3.19 | 4 | 3.19 |
| AR - | | 2.06 | 1.45 | 5.48 | 7.71 | 5.41 | 2.9 | 7.71 | 5.48 | 5.48 | 1.34 | 9.67 | 9.67 | 5.48 | 0.44 | 0.7 | 7.71 | 16.52 | 9.67 | 7.71 |
| AF - | | 2.33 | 1.64 | 6.18 | 8.7 | 3.89 | 3.27 | 8.7 | 6.18 | 11.53 | 1.51 | 10.91 | 10.91 | 6.18 | 0.5 | 2.72 | 8.7 | 8.7 | 10.91 | 19.33 |

BRLF1 : grouping per country – Max MCC

| Pop | | Cluster | | | | | | | | | | | | | | | | | |
|-----|---|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | | Clust.2 | Clust.3 | Clust.5 | Clust.6 | Clust.47 | Clust.48 | Clust.51 | Clust.52 | Clust.53 | Clust.54 | Clust.56 | Clust.57 | Clust.59 | Clust.60 | Clust.72 | Clust.73 | Clust.78 | Clust.80 |
| WG | - | 0.56 | 0.39 | 1.49 | 2.1 | 13.42 | 3.74 | 1.49 | 1.49 | 0.36 | 2.63 | 2.63 | 1.49 | 1.88 | 2.19 | 2.1 | 2.1 | 2.63 | 2.1 |
| USA | - | 0.95 | 0.65 | 37.11 | 2.9 | 1.09 | 2.9 | 3.15 | 2.06 | 0.5 | 3.63 | 3.63 | 8.3 | 1.23 | 1.05 | 2.9 | 2.9 | 3.63 | 2.9 |
| UK | - | 1.49 | 0.25 | 1.36 | 21.7 | 0.49 | 1.31 | 0.93 | 0.93 | 0.55 | 1.65 | 1.65 | 7.19 | 3.21 | 1.75 | 2.29 | 1.31 | 3.44 | 1.31 |
| UG | - | 2.67 | 1.88 | 7.08 | 9.97 | 3.75 | 23.27 | 7.08 | 7.08 | 1.73 | 12.5 | 12.5 | 7.08 | 0.57 | 0.91 | 9.97 | 9.97 | 12.5 | 9.97 |
| TW | - | 3.12 | 2.2 | 8.29 | 11.67 | 4.38 | 11.67 | 8.29 | 17.4 | 2.02 | 14.62 | 14.62 | 8.29 | 0.67 | 1.07 | 11.67 | 11.67 | 14.62 | 11.67 |
| TU | - | 0.95 | 0.67 | 2.52 | 3.55 | 1.76 | 3.55 | 2.52 | 2.52 | 0.61 | 4.45 | 42.38 | 2.52 | 1.19 | 3.65 | 3.55 | 3.55 | 4.45 | 3.55 |
| SK | - | 40.24 | 6.68 | 25.14 | 35.4 | 13.31 | 35.4 | 25.14 | 25.14 | 6.15 | 44.38 | 44.38 | 25.14 | 2.03 | 3.24 | 35.4 | 35.4 | 44.38 | 35.4 |
| SA | - | 3.76 | 2.65 | 9.97 | 14.04 | 5.28 | 14.04 | 9.97 | 9.97 | 2.44 | 17.6 | 17.6 | 9.97 | 0.8 | 1.28 | 14.04 | 14.04 | 17.6 | 14.04 |
| PO | - | 1.68 | 1.18 | 4.45 | 6.27 | 16.14 | 6.27 | 4.45 | 4.45 | 1.09 | 7.86 | 19.22 | 4.45 | 1.8 | 2.96 | 6.27 | 6.27 | 7.86 | 6.27 |
| PN | - | 1.53 | 14.39 | 4.07 | 5.73 | 2.15 | 5.73 | 19.06 | 4.07 | 0.99 | 7.19 | 7.19 | 4.07 | 0.33 | 0.52 | 5.73 | 5.73 | 7.19 | 5.73 |
| NG | - | 6.3 | 4.44 | 16.71 | 23.53 | 8.85 | 23.53 | 16.71 | 211.8 | 4.09 | 29.5 | 29.5 | 16.71 | 1.35 | 2.15 | 23.53 | 23.53 | 29.5 | 23.53 |
| NAF | - | 2.33 | 1.64 | 6.18 | 8.7 | 3.27 | 8.7 | 6.18 | 11.53 | 1.51 | 10.91 | 10.91 | 6.18 | 0.68 | 2.72 | 8.7 | 8.7 | 10.91 | 19.33 |
| KE | - | 0.62 | 0.44 | 1.66 | 2.34 | 0.88 | 4.21 | 1.66 | 1.66 | 0.4 | 2.94 | 2.94 | 1.66 | 0.13 | 0.21 | 2.34 | 2.34 | 2.94 | 2.34 |
| JP | - | 28 | 1.18 | 4.45 | 6.27 | 2.36 | 6.27 | 4.45 | 4.45 | 1.44 | 7.86 | 7.86 | 4.45 | 0.36 | 0.57 | 12.78 | 12.78 | 7.86 | 6.27 |
| IT | - | 0.62 | 0.44 | 2.51 | 2.34 | 0.88 | 2.34 | 1.66 | 1.66 | 0.4 | 2.94 | 2.94 | 1.66 | 7.46 | 4.67 | 2.34 | 2.34 | 2.94 | 2.34 |
| IN | - | 0.76 | 58.73 | 1.66 | 4.21 | 1.12 | 2.34 | 1.66 | 1.66 | 0.47 | 2.94 | 2.94 | 1.66 | 0.15 | 0.21 | 2.34 | 2.34 | 6.33 | 2.34 |
| HK | - | 4.92 | 1.08 | 4.07 | 5.73 | 2.15 | 5.73 | 4.07 | 4.07 | 87.35 | 7.19 | 7.19 | 4.07 | 0.33 | 0.52 | 5.73 | 5.73 | 7.19 | 5.73 |
| GH | - | 2.67 | 1.88 | 7.08 | 9.97 | 3.75 | 9.97 | 7.08 | 7.08 | 1.73 | 12.5 | 12.5 | 7.08 | 0.57 | 0.91 | 9.97 | 9.97 | 35 | 87.5 |
| GE | - | 9.47 | 6.68 | 25.14 | 35.4 | 13.31 | 35.4 | 25.14 | 25.14 | 6.15 | 44.38 | 44.38 | 25.14 | 8.26 | 3.24 | 35.4 | 35.4 | 44.38 | 35.4 |
| FR | - | 9.47 | 6.68 | 25.14 | 35.4 | 13.31 | 35.4 | 25.14 | 25.14 | 6.15 | 44.38 | 44.38 | 25.14 | 8.26 | 3.24 | 35.4 | 35.4 | 44.38 | 35.4 |
| CO | - | 1.68 | 1.18 | 4.45 | 6.27 | 2.36 | 12.78 | 4.45 | 4.45 | 1.09 | 7.86 | 7.86 | 4.45 | 0.36 | 0.57 | 6.27 | 6.27 | 7.86 | 6.27 |
| CH | - | 1.93 | 1.29 | 1.88 | 2.65 | 0.99 | 2.65 | 2.86 | 2.86 | 29.18 | 3.32 | 3.32 | 1.88 | 0.15 | 0.24 | 15.09 | 4.8 | 3.32 | 2.65 |
| BR | - | 4.2 | 1.88 | 7.08 | 9.97 | 3.75 | 9.97 | 7.08 | 7.08 | 1.73 | 12.5 | 12.5 | 7.08 | 0.57 | 0.91 | 9.97 | 9.97 | 12.5 | 9.97 |
| BO | - | 1.53 | 1.08 | 4.07 | 5.73 | 2.15 | 5.73 | 19.06 | 4.07 | 0.99 | 154.67 | 7.19 | 4.07 | 0.91 | 0.52 | 5.73 | 11.47 | 7.19 | 5.73 |
| AU | - | 1.06 | 0.6 | 2.27 | 3.19 | 1.56 | 3.19 | 2.27 | 2.27 | 0.55 | 4 | 4 | 3.51 | 3.72 | 2.35 | 3.19 | 3.19 | 4 | 3.19 |
| AR | - | 2.06 | 1.45 | 5.48 | 7.71 | 2.9 | 7.71 | 5.48 | 5.48 | 1.34 | 9.67 | 9.67 | 5.48 | 0.44 | 0.7 | 7.71 | 16.52 | 9.67 | 7.71 |
| AF | - | 2.33 | 1.64 | 6.18 | 8.7 | 3.27 | 8.7 | 6.18 | 11.53 | 1.51 | 10.91 | 10.91 | 6.18 | 0.5 | 2.72 | 8.7 | 8.7 | 10.91 | 19.33 |

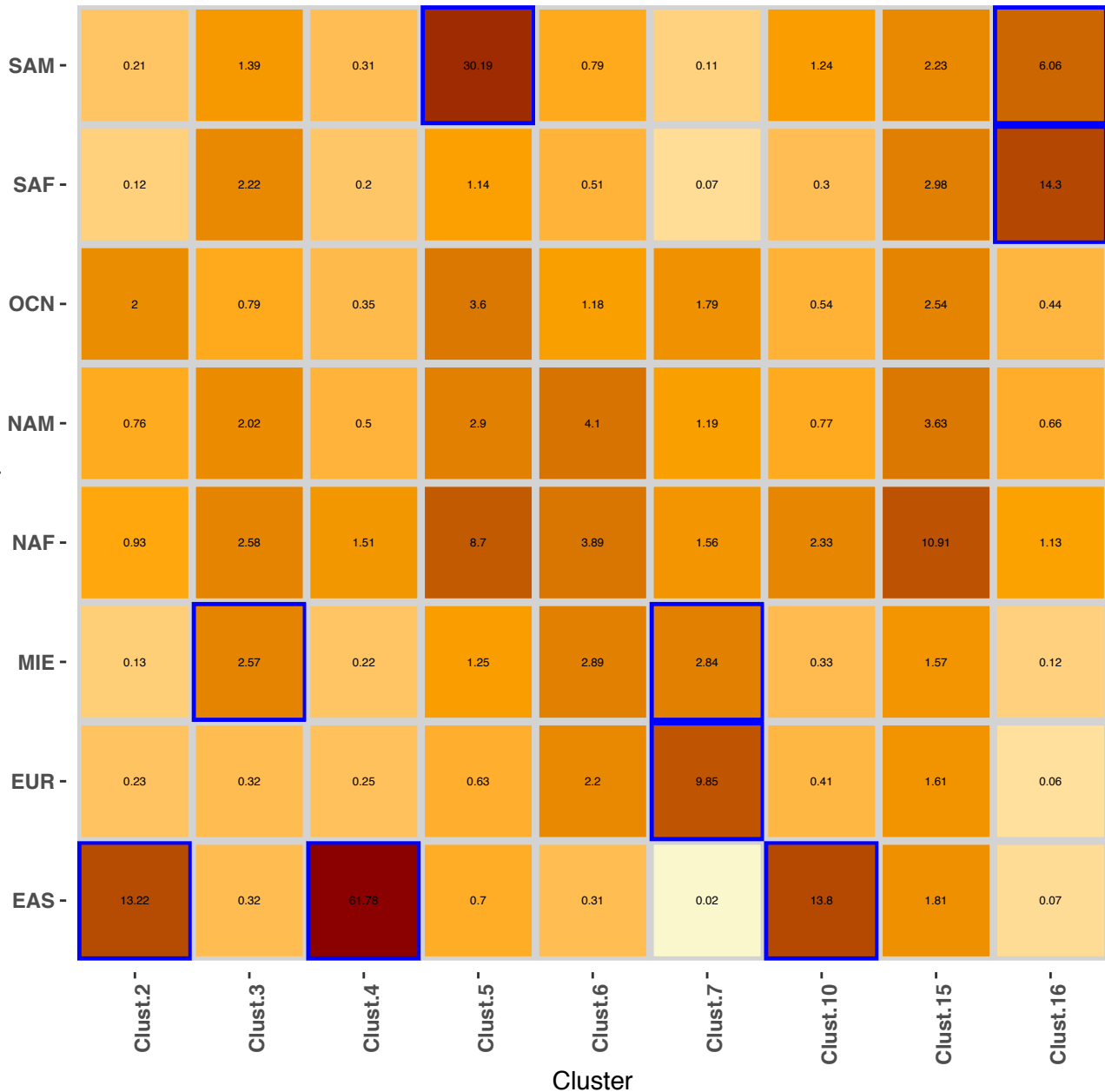
BRLF1 : grouping per continent – max CGS

Pop



BRLF1 : grouping per continent – Max MCC

Pop



BZLF1 : grouping per country – max CGS

Pop

| | | | | | | | |
|-------|-------|--------|-------|-------|-------|-------|-------|
| WG - | 2.16 | 0.72 | 2.64 | 2.1 | 0.27 | 0.43 | 2.1 |
| USA - | 0.8 | 2.19 | 3.48 | 2.77 | 0.36 | 1.5 | 2.77 |
| UK - | 0.36 | 0.36 | 1.61 | 1.29 | 0.39 | 3.46 | 2.24 |
| UG - | 0.45 | 2.84 | 12.54 | 10 | 1.31 | 2.06 | 10 |
| TW - | 0.57 | 3.32 | 14.67 | 11.7 | 2.43 | 2.41 | 11.7 |
| TU - | 0.88 | 1.01 | 4.46 | 6.63 | 0.46 | 0.73 | 3.56 |
| SK - | 1.14 | 10.09 | 44.5 | 35.5 | 4.64 | 7.33 | 35.5 |
| SA - | 2.32 | 7.56 | 17.65 | 14.08 | 1.84 | 2.9 | 14.08 |
| PO - | 0.98 | 1.79 | 7.89 | 12.81 | 0.82 | 4.11 | 6.29 |
| PN - | 1.32 | 1.63 | 7.21 | 5.75 | 20.81 | 1.18 | 5.75 |
| NG - | 6.97 | 6.71 | 29.58 | 23.6 | 3.09 | 4.87 | 23.6 |
| NAF - | 1.74 | 2.48 | 10.94 | 8.72 | 1.14 | 1.8 | 19.39 |
| KE - | 1.38 | 0.81 | 2.95 | 2.35 | 0.31 | 0.48 | 2.35 |
| JP - | 0.57 | 1.79 | 175 | 6.29 | 2.48 | 1.74 | 6.29 |
| IT - | 0.08 | 4.64 | 2.95 | 13.2 | 0.31 | 1.25 | 4.22 |
| IN - | 0.5 | 0.67 | 2.95 | 2.35 | 31.5 | 0.48 | 2.35 |
| HK - | 11.16 | 1.63 | 7.21 | 5.75 | 0.75 | 1.18 | 5.75 |
| GH - | 0.45 | 155.45 | 12.54 | 10 | 1.31 | 2.06 | 10 |
| GE - | 1.14 | 10.09 | 44.5 | 35.5 | 4.64 | 7.33 | 35.5 |
| FR - | 1.14 | 10.09 | 44.5 | 35.5 | 4.64 | 7.33 | 35.5 |
| CO - | 1.15 | 2.79 | 8.7 | 6.94 | 0.91 | 1.43 | 6.94 |
| CH - | 8.04 | 0.75 | 3.33 | 2.66 | 0.86 | 0.55 | 2.66 |
| BR - | 1.15 | 4.51 | 12.54 | 10 | 1.31 | 2.06 | 10 |
| BO - | 0.5 | 1.63 | 7.21 | 5.75 | 2.19 | 16.23 | 5.75 |
| AU - | 0.24 | 0.91 | 4.01 | 3.2 | 0.42 | 2.97 | 3.2 |
| AR - | 1.39 | 2.2 | 9.69 | 7.73 | 1.38 | 1.59 | 7.73 |
| AF - | 1.74 | 2.48 | 10.94 | 8.72 | 1.14 | 1.8 | 19.39 |

Clust.1

Clust.104

Clust.105

Clust.116

Clust.122

Clust.124

Clust.125

Cluster

BZLF1 : grouping per country – Max MCC

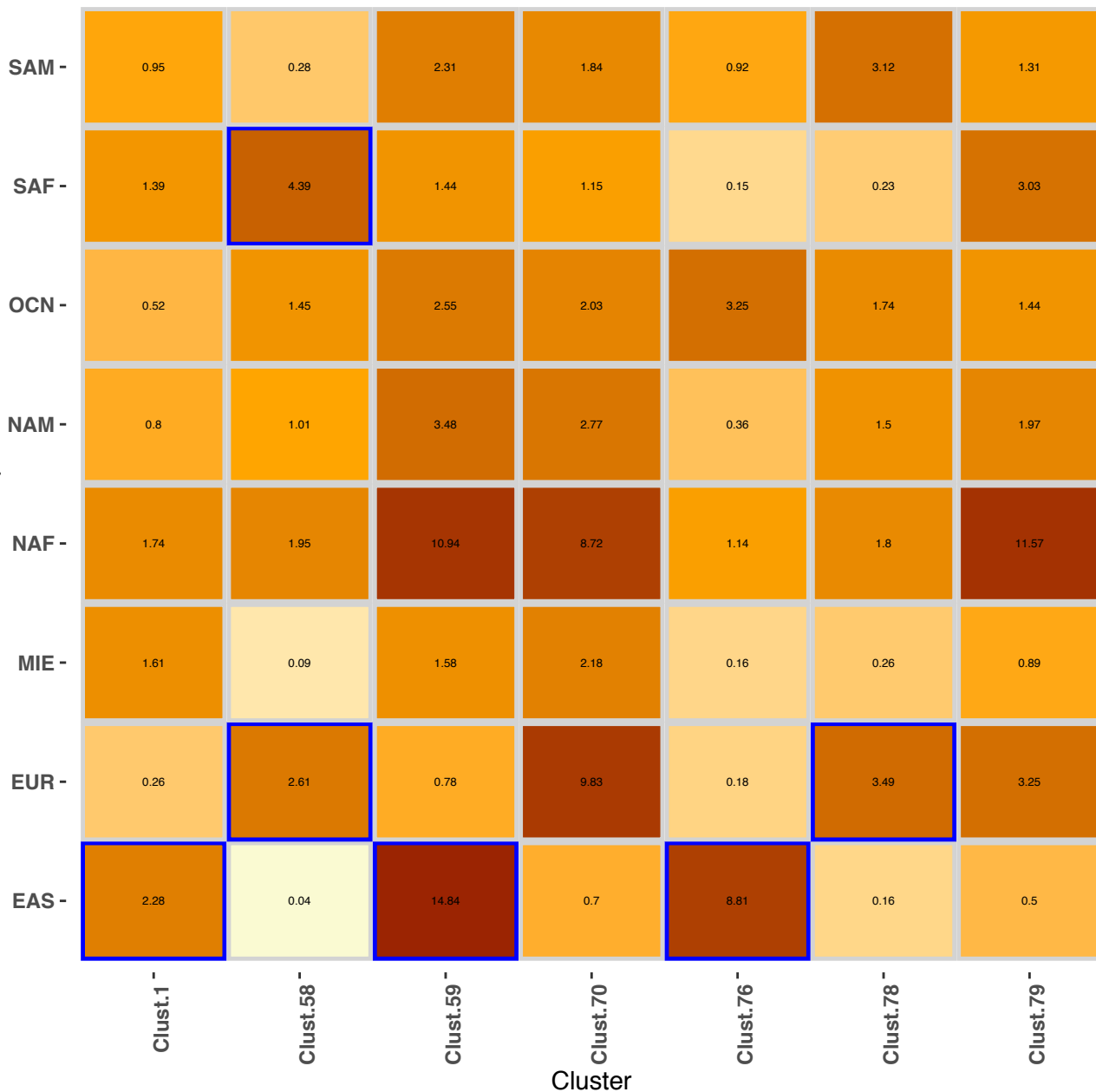
Pop

| WG - | 2.16 | 0.72 | 2.64 | 2.1 | 0.27 | 0.43 | 2.1 |
|-------|---------|-----------|-----------|-----------|-----------|-----------|-----------|
| USA - | 0.8 | 2.19 | 3.48 | 2.77 | 0.36 | 1.5 | 2.77 |
| UK - | 0.36 | 0.36 | 1.61 | 1.29 | 0.39 | 3.46 | 2.24 |
| UG - | 0.45 | 2.84 | 12.54 | 10 | 1.31 | 2.06 | 10 |
| TW - | 0.57 | 3.32 | 14.67 | 11.7 | 2.43 | 2.41 | 11.7 |
| TU - | 0.88 | 1.01 | 4.46 | 6.63 | 0.46 | 0.73 | 3.56 |
| SK - | 1.14 | 10.09 | 44.5 | 35.5 | 4.64 | 7.33 | 35.5 |
| SA - | 2.32 | 7.56 | 17.65 | 14.08 | 1.84 | 2.9 | 14.08 |
| PO - | 0.98 | 1.79 | 7.89 | 12.81 | 0.82 | 4.11 | 6.29 |
| PN - | 1.32 | 1.63 | 7.21 | 5.75 | 20.81 | 1.18 | 5.75 |
| NG - | 6.97 | 6.71 | 29.58 | 23.6 | 3.09 | 4.87 | 23.6 |
| NAF - | 1.74 | 2.48 | 10.94 | 8.72 | 1.14 | 1.8 | 19.39 |
| KE - | 1.38 | 0.81 | 2.95 | 2.35 | 0.31 | 0.48 | 2.35 |
| JP - | 0.57 | 1.79 | 175 | 6.29 | 2.48 | 1.74 | 6.29 |
| IT - | 0.08 | 4.64 | 2.95 | 13.2 | 0.31 | 1.25 | 4.22 |
| IN - | 0.5 | 0.67 | 2.95 | 2.35 | 31.5 | 0.48 | 2.35 |
| HK - | 11.16 | 1.63 | 7.21 | 5.75 | 0.75 | 1.18 | 5.75 |
| GH - | 0.45 | 155.45 | 12.54 | 10 | 1.31 | 2.06 | 10 |
| GE - | 1.14 | 10.09 | 44.5 | 35.5 | 4.64 | 7.33 | 35.5 |
| FR - | 1.14 | 10.09 | 44.5 | 35.5 | 4.64 | 7.33 | 35.5 |
| CO - | 1.15 | 2.79 | 8.7 | 6.94 | 0.91 | 1.43 | 6.94 |
| CH - | 8.04 | 0.75 | 3.33 | 2.66 | 0.86 | 0.55 | 2.66 |
| BR - | 1.15 | 4.51 | 12.54 | 10 | 1.31 | 2.06 | 10 |
| BO - | 0.5 | 1.63 | 7.21 | 5.75 | 2.19 | 16.23 | 5.75 |
| AU - | 0.24 | 0.91 | 4.01 | 3.2 | 0.42 | 2.97 | 3.2 |
| AR - | 1.39 | 2.2 | 9.69 | 7.73 | 1.38 | 1.59 | 7.73 |
| AF - | 1.74 | 2.48 | 10.94 | 8.72 | 1.14 | 1.8 | 19.39 |
| | Clust.1 | Clust.104 | Clust.105 | Clust.116 | Clust.122 | Clust.124 | Clust.125 |

Cluster

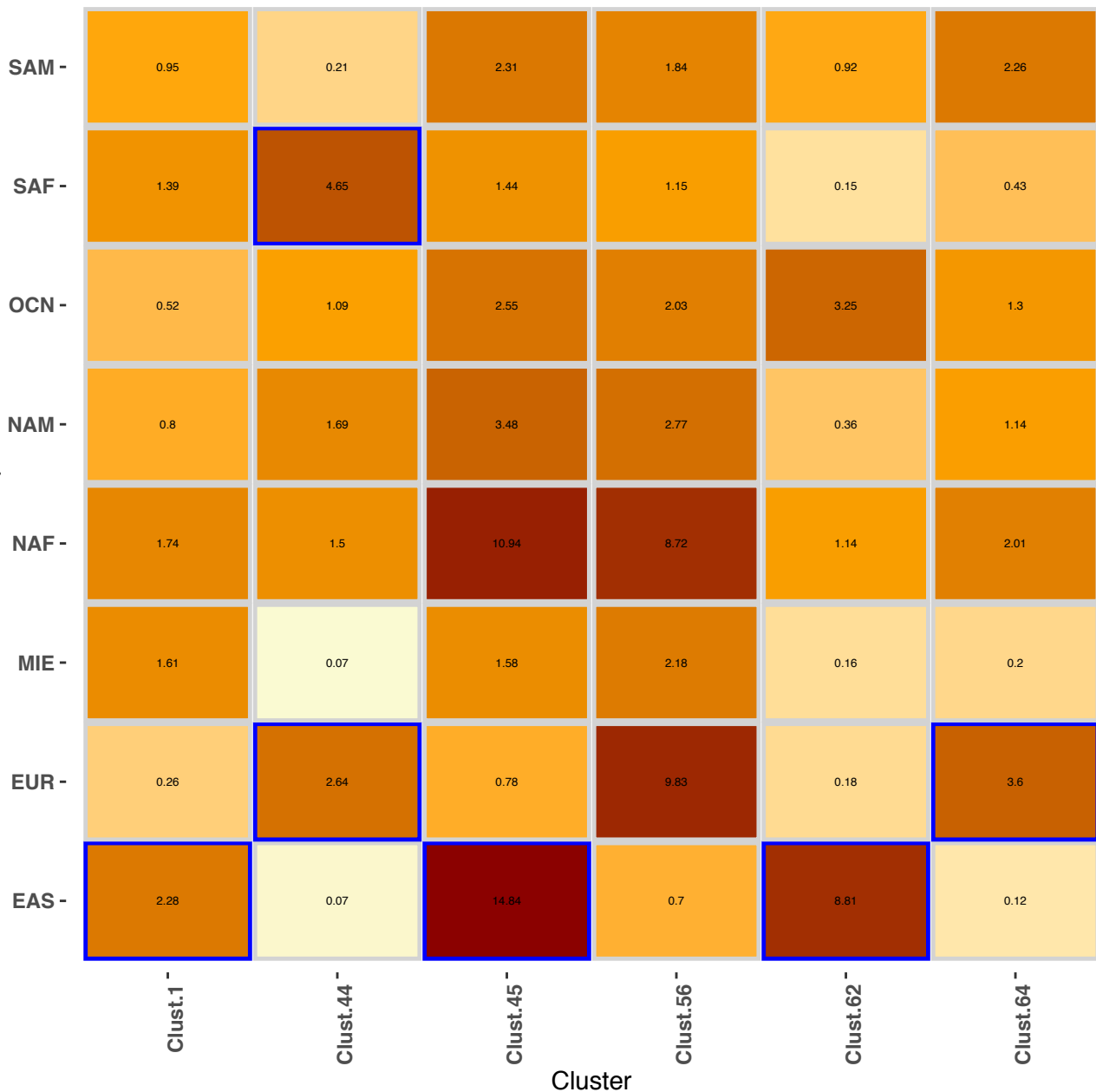
BZLF1 : grouping per continent – max CGS

Pop



BZLF1 : grouping per continent – Max MCC

Pop



EBER-1 : grouping per country – max CGS

Pop

| | | | | | |
|-------|--------|-------|-------|-------|--------|
| WG - | 2.66 | 1.18 | 2.66 | 2.12 | 2.66 |
| USA - | 3.54 | 1.32 | 3.54 | 2.83 | 3.54 |
| UK - | 1.61 | 0.16 | 1.61 | 1.28 | 1.61 |
| UG - | 12.21 | 0.15 | 12.21 | 9.74 | 12.21 |
| TW - | 14.29 | 0.18 | 14.29 | 11.4 | 14.29 |
| TU - | 4.88 | 3.42 | 4.88 | 3.89 | 4.88 |
| SK - | 43.38 | 2.18 | 43.38 | 34.6 | 43.38 |
| SA - | 17.2 | 3.29 | 17.2 | 13.72 | 17.2 |
| PO - | 8.47 | 2.21 | 8.47 | 6.76 | 8.47 |
| PN - | 7.02 | 0.08 | 7.02 | 5.6 | 151.11 |
| NG - | 28.83 | 1.08 | 28.83 | 23 | 28.83 |
| NAF - | 12.21 | 0.54 | 12.21 | 9.74 | 12.21 |
| KE - | 2.87 | 4.19 | 2.87 | 2.29 | 2.87 |
| JP - | 7.68 | 0.12 | 7.68 | 6.13 | 7.68 |
| IT - | 2.87 | 0.86 | 2.87 | 2.29 | 2.87 |
| IN - | 2.87 | 0.03 | 25.76 | 40.25 | 2.87 |
| HK - | 7.02 | 11.46 | 7.02 | 5.6 | 7.02 |
| GH - | 12.21 | 5.55 | 12.21 | 9.74 | 12.21 |
| GE - | 43.38 | 2.18 | 43.38 | 34.6 | 43.38 |
| FR - | 43.38 | 0.54 | 43.38 | 34.6 | 43.38 |
| CO - | 8.47 | 11.44 | 8.47 | 6.76 | 8.47 |
| CH - | 3.24 | 31.55 | 3.24 | 2.58 | 3.24 |
| BR - | 12.21 | 5.55 | 12.21 | 22.73 | 12.21 |
| BO - | 195.43 | 2.21 | 8.47 | 6.76 | 8.47 |
| AU - | 3.9 | 0.71 | 8.63 | 3.11 | 3.9 |
| AR - | 9.44 | 3.33 | 9.44 | 7.53 | 9.44 |
| AF - | 10.66 | 0.18 | 10.66 | 8.5 | 10.66 |

Clust.1

Clust.155

Clust.160

Cluster

Clust.167

Clust.174

EBER-1 : grouping per country – Max MCC

Pop

| | | | | | |
|-------|--------|-------|-------|-------|--------|
| WG - | 2.66 | 1.18 | 2.66 | 2.12 | 2.66 |
| USA - | 3.54 | 1.32 | 3.54 | 2.83 | 3.54 |
| UK - | 1.61 | 0.16 | 1.61 | 1.28 | 1.61 |
| UG - | 12.21 | 0.15 | 12.21 | 9.74 | 12.21 |
| TW - | 14.29 | 0.18 | 14.29 | 11.4 | 14.29 |
| TU - | 4.88 | 3.42 | 4.88 | 3.89 | 4.88 |
| SK - | 43.38 | 2.18 | 43.38 | 34.6 | 43.38 |
| SA - | 17.2 | 3.29 | 17.2 | 13.72 | 17.2 |
| PO - | 8.47 | 2.21 | 8.47 | 6.76 | 8.47 |
| PN - | 7.02 | 0.08 | 7.02 | 5.6 | 151.11 |
| NG - | 28.83 | 1.08 | 28.83 | 23 | 28.83 |
| NAF - | 12.21 | 0.54 | 12.21 | 9.74 | 12.21 |
| KE - | 2.87 | 4.19 | 2.87 | 2.29 | 2.87 |
| JP - | 7.68 | 0.12 | 7.68 | 6.13 | 7.68 |
| IT - | 2.87 | 0.86 | 2.87 | 2.29 | 2.87 |
| IN - | 2.87 | 0.03 | 25.76 | 40.25 | 2.87 |
| HK - | 7.02 | 11.46 | 7.02 | 5.6 | 7.02 |
| GH - | 12.21 | 5.55 | 12.21 | 9.74 | 12.21 |
| GE - | 43.38 | 2.18 | 43.38 | 34.6 | 43.38 |
| FR - | 43.38 | 0.54 | 43.38 | 34.6 | 43.38 |
| CO - | 8.47 | 11.44 | 8.47 | 6.76 | 8.47 |
| CH - | 3.24 | 31.55 | 3.24 | 2.58 | 3.24 |
| BR - | 12.21 | 5.55 | 12.21 | 22.73 | 12.21 |
| BO - | 195.43 | 2.21 | 8.47 | 6.76 | 8.47 |
| AU - | 3.9 | 0.71 | 8.63 | 3.11 | 3.9 |
| AR - | 9.44 | 3.33 | 9.44 | 7.53 | 9.44 |
| AF - | 10.66 | 0.18 | 10.66 | 8.5 | 10.66 |

Clust.1

Clust.155

Clust.160

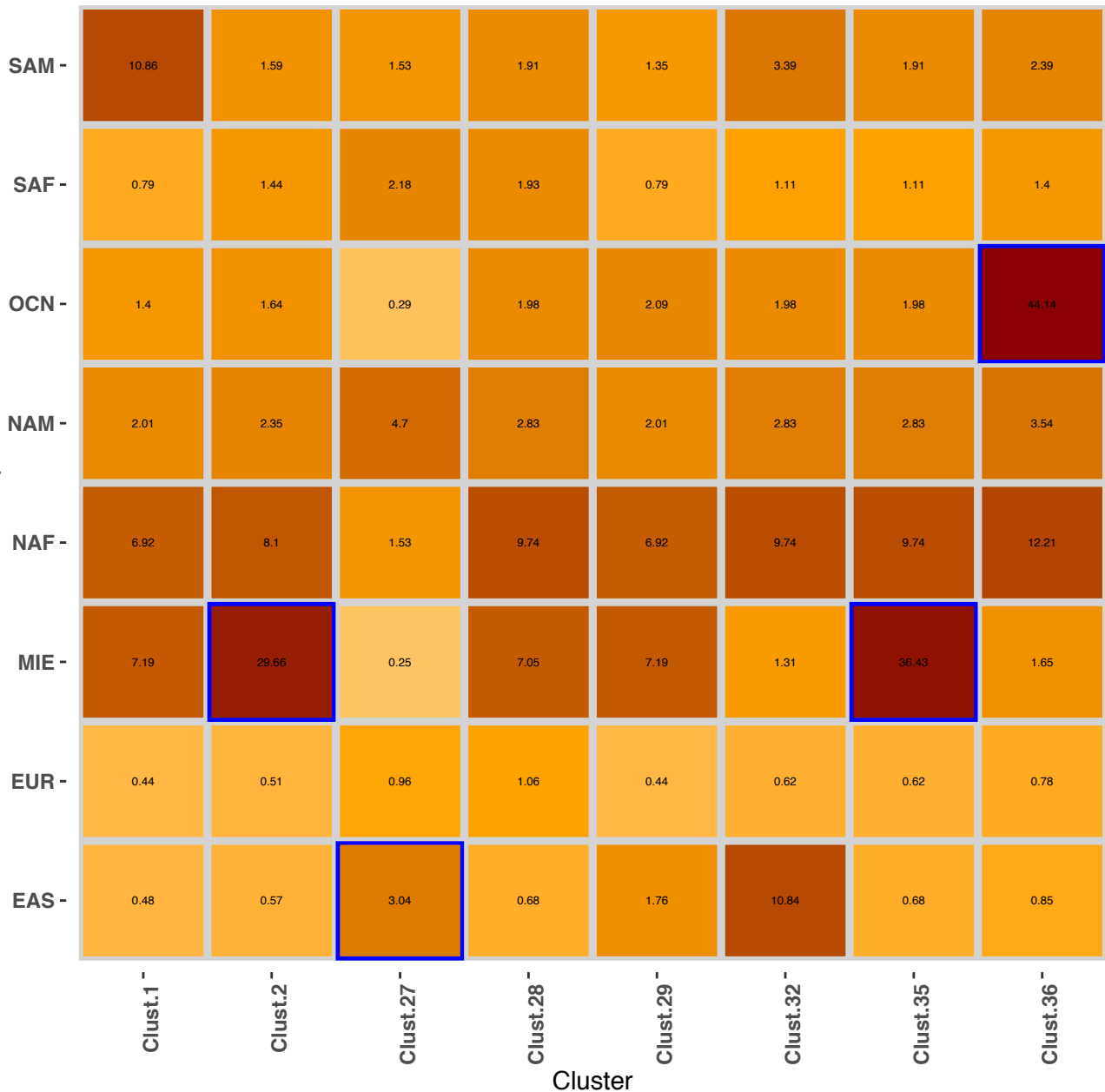
Cluster

Clust.167

Clust.174

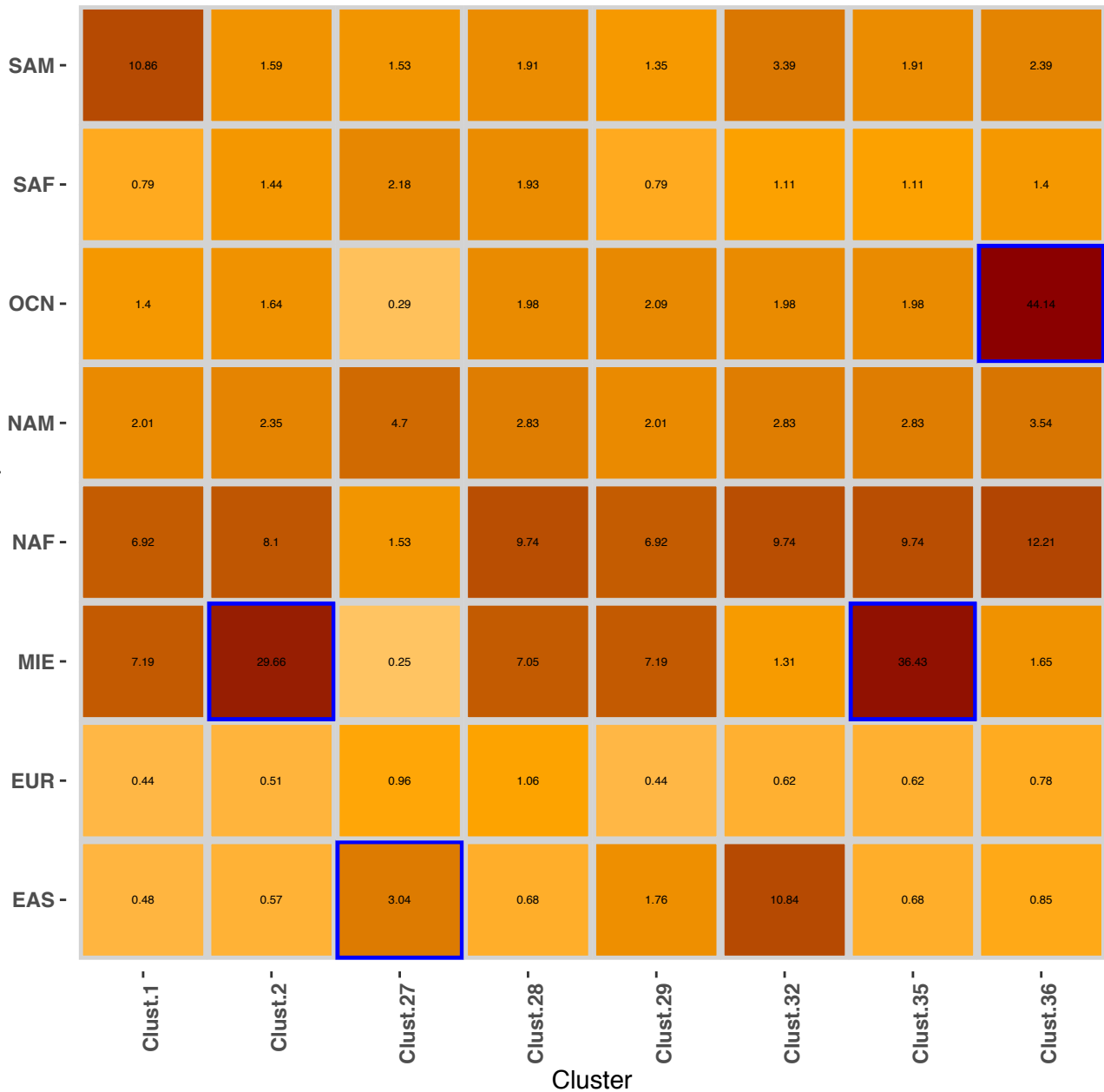
EBER-1 : grouping per continent – max CGS

Pop



EBER-1 : grouping per continent – Max MCC

Pop



EBER-2 : grouping per country – max CGS

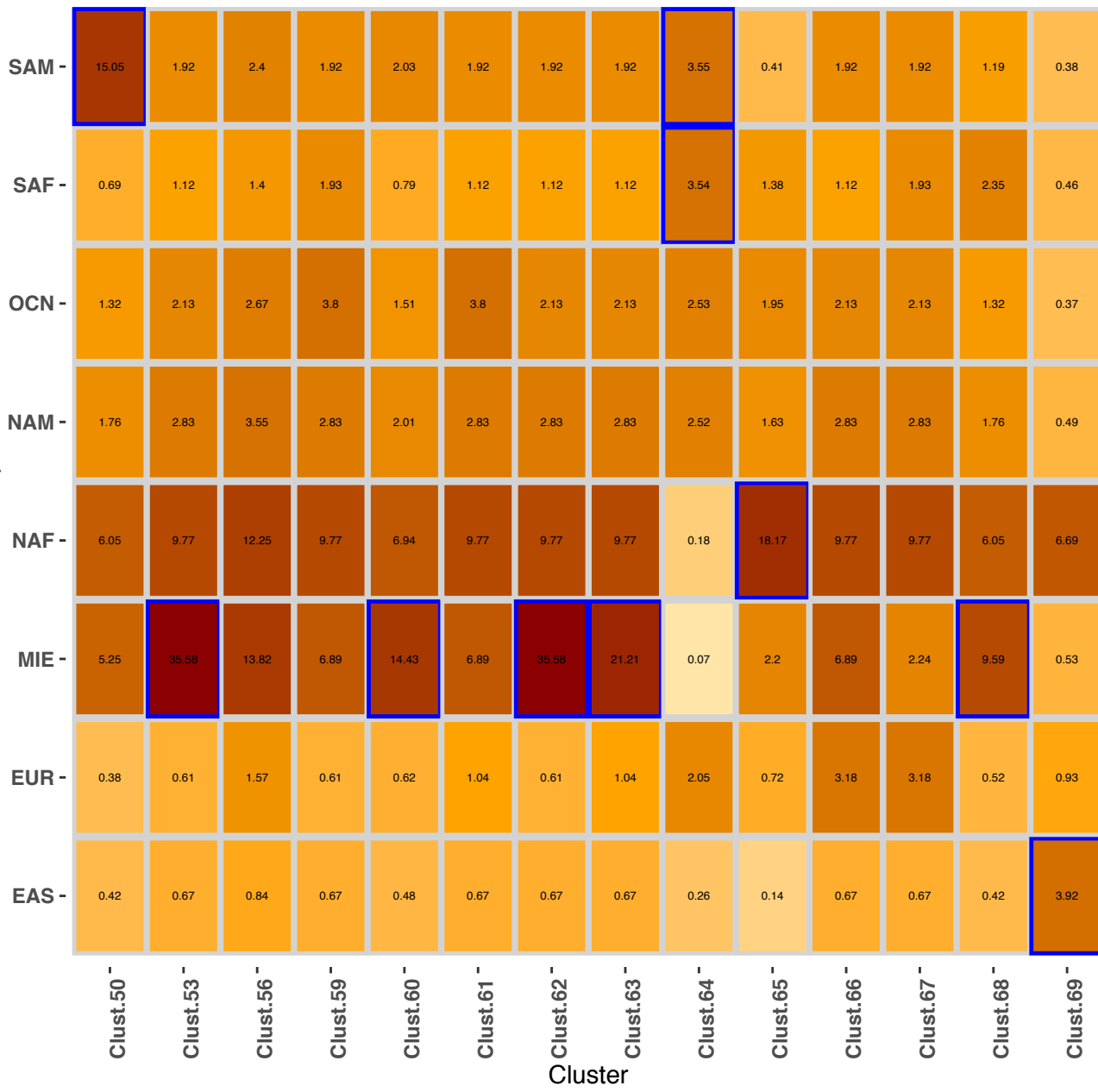
[illegible]

EBER-2 : grouping per country – Max MCC

| Pop | | Cluster | | | | | | | | | | | |
|-------|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| | | Clust.50 | Clust.54 | Clust.65 | Clust.69 | Clust.71 | Clust.73 | Clust.91 | Clust.92 | Clust.95 | Clust.97 | Clust.99 | Clust.103 |
| WG - | | 2.26 | 47.85 | 5.71 | 5.71 | 5.71 | 23.78 | 0.07 | 2.21 | 5.71 | 2.67 | 3.8 | 0.44 |
| USA - | | 2.01 | 3.55 | 3.55 | 3.55 | 3.55 | 3.55 | 3.07 | 1.84 | 3.55 | 3.55 | 2.83 | 0.51 |
| UK - | | 0.89 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 2.6 | 1.79 | 1.57 | 1.57 | 1.25 | 0.25 |
| UG - | | 6.94 | 12.25 | 12.25 | 12.25 | 12.25 | 12.25 | 2.18 | 3.63 | 12.25 | 12.25 | 9.77 | 1.76 |
| TW - | | 8.12 | 14.33 | 14.33 | 14.33 | 14.33 | 14.33 | 0.17 | 2.73 | 14.33 | 14.33 | 11.43 | 3.35 |
| TU - | | 4.11 | 4.61 | 10.38 | 10.38 | 44.4 | 4.61 | 0.13 | 1.1 | 4.61 | 4.61 | 3.68 | 0.81 |
| SK - | | 24.64 | 43.5 | 43.5 | 43.5 | 43.5 | 43.5 | 0.54 | 8.3 | 43.5 | 43.5 | 34.7 | 26.16 |
| SA - | | 9.77 | 17.25 | 17.25 | 17.25 | 17.25 | 17.25 | 0.36 | 3.29 | 17.25 | 57.5 | 13.76 | 2.48 |
| PO - | | 4.81 | 8.5 | 21.25 | 8.5 | 8.5 | 21.25 | 0.1 | 1.62 | 97.43 | 97.43 | 14.12 | 1.22 |
| PN - | | 4.81 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 0.13 | 2.25 | 8.5 | 8.5 | 6.78 | 1.22 |
| NG - | | 16.38 | 28.92 | 28.92 | 28.92 | 28.92 | 28.92 | 3.27 | 5.52 | 28.92 | 28.92 | 23.07 | 4.17 |
| NAF - | | 6.94 | 12.25 | 12.25 | 12.25 | 12.25 | 12.25 | 0.21 | 20.56 | 12.25 | 12.25 | 9.77 | 7 |
| KE - | | 1.63 | 2.88 | 2.88 | 2.88 | 2.88 | 2.88 | 5.3 | 0.65 | 2.88 | 2.88 | 12.88 | 0.41 |
| JP - | | 3.67 | 6.48 | 6.48 | 6.48 | 6.48 | 6.48 | 0.09 | 1.23 | 6.48 | 6.48 | 5.17 | 2.75 |
| IT - | | 1.63 | 2.88 | 2.88 | 2.88 | 2.88 | 2.88 | 1 | 0.55 | 2.88 | 2.88 | 2.29 | 3.45 |
| IN - | | 1.63 | 2.88 | 2.88 | 2.88 | 2.88 | 2.88 | 1.63 | 0.55 | 2.88 | 2.88 | 2.29 | 0.41 |
| HK - | | 3.99 | 7.04 | 7.04 | 7.04 | 7.04 | 7.04 | 0.08 | 1.34 | 7.04 | 7.04 | 5.62 | 1.01 |
| GH - | | 6.94 | 12.25 | 12.25 | 12.25 | 12.25 | 12.25 | 5.52 | 2.34 | 12.25 | 12.25 | 9.77 | 1.76 |
| GE - | | 24.64 | 43.5 | 43.5 | 43.5 | 43.5 | 43.5 | 2.17 | 8.3 | 43.5 | 43.5 | 34.7 | 6.27 |
| FR - | | 24.64 | 43.5 | 43.5 | 43.5 | 43.5 | 43.5 | 2.17 | 8.3 | 43.5 | 43.5 | 34.7 | 6.27 |
| CO - | | 4.81 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 11.37 | 1.62 | 8.5 | 8.5 | 6.78 | 1.22 |
| CH - | | 1.92 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 0.28 | 0.65 | 3.4 | 3.4 | 2.71 | 9.76 |
| BR - | | 13.6 | 12.25 | 12.25 | 12.25 | 12.25 | 12.25 | 2.18 | 2.34 | 12.25 | 12.25 | 9.77 | 1.76 |
| BO - | | 4.81 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.99 | 1.62 | 8.5 | 8.5 | 6.78 | 1.22 |
| AU - | | 2.22 | 3.92 | 3.92 | 8.66 | 3.92 | 3.92 | 4.65 | 2.05 | 3.92 | 3.92 | 3.12 | 0.56 |
| AR - | | 68 | 9.47 | 9.47 | 9.47 | 9.47 | 9.47 | 1.08 | 1.81 | 9.47 | 9.47 | 7.56 | 1.9 |
| AF - | | 6.05 | 10.69 | 10.69 | 10.69 | 10.69 | 10.69 | 0.8 | 3.02 | 10.69 | 10.69 | 8.53 | 5.58 |

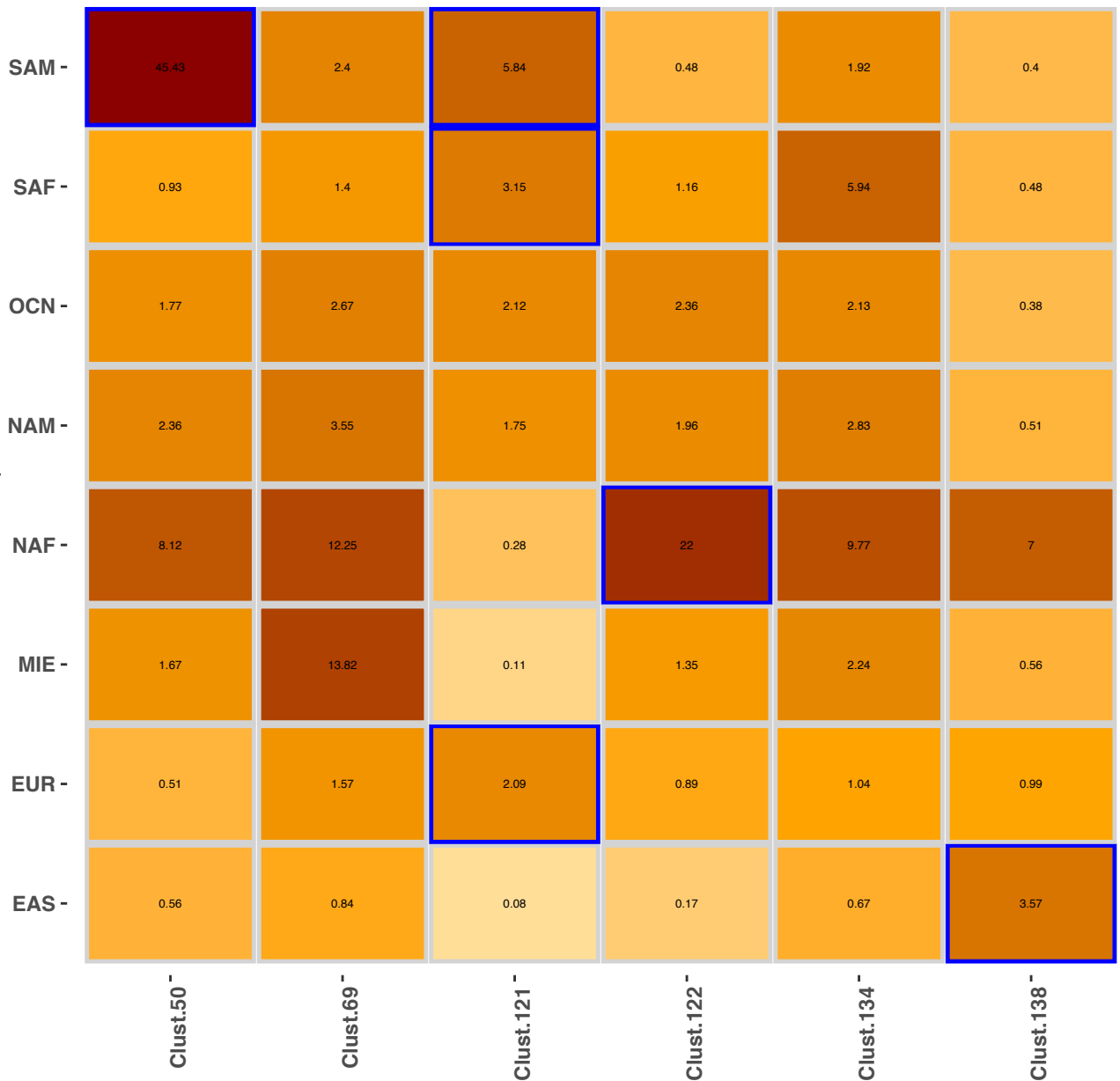
EBER-2 : grouping per continent – max CGS

Pop



EBER-2 : grouping per continent – Max MCC

Pop



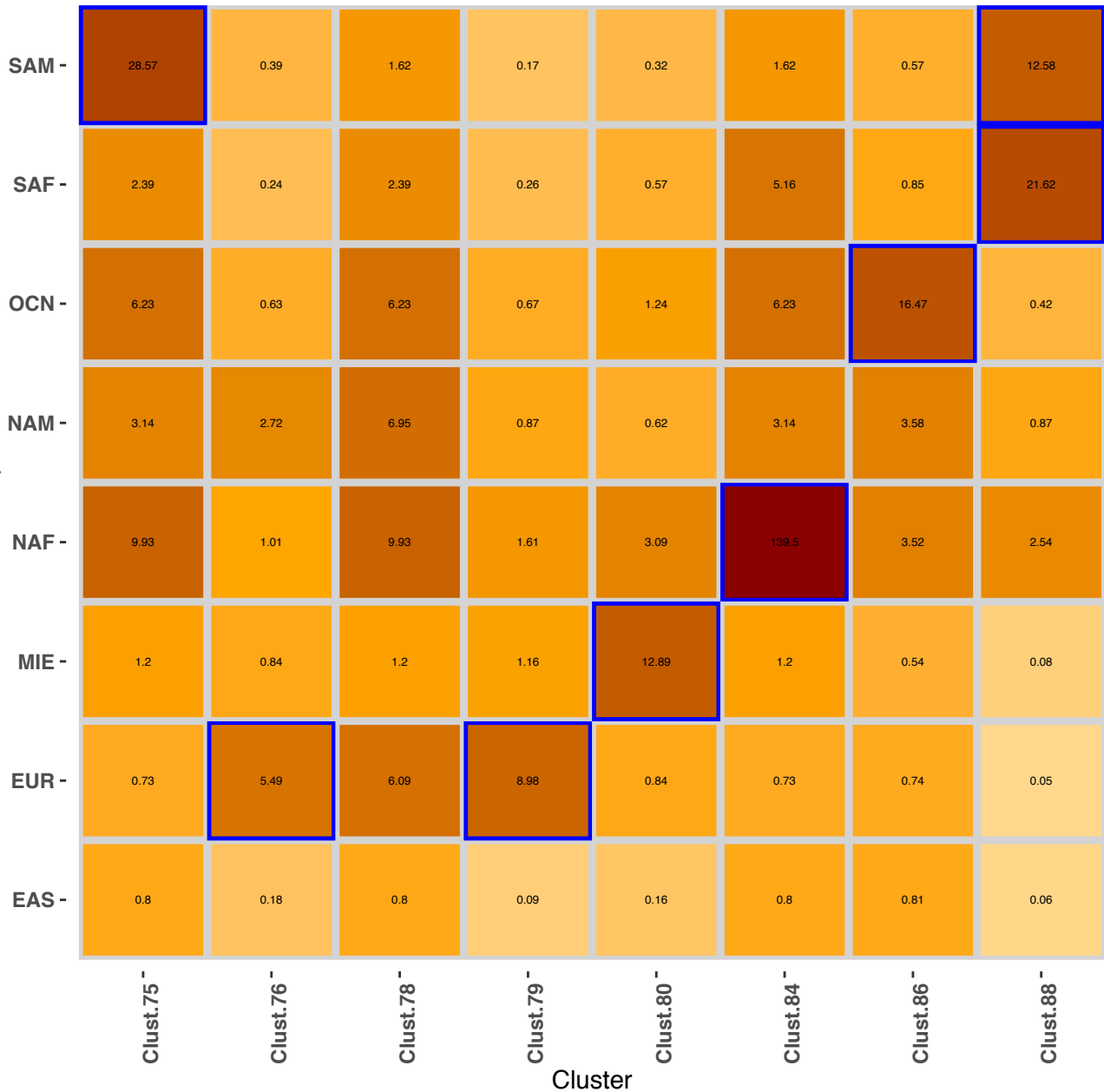
Cluster

EBNA-1 : grouping per country – Max MCC

| | | | | | | |
|-----|-------|----------|----------|----------|----------|----------|
| Pop | WG - | 2.05 | 2.07 | 2.05 | 0.72 | 0.14 |
| | USA - | 3.14 | 1.5 | 3.14 | 3.58 | 0.87 |
| | UK - | 1.79 | 1.86 | 1.79 | 1.91 | 0.13 |
| | UG - | 9.93 | 0.3 | 9.93 | 3.52 | 27.56 |
| | TW - | 11.62 | 0.35 | 11.62 | 4.12 | 0.8 |
| | TU - | 3.5 | 2.31 | 3.5 | 1.69 | 0.24 |
| | SA - | 14 | 0.72 | 14 | 4.96 | 5.13 |
| | PO - | 6.23 | 3.43 | 6.23 | 2.21 | 0.42 |
| | PN - | 6.23 | 0.19 | 6.23 | 16.47 | 0.42 |
| | NG - | 35.38 | 1.08 | 35.38 | 12.55 | 9.96 |
| | NAF - | 9.93 | 1.09 | 139.5 | 3.52 | 2.54 |
| | KE - | 17.56 | 0.53 | 17.56 | 6.23 | 10.3 |
| | JP - | 6.23 | 0.19 | 6.23 | 2.21 | 0.42 |
| | IT - | 2.29 | 79.22 | 2.29 | 0.81 | 0.15 |
| | IN - | 2.29 | 0.25 | 2.29 | 1.07 | 0.17 |
| | HK - | 11.62 | 0.35 | 11.62 | 4.12 | 0.8 |
| | GH - | 9.93 | 0.3 | 9.93 | 3.52 | 27.56 |
| | FR - | 35.38 | 4.38 | 35.38 | 12.55 | 2.43 |
| | CO - | 5.69 | 0.21 | 5.69 | 2.02 | 62.37 |
| | CH - | 3.14 | 0.1 | 3.14 | 1.5 | 0.21 |
| | BR - | 9.93 | 0.3 | 9.93 | 3.52 | 10.73 |
| | BO - | 122.67 | 0.17 | 5.69 | 2.02 | 1.92 |
| | AR - | 6.88 | 0.61 | 6.88 | 2.44 | 6.8 |
| | AF - | 9.93 | 0.43 | 27.8 | 3.52 | 10.73 |
| | | Clust.75 | Clust.76 | Clust.79 | Clust.81 | Clust.83 |
| | | Cluster | | | | |

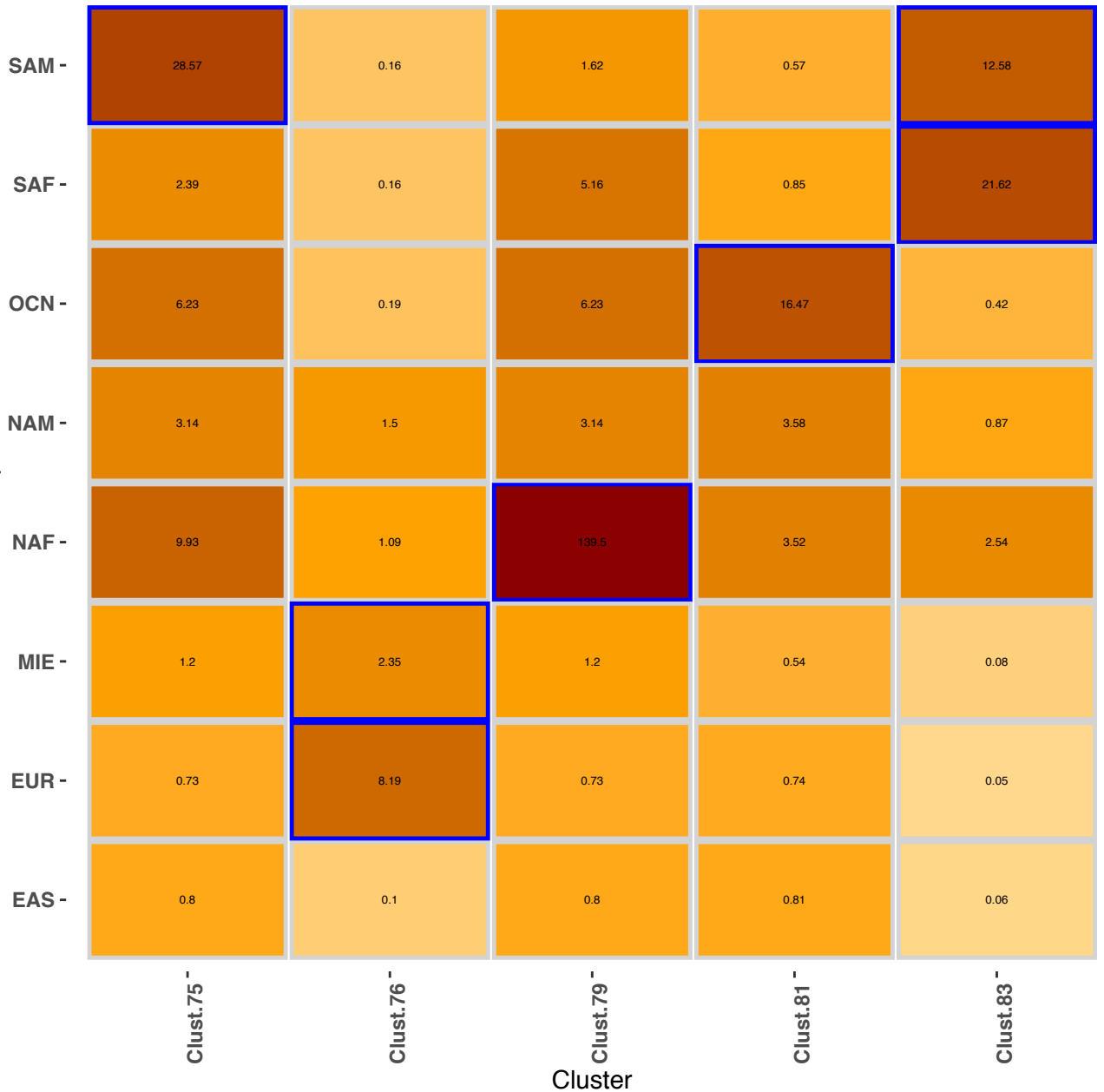
EBNA-1 : grouping per continent – max CGS

Pop



EBNA-1 : grouping per continent – Max MCC

Pop



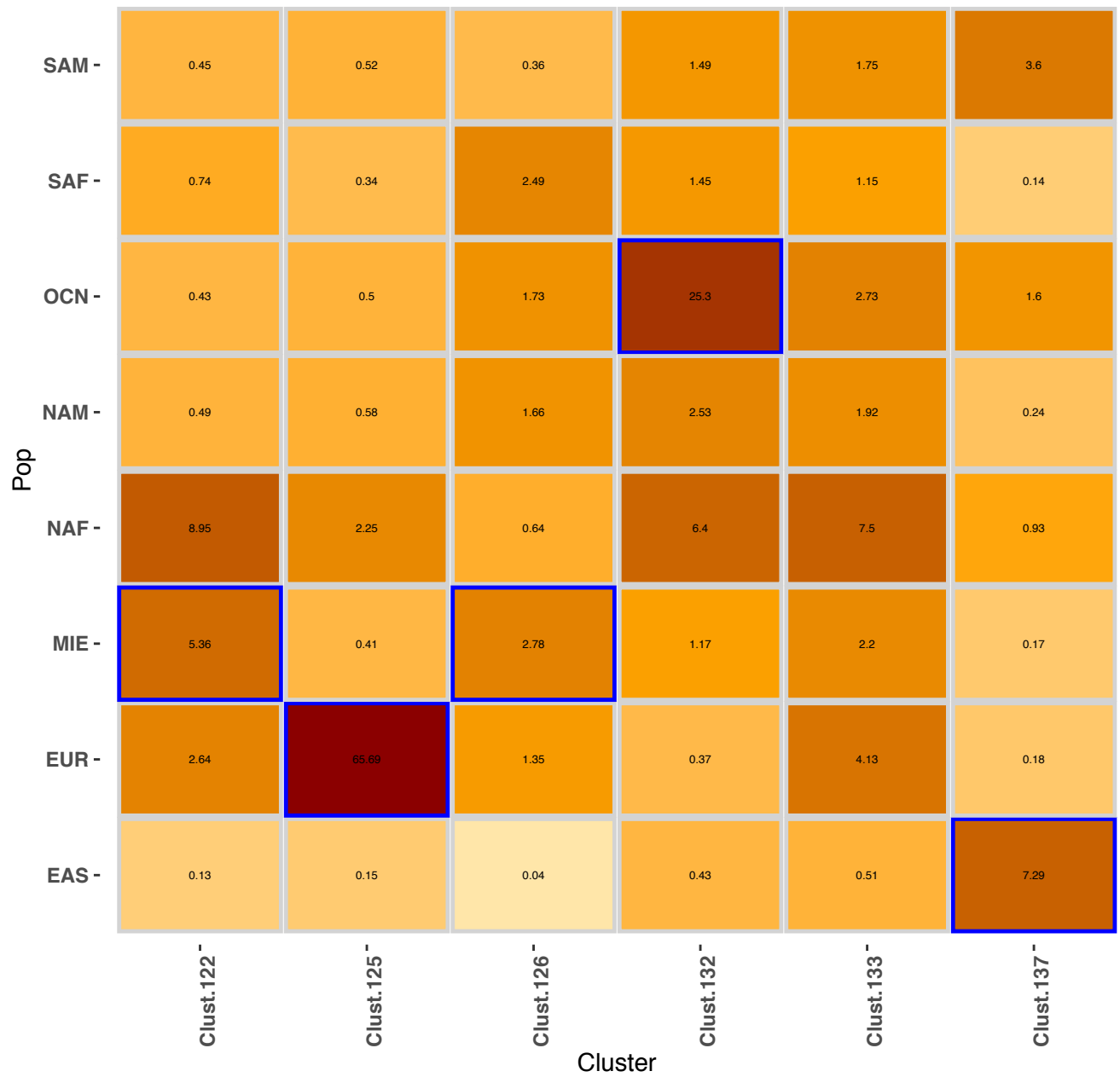
EBNA-2_type1 : grouping per country – max CGS

| Pop | Cluster | | | | | |
|-------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Clust.122 | Clust.125 | Clust.126 | Clust.135 | Clust.136 | Clust.140 |
| WG - | 4.82 | 0.76 | 2.56 | 3.84 | 2.54 | 0.31 |
| USA - | 0.49 | 0.58 | 1.66 | 6.4 | 1.92 | 0.24 |
| UK - | 0.3 | 0.3 | 2.07 | 1.53 | 10.24 | 0.46 |
| UG - | 2.91 | 3.41 | 0.97 | 17.12 | 11.33 | 1.4 |
| TW - | 2.91 | 3.41 | 0.97 | 17.12 | 11.33 | 1.4 |
| TU - | 4.13 | 0.94 | 2.63 | 4.71 | 5.46 | 0.38 |
| SK - | 5.86 | 6.87 | 1.96 | 34.5 | 22.83 | 2.83 |
| SA - | 3.89 | 4.56 | 4.04 | 22.92 | 15.17 | 1.88 |
| PO - | 1.56 | 1.33 | 5.37 | 6.7 | 4.43 | 0.55 |
| PN - | 1.92 | 2.25 | 0.64 | 11.33 | 7.5 | 38.76 |
| NAF - | 8.95 | 2.25 | 0.64 | 11.33 | 7.5 | 0.93 |
| KE - | 0.55 | 0.64 | 6.57 | 3.23 | 2.13 | 0.26 |
| JP - | 1.27 | 1.49 | 0.42 | 7.47 | 4.94 | 0.61 |
| IT - | 7.74 | 480.7 | 0.12 | 2.23 | 1.48 | 0.18 |
| IN - | 0.47 | 0.55 | 0.15 | 2.77 | 1.83 | 14.91 |
| HK - | 0.94 | 1.1 | 0.31 | 5.54 | 3.67 | 18.99 |
| GH - | 1.92 | 2.25 | 0.64 | 11.33 | 7.5 | 0.93 |
| GE - | 5.86 | 6.87 | 1.96 | 34.5 | 22.83 | 2.83 |
| FR - | 5.86 | 6.87 | 8 | 34.5 | 22.83 | 2.83 |
| CO - | 2.32 | 2.72 | 1.33 | 13.65 | 9.03 | 1.12 |
| CH - | 0.47 | 0.55 | 0.15 | 2.77 | 1.83 | 0.91 |
| BR - | 1.64 | 1.92 | 0.79 | 9.68 | 6.4 | 1.17 |
| BO - | 1.43 | 1.68 | 0.48 | 8.44 | 5.58 | 40.63 |
| AU - | 0.55 | 0.64 | 2.51 | 30.47 | 3.56 | 0.26 |
| AR - | 1.64 | 1.92 | 0.55 | 9.68 | 6.4 | 1.17 |
| AF - | 8.95 | 2.25 | 0.64 | 11.33 | 7.5 | 0.93 |

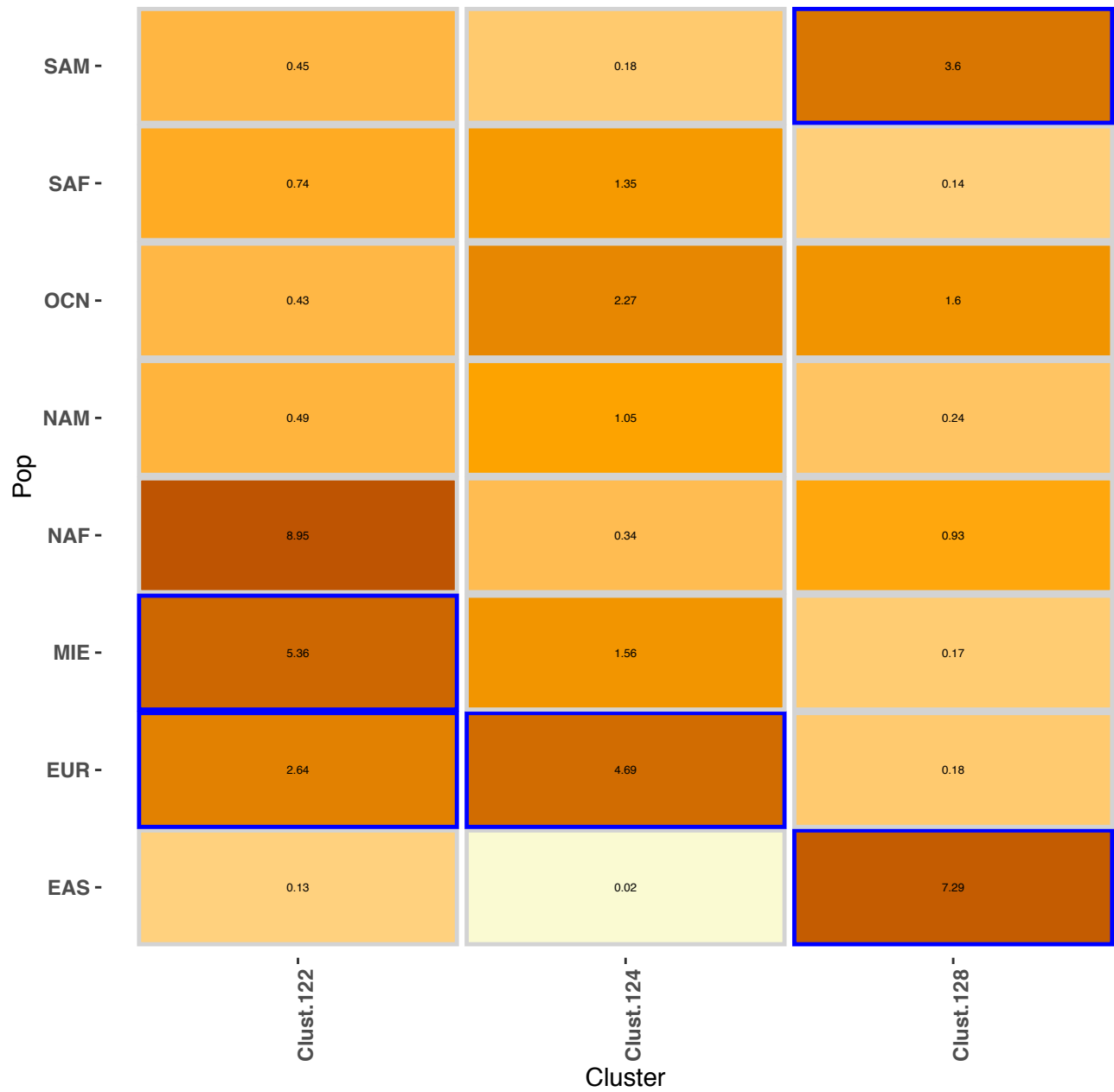
EBNA-2_type1 : grouping per country – Max MCC

| Pop | Cluster | | | |
|-------|-----------|-----------|-----------|-----------|
| | Clust.122 | Clust.125 | Clust.126 | Clust.130 |
| WG - | 4.82 | 0.76 | 1.79 | 0.31 |
| USA - | 0.49 | 0.58 | 1.48 | 0.24 |
| UK - | 0.3 | 0.3 | 3.55 | 0.46 |
| UG - | 2.91 | 3.41 | 0.7 | 1.4 |
| TW - | 2.91 | 3.41 | 0.7 | 1.4 |
| TU - | 4.13 | 0.94 | 2.6 | 0.38 |
| SK - | 5.86 | 6.87 | 1.42 | 2.83 |
| SA - | 3.89 | 4.56 | 2.9 | 1.88 |
| PO - | 1.56 | 1.33 | 3.79 | 0.55 |
| PN - | 1.92 | 2.25 | 0.46 | 38.76 |
| NAF - | 8.95 | 2.25 | 0.46 | 0.93 |
| KE - | 0.55 | 0.64 | 5.71 | 0.26 |
| JP - | 1.27 | 1.49 | 0.3 | 0.61 |
| IT - | 7.74 | 480.7 | 0.09 | 0.18 |
| IN - | 0.47 | 0.55 | 0.11 | 14.91 |
| HK - | 0.94 | 1.1 | 0.22 | 18.99 |
| GH - | 1.92 | 2.25 | 0.46 | 0.93 |
| GE - | 5.86 | 6.87 | 5.78 | 2.83 |
| FR - | 5.86 | 6.87 | 5.78 | 2.83 |
| CO - | 2.32 | 2.72 | 0.96 | 1.12 |
| CH - | 0.47 | 0.55 | 0.11 | 0.91 |
| BR - | 1.64 | 1.92 | 0.57 | 1.17 |
| BO - | 1.43 | 1.68 | 0.34 | 40.63 |
| AU - | 0.55 | 0.64 | 5.71 | 0.26 |
| AR - | 1.64 | 1.92 | 0.4 | 1.17 |
| AF - | 8.95 | 2.25 | 0.46 | 0.93 |

EBNA-2_type1 : grouping per continent – max CGS



EBNA-2_type1 : grouping per continent – Max MCC



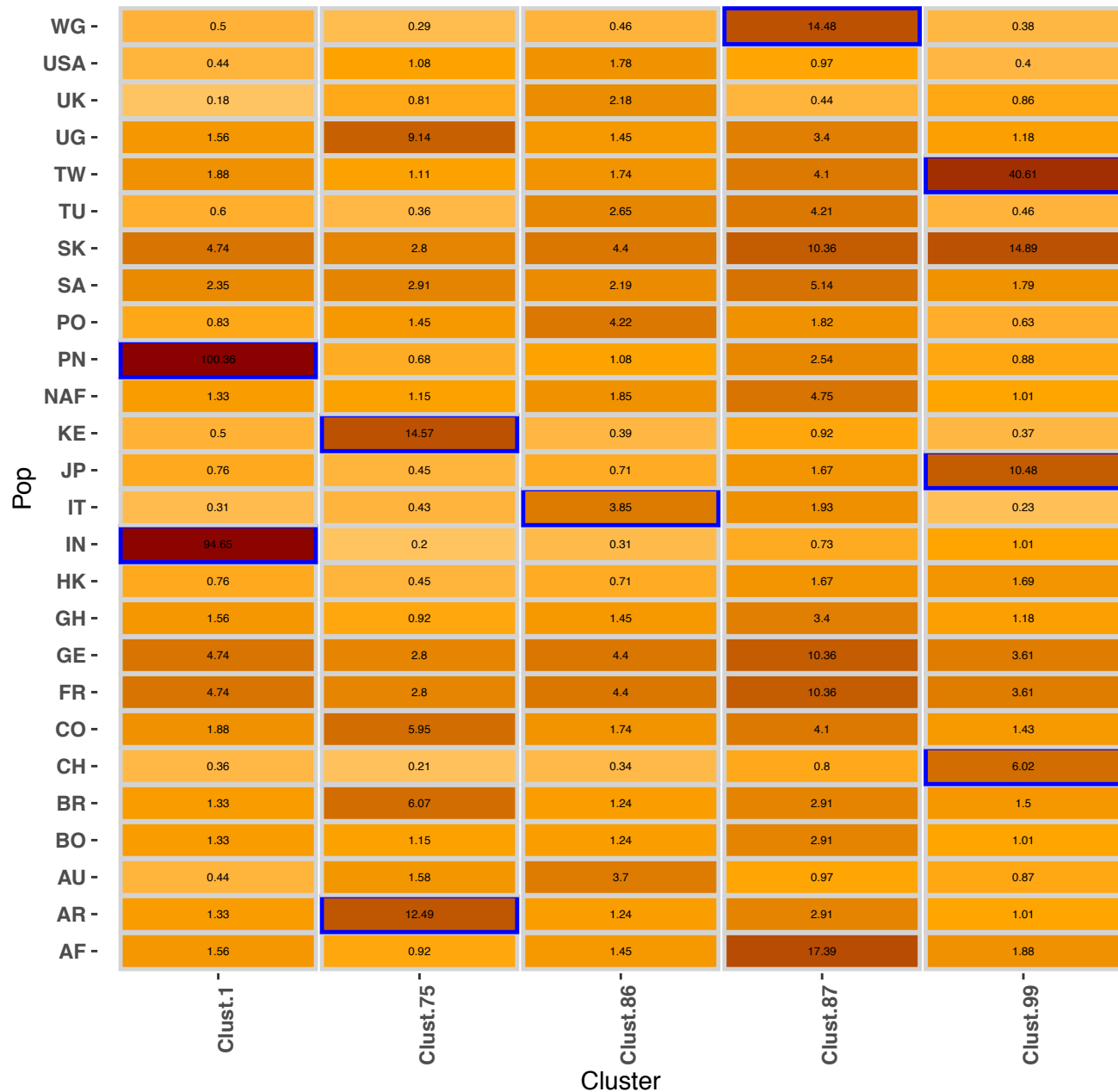
EBNA-3A_type1 : grouping per country – max CGS

Pop

| | | | | | | | | | | | | | | | | | | |
|-------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| WG - | 0.5 | 2.23 | 3.94 | 3.14 | 1.94 | 3.94 | 2.23 | 8.88 | 30.43 | 0.61 | 0.29 | 3.94 | 1.94 | 2.64 | 0.38 | 3.14 | 0.56 | 2.61 |
| USA - | 0.44 | 1.99 | 3.52 | 2.81 | 6.56 | 3.52 | 1.99 | 3.52 | 2.33 | 3.72 | 1.08 | 3.52 | 2.57 | 1.11 | 0.4 | 16.59 | 0.5 | 2.33 |
| UK - | 0.18 | 0.75 | 1.32 | 1.05 | 4.3 | 1.32 | 11.81 | 1.32 | 0.88 | 1.16 | 0.81 | 2.76 | 0.65 | 1.76 | 0.86 | 5.64 | 0.21 | 0.88 |
| UG - | 1.56 | 6.98 | 12.33 | 9.83 | 6.08 | 12.33 | 6.98 | 12.33 | 8.17 | 1.92 | 9.14 | 12.33 | 39.07 | 0.94 | 1.18 | 9.83 | 1.76 | 8.17 |
| TW - | 1.88 | 8.4 | 14.85 | 11.84 | 7.33 | 14.85 | 8.4 | 14.85 | 9.83 | 2.31 | 1.11 | 14.85 | 7.33 | 1.14 | 40.61 | 11.84 | 2.12 | 9.83 |
| TU - | 0.6 | 2.7 | 11.04 | 7.33 | 2.36 | 4.78 | 2.7 | 4.78 | 5.48 | 0.93 | 0.36 | 4.78 | 2.36 | 3.56 | 0.46 | 3.81 | 0.68 | 3.17 |
| SK - | 4.74 | 21.21 | 37.5 | 29.9 | 18.5 | 37.5 | 21.21 | 37.5 | 24.83 | 5.83 | 2.8 | 37.5 | 18.5 | 2.88 | 14.89 | 29.9 | 5.35 | 24.83 |
| SA - | 2.35 | 10.54 | 18.62 | 14.85 | 9.19 | 18.62 | 10.54 | 18.62 | 12.33 | 6.32 | 2.91 | 18.62 | 9.19 | 1.43 | 1.79 | 14.85 | 2.65 | 12.33 |
| PO - | 0.83 | 3.74 | 6.61 | 10.74 | 3.26 | 6.61 | 3.74 | 6.61 | 4.38 | 1.03 | 1.45 | 6.61 | 3.26 | 2.63 | 0.63 | 5.27 | 0.94 | 4.38 |
| PN - | 100.36 | 5.2 | 9.19 | 7.33 | 4.53 | 9.19 | 5.2 | 9.19 | 6.08 | 1.43 | 0.68 | 9.19 | 4.53 | 0.7 | 0.88 | 7.33 | 1.31 | 6.08 |
| NAF - | 1.33 | 5.96 | 10.54 | 8.4 | 5.2 | 10.54 | 5.96 | 29.5 | 6.98 | 6.57 | 1.15 | 10.54 | 5.2 | 3.04 | 1.01 | 8.4 | 1.5 | 6.98 |
| KE - | 0.5 | 1.89 | 3.35 | 2.67 | 1.65 | 3.35 | 1.89 | 3.35 | 2.21 | 0.52 | 14.57 | 31.33 | 1.65 | 0.25 | 0.37 | 2.67 | 0.47 | 2.21 |
| JP - | 0.76 | 3.42 | 6.04 | 4.82 | 2.98 | 6.04 | 3.42 | 6.04 | 4 | 0.94 | 0.45 | 6.04 | 2.98 | 0.46 | 10.48 | 4.82 | 1.12 | 166.29 |
| IT - | 0.31 | 88.14 | 5.27 | 10.96 | 1.21 | 5.27 | 2.08 | 5.27 | 2.62 | 0.44 | 0.43 | 2.45 | 1.21 | 3.44 | 0.23 | 1.95 | 0.35 | 1.62 |
| IN - | 94.65 | 1.5 | 2.65 | 2.12 | 1.31 | 2.65 | 2.27 | 2.65 | 1.76 | 0.48 | 0.2 | 2.65 | 1.31 | 0.2 | 1.01 | 2.12 | 0.44 | 1.76 |
| HK - | 0.76 | 3.42 | 6.04 | 4.82 | 2.98 | 6.04 | 3.42 | 6.04 | 4 | 0.94 | 0.45 | 6.04 | 2.98 | 0.46 | 1.69 | 4.82 | 77.62 | 4 |
| GH - | 1.56 | 6.98 | 12.33 | 9.83 | 6.08 | 12.33 | 6.98 | 12.33 | 8.17 | 20.85 | 0.92 | 12.33 | 39.07 | 0.94 | 1.18 | 9.83 | 1.76 | 8.17 |
| GE - | 4.74 | 21.21 | 200.67 | 29.9 | 18.5 | 37.5 | 21.21 | 37.5 | 24.83 | 5.83 | 2.8 | 37.5 | 18.5 | 2.88 | 3.61 | 29.9 | 5.35 | 24.83 |
| FR - | 4.74 | 21.21 | 37.5 | 29.9 | 18.5 | 200.67 | 21.21 | 37.5 | 24.83 | 5.83 | 2.8 | 37.5 | 18.5 | 2.88 | 3.61 | 29.9 | 5.35 | 24.83 |
| CO - | 1.88 | 8.4 | 14.85 | 11.84 | 7.33 | 14.85 | 8.4 | 14.85 | 9.83 | 13.24 | 5.95 | 14.85 | 7.33 | 1.14 | 1.43 | 11.84 | 2.12 | 9.83 |
| CH - | 0.36 | 1.64 | 2.9 | 2.31 | 1.43 | 2.9 | 1.64 | 2.9 | 1.92 | 0.45 | 0.21 | 2.9 | 1.43 | 0.22 | 6.02 | 2.31 | 29.03 | 3.14 |
| BR - | 1.33 | 5.96 | 10.54 | 8.4 | 5.2 | 10.54 | 5.96 | 10.54 | 6.98 | 1.64 | 6.07 | 10.54 | 9.7 | 0.81 | 1.5 | 8.4 | 1.5 | 6.98 |
| BO - | 1.33 | 5.96 | 10.54 | 8.4 | 5.2 | 10.54 | 5.96 | 10.54 | 6.98 | 1.64 | 1.15 | 10.54 | 5.2 | 0.81 | 1.01 | 8.4 | 1.5 | 6.98 |
| AU - | 0.44 | 1.99 | 3.52 | 2.81 | 6.56 | 7.83 | 1.99 | 3.52 | 2.33 | 2.48 | 1.58 | 3.52 | 1.74 | 2.24 | 0.87 | 2.81 | 0.5 | 2.33 |
| AR - | 1.33 | 5.96 | 10.54 | 8.4 | 5.2 | 10.54 | 5.96 | 10.54 | 6.98 | 1.64 | 12.49 | 10.54 | 5.2 | 0.81 | 1.01 | 8.4 | 1.5 | 6.98 |
| AF - | 1.56 | 6.98 | 12.33 | 9.83 | 6.08 | 12.33 | 6.98 | 12.33 | 8.17 | 3.14 | 0.92 | 12.33 | 12.17 | 4.06 | 1.88 | 9.83 | 1.76 | 8.17 |
| | Clust.1 | Clust.9 | Clust.10 | Clust.17 | Clust.18 | Clust.19 | Clust.21 | Clust.22 | Clust.23 | Clust.24 | Clust.26 | Clust.27 | Clust.28 | Clust.29 | Clust.40 | Clust.42 | Clust.44 | Clust.45 |

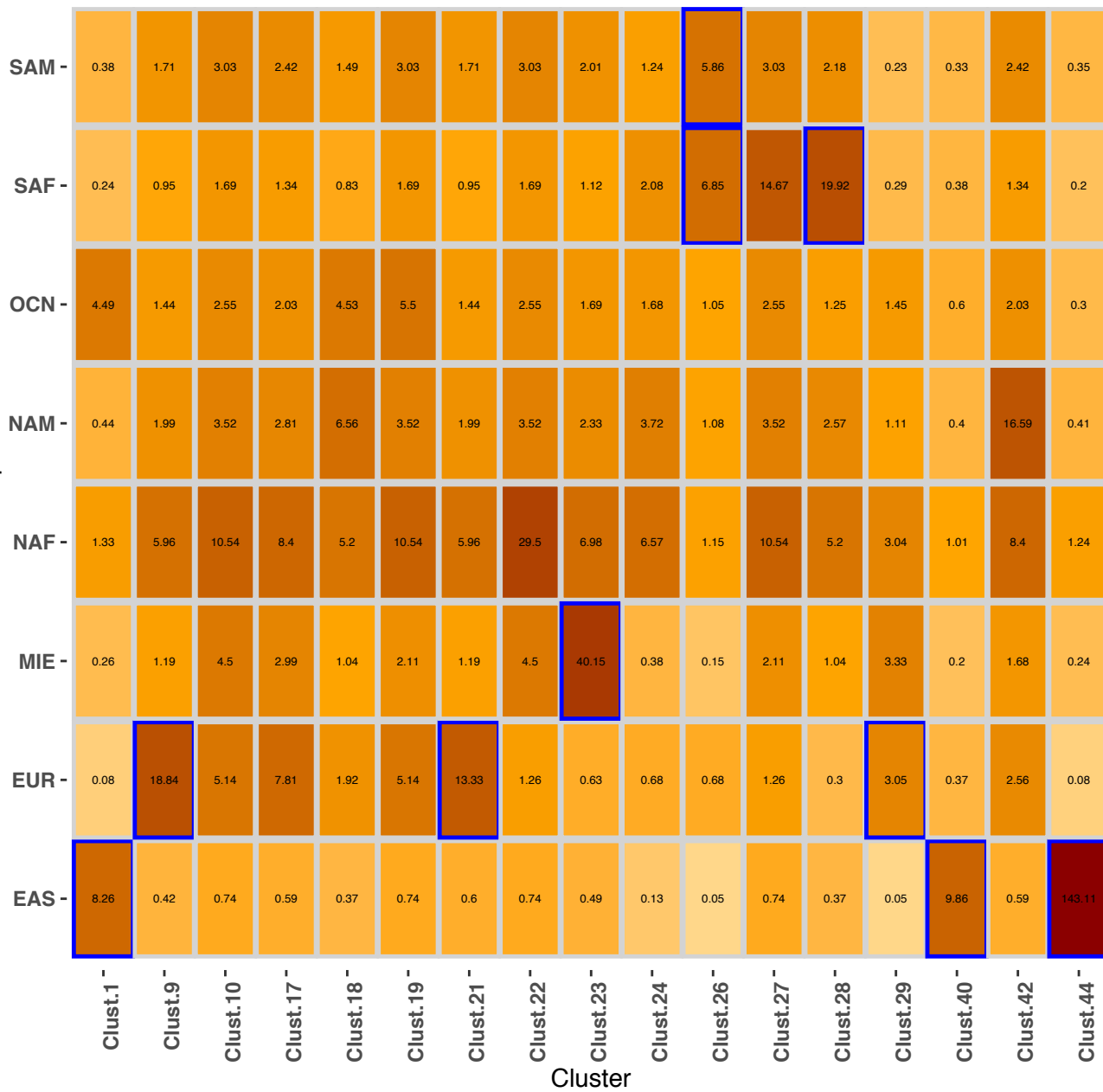
Cluster

EBNA-3A_type1 : grouping per country – Max MCC



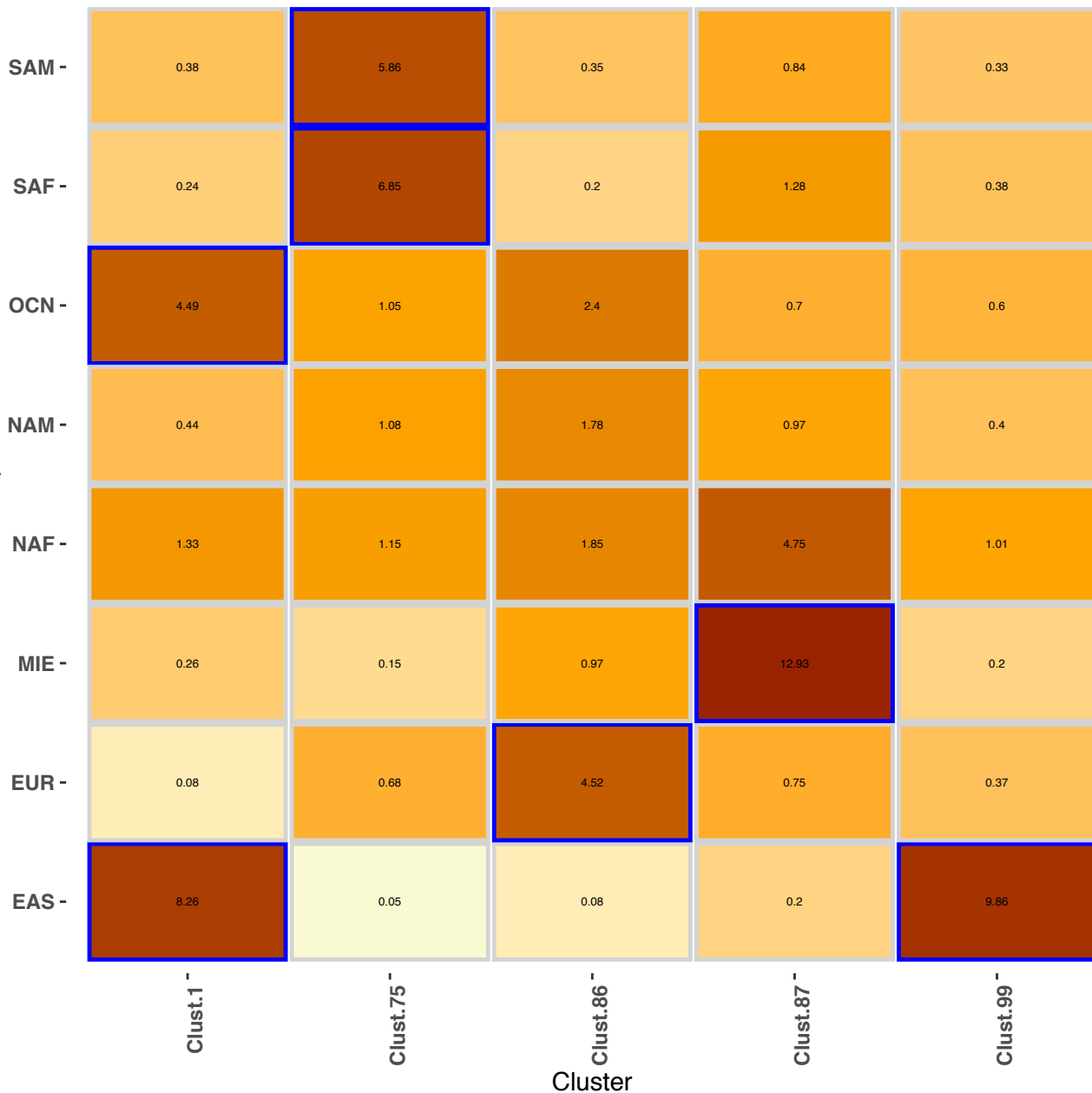
EBNA-3A_type1 : grouping per continent – max CGS

Pop



EBNA-3A_type1 : grouping per continent – Max MCC

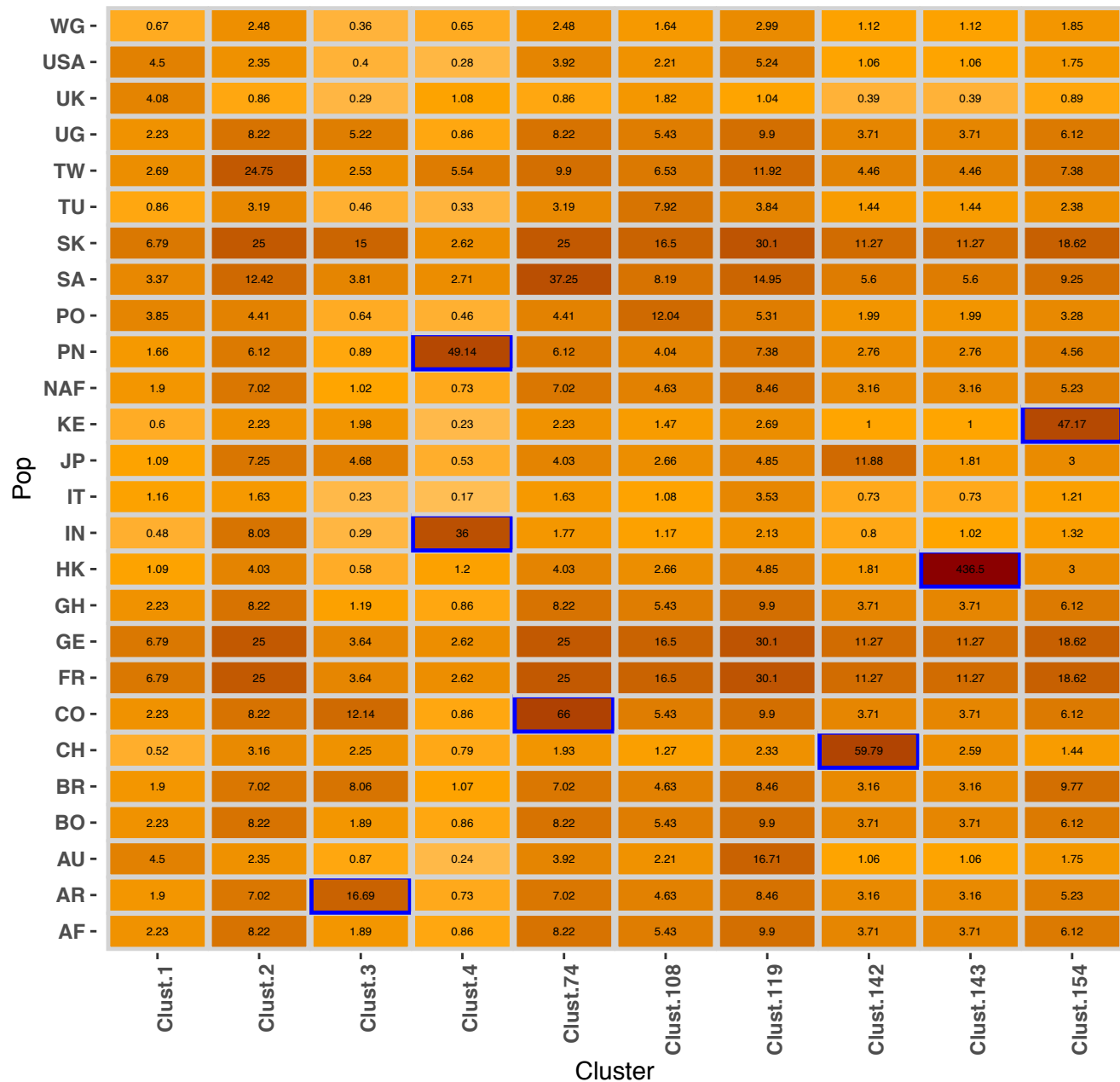
Pop



EBNA-3B_type1 : grouping per country – max CGS

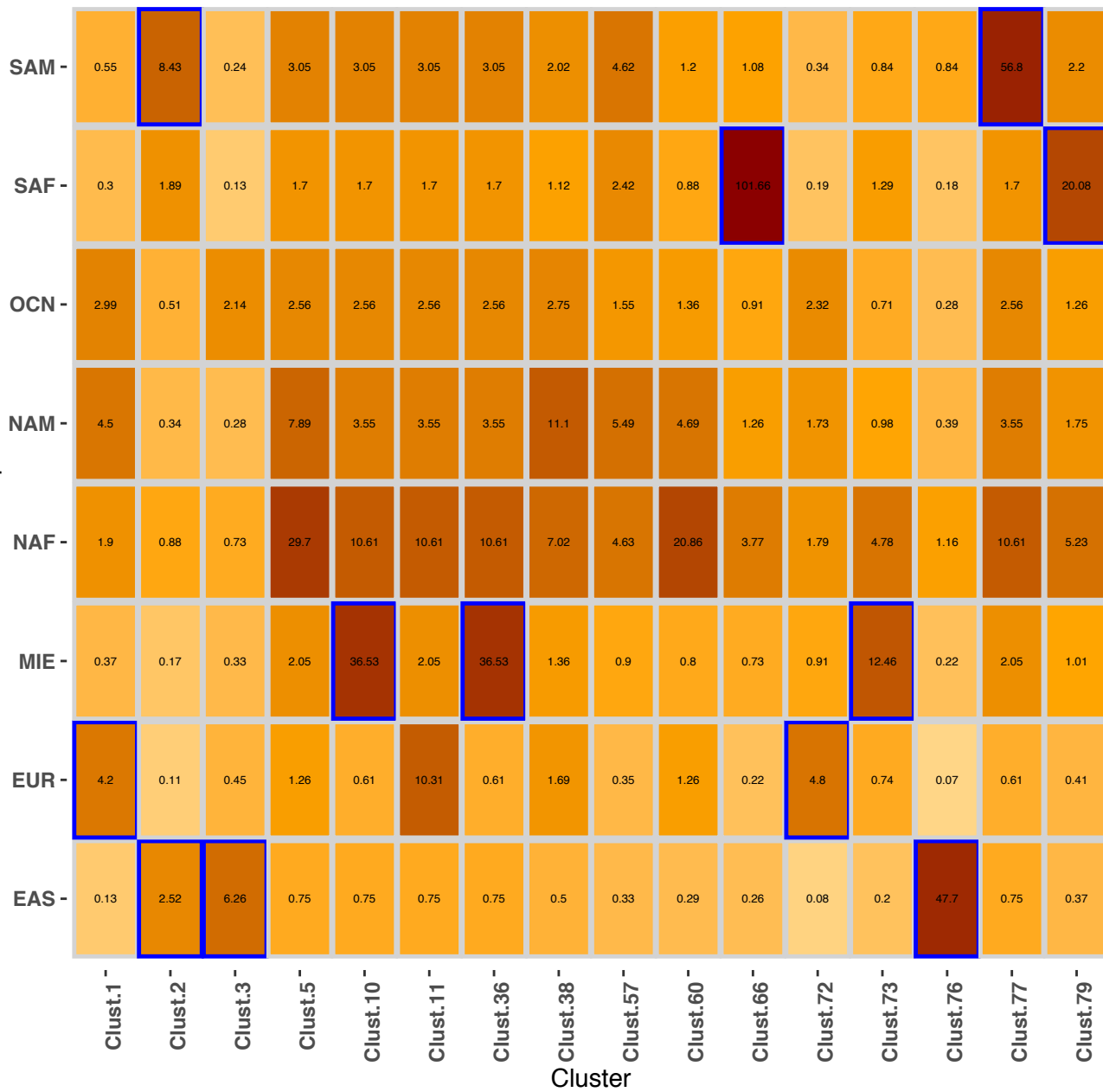
| Pop | | Cluster | | | | | | | | | | | | | | | |
|--|--|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | | Clust.1 | Clust.2 | Clust.3 | Clust.5 | Clust.10 | Clust.11 | Clust.36 | Clust.38 | Clust.57 | Clust.60 | Clust.66 | Clust.72 | Clust.73 | Clust.76 | Clust.77 | Clust.79 |
| WG - USA - UK - UG - TW - TU - SK - SA - PO - PN - NAF - KE - JP - IT - IN - HK - GH - GE - FR - CO - CH - BR - BO - AU - AR - AF - | | 0.67 | 0.31 | 0.65 | 3.75 | 72 | 3.75 | 35.75 | 2.48 | 1.64 | 1.47 | 1.33 | 0.42 | 13.41 | 0.41 | 3.75 | 1.85 |
| | | 4.5 | 0.34 | 0.28 | 7.89 | 3.55 | 3.55 | 3.55 | 11.1 | 5.49 | 4.69 | 1.26 | 1.73 | 0.98 | 0.39 | 3.55 | 1.75 |
| | | 4.08 | 0.24 | 1.08 | 1.3 | 1.3 | 1.3 | 3.68 | 0.76 | 2.79 | 0.46 | 2.47 | 2.47 | 0.43 | 0.16 | 1.3 | 0.89 |
| | | 2.23 | 4.46 | 0.86 | 12.42 | 12.42 | 12.42 | 12.42 | 8.22 | 5.43 | 4.87 | 8.08 | 1.41 | 3.43 | 1.36 | 12.42 | 6.12 |
| | | 2.89 | 6.72 | 5.54 | 14.95 | 14.95 | 14.95 | 14.95 | 9.9 | 6.53 | 5.86 | 5.31 | 1.69 | 4.13 | 1.64 | 14.95 | 7.38 |
| | | 0.86 | 0.4 | 0.33 | 4.82 | 4.82 | 4.82 | 11.12 | 3.19 | 2.1 | 1.89 | 1.71 | 2.56 | 4.24 | 0.53 | 4.82 | 2.38 |
| | | 6.79 | 12.93 | 2.62 | 37.75 | 37.75 | 37.75 | 37.75 | 25 | 16.5 | 14.8 | 13.41 | 4.28 | 10.43 | 4.14 | 37.75 | 18.62 |
| | | 3.37 | 3.27 | 2.71 | 18.75 | 18.75 | 18.75 | 18.75 | 12.42 | 21.07 | 7.35 | 6.66 | 2.12 | 5.18 | 2.05 | 18.75 | 9.25 |
| | | 3.85 | 0.55 | 0.46 | 6.66 | 6.66 | 16.28 | 6.66 | 4.41 | 2.91 | 2.61 | 2.36 | 4.09 | 1.84 | 0.73 | 6.66 | 3.28 |
| | | 1.66 | 0.77 | 49.14 | 9.25 | 9.25 | 9.25 | 9.25 | 6.12 | 4.04 | 3.62 | 3.28 | 1.05 | 2.55 | 1.01 | 9.25 | 4.56 |
| | | 1.9 | 0.88 | 0.73 | 29.7 | 10.61 | 10.61 | 10.61 | 7.02 | 4.63 | 20.86 | 3.77 | 1.79 | 4.78 | 1.16 | 10.61 | 5.23 |
| | | 0.6 | 1.68 | 0.23 | 3.37 | 3.37 | 3.37 | 3.37 | 2.23 | 1.47 | 1.32 | 232.36 | 0.38 | 0.93 | 0.37 | 3.37 | 47.17 |
| | | 1.09 | 5.97 | 0.53 | 6.08 | 6.08 | 6.08 | 6.08 | 4.03 | 2.66 | 2.38 | 2.16 | 0.69 | 1.68 | 8.24 | 6.08 | 3 |
| | | 1.16 | 0.2 | 0.17 | 5.31 | 2.46 | 22.16 | 2.46 | 1.63 | 1.08 | 0.96 | 0.87 | 3.7 | 1.94 | 0.27 | 2.46 | 1.21 |
| | | 0.48 | 0.87 | 36 | 2.67 | 2.67 | 2.67 | 2.67 | 1.77 | 1.17 | 1.05 | 0.95 | 0.3 | 0.74 | 0.33 | 2.67 | 1.32 |
| | | 1.09 | 0.5 | 1.2 | 6.08 | 6.08 | 6.08 | 6.08 | 4.03 | 2.66 | 2.38 | 2.16 | 0.69 | 1.68 | 53.02 | 6.08 | 3 |
| | | 2.23 | 1.03 | 0.86 | 12.42 | 12.42 | 12.42 | 12.42 | 8.22 | 10.46 | 4.87 | 4.41 | 1.41 | 3.43 | 1.36 | 12.42 | 6.12 |
| | | 6.79 | 3.14 | 2.62 | 37.75 | 37.75 | 37.75 | 37.75 | 25 | 16.5 | 14.8 | 13.41 | 4.28 | 10.43 | 4.14 | 37.75 | 18.62 |
| | | 6.79 | 3.14 | 2.62 | 37.75 | 37.75 | 37.75 | 37.75 | 25 | 16.5 | 14.8 | 13.41 | 4.28 | 10.43 | 4.14 | 37.75 | 18.62 |
| | | 2.23 | 10.34 | 0.86 | 12.42 | 12.42 | 12.42 | 12.42 | 8.22 | 32.67 | 4.87 | 4.41 | 1.41 | 3.43 | 1.36 | 12.42 | 6.12 |
| | | 0.52 | 2.49 | 0.79 | 2.92 | 2.92 | 2.92 | 2.92 | 1.93 | 1.27 | 1.14 | 1.03 | 0.33 | 0.8 | 22.81 | 2.92 | 1.44 |
| | | 1.9 | 6.87 | 1.07 | 10.61 | 10.61 | 10.61 | 10.61 | 7.02 | 4.63 | 4.16 | 3.77 | 1.2 | 2.93 | 1.16 | 10.61 | 9.77 |
| | | 2.23 | 1.62 | 0.86 | 12.42 | 12.42 | 12.42 | 12.42 | 8.22 | 5.43 | 4.87 | 4.41 | 1.41 | 3.43 | 6 | 199.33 | 6.12 |
| | | 4.5 | 0.75 | 0.24 | 3.55 | 3.55 | 3.55 | 3.55 | 3.92 | 2.21 | 1.93 | 1.26 | 3.57 | 0.98 | 0.39 | 3.55 | 1.75 |
| | | 1.9 | 14.16 | 0.73 | 10.61 | 10.61 | 10.61 | 10.61 | 7.02 | 4.63 | 4.16 | 3.77 | 1.2 | 2.93 | 1.16 | 29.7 | 5.23 |
| | | 2.23 | 1.62 | 0.86 | 12.42 | 12.42 | 12.42 | 12.42 | 8.22 | 5.43 | 9.12 | 4.41 | 1.41 | 17.52 | 1.36 | 12.42 | 6.12 |

EBNA-3B_type1 : grouping per country – Max MCC



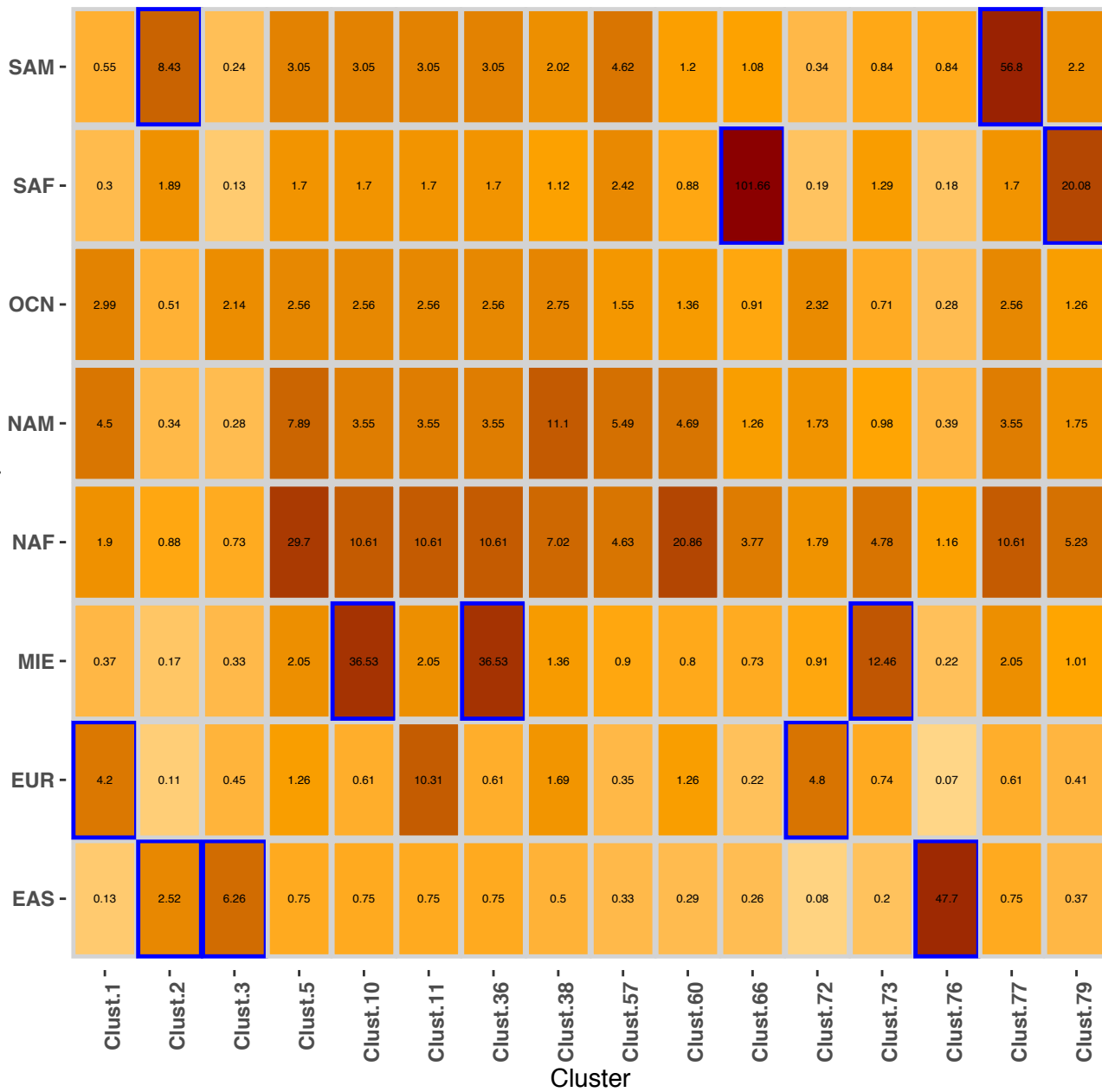
EBNA-3B_type1 : grouping per continent – max CGS

Pop

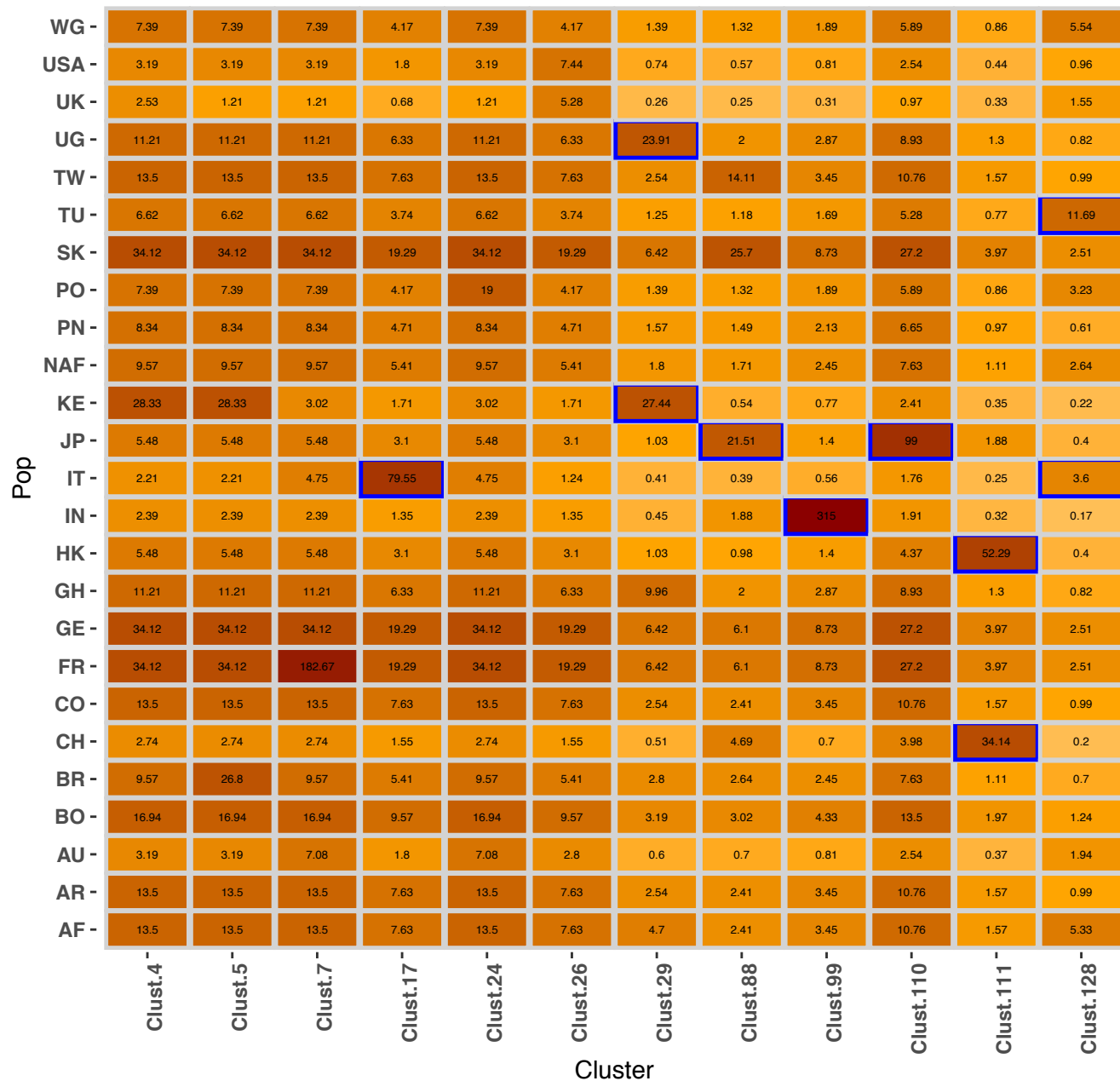


EBNA-3B_type1 : grouping per continent – Max MCC

Pop



EBNA-3C_type1 : grouping per country – max CGS



EBNA-3C_type1 : grouping per country – Max MCC

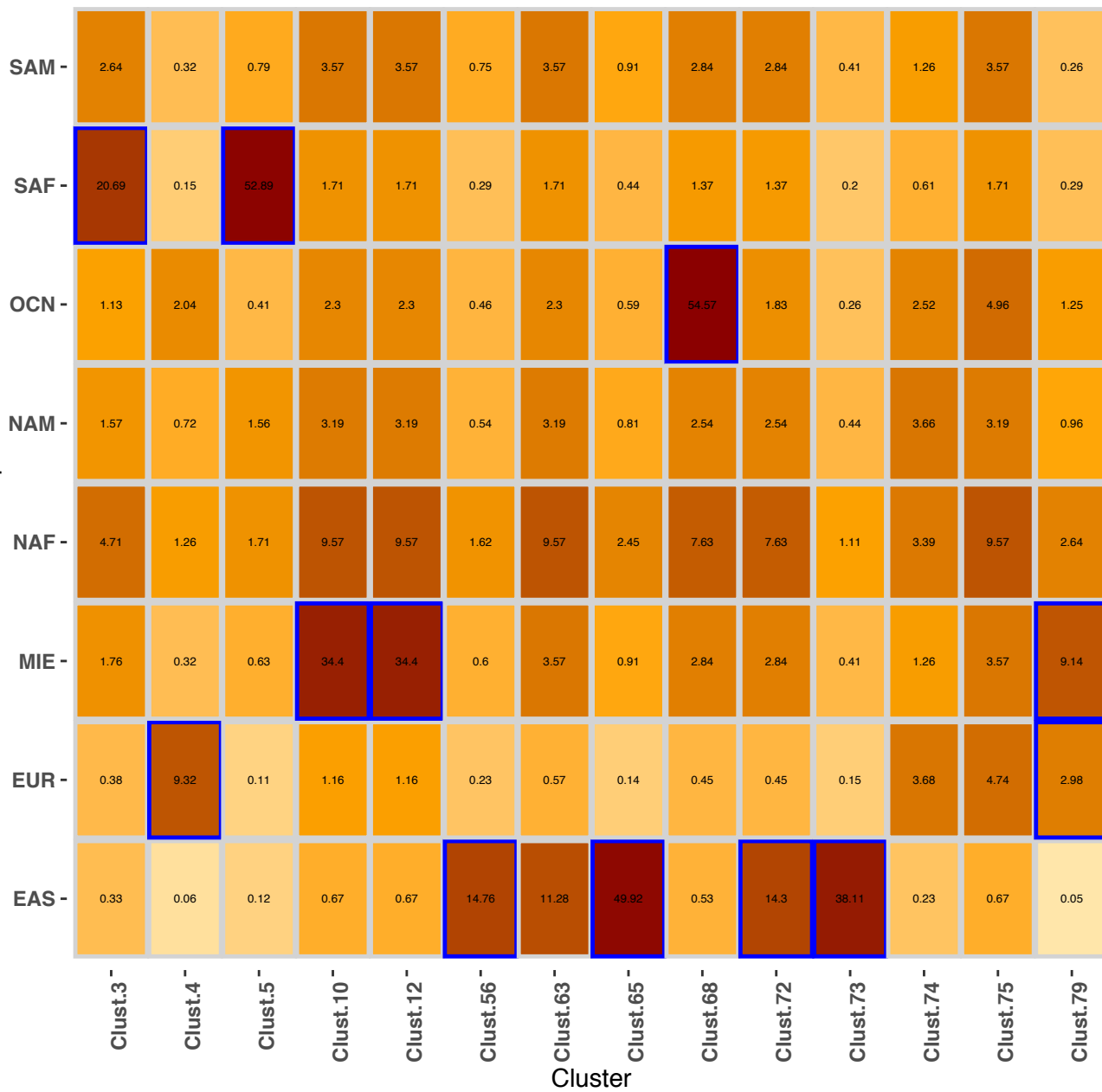
Pop

| | | | | | | | | |
|-------|---------|---------|----------|-----------|-----------|-----------|-----------|-----------|
| WG - | 7.39 | 7.39 | 1.39 | 1.32 | 1.89 | 5.89 | 0.86 | 5.54 |
| USA - | 3.19 | 3.19 | 0.74 | 0.57 | 0.81 | 2.54 | 0.44 | 0.96 |
| UK - | 2.53 | 1.21 | 0.26 | 0.25 | 0.31 | 0.97 | 0.33 | 1.55 |
| UG - | 11.21 | 11.21 | 23.91 | 2 | 2.87 | 8.93 | 1.3 | 0.82 |
| TW - | 13.5 | 13.5 | 2.54 | 14.11 | 3.45 | 10.76 | 1.57 | 0.99 |
| TU - | 6.62 | 6.62 | 1.25 | 1.18 | 1.69 | 5.28 | 0.77 | 11.69 |
| SK - | 34.12 | 34.12 | 6.42 | 25.7 | 8.73 | 27.2 | 3.97 | 2.51 |
| PO - | 7.39 | 7.39 | 1.39 | 1.32 | 1.89 | 5.89 | 0.86 | 3.23 |
| PN - | 8.34 | 8.34 | 1.57 | 1.49 | 2.13 | 6.65 | 0.97 | 0.61 |
| NAF - | 9.57 | 9.57 | 1.8 | 1.71 | 2.45 | 7.63 | 1.11 | 2.64 |
| KE - | 28.33 | 28.33 | 27.44 | 0.54 | 0.77 | 2.41 | 0.35 | 0.22 |
| JP - | 5.48 | 5.48 | 1.03 | 21.51 | 1.4 | 99 | 1.88 | 0.4 |
| IT - | 2.21 | 2.21 | 0.41 | 0.39 | 0.56 | 1.76 | 0.25 | 3.6 |
| IN - | 2.39 | 2.39 | 0.45 | 1.88 | 315 | 1.91 | 0.32 | 0.17 |
| HK - | 5.48 | 5.48 | 1.03 | 0.98 | 1.4 | 4.37 | 52.29 | 0.4 |
| GH - | 11.21 | 11.21 | 9.96 | 2 | 2.87 | 8.93 | 1.3 | 0.82 |
| GE - | 34.12 | 34.12 | 6.42 | 6.1 | 8.73 | 27.2 | 3.97 | 2.51 |
| FR - | 34.12 | 34.12 | 6.42 | 6.1 | 8.73 | 27.2 | 3.97 | 2.51 |
| CO - | 13.5 | 13.5 | 2.54 | 2.41 | 3.45 | 10.76 | 1.57 | 0.99 |
| CH - | 2.74 | 2.74 | 0.51 | 4.69 | 0.7 | 3.98 | 34.14 | 0.2 |
| BR - | 9.57 | 26.8 | 2.8 | 2.64 | 2.45 | 7.63 | 1.11 | 0.7 |
| BO - | 16.94 | 16.94 | 3.19 | 3.02 | 4.33 | 13.5 | 1.97 | 1.24 |
| AU - | 3.19 | 3.19 | 0.6 | 0.7 | 0.81 | 2.54 | 0.37 | 1.94 |
| AR - | 13.5 | 13.5 | 2.54 | 2.41 | 3.45 | 10.76 | 1.57 | 0.99 |
| AF - | 13.5 | 13.5 | 4.7 | 2.41 | 3.45 | 10.76 | 1.57 | 5.33 |
| | Clust.4 | Clust.5 | Clust.41 | Clust.101 | Clust.112 | Clust.123 | Clust.124 | Clust.141 |

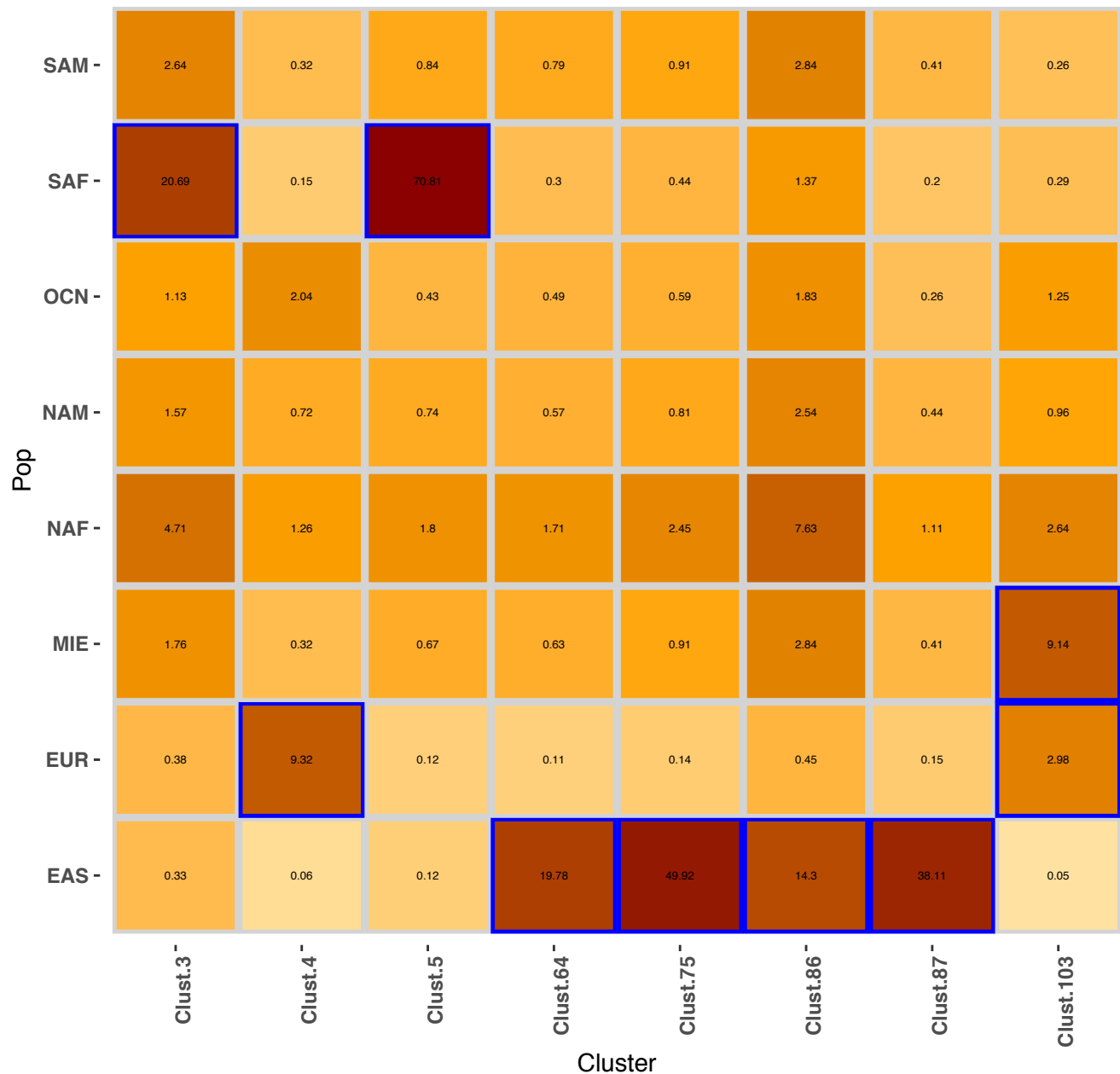
Cluster

EBNA-3C_type1 : grouping per continent – max CGS

Pop



EBNA-3C_type1 : grouping per continent – Max MCC



LMP-2A : grouping per country – Max MCC

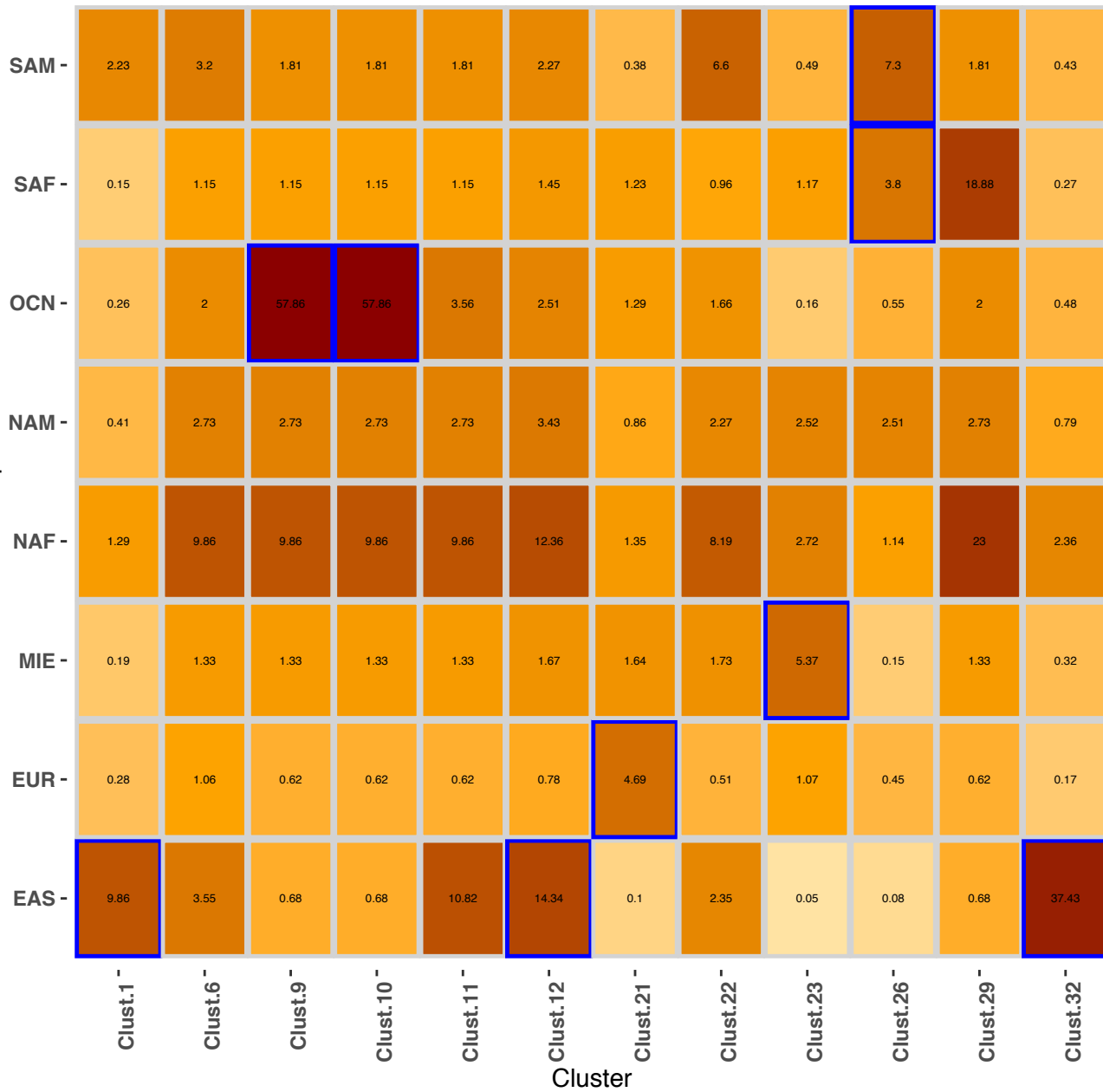
Pop

| | | | | | | | | |
|-------|---------|----------|----------|----------|----------|----------|----------|----------|
| WG - | 0.39 | 2.69 | 1.18 | 1.87 | 1.5 | 1.78 | 10.22 | 0.46 |
| USA - | 0.49 | 3.43 | 2.1 | 1.7 | 0.66 | 2.27 | 1.5 | 3.89 |
| UK - | 0.88 | 1.59 | 0.69 | 4.55 | 0.92 | 1.05 | 0.89 | 0.67 |
| UG - | 1.78 | 12.36 | 5.41 | 0.64 | 4.7 | 8.19 | 1.33 | 2.13 |
| TW - | 9.45 | 14.46 | 6.33 | 0.75 | 0.73 | 21.56 | 1.55 | 2.49 |
| TU - | 0.71 | 4.94 | 3.15 | 1.07 | 1.05 | 5.57 | 3.55 | 1.06 |
| SK - | 6.33 | 43.88 | 19.22 | 2.27 | 9.09 | 29.08 | 4.72 | 7.57 |
| SA - | 2.51 | 17.4 | 7.62 | 0.9 | 1.52 | 11.53 | 10.29 | 3 |
| PO - | 1.23 | 8.57 | 3.76 | 3.88 | 0.56 | 5.68 | 2.89 | 2.03 |
| PN - | 1.02 | 152.89 | 3.11 | 0.37 | 0.36 | 4.71 | 0.76 | 1.62 |
| NG - | 4.21 | 29.17 | 12.78 | 1.51 | 1.48 | 19.33 | 3.14 | 5.03 |
| NAF - | 1.78 | 12.36 | 5.41 | 0.92 | 2.31 | 8.19 | 1.33 | 8.66 |
| KE - | 0.43 | 3.02 | 1.32 | 0.15 | 2.63 | 2 | 1.3 | 0.62 |
| JP - | 0.94 | 6.54 | 2.86 | 0.34 | 3.43 | 4.33 | 0.7 | 1.13 |
| IT - | 0.42 | 2.9 | 1.27 | 3.64 | 0.77 | 1.92 | 0.35 | 3.17 |
| IN - | 0.51 | 3.02 | 1.32 | 0.15 | 0.15 | 2 | 0.32 | 0.62 |
| HK - | 264 | 7.1 | 3.11 | 0.37 | 0.36 | 4.71 | 0.76 | 1.22 |
| GH - | 1.78 | 12.36 | 5.41 | 0.64 | 0.63 | 8.19 | 1.33 | 8.66 |
| GE - | 6.33 | 43.88 | 19.22 | 2.27 | 2.23 | 29.08 | 4.72 | 7.57 |
| FR - | 6.33 | 43.88 | 19.22 | 9.27 | 2.23 | 29.08 | 4.72 | 7.57 |
| CO - | 1.23 | 8.57 | 3.76 | 0.44 | 2.33 | 5.68 | 1.22 | 1.48 |
| CH - | 9.21 | 3.28 | 1.44 | 0.17 | 0.18 | 3.54 | 0.35 | 0.56 |
| BR - | 1.78 | 12.36 | 5.41 | 0.64 | 0.9 | 8.19 | 1.33 | 2.13 |
| BO - | 1.12 | 7.77 | 113.67 | 0.4 | 0.5 | 28.42 | 0.83 | 1.34 |
| AU - | 0.57 | 3.95 | 1.73 | 4.24 | 2.04 | 2.62 | 0.42 | 0.68 |
| AR - | 1.23 | 8.57 | 6.04 | 0.44 | 1.3 | 5.68 | 1.22 | 2.03 |
| AF - | 1.55 | 10.78 | 4.72 | 0.56 | 3.52 | 7.15 | 1.16 | 2.73 |
| | Clust.1 | Clust.12 | Clust.33 | Clust.34 | Clust.36 | Clust.60 | Clust.63 | Clust.64 |

Cluster

LMP-2A : grouping per continent – max CGS

Pop



LMP-2A : grouping per continent – Max MCC

Pop

