#### Economic Clustering Summary Report: Madagascar 2021

#### **Data Summary**

**Country Code-year:** MD21

**Number of observations: 20494** 

Number of variables used: 22

Variable set used: 1

**Variables used in the algorithm:** hv201a, hv206, hv207, hv208, hv210, hv227, hv237, hv243a, hv243b, hv244, hv246, sh121g, sh121h, sh121i, sh121j, sh121m, water, toilet, floor, roof,

cookfuel, wall

Top 10 Variable Sets (Sorted by ASW)

| Set | ASW    | Var.1           | Var.2          | Var.3       | Var.4                   |
|-----|--------|-----------------|----------------|-------------|-------------------------|
| 1   | 0.9118 | has electricity | has television | has a bed   | has a dvd / divx player |
| 2   | 0.9111 | has television  | has a bed      | has a chair | has a dvd / divx player |
| 3   | 0.8864 | has electricity | has television | has a table | has a dvd / divx player |
| 4   | 0.8863 | has television  | has a bed      | has a table | has a dvd / divx player |
| 5   | 0.8818 | has television  | has a table    | has a chair | has a dvd / divx player |
| 6   | 0.8797 | has electricity | has television | has a bed   | has a chair             |
| 7   | 0.8783 | has electricity | has a bed      | has a chair | has a dvd / divx player |
| 8   | 0.8756 | has a bed       | has a table    | has a chair | has a dvd / divx player |
| 9   | 0.8734 | has electricity | has television | has a chair | has a dvd / divx player |
| 10  | 0.8727 | has a bed       | has a table    | has a chair | has a sofa              |

## Marginal Distributions

| Variable | Description             | % in Top Sets | Distribution          |
|----------|-------------------------|---------------|-----------------------|
| hv206    | has electricity         | 50%           | Binary, 33.2% (1/yes) |
| hv208    | has television          | 70%           | Binary, 21.4% (1/yes) |
| sh121g   | has a bed               | 70%           | Binary, 77% (1/yes)   |
| sh121h   | has a table             | 50%           | Binary, 65% (1/yes)   |
| sh121i   | has a chair             | 70%           | Binary, 55.4% (1/yes) |
| sh121m   | has a dvd / divx player | 80%           | Binary, 14.7% (1/yes) |
| sh121j   | has a sofa              | 10%           | Binary, 18.9% (1/yes) |

### Cluster Configuration (Set #1)

| Cluster<br>Group | has<br>electricity | has<br>television | has a<br>bed | has a dvd / divx<br>player | Proportion (%) |
|------------------|--------------------|-------------------|--------------|----------------------------|----------------|
| 1                | 1                  | 1                 | 0            | 0                          | 7.88           |
| 1                | 1                  | 1                 | 1            | 0                          |                |
| 2                | 0                  | 0                 | 0            | 0                          | 22.84          |
| 2                | 0                  | 0                 | 0            | 1                          |                |
| 2                | 0                  | 1                 | 0            | 0                          |                |
| 2                | 1                  | 0                 | 0            | 0                          |                |
| 3                | 0                  | 1                 | 1            | 1                          | 13.77          |
| 3                | 1                  | 0                 | 0            | 1                          |                |
| 3                | 1                  | 0                 | 1            | 1                          |                |
| 3                | 1                  | 1                 | 0            | 1                          |                |
| 3                | 1                  | 1                 | 1            | 1                          |                |
| 4                | 1                  | 0                 | 1            | 0                          | 11.43          |
| 5                | 0                  | 0                 | 1            | 0                          | 44.09          |
| 5                | 0                  | 0                 | 1            | 1                          |                |
| 5                | 0                  | 1                 | 1            | 0                          |                |

#### **Validation Tables**

#### a.1) Using Children Deceased (Sorted by proportion of 0%)

| Cluster ID/Children Deceased | 0%             | 1-33%         | 34-66%     | 67+%       |
|------------------------------|----------------|---------------|------------|------------|
| 1*                           | 1,492 (90.8%)  | 109 (6.6%)    | 33 (2.0%)  | 9 (0.5%)   |
| 3                            | 2,807 (90.7%)  | 207 (6.7%)    | 63 (2.0%)  | 17 (0.5%)  |
| 4                            | 1,836 (87.7%)  | 187 (8.9%)    | 53 (2.5%)  | 17 (0.8%)  |
| 5                            | 6,875 (84.0%)  | 916 (11.2%)   | 315 (3.8%) | 76 (0.9%)  |
| 2                            | 2,994 (77.8%)  | 624 (16.2%)   | 178 (4.6%) | 50 (1.3%)  |
| Total                        | 16,004 (84.9%) | 2,043 (10.8%) | 642 (3.4%) | 169 (0.9%) |

<sup>\*</sup>The chi-squared p-value is 0

#### a.2) Aggregating proportions greater than 0%

| Cluster ID/Children Deceased | 0%             | >0%           |  |
|------------------------------|----------------|---------------|--|
| 1*                           | 1,492 (90.8%)  | 151 (9.2%)    |  |
| 3                            | 2,807 (90.7%)  | 287 (9.3%)    |  |
| 4                            | 1,836 (87.7%)  | 257 (12.3%)   |  |
| 5                            | 6,875 (84.0%)  | 1,307 (16.0%) |  |
| 2                            | 2,994 (77.8%)  | 852 (22.2%)   |  |
| Total                        | 16,004 (84.9%) | 2,854 (15.1%) |  |

<sup>\*</sup>The chi-squared p-value is 0

b) Using Individual Education Level Attained (Sorted by weighted average by row)

| Cluster<br>ID/Education | 0                | 1                | 2               | 3                | 4              | 5              | W.<br>Avg. |
|-------------------------|------------------|------------------|-----------------|------------------|----------------|----------------|------------|
| 1*a                     | 45<br>(2.7%)     | 232<br>(14.1%)   | 125<br>(7.6%)   | 836<br>(50.9%)   | 168<br>(10.2%) | 237<br>(14.4%) | 2.95       |
| 3                       | 119<br>(3.8%)    | 487<br>(15.7%)   | 201<br>(6.5%)   | 1,587<br>(51.3%) | 330<br>(10.7%) | 370<br>(12.0%) | 2.85       |
| 4                       | 197<br>(9.4%)    | 619<br>(29.6%)   | 195<br>(9.3%)   | 880<br>(42.0%)   | 105<br>(5.0%)  | 97<br>(4.6%)   | 2.18       |
| 5                       | 1,585<br>(19.4%) | 3,344<br>(40.9%) | 777<br>(9.5%)   | 2,291<br>(28.0%) | 137<br>(1.7%)  | 48<br>(0.6%)   | 1.53       |
| 2                       | 1,483<br>(38.6%) | 1,678<br>(43.6%) | 212<br>(5.5%)   | 446<br>(11.6%)   | 17<br>(0.4%)   | 10<br>(0.3%)   | 0.93       |
| Total                   | 3,429<br>(18.2%) | 6,360<br>(33.7%) | 1,510<br>(8.0%) | 6,040<br>(32.0%) | 757<br>(4.0%)  | 762<br>(4.0%)  | 1.82       |

<sup>\*</sup>The chi-squared p-value is 0

<sup>&</sup>lt;sup>a</sup>0=none, 1=incomplete primary, 2=primary, 3=incomplete secondary, 4=secondary, 5=higher

# c) Using Primary Healthcare Source (Sorted by % enrolled in public healthcare [ascending order])

| Cluster ID/Primary Healthcare Source | 0             | 1             | 2         |
|--------------------------------------|---------------|---------------|-----------|
| 3*a                                  | 577 (61.3%)   | 347 (36.8%)   | 18 (1.9%) |
| 1                                    | 321 (64.7%)   | 170 (34.3%)   | 5 (1.0%)  |
| 4                                    | 569 (76.8%)   | 164 (22.1%)   | 8 (1.1%)  |
| 5                                    | 2,508 (85.9%) | 392 (13.4%)   | 18 (0.6%) |
| 2                                    | 988 (89.6%)   | 114 (10.3%)   | 1 (0.1%)  |
| Total                                | 4,963 (80.0%) | 1,187 (19.1%) | 50 (0.8%) |

<sup>\*</sup>The chi-squared p-value is 0

<sup>&</sup>lt;sup>a</sup>0=public/government, 1=private, 2=other