core (&#9899;for presence and &#10683; for absence) and peripheral conditions (&#9679;for presence and &#10680; for absence).

Sufficiency PRESENCE BAL – direct calibration

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Conditions / Sol** | 1 | 2 | 3 | 4 | 5 |
| **VPDIF** | &#10683; |  | &#10680; | &#9899; |  |
| **SEGM** |  |  | &#10683; | &#10683; | &#9679; |
| **NETWDIF** |  | &#9899; | &#10683; | &#9679; | &#10683; |
| **REVDIF** | &#9899; | &#10683; | &#9679; | &#9679; | &#10683; |
| **SPIN** | &#10683; | &#10683; | &#9679; | &#9679; | &#9899; |
| Consistency | 0.67 | 0.85 | 0.77 | 0.76 | 0.79 |
| Raw coverage | 0.03 | 0.04 | 0.06 | 0.19 | 0.17 |
|  |  |  |  |  |  |
| Unique coverage | 0.00 | 0.02 | 0.01 | 0.17 | 0.01 |
| PRI | 0.24 | 0.28 | 0.27 | 0.39 | 0.26 |
| Nr. cases | 1 | 1 | 1 | 9 | 1 |
| Solution consistency | 0.7 |  |  |  |  |
| Solution coverage | 0.35 |  |  |  |  |
| Solution PRI | 0.32 |  |  |  |  |
| Nr. Cases 1/0/C | 14/165/0 |  |  |  |  |

inclS PRI covS covU

----------------------------------------------------------

1 vpdif\*REVDIF\*spindif 0.853 0.431 0.397 0.119

2 NETWDIF\*revdif\*spindif 0.888 0.391 0.338 0.075

3 vpdif\*segm\*netwdif\*SPINDIF 0.900 0.554 0.132 0.037

4 VPDIF\*segm\*netwdif\*spindif 0.864 0.237 0.298 0.056

5 SEGM\*netwdif\*revdif\*SPINDIF 0.882 0.266 0.134 0.040

----------------------------------------------------------

M1 0.798 0.402 0.637

inclS PRI covS covU (M1) (M2) (M3) (M4)

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1 netwdif\*revdif\*SPINDIF 0.850 0.350 0.156 0.013 0.048 0.033 0.033 0.013

2 NETWDIF\*revdif\*spindif 0.888 0.391 0.338 0.036 0.075 0.050 0.075 0.075

----------------------------------------------------------------------------------

3 vpdif\*segm\*REVDIF 0.907 0.448 0.327 0.003 0.020

4 vpdif\*netwdif\*REVDIF 0.894 0.475 0.394 0.000 0.079 0.016

5 vpdif\*netwdif\*SPINDIF 0.888 0.480 0.157 0.000 0.016

6 vpdif\*NETWDIF\*spindif 0.871 0.423 0.339 0.001 0.032

7 vpdif\*REVDIF\*spindif 0.853 0.431 0.397 0.004 0.088 0.036 0.119

8 VPDIF\*segm\*netwdif 0.865 0.240 0.332 0.002 0.062 0.062 0.062 0.062

9 VPDIF\*segm\*revdif 0.918 0.445 0.332 0.010

10 segm\*netwdif\*REVDIF 0.906 0.405 0.339 0.000

----------------------------------------------------------------------------------

M1 0.787 0.385 0.652

M2 0.796 0.393 0.645

M3 0.793 0.395 0.648

M4 0.790 0.391 0.648

M5 0.792 0.395 0.646

M6 0.805 0.421 0.658

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(M5) (M6)

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1 netwdif\*revdif\*SPINDIF 0.048 0.048

2 NETWDIF\*revdif\*spindif 0.075 0.061

----------------------------------------

3 vpdif\*segm\*REVDIF

4 vpdif\*netwdif\*REVDIF

5 vpdif\*netwdif\*SPINDIF

6 vpdif\*NETWDIF\*spindif

7 vpdif\*REVDIF\*spindif 0.099 0.099

8 VPDIF\*segm\*netwdif 0.024

9 VPDIF\*segm\*revdif 0.036

10 segm\*netwdif\*REVDIF 0.014 0.042

----------------------------------------

NO BP

core (&#9899;for presence and &#10683; for absence) and peripheral conditions (&#9679;for presence and &#10680; for absence).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Conditions / Sol.** | 1 | 2 | 3 | 4 | 5 |
| **VPDIF** | &#9899; |  | &#10683; |  |  |
| **SEGM** | &#10683; |  | &#9899; | &#10683; | &#9899; |
| **NETWDIF** |  | &#9899; |  |  | &#10680; |
| **REVDIF** |  | &#10683; |  | &#9899; | &#10683; |
| **SPINDIF** |  | &#10680; | &#9899; | &#10683; | &#9899; |
| Consistency | 0.782 | 0.820 | 0.879 | 0.844 | 0.834 |
| Raw coverage | 0.442 | 0.419 | 0.177 | 0.383 | 0.170 |
|  |  |  |  |  |  |
| Unique coverage | 0.044 | 0.092 | 0.016 | 0.019 | 0.009 |
| PRI | 0.210 | 0.152 | 0.367 | 0.295 | 0.193 |
| Nr. cases | 18 | 16 | 11 | 16 | 11 |
| Solution consistency | 0.732 |  |  |  |  |
| Solution coverage | 0.635 |  |  |  |  |
| Solution PRI | 0.201 |  |  |  |  |
| Nr. Cases 1/0/C | 51/ | 124/ | 0 |  |  |

Parsimonious ESA

M1: vpdif\*SEGM\*netwdif\*SPINDIF + VPDIF\*segm\*NETWDIF\*REVDIF + segm\*netwdif\*REVDIF\*spindif + (vpdif\*SEGM\*REVDIF\*SPINDIF) => NOBP

M2: vpdif\*SEGM\*netwdif\*SPINDIF + VPDIF\*segm\*NETWDIF\*REVDIF + segm\*netwdif\*REVDIF\*spindif + (vpdif\*NETWDIF\*REVDIF\*SPINDIF) => NOBP

Intermediate ESA

M1: vpdif\*SEGM\*netwdif\*SPINDIF + vpdif\*SEGM\*REVDIF\*SPINDIF + VPDIF\*segm\*NETWDIF\*REVDIF + segm\*netwdif\*REVDIF\*spindif => NOBP

NOCP

core (&#9899; for presence and &#10683; for absence) and peripheral conditions (&#9679;for presence and &#10680; for absence).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Conditions / Sol.** | 1 | 2 | 3 | 4 |
| **VPDIF** |  | &#10683; | &#9899; | &#9899; |
| **SEGM** | &#10683; | &#9899; | &#10683; | &#10683; |
| **NETWDIF** | &#9899; | &#10683; | &#10683; | &#10680; |
| **REVDIF** | &#10683; |  | &#9899; | &#10683; |
| **SPINDIF** |  | &#9899; | &#10680; | &#9899; |
| Consistency | 0.789 | 0.841 | 0.844 | 0.853 |
| Raw coverage | 0.438 | 0.201 | 0.475 | 0.182 |
|  |  |  |  |  |
| Unique coverage | 0.056 | 0.033 | 0.091 | 0.009 |
| PRI | 0.021 | 0.032 | 0.028 | 0.03 |
| Nr. cases | 6 | 5 | 5 | 2 |
| Solution consistency | 0.739 |  |  |  |
| Solution coverage | 0.590 |  |  |  |
| Solution PRI | 0.024 |  |  |  |
| Nr. Cases 1/0/C | 17/ | 162/ | 0 |  |

parsimonious -------------------

inclS PRI covS covU (M1) (M2) cases

-----------------------------------------------------------------------------------------------

1 segm\*NETWDIF\*revdif 0.789 0.021 0.438 0.056 0.067 0.056 41,124,154; 37,158; 98

2 vpdif\*SEGM\*netwdif\*SPINDIF 0.841 0.032 0.201 0.033 0.033 0.033 50,122,131,147,153

3 VPDIF\*segm\*netwdif\*REVDIF 0.844 0.028 0.475 0.091 0.091 0.097 11,61,70,109; 68

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4 VPDIF\*segm\*netwdif\*SPINDIF 0.842 0.037 0.188 0.000 0.009 66; 68

5 VPDIF\*segm\*revdif\*SPINDIF 0.853 0.003 0.182 0.000 0.009 66; 98

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M1 0.739 0.024 0.590

M2 0.739 0.024 0.590

Intermediate inclS PRI covS covU cases

------------------------------------------------------------------------------------

1 VPDIF\*segm\*netwdif\*REVDIF 0.844 0.028 0.475 0.107 11,61,70,109; 68

2 VPDIF\*segm\*revdif\*SPINDIF 0.853 0.003 0.182 0.020 66; 98

3 segm\*NETWDIF\*revdif\*spindif 0.814 0.026 0.400 0.055 41,124,154; 37,158

4 vpdif\*SEGM\*netwdif\*revdif\*SPINDIF 0.876 0.000 0.187 0.031 50,122,131,147,153

------------------------------------------------------------------------------------

M1 0.753 0.026 0.586

BOTHLOW

core (&#9899; for presence and &#10683; for absence) and peripheral conditions (&#9679;for presence and &#10680; for absence).

|  |  |
| --- | --- |
| **Conditions / Sol.** | 1 |
| **VPDIF** | &#10683; |
| **SEGM** | &#9899; |
| **NETWDIF** | &#10683; |
| **REVDIF** | &#10680; |
| **SPINDIF** | &#9899; |
| Nr. cases | 5 |
| Solution consistency | 0.864 |
| Solution coverage | 0.181 |
| Solution PRI | 0.003 |
| Nr. Cases 1/0/C | 5/174/0 |

Parsimonious

M1: vpdif\*SEGM\*netwdif\*SPINDIF => BOTHLOW

inclS PRI covS covU cases

-----------------------------------------------------------------------------

1 vpdif\*SEGM\*netwdif\*SPINDIF 0.864 0.003 0.181 - 50,122,131,147,153

-----------------------------------------------------------------------------

M1 0.864 0.003 0.181

INTERMEDIATE

n OUT = 1/0/C: 5/174/0

Total : 179

From C1P1:

Number of multiple-covered cases: 0

M1: vpdif\*SEGM\*netwdif\*revdif\*SPINDIF => BOTHLOW

inclS PRI covS covU cases

------------------------------------------------------------------------------------

1 vpdif\*SEGM\*netwdif\*revdif\*SPINDIF 0.912 0.004 0.171 - 50,122,131,147,153

------------------------------------------------------------------------------------

M1 0.912 0.004 0.171

|  |  |  |  |
| --- | --- | --- | --- |
| ***Issue*** | ***Description*** | ***Solution strategy*** | ***Application*** |
| **Measurement errors** | Sensitivity to changes in raw consistency levels | Raw consistency  Robustness test | Use of three different raw consistency thresholds |
| **Plausibility & tenability** | Limited diversity & contradictions can trigger inferences that are implausible and/or contradictory | Enhanced Standard Analysis | Intermediate solution based on directional expectations and exclusion of contradictory rows and untenable assumptions |
| **Causal relevance** | Only parsimonious solution removes causally irrelevant conditions from solution term | Comparative presentation of parsimonious & intermediate solution | Parsimonious solution is causally interpretable and less sensitive to errors |
| **Skewness** | Skewed distributions can produce simultaneous subset relations, exacerbate limited diversity, and strongly distort parameters of fit | Skewness statistics | % of cases with membership > 0.5 in sets in reported. Skewness is problematic if the vast majority (> 85%) of the cases cluster in only one of the four possible intersecting areas of the XY plots with two digitals |
| **Accuracy** | Degree to which observations correspond to set relation | Consistency | Necessity: ≥ 0.9  Sufficiency: ≥ 0.75 |
| **Explanatory power** | Empirical relevance of model | Coverage | Necessity: ≥ 0.6  RoN: ≥ 0.8  Sufficiency: Low coverage indicates low explanatory power |