Apêndice Metodológico Adicional: Introdução

Durante a defesa desta tese, um dos membros da banca sugeriu que, além da rotação Varimax originalmente empregada na análise fatorial exploratória (AFE), fosse realizado um teste adicional utilizando a rotação Oblimin. Essa recomendação visava avaliar a robustez das análises, considerando que a rotação Oblimin permite a existência de correlações entre os fatores, enquanto a Varimax assume ortogonalidade. Embora não houvesse a necessidade de alterar os resultados apresentados no corpo principal da tese, foi solicitado que a comparação entre os métodos fosse incluída como apêndice para maior transparência metodológica.

Atendendo à sugestão, realizei novamente a AFE para casos discutidos no capítulo 2, considerando a solução de quatro fatores. Os resultados obtidos com a rotação Oblimin mostraram-se altamente similares aos apresentados com a rotação Varimax, confirmando a robustez das interpretações descritas no texto principal. Essa similaridade é esperada em contextos como o presente, onde as estruturas fatoriais apresentam alta consistência, independentemente do método de rotação utilizado.

Este apêndice apresenta uma comparação detalhada dos resultados, que estão dispostos nas tabelas subsequentes. Tal análise evidencia que as variações observadas entre as duas abordagens são mínimas e não alteram as conclusões ou interpretações alcançadas na tese.

Com mais fatores (Varimax), acesse este links apontados ao fim desse documento.

Em suma: abaixo, comparam-se resultados da AFE com 4 fatores (WVS): rotação Oblimin (primeiro) e Varimax (segundo). Nota-se que não há diferenças significativas, confirmando a robustez dos resultados.

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caso ARGENTINA $\left(\text{ARG}\right)$ ONDA 2

ROTAÇÃO TIPO OBLIMIN

```
Loadings:
     MR1    MR4    MR2    MR3
B006         0.125
C001 -0.171
C002         0.133
E018 -0.351 -0.108
E034         0.201
E035               -0.258  0.116
E036                0.783
E039  0.111  0.116  0.520
F028         0.632
F034 -0.188  0.371         0.210
F063         0.569
F116                        0.446
F118  0.648  0.101
F120  0.486 -0.254
```

```
F121  0.578
F141                        0.637
G006         0.191  0.111 -0.169

                 MR1   MR4   MR2   MR3
SS loadings    1.210 1.085 0.997 0.708
Proportion Var 0.071 0.064 0.059 0.042
Cumulative Var 0.071 0.135 0.194 0.235
```

TIPO> VARIMAX

```
Loadings:
     MR1    MR4    MR2    MR3
B006         0.129
C001 -0.177  0.104
C002         0.132
E018 -0.324
E034         0.188
E035               -0.254
E036 -0.157         0.765  0.127
E039                0.517
F028         0.621
F034 -0.209  0.397         0.160
F063 -0.126  0.562  0.135
F116                       0.438
F118  0.613
F120  0.522 -0.356
F121  0.588 -0.203
F141  0.122                0.641
G006 -0.105  0.202  0.122 -0.169

                 MR1   MR4   MR2   MR3
SS loadings    1.256 1.163 1.071 0.719
```

ARG ONDA 3:
OBLIMIN:

```
Loadings:
     MR1    MR2    MR4    MR3
B008                0.265
C001        -0.171
C002                0.224
E018        -0.123  0.404
E034                0.333
E035  0.104         0.116 -0.231
E036                       0.394
E039                       0.507
F028  0.481 -0.198        -0.100
F034  0.829
F063  0.683         0.117
F116               -0.325  0.187
F118         0.537 -0.176
F120         0.656
F121         0.767
```

```
G006  0.120          0.368

                 MR1   MR2   MR4   MR3
SS loadings    1.435 1.407 0.710 0.539
Proportion Var 0.090 0.088 0.044 0.034
Cumulative Var 0.090 0.178 0.222 0.256
```

VARIMAX:

```
Loadings:
      MR1    MR2    MR4    MR3
B008                0.235
C001 -0.185
C002 -0.116         0.235
E018 -0.220  0.161  0.420
E034                0.322 -0.116
E035         0.115  0.117 -0.246
E036                       0.389
E039                       0.508
F028 -0.281  0.473        -0.119
F034 -0.115  0.776  0.139
F063 -0.228  0.680  0.268
F116  0.101        -0.302  0.221
F118  0.571 -0.151 -0.250
F120  0.654 -0.145 -0.114
F121  0.731
G006 -0.111  0.178  0.380

                     MR1   MR2   MR4   MR3
SS loadings    1.558 1.437 0.818 0.567
Proportion Var 0.097 0.090 0.051 0.035
Cumulative Var 0.097 0.187 0.238 0.274
```

ARG ONDA 4:

OBLIMIN:

```
> pfa4$loadings

Loadings:
     MR1    MR2    MR3    MR4
B008
C001        -0.140  0.139  0.321
C002                0.121  0.204
E018  0.262 -0.173 -0.105  0.103
E034  0.184                0.225
E035  0.104  0.121 -0.138  0.146
E036                0.424
E039                0.495
F028  0.424 -0.154        -0.234
F034  0.651
F063  0.839
F116 -0.175  0.100
F118         0.695        -0.143
F120 -0.228  0.472
F121         0.729
G006  0.359

                 MR1   MR2   MR3   MR4
SS loadings    1.640 1.349 0.507 0.339
Proportion Var 0.102 0.084 0.032 0.021
Cumulative Var 0.102 0.187 0.218 0.240
```

VARIMAX:

```
> arg4fact4$loadings

Loadings:
      MR1    MR2    MR3    MR4
B008                -0.117
C001                        0.368
C002                        0.248
E018  0.281 -0.152 -0.131  0.142
E034  0.133                 0.238
E035         0.141 -0.181
E036                 0.404  0.122
E039                 0.466  0.163
F028  0.517 -0.212  0.105
F034  0.658
F063  0.805                 0.165
F116 -0.218  0.114
F118 -0.153  0.624        -0.273
F120 -0.373  0.467
F121 -0.185  0.699
G006  0.351                 0.127

                       MR1   MR2   MR3   MR4
SS loadings          1.816 1.212 0.482 0.470
Proportion Var       0.113 0.076 0.030 0.029
Cumulative Var       0.113 0.189 0.219 0.249
```

ARG ONDA 5

OBLIMIN:

```
Loadings:
      MR1    MR3    MR2    MR4
B008 -0.108                -0.164
C001        -0.113          0.427
C002                        0.435
E018                0.999
E035
E036                        0.148
E039                        0.104
F028  0.468 -0.156
F034  0.753
F063  0.837
F116 -0.150  0.164
F118         0.745
F120 -0.191  0.443
F121         0.722          0.112
G006  0.202         0.168

                     MR1   MR3   MR2   MR4
SS loadings        1.614 1.353 1.062 0.467
Proportion Var     0.108 0.090 0.071 0.031
Cumulative Var     0.108 0.198 0.269 0.300
```

VARIMAX:

```
> arg5fact4$loadings

Loadings:
      MR1    MR2    MR3    MR4
B008                      -0.177
C001       -0.152  0.138  0.413
C002                      0.418
E018  0.239         0.944 -0.213
E035
E036                      0.154
```

```
E039                      0.121
F028  0.486 -0.225
F034  0.745
F063  0.821 -0.136
F116 -0.187  0.179
F118         0.733        -0.151
F120 -0.279  0.476 -0.105
F121 -0.166  0.703
G006  0.249 -0.115  0.165

                     MR1   MR2   MR3   MR4
SS loadings    1.742 1.407 1.074 0.501
Proportion Var 0.116 0.094 0.065 0.033
Cumulative Var 0.116 0.210 0.275 0.308
```

ARG ONDA 6

OBLIMIN:

```
Loadings:
     MR1    MR2    MR3    MR4
B008 -0.119 -0.131
C001        -0.237  0.235
C002  0.146 -0.170
E018  0.183        -0.258
E035        -0.128        -0.466
E036                       0.370
E039                0.111  0.386
F028  0.506 -0.224         0.180
F034  0.760
F063  0.818
F116                0.695
F118         0.768
F120 -0.151  0.539  0.176
F121         0.660 -0.138
G006  0.135        -0.110

                   MR1   MR2   MR3   MR4
SS loadings    1.628 1.498 0.701 0.557
Proportion Var 0.109 0.100 0.047 0.037
Cumulative Var 0.109 0.208 0.255 0.292
```

VARIMAX:

```
Loadings:
      MR1    MR2    MR3    MR4
B008        -0.115
C001        -0.240  0.215
C002  0.184 -0.185        -0.121
E018  0.202        -0.286
E035        -0.130        -0.488
E036                       0.388
E039                0.126  0.394
F028  0.555 -0.275
F034  0.729               -0.189
F063  0.788        -0.139 -0.164
F116                0.691
F118 -0.134  0.716  0.122  0.115
F120 -0.287  0.513  0.249  0.137
F121 -0.216  0.645         0.131
G006  0.136        -0.121

                     MR1   MR2   MR3   MR4
SS loadings    1.716 1.415 0.741 0.691
Proportion Var 0.114 0.094 0.049 0.046
Cumulative Var 0.114 0.209 0.258 0.304
```

ARG ONDA 7

OBLIMIN:

```
Loadings:
        MR2    MR1    MR3    MR4
B008                 0.209
C001   -0.101        0.647
C002                 0.164
E018    0.154  0.194        -0.260
E034    0.138               -0.197
E035           0.144         0.131
E036                -0.100  0.499
E039                         0.453
F028   -0.226  0.432  0.101
F034           0.689  0.122
F063           0.845
F116    0.135         0.343  0.167
F118    0.600
F120    0.553 -0.110  0.218  0.225
F121    0.828
F144_02 0.418         0.145
G006           0.192 -0.265

                 MR2   MR1   MR3   MR4
SS loadings    1.663 1.508 0.809 0.692
Proportion Var 0.098 0.089 0.048 0.041
Cumulative Var 0.098 0.186 0.234 0.275
```

VARIMAX:

```
> arg7fact4 <- fa(arg07d,nfactors=4,rotate = "varimax")
> arg7fact4$loadings

Loadings:
         MR1    MR3    MR2    MR4
B008                 0.228
C001   -0.107        0.643
C002                 0.152
E018           0.168        -0.276
E034                        -0.207
E035           0.146         0.131
E036                         0.486
E039    0.110                0.438
F028   -0.299  0.469
F034           0.673        -0.106
F063   -0.146  0.814 -0.211
F116    0.171        0.351  0.170
F118    0.594 -0.168 -0.124
F120    0.604 -0.188  0.217  0.174
F121    0.790 -0.127 -0.151 -0.167
F144_02 0.405        0.106
G006           0.162 -0.306 -0.105

                    MR1   MR3   MR2   MR4
SS loadings    1.690 1.510 0.868 0.690
Proportion Var 0.099 0.089 0.051 0.041
Cumulative Var 0.099 0.188 0.239 0.280
```

BOLÍVIA ONDA 7

OBLIMIN:

```
> pf1.2$loadings
```

```
Loadings:
        MR1    MR3    MR2    MR4
B008                         -0.281
C001                         -0.180
C002
E018             0.211         0.136
E034             0.105
E035                           0.159
E036                   0.101   0.149
E039                   0.998
F028             0.484        -0.108
F034             0.578
F063             0.629         0.112
F116     0.354                -0.141
F118     0.587                 0.151
F120     0.682
F121     0.641
F144_02  0.368
G006             0.123         0.241

                 MR1   MR3   MR2   MR4
SS loadings    1.491 1.050 1.020 0.322
Proportion Var 0.088 0.062 0.060 0.019
Cumulative Var 0.088 0.149 0.209 0.228
```

VARIMAX:

```
> b7fact4$loadings
```

```
Loadings:
         MR1    MR3    MR2    MR4
B008                         -0.282
C001                         -0.179
C002
E018             0.204         0.140
E034             0.113
E035            -0.104         0.158
E036                    0.108  0.147
E039                    0.997
F028    -0.117   0.489
F034             0.568
F063    -0.141   0.617         0.128
F116     0.361                -0.122
F118     0.569 -0.134         0.182
F120     0.670
F121     0.634 -0.147
F144_02  0.366 -0.106
G006             0.108         0.243

                    MR1   MR3   MR2   MR4
SS loadings    1.490 1.089 1.018 0.326
Proportion Var 0.088 0.064 0.060 0.019
Cumulative Var 0.088 0.152 0.212 0.231
```

BRASIL (BRA) ONDA 2

OBLIMIN:

```
Loadings:
     MR1    MR4    MR2    MR3
B006 -0.124  0.249         0.177
C001         0.131 -0.131
C002
E018         0.447
E034         0.384
E035  0.135
E036                        0.528
E039                        0.508
F028 -0.207         0.263
F034                0.554
F063                0.629
F116        -0.127 -0.115
F118  0.596
F120  0.504        -0.120
F121  0.614
F141        -0.409
G006         0.404

                  MR1   MR4   MR2   MR3
SS loadings    1.091 0.813 0.851 0.596
Proportion Var 0.064 0.048 0.050 0.035
Cumulative Var 0.064 0.112 0.162 0.197
```

VARIMAX:

```
> br2fact4 <- fa(br2d,nfactors=4,rotate = "varimax")
> br2fact4$loadings

Loadings:
      MR1    MR2    MR4    MR3
B006 -0.173         0.284  0.206
C001 -0.116         0.134
C002
E018 -0.125         0.426
E034                0.358
E035  0.121
E036                       0.523
E039                       0.503
F028 -0.228  0.316  0.195
F034         0.547  0.117
F063         0.617  0.107
F116        -0.147 -0.134
F118  0.540
F120  0.496 -0.220 -0.234
F121  0.590        -0.228 -0.102
F141  0.182 -0.202 -0.428
G006         0.177  0.375

                     MR1   MR2   MR4   MR3
SS loadings    1.055 0.960 1.009 0.617
Proportion Var 0.062 0.056 0.055 0.036
Cumulative Var 0.062 0.119 0.174 0.210
```

BRA ONDA 3
OBLIMIN:

```
> pfd$loadings

Loadings:
     MR1    MR2    MR3    MR4
B008  0.138
C001                0.690
C002                0.140
E018 -0.197                0.126
E034                       0.415
E035                       0.178
E036                       0.155
E039               -0.128
F028 -0.183  0.348
F034         0.848
F063 -0.188  0.312
F116               -0.147
F118  0.571
F120  0.618
F121  0.620
G006 -0.134         0.102  0.234

                 MR1   MR2   MR3   MR4
SS loadings    1.260 0.977 0.561 0.309
Proportion Var 0.079 0.061 0.035 0.019
Cumulative Var 0.079 0.140 0.175 0.194
```

VARIMAX:

```
> br3fact4$loadings

Loadings:
      MR1    MR2    MR3    MR4
B008  0.138
C001  0.125         0.674
C002                0.132
E018 -0.178  0.166         0.138
E034                       0.412
E035                       0.169
E036                       0.157
E039 -0.107        -0.124
F028 -0.113  0.396
F034  0.155  0.830
F063 -0.130  0.369
F116               -0.143
F118  0.564 -0.104  0.105
F120  0.563 -0.258
F121  0.603 -0.155
G006 -0.104  0.117         0.226

                   MR1   MR2   MR3   MR4
SS loadings    1.153 1.138 0.544 0.313
Proportion Var 0.072 0.071 0.034 0.020
Cumulative Var 0.072 0.143 0.177 0.197
```

BRA ONDA 5
OBLIMIN:

```
> pfd$loadings

Loadings:
     MR2    MR1    MR4    MR3
```

```
B008                        0.117
C001                0.439
C002                0.139
E018  0.146                 0.107
E035                        0.199
E036                        0.481
E039                        0.229
F028  0.479         0.220
F034  0.666
F063  0.264 -0.255 -0.157
F116         0.178  0.111  0.259
F118         0.356 -0.379
F120         0.627
F121 -0.107  0.273 -0.282
G006        -0.158

                  MR2   MR1   MR4   MR3
SS loadings     0.792 0.736 0.551 0.428
Proportion Var  0.053 0.049 0.037 0.029
Cumulative Var  0.053 0.102 0.139 0.167
```

VARIMAX:

```
br5fact4$loadings

Loadings:
      MR1    MR4    MR2    MR3
B008                        0.119
C001               -0.422
C002               -0.135
E018 -0.122  0.169         0.104
E035                        0.198
E036                        0.477
E039                        0.233
F028         0.483 -0.173
F034 -0.103  0.647  0.132
F063 -0.275  0.280  0.167
F116  0.146                 0.261
F118  0.414         0.397
F120  0.618
F121  0.335 -0.168  0.283
G006 -0.153

                    MR1   MR4   MR2   MR3
SS loadings     0.825 0.816 0.535 0.432
Proportion Var  0.055 0.054 0.036 0.029
Cumulative Var  0.055 0.109 0.145 0.174
```

BRA ONDA 6

OBLIMIN:

```
> pfd$loadings

Loadings:
     MR1    MR2    MR4    MR3
B008                -0.120
C001                        0.434
C002                        0.380
E018                0.271
E035                0.101  0.105
E036         0.103  0.164  0.201
E039                        0.222
```

```
F028  0.301 -0.166
F034  0.978
F063                0.523
F116         0.126 -0.196  0.133
F118         0.570
F120         0.302 -0.378
F121         0.652
G006                0.175

                   MR1   MR2   MR4   MR3
SS loadings    1.068 0.917 0.637 0.477
Proportion Var 0.071 0.061 0.042 0.032
Cumulative Var 0.071 0.132 0.175 0.207
```

VARIMAX:

```
> br6fact4 <- fa(br6d,nfactors=4,rotate = "varimax")
> br6fact4$loadings

Loadings:
      MR1    MR2    MR3    MR4
B008               -0.149
C001        -0.126 -0.218  0.393
C002                      0.366
E018                0.242  0.109
E035                       0.115
E036                       0.210
E039                       0.207
F028  0.316 -0.211  0.152
F034  0.939         0.274
F063  0.113         0.533
F116         0.149 -0.213
F118         0.575
F120         0.404 -0.332
F121         0.642
G006                0.188

                     MR1   MR2   MR3   MR4
SS loadings    1.011 1.001 0.717 0.435
Proportion Var 0.067 0.067 0.048 0.029
Cumulative Var 0.067 0.134 0.182 0.211
```

BRA ONDA 7

OBLIMIN

```
> pfd$loadings

Loadings:
        MR1    MR2    MR3    MR4
B008                0.164
C001           -0.102  0.423
C002     0.108          0.252
E018                          0.337
E034                          0.190
E035    -0.101          0.124  0.410
E036                    0.159  0.173
E039                    0.280
F028     0.432 -0.208
F034     0.727
F063     0.538        -0.149  0.104
F116            0.150  0.274 -0.110
F118            0.510 -0.108 -0.115
F120    -0.272  0.307  0.103 -0.159
F121            0.772
F144_02         0.233  0.231
```

```
G006                   -0.168  0.293

                 MR1   MR2   MR3   MR4
SS loadings    1.127 1.096 0.604 0.509
Proportion Var 0.066 0.064 0.036 0.030
Cumulative Var 0.066 0.131 0.166 0.196
```

VARIMAX:

```
> br7fact4 <- fa(br7d,nfactors=4,rotate = "varimax")
> br7fact4$loadings

Loadings:
          MR2    MR1    MR3    MR4
B008                  0.182
C001                  0.427
C002                  0.239
E018            0.110         0.360
E034                          0.193
E035                  0.169  0.355
E036                  0.172  0.132
E039                  0.281
F028    -0.249  0.433
F034            0.689         0.105
F063    -0.141  0.544 -0.185  0.238
F116     0.193         0.236 -0.163
F118     0.518 -0.135 -0.178
F120     0.374 -0.323        -0.225
F121     0.748
F144_02  0.250         0.200
G006                 -0.142  0.332

                     MR2   MR1   MR3   MR4
SS loadings    1.162 1.135 0.616 0.585
Proportion Var 0.068 0.067 0.036 0.034
Cumulative Var 0.068 0.135 0.171 0.206
```

CHILE (CHI) ONDA 2

OBLIMIN:

```
> pfd$loadings

Loadings:
     MR1    MR2    MR3    MR4
B006                       0.304
C001                       0.171
C002
E018                       0.256
E034                -0.131 0.111
E035  0.152  0.127 -0.127
E036                0.394
E039                0.466
F028         0.430
F034         0.689        -0.108
F063         0.638         0.113
F116  0.109         0.246  0.124
F118  0.632
F120  0.714
F121  0.538               -0.130
F141  0.334 -0.131  0.186 -0.174
G006         0.227 -0.120  0.133

                 MR1   MR2   MR3   MR4
SS loadings    1.368 1.184 0.543 0.318
Proportion Var 0.080 0.070 0.032 0.019
```

```
Cumulative Var 0.080 0.150 0.182 0.201
```

VARIMAX:

```
> ch2fact4 <- fa(ch2d,nfactors=4,rotate = "varimax")
> ch2fact4$loadings

Loadings:
      MR1    MR2    MR3    MR4
B006                        0.282
C001                        0.161
C002
E018 -0.140  0.136         0.255
E034         0.126 -0.134  0.115
E035  0.119  0.118 -0.116
E036                0.395
E039                0.461
F028         0.441
F034         0.654
F063 -0.158  0.652         0.146
F116                0.240  0.106
F118  0.601
F120  0.695 -0.144
F121  0.563 -0.181        -0.161
F141  0.388 -0.245  0.203 -0.198
G006 -0.134  0.276 -0.118  0.147

                       MR1   MR2   MR3   MR4
SS loadings          1.415 1.289 0.542 0.320
Proportion Var       0.083 0.076 0.032 0.019
Cumulative Var       0.083 0.159 0.191 0.210
```

CHI ONDA 3

OBLIMIN:

```
> pfd$loadings

Loadings:
      MR1    MR2    MR3    MR4
B008         -0.116
C001 -0.162 -0.317  0.139  0.311
C002 -0.158 -0.221         0.185
E018         0.280        -0.188
E034         0.297 -0.103
E035
E036                -0.103  0.304
E039         -0.262         0.226
F028 -0.116 -0.160  0.527 -0.181
F034         0.135  0.725
F063         0.553  0.249
F116                        0.519
F118  0.587
F120  0.702
F121  0.671        -0.103
G006         0.418        -0.132

                     MR1   MR2   MR3   MR4
SS loadings        1.386 0.950 0.952 0.645
Proportion Var     0.087 0.059 0.059 0.040
Cumulative Var     0.087 0.146 0.206 0.246
```

VARIMAX:

```
> ch3fact4$loadings
```

```
Loadings:
      MR1    MR2    MR3    MR4
B008         0.136 -0.134
C001 -0.148  0.468         0.131
C002 -0.143  0.308
E018        -0.354
E034        -0.250         0.122
E035
E036                       0.286
E039         0.366
F028 -0.178         0.475 -0.266
F034                0.759
F063 -0.119 -0.471  0.452  0.137
F116  0.115  0.325         0.425
F118  0.570
F120  0.682
F121  0.672        -0.186  0.138
G006 -0.105 -0.437  0.231

                     MR1   MR2   MR3   MR4
SS loadings    1.365 1.194 1.128 0.428
Proportion Var 0.085 0.075 0.071 0.027
Cumulative Var 0.085 0.160 0.231 0.257
```

CHI ONDA 4

OBLIMIN:

```
> pfd$loadings

Loadings:
      MR1    MR2    MR4    MR3
B008 -0.101         -0.106  0.209
C001         -0.233  0.234  0.171
C002                 0.239  0.146
E018  0.175         -0.266
E034                       -0.138
E035                        0.171
E036                        0.467
E039                        0.402
F028  0.551 -0.154
F034  0.756
F063  0.488         -0.212
F116                 0.347 -0.112
F118          0.693  0.128
F120 -0.165  0.422  0.500
F121 -0.203  0.587         0.131
G006  0.287         -0.323 -0.176

                   MR1   MR2   MR4   MR3
SS loadings    1.316 1.120 0.749 0.618
Proportion Var 0.082 0.070 0.047 0.039
Cumulative Var 0.082 0.152 0.199 0.238
```

VARIMAX:

```
Loadings:
      MR2    MR1    MR4    MR3
B008 -0.125         -0.173  0.180
C001         -0.293  0.209  0.240
C002         -0.111  0.213  0.186
E018  0.128         -0.259
E034                       -0.140
E035                        0.166
E036          0.119         0.469
```

```
E039                         0.403
F028  0.539 -0.101         0.105
F034  0.771
F063  0.460        -0.203
F116  0.112         0.398
F118         0.686
F120         0.251  0.533
F121 -0.135  0.587
G006  0.235        -0.290 -0.195

                 MR2   MR1   MR4   MR3
SS loadings    1.232 1.020 0.776 0.626
Proportion Var 0.077 0.064 0.048 0.039
Cumulative Var 0.077 0.141 0.189 0.228
```

CHI ONDA 5

OBLIMIN:

```
> pfd$loadings

Loadings:
     MR1    MR2    MR3    MR4
B008
C001                0.359
C002                0.683
E018                0.104 -0.247
E035  0.140                0.161
E036                       0.163
E039                       0.364
F028  0.569                0.235
F034  0.716
F063  0.662               -0.177
F116         0.189         0.330
F118         0.698
F120 -0.134  0.485         0.141
F121         0.694
G006  0.131               -0.142

                 MR1   MR2   MR3   MR4
SS loadings    1.358 1.293 0.618 0.489
Proportion Var 0.091 0.086 0.041 0.033
Cumulative Var 0.091 0.177 0.218 0.251
```

VARIMAX:

```
> ch5fact4 <- fa(ch5d,nfactors=4,rotate = "varimax")
> ch5fact4$loadings

Loadings:
      MR1    MR2    MR3    MR4
B008
C001               0.364
C002               0.677
E018  0.100              -0.243
E035  0.126               0.156
E036                      0.164
E039  0.112 -0.117        0.362
F028  0.573 -0.167        0.227
F034  0.706 -0.132
F063  0.648              -0.188
F116        0.193         0.329
F118        0.675
```

```
F120 -0.216  0.501         0.140
F121 -0.143  0.689
G006  0.146 -0.109        -0.145

                       MR1   MR2   MR3   MR4
SS loadings    1.388 1.327 0.618 0.484
Proportion Var 0.093 0.088 0.041 0.032
Cumulative Var 0.093 0.181 0.222 0.254
```

CHI ONDA 6

OBLIMIN:

```
> pfd$loadings

Loadings:
     MR1    MR2    MR4    MR3
B008                        0.181
C001                        0.483
C002                        0.461
E018                -0.378
E035        -0.160  0.179  0.164
E036 -0.105  0.153 -0.113
E039                 0.308  0.248
F028  0.648
F034  0.877
F063  0.511        -0.341
F116                0.395
F118         0.753
F120         0.506  0.176
F121         0.638 -0.135
G006  0.168 -0.133 -0.197

                   MR1   MR2   MR4   MR3
SS loadings    1.513 1.313 0.663 0.590
Proportion Var 0.101 0.088 0.044 0.039
Cumulative Var 0.101 0.188 0.233 0.272
```

VARIMAX:

```
> ch6fact4$loadings

Loadings:
     MR1    MR2    MR3    MR4
B008                0.193
C001                0.482
C002                0.452
E018  0.151               0.371
E035       -0.182  0.203 -0.147
E036        0.182
E039                0.293 -0.269
F028  0.649 -0.170  0.146  0.159
F034  0.822 -0.195  0.138
F063  0.567               0.387
F116                     -0.384
F118         0.729
F120 -0.162  0.492 -0.150 -0.221
F121         0.648
G006  0.220 -0.148         0.219

                       MR1   MR2   MR3   MR4
SS loadings    1.553 1.371 0.687 0.678
Proportion Var 0.104 0.091 0.046 0.045
Cumulative Var 0.104 0.195 0.241 0.286
```

CHI ONDA 7

OBLIMIN:

```
> pfd$loadings

Loadings:
        MR1    MR3    MR2    MR4
B008                          0.821
C001            0.183  0.355
C002            0.230  0.257
E018    0.188   0.201 -0.206 -0.217
E034                  -0.195  0.204
E035            0.151  0.347  0.140
E036
E039                   0.452
F028   -0.145   0.603
F034            0.766
F063    0.278   0.500 -0.206  0.116
F116                   0.546  0.174
F118    0.699
F120    0.465          0.386 -0.137
F121    0.847
F144_02 0.315          0.241
G006            0.111 -0.404 -0.120

                 MR1   MR3   MR2   MR4
SS loadings    1.691 1.388 1.318 0.891
Proportion Var 0.099 0.082 0.078 0.052
Cumulative Var 0.099 0.181 0.259 0.311
```

VARIMAX:

```
> ch7fact4$loadings

Loadings:
         MR1    MR2    MR3    MR4
B008            0.407          0.718
C001            0.305  0.105 -0.125
C002            0.269  0.166
E018    0.125  -0.308  0.252 -0.124
E034                          0.233
E035            0.393
E036
E039    0.176   0.421 -0.140
F028   -0.236   0.104  0.577
F034   -0.164          0.754
F063    0.139  -0.164  0.531  0.194
F116    0.156   0.579 -0.171
F118    0.699
F120    0.569   0.246 -0.157 -0.202
F121    0.842  -0.101
F144_02 0.354   0.186
G006           -0.434  0.203

                   MR1   MR2   MR3   MR4
SS loadings    1.836 1.438 1.423 0.715
Proportion Var 0.108 0.085 0.084 0.042
Cumulative Var 0.108 0.193 0.276 0.318
```

COLÔMBIA ONDA 7

OBLIMIN:

```
Loadings:
        MR1    MR2    MR3    MR4
B008   -0.257          0.260  0.122
```

```
C001    -0.270         0.257 -0.116
C002                         -0.170
E018            0.235 -0.132  0.100
E034                         0.298
E035                         0.269
E036                         0.196
E039                  0.179  0.244
F028    -0.142  0.466
F034            0.602
F063            0.582         0.107
F116                  0.498
F118     0.636
F120     0.375 -0.263  0.252
F121     0.719
F144_02  0.401         0.131
G006            0.281

                  MR1   MR2   MR3   MR4
SS loadings     1.414 1.145 0.520 0.350
Proportion Var 0.083 0.067 0.031 0.021
Cumulative Var 0.083 0.150 0.181 0.202
```

VARIMAX:

```
Loadings:
         MR1    MR2    MR3    MR4
B008    -0.105         0.294  0.116
C001    -0.113         0.272 -0.116
C002                         -0.165
E018           0.251
E034           0.136         0.290
E035                         0.262
E036                         0.191
E039                  0.183  0.237
F028    -0.185  0.472  0.109
F034           0.560
F063    -0.116  0.598         0.103
F116     0.352         0.395
F118     0.609 -0.175 -0.169
F120     0.537 -0.365
F121     0.673 -0.111 -0.183
F144_02  0.445
G006           0.295

                   MR1   MR2   MR3   MR4
SS loadings    1.521 1.251 0.457 0.333
Proportion Var 0.089 0.074 0.027 0.020
Cumulative Var 0.089 0.163 0.190 0.209
```

EQUADOR ONDA 7

OBLIMIN:

```
> pfa5$loadings

Loadings:
        MR1    MR2    MR3    MR4
B008                         0.271
C001    -0.141               0.273
C002
E018            0.124
E034            0.110         0.115
E035                  0.302
E036                  0.673
```

```
E039    -0.158         0.277  0.256
F028            0.521
F034            0.540
F063            0.435  0.108
F116     0.233                0.421
F118     0.622
F120     0.587                0.244
F121     0.741
F144_02  0.317 -0.121
G006

                 MR1   MR2   MR3   MR4
SS loadings    1.494 0.829 0.641 0.498
Proportion Var 0.088 0.049 0.038 0.029
```

VARIMAX:

```
> equ7fact4$loadings

Loadings:
          MR1    MR2    MR3    MR4
B008                          0.270
C001                          0.280
C002
E018    -0.106  0.131
E034                          0.131
E035                  0.299
E036                  0.667
E039                  0.283  0.246
F028    -0.107  0.491         0.172
F034            0.520
F063            0.433
F116     0.392                0.366
F118     0.616
F120     0.683 -0.120         0.153
F121     0.703               -0.151
F144_02  0.365 -0.147
G006

                   MR1   MR2   MR3   MR4
SS loadings    1.674 0.788 0.636 0.465
Proportion Var 0.098 0.046 0.037 0.027
Cumulative Var 0.098 0.145 0.182 0.210
```

GUATEMALA ONDA 5

OBLIMIN:

```
> pfa5d$loadings

Loadings:
     MR1    MR2    MR3    MR4
B008                -0.167
C001 -0.119         -0.244  0.137
C002                -0.139
E018                 0.271
E035                 0.139 -0.125
E036                 0.154  0.397
E039                        0.415
F028          0.560  0.101
F034          0.627
F063          0.223  0.393
F116  0.377         -0.118  0.260
F118  0.719
F120  0.679
```

```
F121  0.433 -0.193  0.103
G006         0.103  0.180

                 MR1   MR2   MR3   MR4
SS loadings    1.359 0.829 0.461 0.444
Proportion Var 0.091 0.055 0.031 0.030
Cumulative Var 0.091 0.146 0.177 0.206
```

VARIMAX:

```
> pfa5d$loadings

Loadings:
     MR1    MR2    MR3    MR4
B008  0.116        -0.162
C001               -0.257  0.130
C002               -0.142
E018                0.266
E035                0.132 -0.131
E036                0.114  0.379
E039  0.121                0.413
F028 -0.121  0.554  0.179
F034         0.616
F063         0.210  0.418
F116  0.435  0.106 -0.102  0.281
F118  0.706
F120  0.690
F121  0.407 -0.212
G006                0.193

                 MR1   MR2   MR3   MR4
SS loadings    1.393 0.814 0.498 0.442
Proportion Var 0.093 0.054 0.033 0.029
Cumulative Var 0.093 0.147 0.180 0.210
```

GUATEMALA ONDA 7

OBLIMIN:

```
> pfa7.m$loadings

Loadings:
        MR2    MR3    MR1    MR4
B008                -0.134
C001    -0.103  0.102         0.717
C002                          0.375
E018     0.296 -0.171  0.164
E034
E035                 0.156
E036            0.143
E039            0.277 -0.222
F028     0.579        -0.165
F034     0.600
F063     0.626 -0.186  0.122
F116    -0.160  0.453         0.121
F118    -0.148  0.614  0.289
F120    -0.248  0.703  0.289
F121    -0.105  0.293  0.646
F144_02 -0.143  0.116  0.587
G006     0.262 -0.108
```

```
                  MR2   MR3   MR1   MR4
SS loadings    1.414 1.375 1.111 0.722
Proportion Var 0.083 0.081 0.065 0.042
Cumulative Var 0.083 0.164 0.229 0.272
```

VARIMAX:

```
> pfa7.m$loadings

Loadings:
        MR1    MR2    MR3    MR4
B008                  -0.139
C001                          0.741
C002                          0.388
E018    -0.191  0.250  0.223
E034
E035                  0.176
E036     0.154
E039     0.304  0.106 -0.298
F028            0.593 -0.159
F034            0.621
F063    -0.206  0.573  0.196
F116     0.474                0.135
F118     0.669
F120     0.760
F121     0.291         0.563
F144_02               0.573
G006    -0.112  0.227  0.115

                  MR1   MR2   MR3   MR4
SS loadings    1.572 1.219 0.948 0.757
Proportion Var 0.092 0.072 0.056 0.045
Cumulative Var 0.092 0.164 0.220 0.264
```

HAITI ONDA 6

OBLIMIN:

```
Loadings:
     MR1    MR4    MR2    MR3
B008
C001
C002
E018
E035                       0.545
E036                       0.601
E039
F028
F034                0.577
F063                0.679
F116         0.996
F118  0.570
F120  0.860
F121  0.560  0.272
G006         0.132

                  MR1   MR4   MR2   MR3
SS loadings    1.392 1.093 0.807 0.669
Proportion Var 0.093 0.073 0.054 0.045
```

```
Cumulative Var 0.093 0.166 0.219 0.264
```

VARIMAX:

```
     MR1    MR4    MR2    MR3
B008
C001
C002
E018
E035                        0.542
E036                        0.594
E039
F028
F034                0.572
F063                0.671
F116  0.468  0.878
F118  0.576
F120  0.833
F121  0.685  0.247
G006  0.149  0.131

                  MR1   MR4   MR2   MR3
SS loadings    1.743 0.870 0.801 0.664
Proportion Var 0.116 0.058 0.053 0.044
Cumulative Var 0.116 0.174 0.228 0.272
```

NICARÁGUA ONDA 7

OBLIMIN:

```
Loadings:
        MR1    MR4    MR2    MR3
B008                    0.104
C001                    0.478
C002            -0.167  0.395
E018    -0.145          -0.118  0.150
E034
E035            -0.125          0.313
E036                    0.116   0.402
E039     0.141  0.101   0.142   0.289
F028             0.434
F034             0.473 -0.140
F063    -0.157          -0.141  0.279
F116     0.565  0.153
F118     0.400 -0.184 -0.206
F120     0.500 -0.145         -0.100
F121     0.292 -0.337 -0.234
F144_02  0.482
G006    -0.133          -0.191  0.276

                  MR1   MR4   MR2   MR3
SS loadings    1.146 0.672 0.626 0.566
Proportion Var 0.067 0.040 0.037 0.033
Cumulative Var 0.067 0.107 0.144 0.177
```

VARIMAX:

```
Loadings:
        MR1    MR4    MR2    MR3
B008                    0.112
C001                    0.460
```

```
C002    -0.105 -0.153  0.356
E018    -0.125        -0.136  0.148
E034
E035           -0.116         0.304
E036                          0.404
E039                   0.135  0.300
F028    -0.117  0.416
F034            0.450
F063    -0.146        -0.165  0.279
F116     0.497  0.124  0.145
F118     0.501 -0.196 -0.182
F120     0.542 -0.161        -0.109
F121     0.441 -0.338 -0.235
F144_02  0.481
G006                  -0.221  0.267

                 MR1   MR4   MR2   MR3
SS loadings    1.299 0.629 0.592 0.565
Proportion Var 0.076 0.037 0.035 0.033
Cumulative Var 0.076 0.113 0.148 0.182
```

MÉXICO (MEX) ONDA 2

OBLIMIN:

```
> pf02<- fa(mex02d,nfactors=4,rotate = "oblimin")
> pf02$loadings

Loadings:
     MR1    MR2    MR3    MR4
B006 -0.167
C001
C002                        0.113
E018 -0.110  0.144
E034         0.113          0.292
E035                        0.419
E036                0.404 -0.143
E039                0.790
F028         0.625        -0.126
F034         0.739
F063         0.720         0.127
F116  0.338
F118  0.589
F120  0.784
F121  0.662                 0.131
F141  0.566
G006         0.142 -0.123

                 MR1   MR2   MR3   MR4
SS loadings    1.884 1.523 0.832 0.379
Proportion Var 0.111 0.090 0.049 0.022
Cumulative Var 0.111 0.200 0.249 0.272
```

VARIMAX:

```
Loadings:
     MR1    MR2    MR3    MR4
B006 -0.163
C001
C002                       0.112
```

```
E018 -0.127  0.168
E034         0.138 -0.108  0.286
E035         0.111         0.417
E036                0.419 -0.103
E039                0.783
F028 -0.116  0.608
F034         0.726
F063 -0.111  0.727         0.146
F116  0.349
F118  0.579
F120  0.765
F121  0.670 -0.104         0.137
F141  0.577 -0.132
G006         0.147 -0.133

                       MR1   MR2   MR3   MR4
SS loadings    1.909 1.560 0.846 0.371
Proportion Var 0.112 0.092 0.050 0.022
Cumulative Var 0.112 0.204 0.254 0.276
```

MÉXICO (MEX) ONDA 3

OBLIMIN:

```
Loadings:
      MR2    MR1    MR3    MR4
B008  0.114
C001                        -0.199
C002        -0.138          0.101
E018         0.126         -0.118
E034         0.131          0.193
E035  0.104                 -0.219
E036                 0.883
E039        -0.143  0.217  0.322
F028 -0.199  0.424          0.323
F034         0.727          0.136
F063         0.736         -0.159
F116  0.368 -0.145          0.331
F118  0.518
F120  0.742
F121  0.698                 -0.152
G006         0.355         -0.172

                   MR2   MR1   MR3   MR4
SS loadings    1.524 1.488 0.839 0.573
Proportion Var 0.095 0.093 0.052 0.036
Cumulative Var 0.095 0.188 0.241 0.277
```

VARIMAX:

```
> mex3fact4$loadings

Loadings:
      MR2    MR1    MR3    MR4
B008 -0.109  0.128
C001                       -0.188
C002 -0.166
E018  0.174 -0.105
E034                        0.211
E035  0.121                -0.208
E036                0.879
E039 -0.215         0.240  0.290
F028  0.339 -0.215         0.430
F034  0.649                0.279
F063  0.765 -0.159
F116 -0.304  0.418         0.219
F118         0.509
```

```
F120 -0.180  0.741
F121         0.653        -0.236
G006  0.405 -0.124

                       MR2   MR1   MR3   MR4
SS loadings          1.560 1.530 0.845 0.595
Proportion Var       0.098 0.096 0.053 0.037
Cumulative Var       0.098 0.193 0.246 0.283
```

MÉXICO (MEX) ONDA 4

OBLIMIN:

```
> pfa4a$loadings

Loadings:
     MR1    MR2    MR4    MR3
B008        -0.127          0.127
C001                        0.572
C002                        0.305
E018                 0.252 -0.145
E034                 0.212
E035                -0.130 -0.123
E036         0.173
E039         0.137 -0.195  0.144
F028         0.523
F034         0.538
F063         0.308  0.434
F116  0.195        -0.198  0.229
F118  0.636
F120  0.699        -0.121
F121  0.761
G006        -0.100  0.371  0.151

                   MR1   MR2   MR4   MR3
SS loadings      1.537 0.752 0.573 0.587
Proportion Var   0.096 0.047 0.036 0.037
Cumulative Var   0.096 0.143 0.179 0.216
```

VARIMAX:

```
> mex4fact4 <- fa(mex04d,nfactors=4,rotate = "varimax")
> mex4fact4$loadings

Loadings:
      MR1    MR2    MR3    MR4
B008       -0.108         0.153
C001 -0.110        -0.167  0.542
C002                       0.286
E018                0.302
E034                0.214
E035                      -0.154
E036         0.158
E039         0.123 -0.217
F028         0.521
F034         0.537  0.151
F063         0.352  0.443  0.104
F116  0.169        -0.300  0.130
F118  0.625
F120  0.678        -0.205 -0.121
F121  0.752               -0.117
G006 -0.106         0.302  0.256

                     MR1   MR2   MR3   MR4
SS loadings        1.492 0.758 0.675 0.579
Proportion Var     0.093 0.047 0.042 0.036
Cumulative Var     0.093 0.141 0.183 0.219
```

MÉXICO (MEX) ONDA 5

OBLIMIN:

```
> pfa5<- fa(mex05d,nfactors=4,rotate = "oblimin")
> pfa5$loadings

Loadings:
     MR1    MR2    MR3    MR4
B008
C001         0.998
C002         0.262
E018                0.165
E035  0.124
E036                       0.186
E039 -0.147                0.346
F028 -0.113         0.514  0.102
F034                0.551
F063                0.565 -0.133
F116  0.108                0.426
F118  0.715
F120  0.520                0.301
F121  0.723
G006  0.114         0.232 -0.169

                   MR1   MR2   MR3   MR4
SS loadings    1.390 1.078 0.977 0.501
Proportion Var 0.093 0.072 0.065 0.033
Cumulative Var 0.093 0.165 0.230 0.263
```

VARIMAX:

```
> mex5fact4$loadings

Loadings:
      MR1    MR3    MR2    MR4
B008
C001 -0.130         0.975  0.157
C002                0.261
E018         0.172
E035  0.128
E036                       0.178
E039                       0.337
F028 -0.147  0.522         0.102
F034         0.530
F063         0.570        -0.110
F116  0.199                0.423
F118  0.692 -0.105
F120  0.589 -0.179         0.309
F121  0.705 -0.152
G006         0.227        -0.157

                     MR1   MR3   MR2   MR4
SS loadings    1.442 1.033 1.032 0.503
Proportion Var 0.096 0.069 0.069 0.034
Cumulative Var 0.096 0.165 0.234 0.267
```

MÉXICO (MEX) ONDA 6

OBLIMIN:

```
> pfa66x<- fa(mex06d,nfactors=4,rotate = "oblimin")
```

```
> pfa66x$loadings

Loadings:
     MR1    MR2    MR3    MR4
B008
C001                0.530
C002                0.219
E018         0.145
E035                       0.272
E036                       0.238
E039                       0.464
F028         0.487
F034         0.657
F063         0.628
F116  0.315         0.154  0.135
F118  0.573
F120  0.637         0.129
F121  0.697
G006         0.163  0.161 -0.120

                 MR1   MR2   MR3   MR4
SS loadings    1.333 1.123 0.423 0.394
Proportion Var 0.089 0.075 0.028 0.026
Cumulative Var 0.089 0.164 0.192 0.218
```

VARIMAX:

```
> mex6fact4$loadings

Loadings:
      MR1    MR2    MR3    MR4
B008
C001               0.527
C002               0.212
E018         0.164
E035                      0.272
E036                      0.234
E039                      0.455
F028         0.487
F034         0.641
F063 -0.108  0.630
F116  0.319        0.138  0.130
F118  0.564 -0.103 -0.132
F120  0.635 -0.116
F121  0.679       -0.152
G006         0.191  0.147

                   MR1   MR2   MR3   MR4
SS loadings    1.315 1.152 0.424 0.387
Proportion Var 0.088 0.077 0.028 0.026
Cumulative Var 0.088 0.164 0.193 0.219
```

MÉXICO (MEX) ONDA 7

OBLIMIN:

```
Loadings:
        MR1    MR2    MR3    MR4
B008                          0.145
C001                 0.744
C002                 0.535
E018           0.182 -0.115
E034           0.101
E035                          0.273
E036                          0.370
```

```
E039                          0.480
F028            0.557
F034            0.674
F063            0.439
F116     0.266         0.110  0.133
F118     0.610
F120     0.600                0.104
F121     0.707
F144_02  0.360
G006    -0.101  0.167

                  MR1   MR2   MR3   MR4
SS loadings     1.468 1.041 0.878 0.519
Proportion Var 0.086 0.061 0.052 0.031
```

VARIMAX:

```
> mex7fact4$loadings

Loadings:
          MR1    MR2    MR3    MR4
B008                          0.153
C001                    0.739 0.110
C002                    0.526
E018            0.186 -0.102
E034            0.108
E035                          0.271
E036                          0.364
E039                          0.479
F028            0.561
F034            0.666
F063            0.449
F116     0.267         0.100  0.138
F118     0.601
F120     0.600 -0.127
F121     0.696
F144_02  0.362 -0.113
G006    -0.109  0.181        -0.106

                     MR1   MR2   MR3   MR4
SS loadings    1.450 1.089 0.861 0.526
Proportion Var 0.085 0.064 0.051 0.031
Cumulative Var 0.085 0.149 0.200 0.231
```

PERU ONDA 3

OBLIMIN:

```
Loadings:
     MR1    MR2    MR3    MR4
B008                 0.355  0.129
C001                 0.396
C002                 0.314
E018                        0.161
E034  0.104                 0.377
E035                -0.274
E036
E039 -0.105          0.274
F028          0.267
F034          0.754
F063          0.346         0.271
F116                 0.140 -0.258
F118  0.576
F120  0.496          0.160 -0.182
F121  0.654
G006          0.144         0.133
```

```
                  MR1   MR2   MR3   MR4
SS loadings     1.061 0.815 0.593 0.404
Proportion Var 0.066 0.051 0.037 0.025
Cumulative Var 0.066 0.117 0.154 0.180
```

VARIMAX:

```
> peru3fact4 <- fa(peru03d,nfactors=4,rotate = "varimax")
> peru3fact4$loadings

Loadings:
      MR1    MR2    MR3    MR4
B008                0.330
C001                0.383  0.141
C002                0.306
E018                      -0.151
E034                      -0.362
E035               -0.263
E036                       0.106
E039                0.282  0.102
F028         0.292
F034         0.728         0.154
F063 -0.106  0.421        -0.202
F116  0.132         0.151  0.281
F118  0.572        -0.115
F120  0.530 -0.133  0.139  0.202
F121  0.625 -0.119        -0.107
G006         0.179        -0.101

                     MR1   MR2   MR3   MR4
SS loadings    1.056 0.882 0.573 0.408
Proportion Var 0.066 0.055 0.036 0.025
Cumulative Var 0.066 0.121 0.157 0.182
```

PERU ONDA 4

OBLIMIN:

```
      MR1    MR2    MR3    MR4
B008          0.116          0.137
C001                 0.508
C002                 0.392 -0.128
E018          0.110 -0.212 -0.123
E034
E035                -0.159 -0.102
E036 -0.187                 0.164
E039                        0.365
F028 -0.147  0.406
F034         0.560  0.155
F063         0.596 -0.147
F116  0.134                 0.280
F118  0.550
F120  0.423                 0.191
F121  0.593
G006         0.189 -0.123

                  MR1   MR2   MR3   MR4
SS loadings     0.920 0.912 0.571 0.373
Proportion Var 0.058 0.057 0.036 0.023
```

VARIMAX:

```
> peru4fact4 <- fa(peru04d,nfactors=4,rotate = "varimax")
> peru4fact4$loadings

Loadings:
```

```
      MR2    MR1    MR3    MR4
B008                       0.135
C001                0.540
C002                0.329 -0.177
E018  0.135        -0.280
E034                       0.108
E035                -0.202
E036        -0.189         0.144
E039 -0.116         0.219  0.294
F028  0.435 -0.173
F034  0.554
F063  0.578        -0.203  0.114
F116         0.142  0.209  0.236
F118         0.543  0.104
F120 -0.156  0.430  0.180  0.173
F121         0.582
G006  0.160        -0.102  0.118

                       MR2   MR1   MR3   MR4
SS loadings    0.933 0.921 0.720 0.294
Proportion Var 0.058 0.058 0.045 0.018
Cumulative Var 0.058 0.116 0.161 0.179
```

PERU ONDA 6

OBLIMIN:

```
> pfa66x$loadings

Loadings:
      MR1    MR2    MR3    MR4
B008                 0.149  0.117
C001 -0.193          0.391
C002                 0.202
E018  0.118  0.177 -0.218
E035  0.173                 0.470
E036                        0.181
E039 -0.113          0.295  0.270
F028 -0.144  0.364  0.103
F034         0.636
F063         0.620 -0.115
F116                 0.542
F118  0.610
F120  0.441          0.424 -0.150
F121  0.818
G006         0.174

                  MR1   MR2   MR3   MR4
SS loadings    1.360 0.994 0.866 0.398
Proportion Var 0.091 0.066 0.058 0.027
Cumulative Var 0.091 0.157 0.215 0.241
```

VARIMAX:

```
Loadings:
      MR1    MR2    MR3    MR4
B008                0.147  0.105
C001                0.387
C002                0.195
E018         0.176 -0.219
E035  0.109                0.470
E036                       0.174
E039                0.301  0.247
F028 -0.128  0.374
F034         0.628         0.115
F063         0.623 -0.124
F116  0.204         0.511
F118  0.620
```

```
F120  0.590         0.362 -0.169
F121  0.801
G006         0.175

                      MR1   MR2   MR3   MR4
SS loadings    1.464 1.002 0.788 0.383
Proportion Var 0.098 0.067 0.053 0.026
Cumulative Var 0.098 0.164 0.217 0.242
```

PERU ONDA 7

OBLIMIN:

```
> pfaxx$loadings

Loadings:
        MR1    MR2    MR3    MR4
B008                    0.114
C001                    0.221
C002
E018             0.168 -0.157
E034                    0.117
E035                    0.117  0.368
E036                    0.166  0.312
E039                    0.500  0.110
F028    -0.106  0.460        -0.161
F034            0.553
F063            0.568
F116     0.358          0.193 -0.242
F118     0.719
F120     0.742                -0.125
F121     0.635                 0.112
F144_02  0.361                 0.151
G006            0.174

                   MR1   MR2   MR3   MR4
SS loadings    1.767 0.913 0.446 0.412
Proportion Var 0.104 0.054 0.026 0.024
Cumulative Var 0.104 0.158 0.184 0.208
```

VARIMAX:

```
> peru7fact4 <- fa(peru07d,nfactors=4,rotate = "varimax")
> peru7fact4$loadings

Loadings:
         MR1    MR2    MR3    MR4
B008                   0.121
C001                   0.248
C002
E018            0.178 -0.173
E034                   0.117
E035     0.109                 0.365
E036                           0.318
E039                   0.446  0.194
F028    -0.178  0.445  0.123 -0.165
F034            0.541
F063            0.562
F116     0.378         0.275 -0.184
F118     0.712
F120     0.753
F121     0.625        -0.128
F144_02  0.356        -0.130  0.134
G006            0.176

                      MR1   MR2   MR3   MR4
SS loadings    1.797 0.896 0.459 0.385
```

```
Proportion Var 0.106 0.053 0.027 0.023
Cumulative Var 0.106 0.158 0.185 0.208
```

Uruguai onda 3

oblimin:

```
> pfd3<- fa(uru03d,nfactors=4,rotate = "oblimin")
> pfd3$loadings

Loadings:
     MR1    MR2    MR3    MR4
B008        -0.114 -0.208
C001  0.116        -0.192  0.333
C002  0.109                0.215
E018 -0.147  0.165 -0.137 -0.259
E034 -0.125               -0.157
E035               -0.111
E036                0.338
E039                0.408
F028 -0.192  0.491         0.228
F034         0.836
F063         0.742
F116  0.247
F118  0.645         0.219  0.105
F120  0.697                0.116
F121  0.764               -0.138
G006 -0.107  0.173  0.176 -0.157

                  MR1   MR2   MR3   MR4
SS loadings     1.667 1.601 0.493 0.395
Proportion Var  0.104 0.100 0.031 0.025
```

varimax:

```
> uru3fact4 <- fa(uru03d,nfactors=4,rotate = "varimax")
> uru3fact4$loadings

Loadings:
      MR1    MR2    MR4    MR3
B008        -0.165        -0.209
C001                0.369
C002                0.244
E018 -0.160  0.115 -0.281 -0.217
E034 -0.116        -0.191
E035                      -0.126
E036  0.101                0.325
E039  0.117        -0.136  0.371
F028 -0.253  0.553
F034         0.810 -0.132
F063         0.701 -0.195 -0.138
F116  0.249         0.110
F118  0.649         0.192  0.214
F120  0.655 -0.196  0.292
F121  0.736 -0.130        -0.111
G006         0.184 -0.231  0.107

                    MR1   MR2   MR4   MR3
SS loadings       1.601 1.599 0.585 0.469
Proportion Var    0.100 0.100 0.037 0.029
Cumulative Var    0.100 0.200 0.237 0.266
```

Uruguai onda 5

oblimin:

```
> uru5fact4 <- fa(uru05d,nfactors=4,rotate = "varimax")
> uru5fact4$loadings
```

```
Loadings:
      MR1    MR2    MR3    MR4
B008 -0.103
C001        -0.169  0.129  0.676
C002                       0.513
E018        -0.120 -0.514
E035        -0.109        -0.148
E036
E039                0.130
F028  0.470
F034  0.788
F063  0.802 -0.155 -0.122
F116                0.689
F118         0.662
F120         0.558  0.223
F121 -0.101  0.760 -0.163
G006               -0.284

                       MR1   MR2   MR3   MR4
SS loadings    1.550 1.420 1.052 0.767
Proportion Var 0.103 0.095 0.063 0.051
Cumulative Var 0.103 0.198 0.261 0.313
```

varimax:

```
Loadings:
      MR1    MR2    MR3    MR4
B008 -0.102
C001                        0.695
C002          0.101         0.517
E018                -0.525
E035         -0.143        -0.148
E036
E039                 0.130
F028  0.476
F034  0.809
F063  0.801
F116                 0.689
F118          0.661
F120          0.545  0.258
F121          0.770 -0.121
G006                -0.270

                     MR1   MR2   MR3   MR4
SS loadings    1.554 1.381 0.944 0.793
Proportion Var 0.104 0.092 0.063 0.053
```

Uruguai onda 6

oblimin:

```
Loadings:
      MR1    MR2    MR3    MR4
B008                       -0.133
C001 -0.117          0.223  0.249
C002                 0.590  0.170
E018 -0.132          0.454 -0.306
E035                 0.263
E036                 0.130  0.283
E039                        0.533
F028 -0.149  0.438
F034         0.789
F063         0.712  0.142
F116                 0.131  0.280
```

```
F118  0.712
F120  0.575 -0.132
F121  0.740         0.106
G006         0.208  0.224 -0.191

                 MR1   MR2   MR3   MR4
SS loadings    1.466 1.416 0.831 0.701
Proportion Var 0.098 0.094 0.055 0.047
```

varimax:

```
> uru6fact4 <- fa(uru06d,nfactors=4,rotate = "varimax")
> uru6fact4$loadings

Loadings:
      MR1    MR2    MR3    MR4
B008                       0.163
C001 -0.132         0.345
C002                0.467  0.399
E018 -0.155                0.570
E035                0.198  0.198
E036                0.315
E039 -0.102         0.507 -0.169
F028 -0.176  0.452
F034         0.763
F063         0.694  0.117  0.258
F116                0.311
F118  0.692               -0.183
F120  0.573 -0.209        -0.236
F121  0.710
G006         0.198         0.332

                     MR1   MR2   MR3   MR4
SS loadings    1.421 1.393 0.864 0.862
Proportion Var 0.095 0.093 0.058 0.057
Cumulative Var 0.095 0.188 0.245 0.303
---------------------------
```

Testes de redução de dimensionalidade com 1,2,3 e 4 fatores com rotação varimax:

- Argentina: https://github.com/gregorioCPcG/Capitulo2_TESE_Gregorio/tree/Argentina
- Bolívia: https://github.com/gregorioCPcG/Capitulo2_TESE_Gregorio/tree/Bol%C3%ADvia
- Brasil: https://github.com/gregorioCPcG/Capitulo2_TESE_Gregorio/tree/Brasil
- Chile: https://github.com/gregorioCPcG/Capitulo2_TESE_Gregorio/tree/Chile
- Colômbia: https://github.com/gregorioCPcG/Capitulo2_TESE_Gregorio/tree/Col%C3%B4mbia
- El Salvador: https://github.com/gregorioCPcG/Capitulo2_TESE_Gregorio/tree/El-Salvador
- Equador: https://github.com/gregorioCPcG/Capitulo2_TESE_Gregorio/tree/Equador
- Guatemala: https://github.com/gregorioCPcG/Capitulo2_TESE_Gregorio/tree/Guatemala
- Haiti: https://github.com/gregorioCPcG/Capitulo2_TESE_Gregorio/tree/Haiti
- México: https://github.com/gregorioCPcG/Capitulo2_TESE_Gregorio/tree/Mexico
- Nicarágua: https://github.com/gregorioCPcG/Capitulo2_TESE_Gregorio/tree/Nicaragua

- Peru: https://github.com/gregorioCPcG/Capitulo2_TESE_Gregorio/tree/Peru
- Porto Rico: https://github.com/gregorioCPcG/Capitulo2_TESE_Gregorio/tree/Porto-Rico
- Rep Dominicana: https://github.com/gregorioCPcG/Capitulo2_TESE_Gregorio/tree/Rep-Dom
- Uruguai: https://github.com/gregorioCPcG/Capitulo2_TESE_Gregorio/tree/Uruguai
- Venezuela: https://github.com/gregorioCPcG/Capitulo2_TESE_Gregorio/tree/Venezuela

Obs.: Não foi realizada a verificação dos casos de Venezuela, El Salvador e República Dominicana, mas pode ser obtida mediante contato com o autor.