This report was generated by the EnQuireR package

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EnQuireR: Multivariate Exploratory Analysis of Questionnaires

Multivariate exploration of the questionnaire
How is my dataset “structured”?  
How does my dataset look like?  
How can the main axes of variability be interpreted?

Typology of the individuals
How many groups are there in my dataset?  
How can the groups be displayed?  
How different are the groups?  
How can the groups be described?
Multivariate exploration of the questionnaire

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## Percentages of variance explained by the first five axes

<table>
<thead>
<tr>
<th>Axis</th>
<th>Eigenvalue</th>
<th>Percentage of variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.14827</td>
<td>9.88%</td>
</tr>
<tr>
<td>2</td>
<td>0.12155</td>
<td>8.1%</td>
</tr>
<tr>
<td>3</td>
<td>0.09001</td>
<td>6%</td>
</tr>
<tr>
<td>4</td>
<td>0.07805</td>
<td>5.2%</td>
</tr>
<tr>
<td>5</td>
<td>0.07375</td>
<td>4.92%</td>
</tr>
</tbody>
</table>

**Table:** Eigenvalues associated with the first five axes
Representation of the individuals

Figure: Raw representation of the individuals on axes 1 and 2
Representation of the categories

Figure: Raw representation of the categories on axes 1 and 2
Simplified representation of the categories

Figure: Simplified representation of the categories on axes 1 and 2
Description of the first axis: positive side (1/2)

The following categories are meaningful for the first axis (positive side):

- tea house
- large-scale retail stores+specialized shop
- friends
- restaurant
- afternoon tea
- tea bag+bulk
- pub
- work
- variable-p
- after lunch
Description of the first axis: positive side (2/2)

The following categories are meaningful for the first axis (positive side):

- evening
- other
- anytime
- upscale-p
- black
- no after dinner
- perfumed
- breakfast
- no sugar
Description of the first axis: negative side (1/2)

The following categories are meaningful for the first axis (negative side):

- no tea house
- no friends
- large-scale retail stores
- no restaurant
- tea bag
- no afternoon tea
- no pub
- no work
- green
- no after lunch
Description of the first axis: negative side ( 2 / 2 )

The following categories are meaningful for the first axis (negative side):

- pure
- no evening
- no anytime
- milk
- after dinner
- specialized shop
- no breakfast
- famous-brand-p
- sugar
Description of the second axis: positive side (1 / 2)

The following categories are meaningful for the second axis (positive side):

- specialized shop
- upscale-p
- bulk
- green
- no restaurant
- after dinner
- no work
- no sugar
- no after lunch
- no breakfast
Description of the second axis: positive side (2 / 2)

The following categories are meaningful for the second axis (positive side):

- tea house
- no friends
Description of the second axis: negative side (1 / 2)

The following categories are meaningful for the second axis (negative side):

- large-scale retail stores
- tea bag
- large-scale retail stores + specialized shop
- tea bag + bulk
- perfumed
- restaurant
- unknown-p
- no after dinner
- famous-brand-p
- work
Description of the second axis: negative side (2 / 2)

The following categories are meaningful for the second axis (negative side):

- sugar
- supermarket-p
- milk
- after lunch
- breakfast
- no tea house
- friends
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- How many groups are there in my dataset? 
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Number of clusters chosen by the analyst

**Figure**: A number of clusters is chosen
Representation of the individuals according to the group they belong to

Figure: Correspondence map displaying clusters
Simplified representation of the individuals according to the group they belong to

**Figure:** Levelling curves around each cluster
Representation of the barycenter of each group enhanced with confidence ellipses

Figure: Confidence ellipses around each cluster
Multivariate exploration of the questionnaire

Typology of the individuals

How different are the groups?

Number of individuals per cluster

**Figure**: Number of individuals by cluster
Multivariate exploration of the questionnaire

Typology of the individuals

How different are the groups?

Distribution of the individuals per cluster for the variable price

Figure: Variable price
Multivariate exploration of the questionnaire

Typology of the individuals

How different are the groups?

Distribution of the individuals per cluster for the variable location.of.purchase

Figure: Variable location.of.purchase
Distribution of the individuals per cluster for the variable shape

Figure: Variable shape
Multivariate exploration of the questionnaire

Typology of the individuals

How different are the groups?

Distribution of the individuals per cluster for the variable after.lunch

**Figure:** Variable after.lunch
Multivariate exploration of the questionnaire

Typology of the individuals

How different are the groups?

Distribution of the individuals per cluster for the variable after.dinner

**Figure:** Variable after.dinner
Distribution of the individuals per cluster for the variable tea.type

Figure: Variable tea.type
Distribution of the individuals per cluster for the variable tea.house

Figure: Variable tea.house
Distribution of the individuals per cluster for the variable friends

Figure: Variable friends
Distribution of the individuals per cluster for the variable how

Figure: Variable how
Distribution of the individuals per cluster for the variable pub

**Figure:** Variable pub
Description of cluster 1 ( 1 / 3 )

The following modalities are meaningful for cluster 1:

- **location.of.purchase=large-scale retail stores**
  64 % of the individuals possess this category in the global population versus 94.74% of the individuals within cluster 1;
  75 % individuals possessing this category belong to cluster 1

- **shape=tea bag**
  56.67 % of the individuals possess this category in the global population versus 82.89% of the individuals within cluster 1;
  74.12 % individuals possessing this category belong to cluster 1

- **price=famous-brand-p**
  31.67 % of the individuals possess this category in the global population versus 48.68% of the individuals within cluster 1;
  77.89 % individuals possessing this category belong to cluster 1

- **tea.house=no tea house**
  80.67 % of the individuals possess this category in the global population versus 94.08% of the individuals within cluster 1;
  59.09 % individuals possessing this category belong to cluster 1

- **price=supermarket-p**
  7 % of the individuals possess this category in the global population versus 13.16% of the individuals within cluster 1;
  95.24 % individuals possessing this category belong to cluster 1
Description of cluster 1 (2 / 3)

The following modalities are meaningful for cluster 1:

- **after.lunch=no after lunch**
  85.33 % of the individuals possess this category in the global population versus 94.08% of the individuals within cluster 1;
  55.86 % individuals possessing this category belong to cluster 1

- **friends=no friends**
  34.67 % of the individuals possess this category in the global population versus 46.05% of the individuals within cluster 1;
  67.31 % individuals possessing this category belong to cluster 1

- **pub=no pub**
  79 % of the individuals possess this category in the global population versus 87.5% of the individuals within cluster 1;
  56.12 % individuals possessing this category belong to cluster 1

- **price=unknown-p**
  4 % of the individuals possess this category in the global population versus 7.89% of the individuals within cluster 1;
  100 % individuals possessing this category belong to cluster 1

- **after.dinner=no after dinner**
  93 % of the individuals possess this category in the global population versus 98.03% of the individuals within cluster 1;
  53.41 % individuals possessing this category belong to cluster 1
Description of cluster 1 (3/3)

The following modalities are meaningful for cluster 1:

- **sugar=sugar**
  48.33% of the individuals possess this category in the global population versus 56.58% of the individuals within cluster 1;
  59.31% individuals possessing this category belong to cluster 1;

- **restaurant=no restaurant**
  73.67% of the individuals possess this category in the global population versus 80.92% of the individuals within cluster 1;
  55.66% individuals possessing this category belong to cluster 1;

- **how=milk**
  21% of the individuals possess this category in the global population versus 26.32% of the individuals within cluster 1;
  63.49% individuals possessing this category belong to cluster 1;

- **afternoon.tea=no afternoon tea**
  43.67% of the individuals possess this category in the global population versus 50% of the individuals within cluster 1;
  58.02% individuals possessing this category belong to cluster 1;
Description of cluster 2 (1/2)

The following modalities are meaningful for cluster 2:

- **price=upscale-p**
  17.67% of the individuals possess this category in the global population versus 62.5% of the individuals within cluster 2;
  84.91% individuals possessing this category belong to cluster 2

- **location.of.purchase=specialized shop**
  10% of the individuals possess this category in the global population versus 37.5% of the individuals within cluster 2;
  90% individuals possessing this category belong to cluster 2

- **shape=bulk**
  12% of the individuals possess this category in the global population versus 40.28% of the individuals within cluster 2;
  80.56% individuals possessing this category belong to cluster 2

- **after.dinner=after dinner**
  7% of the individuals possess this category in the global population versus 23.61% of the individuals within cluster 2;
  80.95% individuals possessing this category belong to cluster 2

- **tea.type=black**
  24.67% of the individuals possess this category in the global population versus 48.61% of the individuals within cluster 2;
  47.3% individuals possessing this category belong to cluster 2
Description of cluster 2 ( 2 / 2 )

The following modalities are meaningful for cluster 2:

- **how=other**
  - 3% of the individuals possess this category in the global population versus 12.5% of the individuals within cluster 2;
  - 100% individuals possessing this category belong to cluster 2

- **after.lunch=no after lunch**
  - 85.33% of the individuals possess this category in the global population versus 95.83% of the individuals within cluster 2;
  - 26.95% individuals possessing this category belong to cluster 2

- **tea.house=tea house**
  - 19.33% of the individuals possess this category in the global population versus 31.94% of the individuals within cluster 2;
  - 39.66% individuals possessing this category belong to cluster 2

- **sugar=no sugar**
  - 51.67% of the individuals possess this category in the global population versus 63.89% of the individuals within cluster 2;
  - 29.68% individuals possessing this category belong to cluster 2
Description of cluster 3 (1/3)

The following modalities are meaningful for cluster 3:

- **price=variable-p**
  37.33 % of the individuals possess this category in the global population versus 75% of the individuals within cluster 3;
  50.89 % individuals possessing this category belong to cluster 3

- **location.of.purchase=large-scale retail stores+specialized shop**
  26 % of the individuals possess this category in the global population versus 60.53% of the individuals within cluster 3;
  58.97 % individuals possessing this category belong to cluster 3

- **shape=tea bag+bulk**
  31.33 % of the individuals possess this category in the global population versus 67.11% of the individuals within cluster 3;
  54.26 % individuals possessing this category belong to cluster 3

- **after.lunch=after lunch**
  14.67 % of the individuals possess this category in the global population versus 42.11% of the individuals within cluster 3;
  72.73 % individuals possessing this category belong to cluster 3

- **friends=friends**
  65.33 % of the individuals possess this category in the global population versus 92.11% of the individuals within cluster 3;
  35.71 % individuals possessing this category belong to cluster 3
How can the groups be described?

Description of cluster 3 ( 2 / 3 )

The following modalities are meaningful for cluster 3:

- **tea.type=perfumed**
  64.33 % of the individuals possess this category in the global population versus 86.84% of the individuals within cluster 3;
  34.2 % individuals possessing this category belong to cluster 3

- **pub=pub**
  21 % of the individuals possess this category in the global population versus 39.47% of the individuals within cluster 3;
  47.62 % individuals possessing this category belong to cluster 3

- **tea.house=tea house**
  19.33 % of the individuals possess this category in the global population versus 34.21% of the individuals within cluster 3;
  44.83 % individuals possessing this category belong to cluster 3

- **restaurant=restaurant**
  26.33 % of the individuals possess this category in the global population versus 42.11% of the individuals within cluster 3;
  40.51 % individuals possessing this category belong to cluster 3

- **work=work**
  29 % of the individuals possess this category in the global population versus 42.11% of the individuals within cluster 3;
  36.78 % individuals possessing this category belong to cluster 3
Description of cluster 3 (3/3)

The following modalities are meaningful for cluster 3:

- **how=lemon**
  11% of the individuals possess this category in the global population versus 19.74% of the individuals within cluster 3;
  45.45% individuals possessing this category belong to cluster 3

- **after.dinner=no after dinner**
  93% of the individuals possess this category in the global population versus 98.68% of the individuals within cluster 3;
  26.88% individuals possessing this category belong to cluster 3

- **afternoon.tea=afternoon tea**
  56.33% of the individuals possess this category in the global population versus 67.11% of the individuals within cluster 3;
  30.18% individuals possessing this category belong to cluster 3