

Quick Guide Statistical Solutions

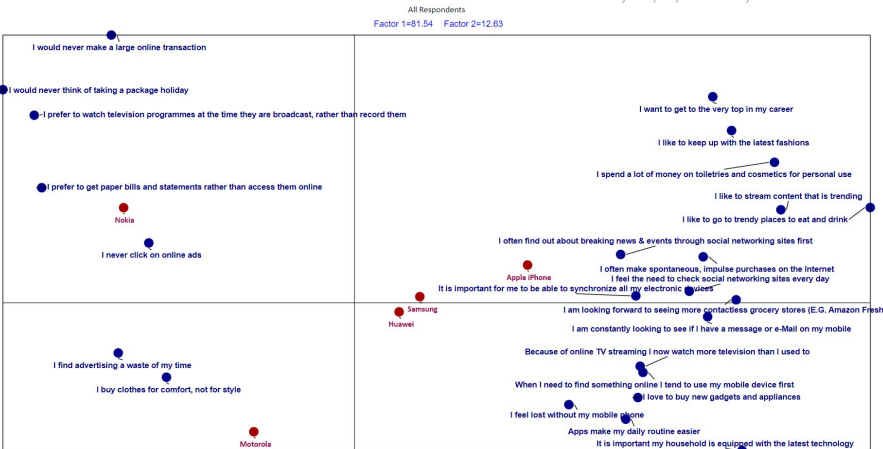
How to interpret a Correspondence Analysis

This document explains how to understand the brands within a market using Correspondence Analysis statistics. For this example we have used the 'Mobile Phone' market e.g. Mobile Phone Brands.

Correspondence analysis is a **statistical technique** for examining the **relationship between variables**. It is often used to **understand brands** in a market, but it will **analyze any data** that is entered. The end result is a **pictorial representation** of a crosstab, showing data plotted according to **correlation**. It is a quick method of **summarising a lot of data**.

In order to understand the above chart or describe the 'Mobile Phone' market, one needs to look into the stats behind the chart.

Click on the 'Stats' button and then right click on the heading 'Factor 1' and select **Desc**. This will sort Factor 1 by ABS score.



Explanation of Factor 1

The correspondence program plots the brands and lifestyle statements on a graph. It shows **Factor 1** as the **'X-axis'** (left to right) and **Factor 2** as the **'Y-axis'** (top to bottom).

In order to understand what the factors are, we need to examine which lifestyle statements are important to each factor, this is done by using the statistics tab. The statistics are used to describe and explain the chart.

ABS (Absolute):

This helps you understand the influence of a brand or lifestyle statement on this factor. You can interpret the ABS score like %Col in TNT+. In the example above, **Apple iPhone** contributes **34.06%** towards **Factor 1's** results.

Description	%INF	Factor 1 ABS REL ↓	Factor 2 ABS REL
Based On %Col			
Columns(+)			
Apple iPhone	29.82	34.06 + 93.14	6.09 + 2.58
Samsung	4.75	4.56 + 78.37	0.15 + 0.40
Huawei	4.87	2.09 + 34.89	0.32 - 0.84
Rows(Top 20+)			
I like to go to trendy places to eat and drink	1.21	1.39 + 93.88	0.18 + 1.86
When I need to find something online I tend to use my mobile device first	1.11	1.27 + 93.45	0.28 - 3.17
I am constantly looking to see if I have a message or e-Mail on my mobile	0.95	1.15 + 98.82	0.01 - 0.09
I feel the need to check social networking sites every day	0.97	1.15 + 96.25	0.01 + 0.07
It is important my household is equipped with the latest technology	0.84	0.94 + 90.64	0.51 - 7.66
I am looking forward to seeing more contactless grocery stores (E.G. Amazon Fresh)	0.73	0.89 + 98.88	0.00 + 0.00
I often make spontaneous, impulse purchases on the Internet	0.75	0.86 + 94.55	0.06 + 0.96



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REL (Relative):

This score determines which side of the graph the brand or lifestyle statement will appear on. For **Factor 1** “-“ appears on the left and “+” appears on the right. The REL score also explains which factor best explains the brand or lifestyle statement. We look at these scores horizontally. In the example above, we can see that **Factor 1** best explains **Huawei**, the REL score is **+34.89**, the highest score for Huawei compared to the other 5 factors.

Description	%INF	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Based On %Col		ABS REL ↓	ABS REL	ABS REL	ABS REL	ABS REL	ABS REL
Columns(+)							
Apple iPhone	29.82	34.06 + 93.14	6.09 + 2.58	24.42 + 3.68	13.43 - 0.60	22.01 + 0.00	0.00 + 0.00
Samsung	4.75	4.56 + 78.37	0.15 + 0.40	0.42 - 0.39	74.21 + 20.83	20.66 + 0.00	0.00 + 0.00
Huawei	4.87	2.09 + 34.89	0.32 - 0.84	66.39 - 61.27	10.98 - 3.00	20.22 + 0.00	0.00 + 0.00

%Inf (Inference):

This shows how much influence a brand or lifestyle statement has on the analysis. We usually sort by %inf prior to a Cluster analysis to determine the most influential statements for a market. In this example ‘I like to go to trendy places to eat & drink’ has the most influence on the mobile phone brand market, it has the highest %inf, 1.21 compared to the other statements used in this analysis.

Rows(Top 20)	%INF	Factor 1	Factor 2
I like to go to trendy places to eat and drink	1.21	1.39 + 93.88	
I prefer to watch television programmes at the time they are broadcast, rather than record them	1.12	1.14 - 83.26	
When I need to find something online I tend to use my mobile device first	1.11	1.27 + 93.45	
I feel the need to check social networking sites every day	0.97	1.15 + 96.25	

Explanation of Factor 2

Right click on the heading ‘**Factor 2**’ and select **Sort Descending**. This will sort Factor 2 by **ABS** score.

Nokia has the highest **ABS** scores compared to the other brands for **Factor 2** (31.44) and they correlate with the rows (lifestyle statements) directly below e.g. ‘**Computers confuse me, I’ll never get used to them**’ and ‘**I would never make a large online transaction**’.

Description	%INF	Factor 1	Factor 2
Based On %Col		ABS REL	ABS REL ↓
Columns(+)			
Nokia	44.18	49.25 - 90.90	31.44 + 8.99
Apple iPhone	29.82	34.06 + 93.14	6.09 + 2.58
Samsung	4.75	4.56 + 78.37	0.15 + 0.40
Rows(Top 20+)			
Computers confuse me, I’ll never get used to them	0.78	0.44 - 46.58	3.25 + 52.75
I would never make a large online transaction	0.66	0.45 - 56.21	2.06 + 39.70
If I am going to be able to use a new technology product, somebody has to show me how to use it	0.54	0.36 - 54.84	1.80 + 42.35
I would never buy something from an online auction	0.52	0.37 - 57.18	1.69 + 40.85
I prefer to watch television programmes at the time they are broadcast, rather than record them	1.12	1.14 - 83.26	1.48 + 16.63
Human interaction is important to me when I pay for my shopping	0.55	0.45 - 67.06	1.36 + 31.32