Ipsos MORI

UNLOCKING VALUE WITH DATA SCIENCE

HIGH DEFINITION CUSTOMERS - A POWERFUL SEGMENTATION

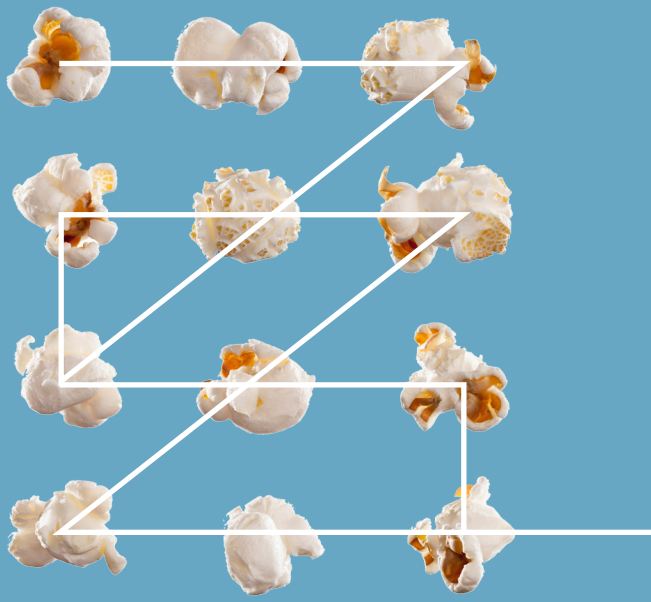
2016

JUST LIKE THE BEST FILMS, DATA CAN TELL A STORY TOO – YOU JUST NEED TO KNOW WHERE TO LOOK.

HERE AT IPSOS, WE USE A NUMBER OF ADVANCED STATISTICAL ANALYSIS TECHNIQUES TO UNCOVER THE HIDDEN STORIES, AND VALUE, IN THE DATA THAT MAY NOT BE VISIBLE AT FIRST GLANCE.

In this white paper we will explore how three types of advanced statistical analysis – Factor, Cluster and CHAID analysis – can help us unlock additional value from market segmentation. They help us see our customers in high definition, by better understanding the variables in the survey and defining the segments.

We're big film enthusiasts in the Ipsos Connect team, so we'll be looking to identify different groups of cinema-goers based on how they look for information about new films at the cinemas, but these tools can easily be used in any market segmentation.



WHAT IS MARKET SEGMENTATION?

Market segmentation is about understanding the needs of customers and how they decide between one product or offer and another. Using market segmentation we can build a picture of a group of customers who share the same, or very similar, criteria or attributes. Using this information a company can identify the groups of customers they are best suited to, as well as the areas where they can outperform the competition.

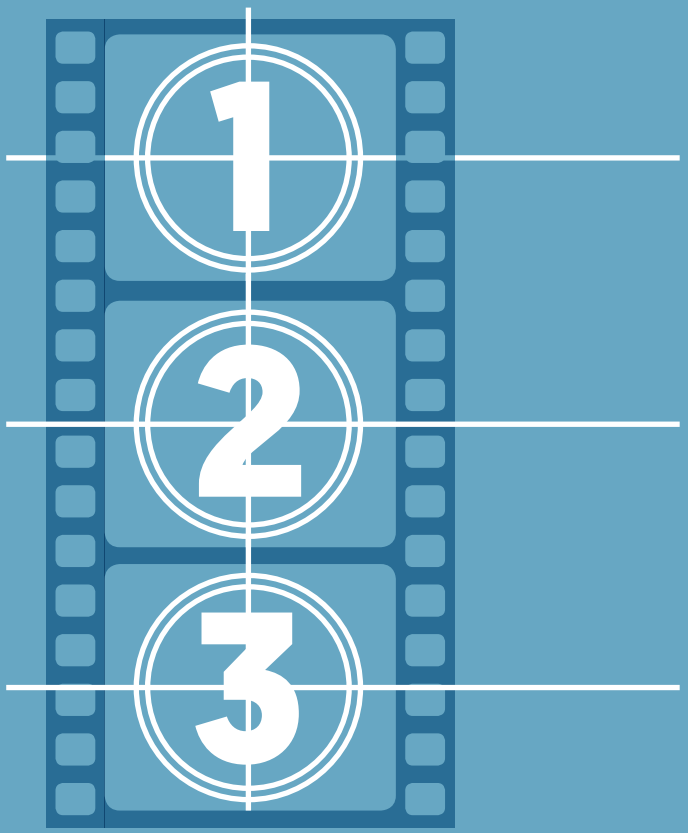
The ultimate objective of segmentation, therefore, must be how to gain and retain the target customers. A good segmentation study identifies and profiles promising target markets so that you can reach them with optimal marketing strategies.

ADVANCED STATISTICAL ANALYSIS – SPECIFICALLY FACTOR, CLUSTER AND CHAID ANALYSIS – ALLOW US TO PRODUCE A MORE POWERFUL SEGMENTATION, WITH A CLEARER VIEW OF OUR TARGET AUDIENCE.

CINEMA-GOERS IN HIGH DEFINITION

Cinema-goers can be very distinct in the way they look for information about new films. By segmenting this market we can build a better picture of the different types of cinema-goers and their characteristics, which can then improve how we communicate with them about the latest releases.

OUR SAMPLE STUDY PROVIDED US WITH LOTS OF DATA, SO TO HELP US MAKE SENSE OF IT WE:



RAN A FACTOR ANALYSIS

in order to reduce the number of attitudinal attributes (32 in total) into a more manageable number of underlying themes

USED CLUSTER ANALYSIS

to segment the consumers based on the new factors found

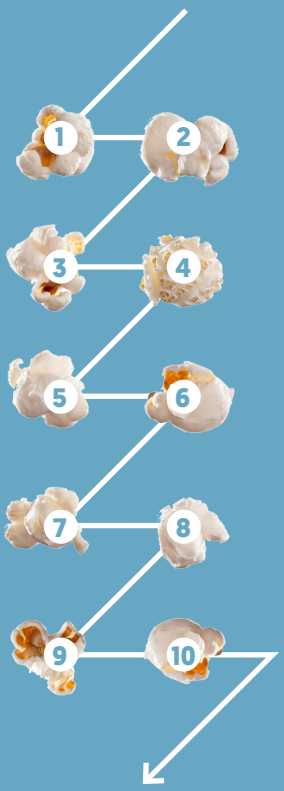
APPLIED CHAID ANALYSIS

to help us profile the segments we found

FACTOR ANALYSIS: SIMPLIFYING ATTRIBUTES TO ENABLE FOCUSED ANALYSIS

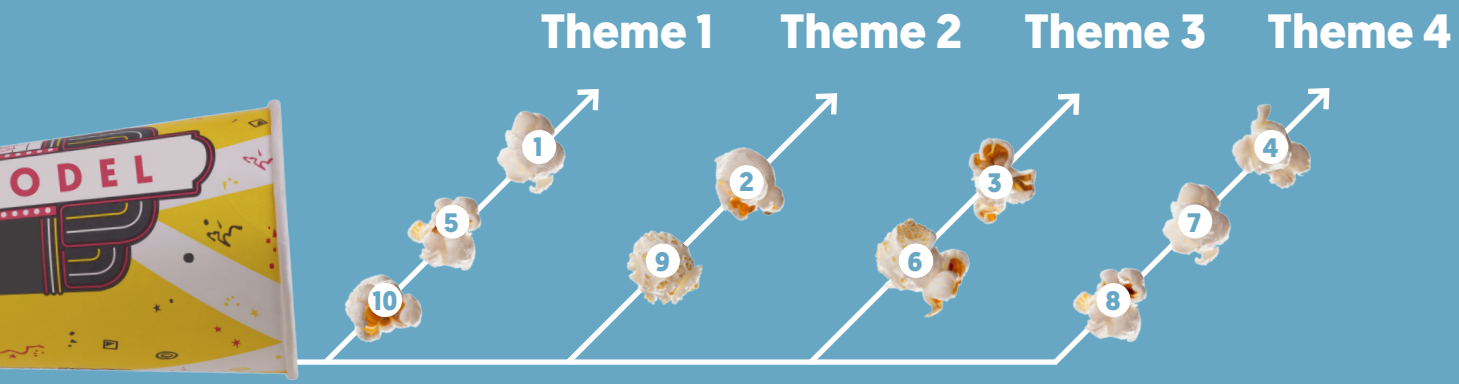
Factor analysis is a statistical technique broadly used to examine the pattern of correlations between attributes. It allows us to reduce a large number of attributes down to a more manageable number of representative concepts. With fewer attributes to distract us we can focus on the essence of the question at hand.

When asked about the sources that influence their film choice, our cinema-goers cited, amongst others, Facebook comments, Twitter comments and comments on online reviews. Using Factor analysis we were able to group all of these attributes into a single factor – social media comments.



WE WERE ABLE TO DO THIS ACROSS ALL 32 ATTRIBUTES AND DISTIL THEM DOWN TO FOUR FACTORS:

1. **Social media comments** — 9 attributes
2. **Awards and nominations** — 7 attributes
3. **Friends / family indication** — 8 attributes
4. **Reviews from official publications** — 8 attributes



CLUSTER ANALYSIS: GROUP INDIVIDUALS BY SIMILARITIES TO REVEAL SEGMENTS

Once we reduced the 32 attitudinal attributes into four broad areas we ran the Cluster analysis. Cluster analysis is a classification method which uses a number of mathematical techniques to arrange sets of individuals into clusters. The aim is to establish a set of clusters such that individuals within a given cluster are more similar to each other than they are to individuals in other clusters. The technique reveals associations and structures in the data which were previously undefined.

The clusters need to be sensible, actionable and with characteristics that are easy to describe. They also need to have a significant number of respondents – those with only one or two respondents tell us very little. The clusters are also tested by using them as cross breaks on attributes, demographics and behavioural tabulations to ensure they are sound.

It is worth noting that Cluster analysis is a data reduction technique from the same family as Factor analysis. However, while Factor analysis seeks to group attributes or variables, Cluster analysis is concerned with grouping individuals or respondents – in this case our cinema-goers.

WHEN WE RAN THE CLUSTER ANALYSIS BASED ON THE FOUR FACTORS, THREE DISTINCT SEGMENTS EMERGED:

FACTORS	CLUSTER 1	CLUSTER 2	CLUSTER 3
Social media comments	High importance	Low importance	Low importance
Friends / family indication	High importance	Low importance	Low importance
Awards and nominations	Medium importance	Medium importance	High importance
Reviews from official publications	Low importance	High importance	High importance
	Word of Mouth **46%**	**Critically Acclaimed** **36%**	**Hollywood** **18%**

In Cluster 1, the respondents put high importance on *social media comments* and *friends / family indication*, they were neutral about *awards and nominations*. R*eviews from official publications* were less important to them. So we decided to call this group **Word of Mouth**.

The second cluster is different from the first one. They put more importance on the *reviews from official publications* and less importance on *social media comments* and *friends/family indication*. We called them **Critically Acclaimed**.

The **Hollywood** cluster put high importance on both *awards and nominations* and r*eviews from official publications*.

Now we have three distinct groups of cinema-goers we can use CHAID analysis to get a deeper understanding of each of them.

CHAID ANALYSIS: MODELLING VARIABLES TO PREDICT OUTCOMES

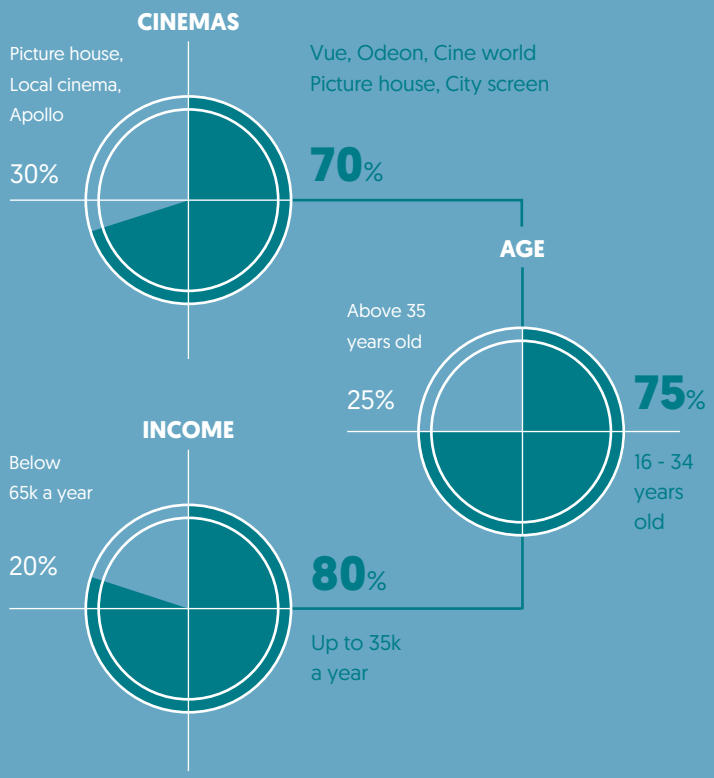
CHAID (Chi-squared Automatic Interaction Detection) analysis is the most common type of Decision Tree analysis and is used to better understand how different variables influence or predict an outcome. One of the main advantages of this technique is that its output is highly visual and easy to interpret.

CHAID analysis looks for distinct groups within a sample, which, according to their responses to independent variables, will predict or profile the variable of interest. The dataset is repeatedly split according to the most significant variable until there are no independent variables left or there are no significant splits left to make. We are then left with an effective 'picture' of each cluster – a portrait of the typical cinema-goer in this group – that helps in a deeper understanding of customers.

CHAID analysis can be a powerful technique to help in profiling segments because we can use any sort of variables or data in the tree.

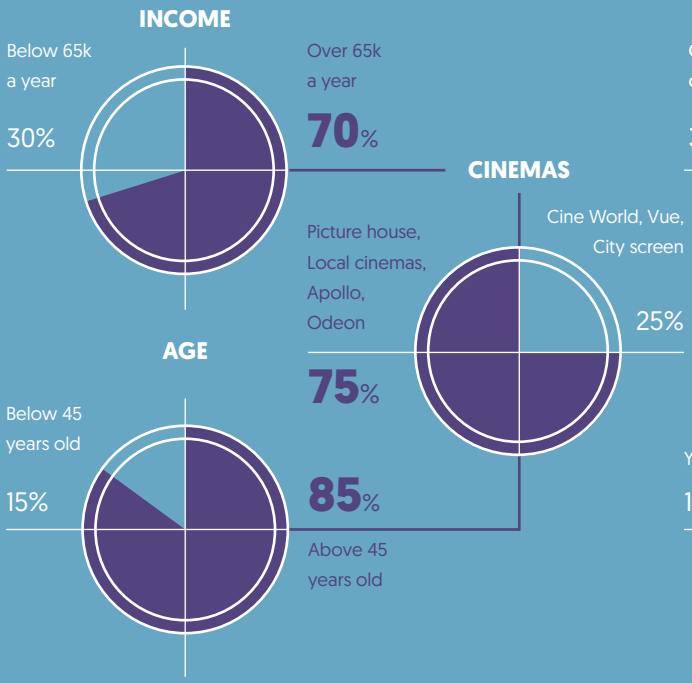
WHAT DOES A TYPICAL 'WORD OF MOUTH' LOOK LIKE?

46% of the customers were classified as Word of Mouth. When we interrogated the data we found the variable most likely to define someone in this segment rather than any of the other categories was the cinema brand. The data then led us to split them by age and income, giving us the typical profile of someone in the Word of Mouth segment – a 16 to 35-year-old who earns less than £35k a year and visits large-chain cinemas.



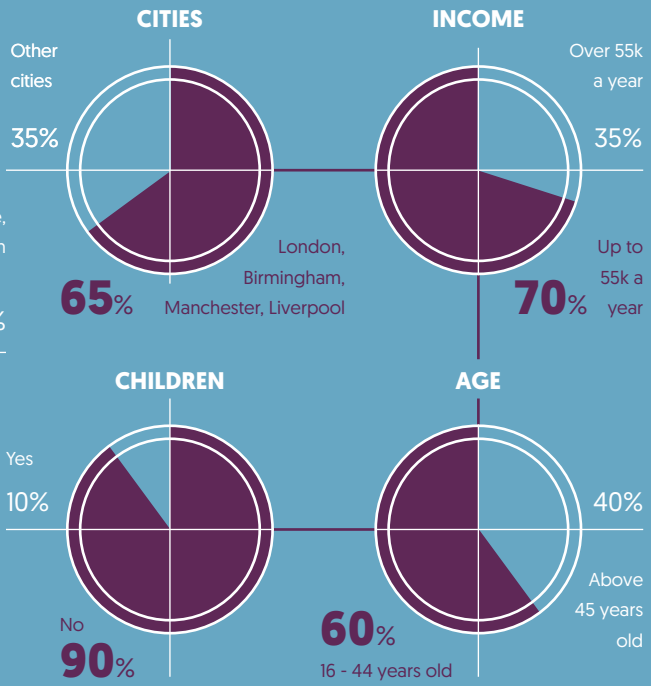
WHAT DOES A TYPICAL 'CRITICALLY ACCLAIMED' LOOK LIKE?

36% of the customers were classified as Critically Acclaimed. This process led us to the image of the Critically Acclaimed as an older person with an income above £65k a year who prefers local or more niche cinema brands, rather than the multiplexes.



WHAT DOES A TYPICAL 'HOLLYWOOD' LOOK LIKE?

18% of the customers were classified as Hollywood. The archetypal Hollywood lives in London, Birmingham, Manchester or Liverpool, earns up to 55k a year, is between 16 and 44-years-old and has no children.



SEGMENTING TO UNLOCK GREATER VALUE

Market segmentation can be approached in a number of different ways, depending on the data available and the objectives of the analysis. By using advanced statistical analysis we can get a high definition view of customers – making the outputs more interesting, the action planning more reliable and reducing the time needed for analysis – helping us unlock more value from the data. And once you understand the customers' needs, the next stage is understanding how to reach them.

Though that's another story...

Ipsos MORI

ABOUT IPSOS MORI

Ipsos MORI, part of the Ipsos group, is one of the UK's largest and most innovative research agencies, working for a wide range of global businesses, the FTSE100 and many government departments and public bodies.

We specialise in solving a range of challenges for our clients, whether related to business, consumers, brands or society. In the field of data science, we have a large and diverse team of experts including mathematicians, statisticians, data scientists and behavioural economists. We are constantly seeking to break new ground in the understanding and application of large and complex data sets.

We are passionately curious about people, markets, brands and society. We deliver information and analysis that makes our complex world easier and faster to navigate and inspires our clients to make smarter decisions.

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