

From A - Z

A different view on how customers make choices



Understanding the process people go through when choosing one brand over another is at the heart of what we do as researchers and marketers.

Customers choose brands that meet their needs and satisfy their wants. Those marketers who better know how their customers trade off those needs and wants to make choices, have a competitive advantage over those who do not.

As researchers we support marketers with brand studies to assess the importance of tangible and intangible brand attributes. Our conjoint studies test the appeal of new features or price points and so on. These studies are commonplace and so is the analysis that underpins the modelling of brand choices. But some of the most widely used approaches to understanding choice are too simplistic to be accurate.

Multinomial Logistic modelling

The vast majority of brand choice models use a method called Multinomial Logistic modelling (MNL). This model won its inventors (James J. Heckman, Daniel L. McFadden) a Nobel Prize for economics in 2000. So it's really powerful then! But opinions on MNL differ and considerable additional consumer psychology literature exists on the way people use information about attributes to make choices between brands.

Paul Green and Yoram Wind provided a famous discussion on this topic in their book, 'Multi-attribute Decisions in Marketing' (Dryden Press, 1973). They describe two types of model for customer decision-making - compensatory choice models and non-compensatory choice models.

Compensating for the shortfall...

In compensatory choice models, the overall value (utility) of a brand is a weighted average of the brand's position on a set of attributes, where the weights measure each attribute's importance.

Consumers, seeking to optimise their choices, select the brand with the highest overall utility. The compensatory aspect of these models derives directly from the weighted averaging that occurs. A deficit on any one attribute can be made up for, that is to say compensated, by advantages on other attributes.

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For example, a consumer may have a preferred brand of vehicle, but if a competitor brand is on a price offer, he or she may compensate what they believe to be the "better" product of their preferred brand for the lower price of the competitor brand. This is not indicative of how everybody selects brands and indeed individuals may alter their choice processes across different products and sectors. The key point however is that the MNL model, on which most brand research is based, assumes all consumer decisions are compensatory in nature.

There's just no substitute

Green and Wind also describe non-compensatory choice models.

Consumers making non-compensatory choices consider attributes sequentially and benefits on some attributes may not overbalance shortfalls on others. For example someone is in the market for a new SUV, but because of the consumer's need for strong fuel economy, diesel or hybrid are the only potential choices. The consumer will therefore not consider any brand that does not offer a diesel engine. Adding a great audio system, leather trim or cutting the price won't sway the need for fuel economy. There are none of the other benefits that can compensate for economy!

A third way?

Of course, hybrid approaches may be used where a non-compensatory first stage limits the selection, followed by a compensatory second stage to make the final choice.

For example, if I wanted to buy a smart phone. I could choose between a Windows, an Apple or an Android based handset. My non-compensatory choice could be towards an Android handset because I believe it offers me a superior operating system. The benefits offered to me by Apple or Windows phone do not outweigh my desire for an Android. I may then have a layer of non-compensatory choices to make around which network my handset operates under. Since I believe one network to be superior for network coverage and customer service, my choice cannot be swayed away from that network.

After that, precisely which Android handset I ultimately buy may then be determined by more compensatory choices as I make trade-offs between designs, functions and price.

'In a recent survey, 266 members of the American Marketing Association (AMA) reviewed nine employment compensation plans and chose among them. Asked to indicate which of four brief descriptions best captured their choice process;'

- 3 percent selected a description of a compensatory choice process
- 28 percent chose a process that combined compensatory and non-compensatory elements
- 58 percent selected a non-compensatory process called the lexicographic model
- 11 percent went with a close relative called elimination by aspects

All in all, 97 percent of respondents, all professional marketers, described their decision process as wholly or partly non-compensatory. This simple example shows that we all make some level of non-compensatory choices between options yet overwhelmingly we rely on research that assumes that our customers are different, and use purely compensatory choices.

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Time to do something different?

A straight forward MNL choice model does therefore have limitations. An alternative method, and the most popular method of choosing by the AMA members in the employment compensation plans example above, is more closely related to the Lexicographic Choice Model.

The Lexicographic Choice Model suggests that a customer has a hierarchy of attributes, which are considered in sequence. The customer first determines how the brands compare on his most important attribute and, if one brand dominates the others, he chooses that brand. If not, he looks at those brands performing best on his most important attribute and compares them with respect to his second most important attribute. If one winner results, he chooses that brand; if ties persist, our customer goes down the list to the third attribute and so on. The process concludes when he finds a winner or runs out of determinant attributes, in which case he chooses randomly among the equivalent remaining brands....

We tested a number of consumer and business-to-business studies in a variety of categories including packaged goods, financial services, telecoms, hospitality and retailing, to compare the Lexicographic Choice Model against the MNL Model. MNL and Lexicographic models could be run on the same data sets by simply adding a few simple extra questions to a standard brand choice study in order to collect the extra information needed about non-compensatory effects.

Study	n	MNL	Lexicographic	t	p
		% of correct predictions			
Pizza	402	.48	.52	4.24	<.001
Retail petrol	1,063	.32	.53	7.89	<.001
Smartphone (consumer)	502	.38	.46	5.89	<.001
Smartphone (B2B)	502	.33	.40	4.67	<.001
Oral contraceptives	200	.26	.31	2.13	.034
Investment services	1,602	.44	.53	11.87	<.001
Athletic shoes	1,001	.62	.66	4.72	<.001
Service Provider (consumer)	502	.45	.55	7.29	<.001
Service Provider (B2B)	502	.45	.55	7.29	<.001
Resturant delivery	1,027	.58	.65	5.39	<.001

The results showed the percentage of correct predictions is significantly higher for the Lexicographic model than for MNL in all 10 studies.



This series of tests demonstrate that there are advantages to using the Lexicographic Choice Model over the more widely used MNL approach. It provides marketers with an alternative to test how our customers make brand choices, rather than merely assuming they use compensatory procedures.

So what does this mean for my studies?

Automotive decision making in particular could have a number of non compensatory issues at work. For example “...I do not care how good the spec, I will never buy a xxx brand of vehicle”

We are increasingly asking conjoint studies to do a lot of the heavy lifting in terms of analytics and more and more complex conjoint studies are being designed. Customers will always give us an answer to the questions we ask them, and particularly in conjoint, those inputs need to be carefully considered before we focus on the outputs.

In a future paper we will discuss feature content analysis and feature package building, something often done via conjoint studies and particularly susceptible to two issues:

- Non compensatory choice (as discussed here)
- Having different level attributes in the same study – causing lower importance features to be under-represented in the model