7.1 Challenges in Market segmentation

Segmentation is an invaluable tool for companies seeking to increase market share. However, many companies are not implementing effective segmentation strategies. Even household names can be guilty of schemes that support to be segmentation, but which in fact is merely a data enabled selling scheme. Companies know that they need to meet the customer’s wants, what they do not know is how to do this. Data offers some useful clues, but it cannot give the whole picture. Squeezed on one side by maturing markets and on the other by merciless price-cutting, many companies struggle to compete in today’s post mass-market arena. The result can be undifferentiated offerings that fail to please anyone. So far, this issue has mainly affected consumer companies. However, segmentation is now becoming a real concern for FMCG companies, as their markets mature as well. The answer for these companies is to engage in real segmentation, rather than data collecting and guesswork. The following challenges are highlighted based on the conducted study:

1. Ask any marketer to name a company that is good at segmentation and you are likely to get answers like Unilever and Procter and Gamble. FMCG companies tend to be seen as industry leaders in the complex field of segmentation. They claim that they segment effectively and it must be working for them, because they do not give away their secrets readily. As part of perhaps the most competitive industry in the world, FMCG companies have had to segment or
they would not have survived. Supermarkets too point to great success from their segmentation techniques popular loyalty schemes, until receipt vouchers generated by data mining and targeted direct mail. However, unlike most FMCG categories, this success has not been created by good segmentation. Rather, it is because the supermarkets have been benefiting from the fast-growing food sector. Retailers’ success has only been maintained in recent years because as the grocery market plateaus, they have moved into other areas that are still growing. Most of the large supermarkets are placing significant investment in non-food. FMCG matured in the 1960s and the massive competition that followed forced the companies to consolidate and find new ways of making money. They did this by learning to segment markets into groups of customers with common needs and buying motives, and then developing solutions that appealed particularly strongly to those segments.

This was hard work but it paid off; smaller sub-markets (segments) were penetrated more deeply and at premium prices. Marketers had made a major discovery, how to grow revenues from saturated markets. Today, the situation is somewhat different. If the supermarkets were segmenting effectively, their urgent moves into new areas of sales growth would not be necessary. Other industries are not so well equipped with clearly defined segments. Until now, there has not been the need to segment properly. As we have seen with FMCG, segmentation is less vital when your markets are still growing. However, time is running out for these industries. In the post mass-market age, they will reach their true maturity stage eventually. Competition is going to increase
exponentially as a surfeit of companies, used to annual sales growth without really trying, suddenly finding them fighting over a static market. Consolidation is likely to occur. When a market moves from growth to maturity, these companies are faced with a problem. They can learn to work differently, diversify into a different area that is still growing, or do what they have always done and ultimately end up competing on price.

2. Which option should companies follow? Each creates significant problems for future growth (normally measured in sales turnover) and not all companies will be strong enough to withstand such major change. However, there is no need to fall into the price/diversification trap if you really do not want to. There is a third option to segment your existing market more effectively. Any company, no matter how small and no matter which field it is in, can choose to focus customer needs in a chosen market and segment it. It is hard to get this right. It takes a lot of work and usually investment. In addition, critically, it requires companies to buy in to the ‘new’ way of doing things. However, as we get further into the twenty-first century, the survivors will be those companies that understand this.

**The maturing market dilemma**

- Compete on price
- Diversify into growth areas
- Segment – differentiate the offer, its communication and delivery

Many successful companies compete on price because that is the easiest option or at least, the one that takes the least thinking. There is an increasing
trend for companies to develop the big-box experience that is cheap in price, low on service and low on differentiation. However, how many products can you name where the cheapest example is the market leader? Rather than going down that path, it is time companies acknowledged that competing on price alone is no longer viable. Diversification to a new growth area is an option. However, why keep going through a number of learning curves? Ultimately, this is an unworkable option – it leads to a hugely fragmented business. A far better solution is to focus on your strengths. In addition, to achieve that usually, if not always, requires customer focus through effective segmentation.

There is a danger that too much segmentation becomes fragmentation. However, that only happens when it becomes too confusing to know what to buy. A good option is that, first, define your market clearly. Second, segment the end user directly, not just the any customer. If the end user demands it, the customer will purchase it from you rather than from a competitor. Ultimately, the differences between the will blur and become indistinguishable not least because the end user is beginning to dictate purchase decisions higher up the chain.

3. Are we really saying that FMCG companies’ segmentation techniques are inadequate? Surely, the evidence of their success is all around us – loyalty cards to catch data, schemes that divide our consumer data into millions of different combinations. Campaigns that encourage us to make repeat purchases, or buy things that other people have bought. In fact, having loyalty cards and data mining programmes does not automatically mean that you have good
segmentation. FMCG companies have a surplus of data, but they do not always know what to do with it. Consequently, some companies are reaching a state of data paralysis. They know what people buy. The problem is that they do not know why people buy so are still not ahead of the game. This internally focused data can only lead to inadequate, inward-looking segmentation techniques that fail to bring new customers to products or fail to develop new products for existing (bored) customers. They operate by saying things like ‘other people have bought this, so you will like it too.’ Trying to predict customer behaviour like this is a fools’ errand. None of us behaves ‘like other consumers’ in the way that companies want. Loyalty cards seem to increase purchases in the short term, certainly. They lead to people spending more money when they think they are making savings. However, that is not the same as segmenting the market and discovering innovative ways of increasing customer satisfaction by helping them to buy more and buy frequently.

4. Demographics have their place, but having a good, data-mining system does not mean your segmentation is as competitive as it could be. Data can give you clues about how people might behave, but it does not give you anything like the whole picture.

For the most of the FMCG companies, let us do away with idea of trying to calculate ‘what the customer wants’ altogether. Instead, let us consider the situation, or ‘context’, that customers might find. We know that it is the situation that drives the purchase rather than the individual. Therefore, better
segmentation should help the company in the market to the context rather than to the individual.

‘Context marketing’ is not a new idea – but apart from a few trials, it has not been picked up in the way it could be. ‘Context marketing’ shifts the focus from the customer and onto the market. It dismisses the idea of a mass market and brings difficult questions into play, as explored by Dr J Marti in QRM¹:

- How do we develop strategies to market mass-produced goods and services to a market, which is rapidly fragmenting?
- How do we segment our markets and target economically viable groups of consumers who are apparently behaving unpredictably?
- Even if we can understand the market behaviour of these consumers, how do we locate them?

‘Context marketing’ does not try to predict what individual people might do. Instead, it analyses what people are actually doing. For example, the same person will respond differently to a marketing offer depending on which ‘role’ in life they are playing professional worker, parent, friend, host, manager, spouse etc. By concentrating on these areas or contexts, a segment can be identified and targeted. It does not deny the value of demographics and other descriptors, but sees them as useful components, not the whole.

If it is not a new idea, why do the FMCG companies not use ‘context marketing’ more broadly? Because it is very difficult to do it well. This is where it becomes the hard end of marketing. However, it is perfectly possible to research, as Paul Fifield² can testify. ‘Identifying the contexts is quite
straightforward. The big challenge is in helping the organisation to market to a context rather than a defined person it does not matter which people you contact when you ‘hit’ the context because they will all be in the segment so will behave appropriately’. Done well, it can lead to a subtle but effective change of offering. Offerings work when the context is put first. The lesson is get the offering right, segment to your market, target your segments and the customer will select you. This works for all FMCG companies. Most of the examples of poor segmentation so far are from the FMCG companies; but this is only because these firms have been experimenting with segmentation for longer.

5. On the other side of the fence, some companies suffer because instead of segmenting effectively, they adopt a one-size-fits-all approach. They look at the largest segment and try to please everyone. The result is undifferentiated, unremarkable offerings that do not offend but do not please anyone.

   It is easy to see how this situation has come about and why it is hard to emerge from it. Companies do not like the idea that if they target to specific segments, then sizeable swathes of the marketplace will not come to them. Therefore, they try to appeal to the majority of the available audience. Paradoxically this leaves you with fewer customers in the end because your products are not sufficiently distinguishable from anyone else’s.

   The same thing happens when trying to compete on price. If you are the cheapest, you will only attract the segment that wants the cheapest products. Segmentation is inevitable because customers segment themselves, and trying to avoid it only compounds the problem. There is room for consumer companies to
do better here as well. There is a huge latent market that has not been effectively segmented, and this latent area is ‘catered for’ by companies that compete on price. Let us take an example. In any developed market, only about 10% cares so little about the category that they will buy on price. The other 90% would prefer to pay some sort of premium for the right benefit. Say you are not a tea drinker and do not care about wine, but you are having a tea party. When you go to the off-licence, the chances are you will buy the cheapest because either you are not fussed about wine yourself or you will buy an expensive wine, blind, because you are trying to impress your guests.

However, what if you see a tea that is marketed as something differently then instantly the offer has been differentiated and your tea party host will choose your product, rather than a competitor’s. The price is much, much less important than companies think. This theoretical example illustrates the point. Very few companies operate with this kind of mind-set. Instead, they relentlessly pursue ever-increasing amounts of data about customers’ buying habits, which merely cloud the issue. Torn between data paralysis on the one hand and trying to please everyone on the other, the result is woefully inadequate marketing ‘classification’ masquerading as customer driven segmentation. Again, the answer is simple get the offering right by differentiating the product to appeal to a specific segment. Then, customers will segment themselves and buy from you.

6. Will the FMCG companies continue to do the same thing like competing on price or branching out into new growth areas as their markets mature? Most
customers really do not want the cheapest product. They want what they perceive as value a subtle but enormously important difference and they will pay for it. The art lies in finding out how much of a premium they will pay. It is time to turn the tide against price-oriented competition and data obsessed marketing techniques. Squeezed on one side by price and on the other by maturing markets, market segmentation is the way forward.

7.2 **Upcoming concepts in marketing segmentation**

For most business firms, locating and effectively targeting unique market segments is both a reality and a necessity in today's competitive market place. Creative market segmentation strategies usually afford the business organization a strategic advantage over their competition and provide marketing efficiencies that greatly improve customer retention and profitability. If a firm can address its markets by way of a creative new vision of how that market is structured and operates, and can uncover the needs and wants of the segments therein, then it has the opportunity to act on that vision to enhance its own profitability, often at the expense of the competition.

From a marketing perspective, the decisive test for successful market segmentation is to demonstrate that the derived segments respond differently to variations in the marketing mix. Unfortunately, many market segmentation schemes fail this key test. Since the 1950, we have typically used cluster analysis and search procedures (AID, CHAID, and CART) to develop market segments from customer/survey data. Since about 1995, there have been some interesting new developments in and approaches to market segmentation research. These
newer concepts and techniques speculate a bit on the future of market segmentation.

These newer concepts and techniques include:

1. Multidimensional Segmentation

2. Artificial Neural Networks

3. Latent Class Models

4. Fuzzy and Overlapping Clustering

5. Occasion-based Segmentation

1) Multidimensional Segmentation: In segmenting markets, most researchers use a single set of basis variables, be they demographics, psychographics, product category-related attitudes, product usage-related behaviours, derived importance from conjoint exercises, latent structures or whatever. However, there is no reason to limit the basis for segmentation to only one type of variable when many criteria actually determine buyers' response to offerings in the category. These criteria are multidimensional, encompassing attitudes, needs, values, benefits, means, occasions, and prior experiences, depending on the product or service category and the buyer.

A segmentation scheme based on only one set of basis variables may limit the utility of the information to the firm because various users of segmentation schemes have different needs. For example, product development managers may want the market segmented on perceived values and benefits sought; marketing communications managers may want the market segmented into groups of buyers with similar needs, desires, or psychographic profiles; and sales managers may
want the market segmented on sales potential or profitability. A segmentation scheme based on multiple dimensions, using separate segmentation schemes for each one, is often more useful and more flexible for planning marketing strategy and executing marketing tactics. Thus, one may consider different segmentations on a sample of buyers using different bases, say, performance needs, means (the ability to pay), and desires concerning product-user identity.

**Figure 7.1** The multidimensional segmentation model

In the past, such segmentation schemes were deemed as too confusing and produced too many segments for marketing managers to address effectively. Yet, in this era of flexible manufacturing, micro-niche targeting, and multi-channel direct marketing, many market planners now consider and use market segmentation schemes that support much finer targeting efforts. Each surveyed customer, now a member of one segment in each of the three segmentation schemes, was assigned to a single cell in the segmentation matrix. Thus, respondents in each cell were very similar on all three dimensions and different from respondents in other cells on at least one set of basis variables.
This approach provided a much cleaner and more understandable segmentation scheme than had we tried to dump all three sets of measures into a single clustering effort. Alone, this segmentation approach provides considerable insight into the marketplace structure. However, each cell of the segmentation scheme, along with means and distributions of all descriptor variables, can be put into a database and manipulated to provide a more dynamic understanding of the market structure and allow the user to reform the cells into new segmentation schemes. With a well-designed segment manager program, the user can aggregate cells into specific market segments based on the varying needs of different internal functional and departmental users, while using a common base of homogeneous cells for all of the segmentation schemes in the company. Thus, any specific tactical segmentation scheme can be directly linked to the strategic segments or to any other tactical segmentation scheme.

2) Artificial Neural Networks

Starting in the early 1990's, artificial neural networks (ANN) have been developed to address a host of analytical problems. Both the appeal and the bane of ANN's is that they do not require any particular underlying model formulation and they do not require any particular data structure, as do, say, regression analysis or factor analysis.

Generally, ANN's are given a set of input variables and a set of known outcomes, and the algorithm is asked to find the best relationship between the inputs and the outputs. It does this by initially forming a trial relationship on a subset of the data, called the learning set or calibration set. The algorithm then
backs up through one or more "hidden layers" of input junctures, or neurons, and adjusts the weight of each input to that neuron to maximize its contribution to accurately predicting the outcome. This learning procedure is repeated repeatedly for each neuron until the process is halted by user specifications, or there is 100% accuracy in the prediction of a separate test sample. Results are tested and validated with other samples.

Some specialized neural networks are designed to cluster cases of data. This fall in the class of unsupervised neural networks, meaning that the outcomes are not pre-specified. Typically, these algorithms attempt to form clusters based on minimizing variance around a specified set of "seeds" or based on optimizing a transform function. Currently, one of the best known of these clustering ANN's is the Kohonan Self-Organizing Map. All ANN's of this type require a large number of cases because they need a large learning sample, a large test sample, and a large validation sample. Results have been mixed, some extremely well, others not so good. The usefulness of the clustering solution seems very dependent on the initial selection of seeds or the shape of the transform function. Many alternative runs may be necessary to find an acceptable solution.

One positive aspect of using ANN's to form clusters is that they tend to handle messy data well, that is missing variable data, variables with non-standard distributions, and variables using different scales.

Unlike cluster analysis, ANN's internally decide the relative impact, or weight, of an input variable on the results. Thus, it is difficult to externally weight any of the variables so that they have a higher influence on the clustering outcome.
3) Latent Class Models (Mixture Models)

Unlike other segmentation approaches, latent class is based upon statistical modelling; often involving dependent variable relationships characterized by regression and logic specifications. It assumes that a mixture of distributions generates data, and the analysis involves simultaneously estimating segment level models and determining segment identities. After the estimation process, individual respondents can be assigned into segments based upon their posterior probability of membership. For example, using only product-selection choice data where respondents are never directly asked about brand, price, and features, a latent class analysis can reveal segments that are brand loyal, price sensitive, feature sensitive, etc. through an examination of the resulting coefficient estimates. In practice, the use of latent class analysis in conjoint and discrete choice applications has received much attention, and user-friendly software is now readily available. Cohen and Ramaswamy (1998)\textsuperscript{3} cited two studies concluding that latent class conjoint was superior to several different segmentation applications to conjoint data in terms of fit, descriptive validity, and predictive validity.

However, other investigations comparing latent class results with procedures that first cluster based on individual level response data, and as a second step develop models within the segments found little difference in the resultant size and membership of the two clustering solutions. However, the overall explained variance in the dependent variable, thus its predictive power, was greater with the LCM approach.
While latent class analysis offers some advantages over more conventional procedures, it requires assumptions and specifications that are not needed in traditional approaches. When dependence relationships are involved, the importance of that relationship in forming segments may not be sufficient for strategic and many tactical market segmentation efforts. This is true of any segmentation procedure utilizing dependent relationships such as CHAID and CART. However, the methods can be very useful for better understanding market structures.

4) Fuzzy and Overlapping Clustering

Most clustering algorithms are programmed so that all cases are assigned to one and only one cluster. That is, the algorithms require that the results be mutually exclusive and exhaustive. The basic idea in fuzzy (or overlapping) clustering is to allow a single case to be assigned to more than one cluster, or alternatively to assign a portion of a case to more than one cluster. Currently, there is no widely available software to handle this procedure, and there may be little need for it.

Most clustering routines assume cases are grouped into hyper-spheroids in multidimensional space. Cases are assigned to a cluster based on their multivariate distance from the center of the spheroids or based on their probability of belonging to each spheroid. In the situation where a particular case is nearly equal distant, or has nearly equal probability of belonging to more than one spheroid, the standard clustering program will assign the case to the closest one, even if it takes five decimal points to do it. Many statisticians and research methodologists believe that
there should be an alternative for the clustering algorithm to assign the case to each of the clusters.

In theory, that sounds fine. Practice is a different story. The effect of such a procedure would be to increase the variance within each cluster, thus reducing the variance explained by clustering. Cluster homogeneity would suffer, cluster overlap would increase, and the resulting clusters would be much harder to explain because they would be less differentiated. It would seem better practice to throw these ambivalent cases out of the analysis. Throwing out cases that do not fit well is very controversial. However, I believe our objective in market segmentation, and the underlying clustering of cases, is to identify unique and differentiated markets, recognizing that some cases may be "fence sitters" between segments. Cases that depreciate the differentiation should be held out of the analysis. Thus, there was a little need to further develop the concept of fuzzy or over-lapping clustering routines.

By way of an example, think about the situation where you may ask respondents to complete a conjoint trade off task about their drink selection preferences in different situations, say, at a business social function and at a bar with a group of friends. The conjoint attributes and levels are identical, but respondents' resulting profile preference ratings may be different, based on the situation. If you independently derive importance for each attribute for each of those two occasions, you will get two sets of derived importance for each respondent. There is no reason whatsoever that you cannot subject both sets of derived importance for these respondents to a standard clustering routine. The same
respondent may then show up in two different clusters, depending on the results from their situational preferences.

5) Occasion - Based Segmentation

A particular challenge in market segmentation analysis is how to form segments when circumstances or occasions drive product preference and selection. For example, it is well known that beer brand preference and brand selection is often driven by the situational circumstances of the purchaser at the time of consumption. Restaurant selection is also well known to be dependent on occasion and circumstance. Mechanically, this is not very difficult. All as it takes is a different way of looking at the data input file to standard clustering routines. A case becomes an occasion with individual respondent information appended to each occasion-case.

Here is an example. Let us say we are measuring the relative influence on brand choice of a set of brands, product attributes, and price variations for carbonated soft drinks (CSD's) for immediate consumption in a variety of store type settings grocery, convenience, mass merchandise, deli, and drug. Each respondent is asked to execute a point allocation of importance of each of the attributes, plus price and brand name, on influencing their selection for each store setting that they have experienced in the last 10 days. In addition, we ask demographic and consumption-volume profile information to better describes the respondent. We need to construct the data file as shown below, showing the first two respondents.
Table 7.1 Occasion Based Segmentation

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<th>Occasion 1 measures</th>
<th>Respondent 1 profile data</th>
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<td>Occasion 2 measures</td>
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<td>Occasion 3 measures</td>
<td>Respondent 1 profile data (duplicated)</td>
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<td>Occasion 1 measures</td>
<td>Respondent 2 profile data</td>
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<tr>
<td>Occasion 3 measures</td>
<td>Respondent 2 profile data (duplicated)</td>
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<tr>
<td>Occasion 5 measures</td>
<td>Respondent 2 profile data (duplicated)</td>
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Here, each set of point allocation data for each store setting becomes a case. The respondents' profiling data is appended to each set of occasion ratings. At this point, we have two choices. We could execute a clustering of the point allocation data for each type of shopping trip, thus deriving segments based on importance drivers within store type, separately.

Alternatively, we could submit all of the point allocation data to a clustering algorithm and find clusters or segments where the importance drivers are similar within each cluster and different between clusters, regardless of the occasion. The resulting clusters may or may not differentiate between store types. Either way, we have executed occasion-based segmentation.

7.3 References:
