

Dealer Share and Distance

Many factors are influential in determining how effectively a dealer can or will meet the needs of any specific segment of his or her marketing area. Separating and analyzing these factors, on a small-area geographic basis, can provide useful guidance to marketing strategy. South Bay Associates has conducted research into these factors, to isolate and identify them, and to quantify them. The results can be used to assist a dealer in learning more about the components of their local and extended market, and to better meet their specific needs – thus gaining customers and sales from under-served markets. They can also be used to project anticipated sales by a new dealer.

One of the more important factors in predicting market share within a geographic area is the distance that area is located from the dealer's site. In fact, that distance can explain as much as 70% of the variance in market share within a dealer's extended area of influence.

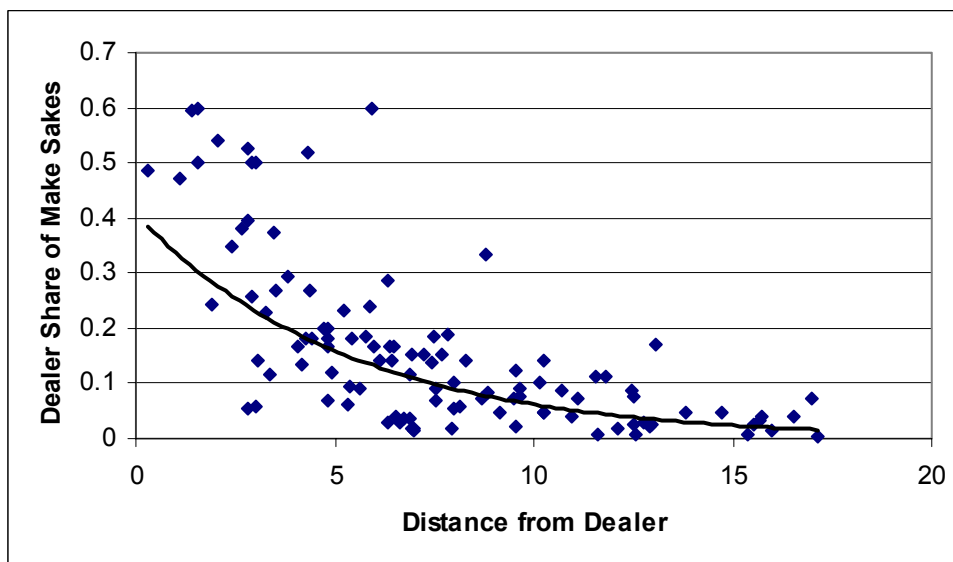
To illustrate this concept, we'll start by defining the geographic segmentation of the market area. A number of different geographic descriptors can be utilized, such as Zip Code, Census Tract, Census Block Group, or Census Block. The use of census-based descriptors requires customer addresses to be geocoded, so for convenience we will use Zip Codes for this example.

The relationship between separation distance and market share can be estimated using a curve derived from a standard econometric tool: the exponential function. The curve is described by this formula:

$$f(x) = \lambda e^{-\alpha x}$$

where x is the distance from the dealership to the center of the geographic area (in the case of Zip Codes, the "centroid"). e is the standard mathematical constant 2.7183 (the base of natural logarithms). The other two variables are unique to the dealer and can be computed using local results. We have found that λ (lambda) is closely related to the average share of make earned by the dealer (dealer effectiveness) while α (alpha) is largely a function of the regional industry market share earned by the make (product desirability). Lambda is typically between 0.25 and 0.6, while alpha generally ranges from 0.12 to 0.20. Existing data can be analyzed to produce the curve and compute its parameters, or forecasts can be made using predicted values based on current market conditions, applied to each Zip Code. (We recommend the use of a scientific calculator to compute the decimal exponent.)

The resulting curve, for a "typical" dealer, will probably look somewhat like this:



Note that on this graph, each dot represents a single Zip Code; it is placed on the graph at the location corresponding to the distance from the dealership and the dealer's share of make sales within that Zip Code.

To perform the analysis, look first at those communities that are significantly above the curve, paying attention to the size of the market within that Zip Code (50% of two cars doesn't make for a strong share value). These communities – particularly those farther to the right on the graph – show a higher market share than would be expected based on the distance that the customer must travel. An evaluation of these specific communities will reveal the strong points for the dealership – something is working quite well here to draw customers from this far away. Now look at those that are well below the curve – the dealership is not doing as well here. In particular, look at those near the left side of the chart, where both dealer share and customer travel distance are low. If there is a significant number of – let's say – Chevrolet vehicles sold here, but not by the local Chevrolet dealer, then there may be an opportunity for growth in that community by that dealer.

Using the knowledge gained from evaluating the high share Zip Codes, determine what is different in each of the low share communities. Analysis may indicate that these communities are not a good market for the make of car the dealer is selling – or it may reveal something quite different. Perhaps it shows that within a specific community there is a strong ethnic component that the dealer has not yet learned to serve. If this or something like it is the case, an opportunity for improvement has been located and the information is at hand as to how to address it. There may be many different reasons why one community or another shows a low share, but each one is an opportunity for gain.

These computations must be make-specific. Remember that a strong Mercedes-Benz dealer may not sell as many cars into a specific Zip Code as does an under-performing dealer selling a higher volume make such as Pontiac. Similar distance-based techniques can be used to forecast sales based on demographic characteristics, which would be useful when a dealer is contemplating opening a new market area.

This analysis can provide the starting point for a more comprehensive market representation study that reveals both the strong points and the opportunities for a dealer. It is provided as an example of the use of scientific methods to improve a dealer's return on investment.

John Rule
© April, 2005