

A Marketing Economy of Scale – Big Brands Lose Less of their Customer Base than Small Brands

Byron Sharp, Erica Riebe, John Dawes and Nick Danenberg

It has been known for many years that there is a positive relationship between market share and profitability. One popular explanation is that larger firms enjoy economies of scale advantages over their smaller competitors. In this paper we report a little known marketing economy of scale; namely that big firms suffer from lower “churn” rates than do smaller firms, ie, they turnover less of their client base each year. We show why this phenomenon logically occurs simply as a function of market stationarity and general lack of partitioning and we provide empirical evidence of its occurrence. We discuss one implication of this phenomenon, that big brands should have lower customer acquisition costs than smaller ones.

The Relationship Between Market Share and Profitability

It is generally accepted that there is a positive relationship between market share and profitability (eg, Kohli et al. 1990; Szymanski et al. 1993)¹. There are a number of possible explanations for this relationship. Of these explanations, the most common reason proffered, is that larger firms enjoy economies of scale (eg, Buzzell et al. 1975).

The general concept of scale economies is well understood and has been discussed at length in the industrial organization and economics literature, as well as in the marketing and strategic management literature. Higher share firms should be able to enjoy lower costs through realising economies in several areas, including procurement, processing/manufacturing and marketing (see Scherer and Ross 1990). Larger companies may, therefore, enjoy higher profitability as a result of their overall lower unit costs of production.

There are several economies of scale which specifically apply to marketing activities. Larger firms might enjoy lower advertising rates and better media placements because they are more valuable to advertising agencies and the media and are hence given favourable treatment. The same can apply to their relationships with distribution channels – big companies are big because their brands sell and resellers need less enticement to stock such brands. It is also argued that there is a “threshold effect” for advertising, whereby those that advertise on a small scale find it much harder to acquire or maintain brand awareness (eg, Rao and Miller 1975). Consumers tend to notice brands that they use (Ehrenberg 1974), so ads for larger brands with more users

¹ Although this relationship has not been found to hold universally (Woo and Cooper, 1982; Woo, 1984; Kuzma and Shanklin, 1992), there has been considerable evidence amassed that supports the general contention of a positive relationship.

will be noticed more by the public, increasing their effectiveness.

In addition to these previously reported marketing related economies of scale, we now report that costs associated with 'customer churn' shall be less for larger firms/brands than smaller ones – this flows naturally from the general market conditions of stationarity and lack of partitioning. This natural phenomenon is the focus of this paper.

Churn

Defection and acquisition patterns are most easily observed in 'subscription' markets where most customers have a "repertoire of one", ie, they typically subscribe to one brand, which provides all their category requirements, until they defect to another (Sharp and Wright 1999). Examples of such markets are insurance, banking and telecommunications. Because customers use one brand at a time, using another brand is usually an obvious sign of defection (a change in repertoire). Firms in such industries have readily identifiable 'churn' rates - for instance in insurance a company can easily determine the proportion of customers who do not renew their policies (with few people actually abandoning the category, lapsing and churn are virtually the same) or massively down-grade their usage of the brand.

In the other type of repeat-purchase market, repertoire markets, buyers regularly switch brands but this happens within an individual's repertoire. The proportion of the repertoire that any brand occupies stays remarkably steady over the medium term. Changes in repertoire do occasionally occur but they are harder to spot in repertoire markets than in subscription markets where a change generally means complete (or near to it) defection.

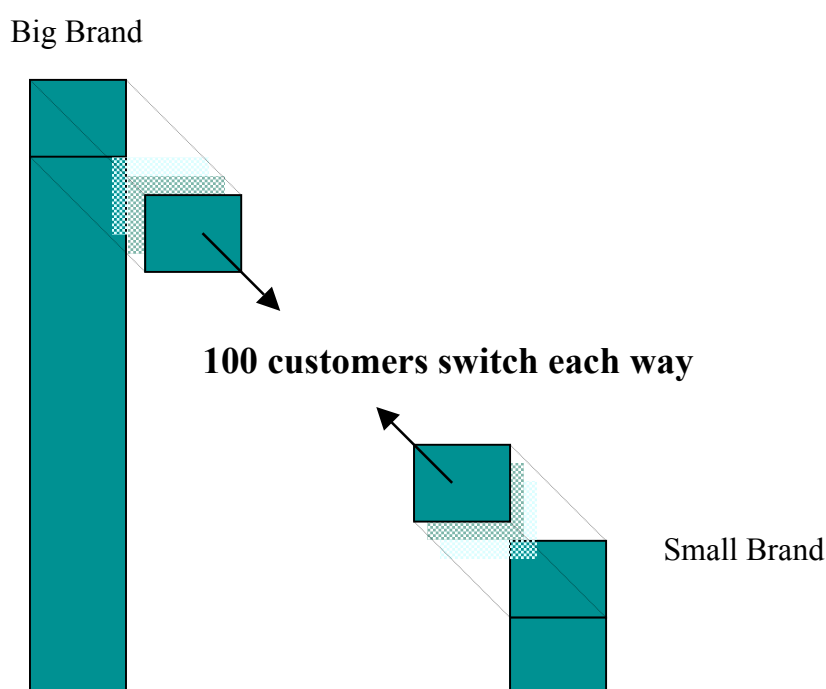
For this reason, in subscription markets managers commonly use churn statistics as an important marketing metric. In repertoire markets loyalty is more commonly assessed via metrics such as average share of category requirements or average purchase frequency (both of which are highly correlated).

The focus of this paper is on churn, which is common to both markets, and has received little in the way of systematic study, whereas great advances have been made in the study of polygamous loyalty in repertoire markets. The study of polygamous loyalty in repertoire markets has led to the discovery of generalised predictable patterns. Here we show that insights from this research mean that there are also patterns in churn rates.

It is a little known marketing fact that the differences in competing brands' customer churn or defection rates are largely a function of brand size (market share). That is, small brands have an inherently less stable customer base than do larger brands in their industry. Smaller brands lose (and conversely win) a greater proportion of their customer base each year when compared to larger share brands. The explanation as to why this phenomenon occurs is best given through an example, and is most clearly exhibited in the case of only two brands in a subscription market.

Imagine a market with only two brands (Brand B and Brand S) and 1,000 customers each of whom use only one of the two brands. Imagine that Brand B is larger than S, with 80% market share (800 customers), while Brand S has 20% market share (200 customers). Imagine also that the market is stationary, that is, each brand has the same market share at year-end as they began the year with. In order for the two

brands to remain the same size, each must gain (and lose) the exact same number of customers each year. That is, if Brand B lost 100 customers each year it would also, as a condition of stationarity, necessarily gain 100 customers. This would be a defection rate of 12.5% (100/800). Meanwhile, the Brand S would also lose and gain 100 customers, but in this instance this represents a 50% defection (and acquisition) rate (100/200)!! This scenario is presented in the figure below. Obviously, this example represents an overly simplistic case. However, it does serve to show the discrepancy in defection rates (and attendant acquisition rates) between brands of differing sizes that occurs simply as an outcome of market stationarity. The case can also be readily extended to more than two brands.



More of the small brand's customer base turns over.

So the small brand has an inherently less stable client base; this is simply a natural aspect of being a small brand.

This is a 'Double Jeopardy' pattern for churn, that is, smaller brands not only have fewer customers but they are also more likely to lose them.

The double jeopardy pattern is well established for repeat-buying within stable repertoires. Small-share brands not only have fewer customers, but these customers buy the brand less often than larger brands get bought by their customers. And now we see that it occurs for *changes* in repertoire too, ie, churn.

Double Jeopardy within stable repertoire buying has been observed in numerous empirical studies conducted over the last thirty years in a range of industries and

countries (Ehrenberg et al. 2003). Recently the DJ pattern has also been observed for customer defection/retention rates for car purchasing (Colombo et al. 2000). Double Jeopardy occurs because of asymmetries in familiarity and distribution, ie, some brands are bigger than others. Double Jeopardy is, therefore, simply a statistical selection effect (as is illustrated above) which occurs for the switching/shuffling between brands that happens within buyers' stable repertoires *and* for churn (when they make dramatic changes to their repertoires).

This statistical selection effect must occur when markets are stationary and unpartitioned.

Stationarity

When a market is stationary any defection must be balanced by an equal amount of acquisition, and the degree of churn (in percentage terms) would be a function of brand size, as the above example illustrates. But if a brand were gaining or losing share it could have defection or acquisition rates that were independent of its market share. Two brands of equal size could have quite different defection rates, if one were rising in share it might have a very low rate of defection and while the other, losing share, might have a high rate of defection. These are empirical questions, but the important point is that without stationarity the Double Jeopardy pattern need not occur.

Most markets are stationary, or very near to it, most of the time. This has been shown by the widespread fit of the Dirichlet model of repeat purchase which assumes stationarity.

Lack of Partitioning

Lower churn rates for large brands also depends on the other assumption necessary for the double jeopardy pattern, that the market is un-partitioned. That is, that differentiation is entirely related to size, with some brands having greater/lesser levels of familiarity and distribution, rather than particular brands appealing to distinct sub-groups within the market. If two or more brands were partitioned, they could have entirely different churn rates than the rest of the market, eg, sharing more customers between each other and less than expected with the rest of the brands. Though we would still expect that differences in churn within the partition would be related to market share. Likewise, a brand could be differentiated to the extent that it formed a partition of one, for example, the classic niche brand where it had higher loyalty than other brands of similar market share.

Empirical Support

We have shown logically that small brands will have a higher proportion of their customers who switch brands under a simple and reasonably realistic constraint of stationarity. But does this logic hold up to empirical scrutiny? To test this, we report on two empirical investigations.

The first of these tests involved survey data which was gathered from an industrial product market, where retailers essentially subscribe to supply a brand for a season

and at the end of the season have the opportunity to defect from one brand and move to another. The study gained a final sample of 200 respondents with a 68% response rate. The survey was administered over the phone and the Verbal Probability Scale was used to collect predictions of future purchasing behaviour. As data specifying both customer defection rates and such information that is inclusive of all brands in the market is difficult to obtain, the data reported here uses probability of defection occurring, rather than actual defection data. However, the probabilistic measure used was the Verbal Probability Scale (VPS), a derivative of the Juster Scale specially developed for phone data collection, which has been shown to be highly correlated with the level of aggregate purchasing behaviour in a range of markets (Brennan and Esslemont 1994). We asked respondents the probability that they would not buy their current brand the next time they made a purchase from the category.

The top five brands shown in the table below represent almost 90% of the market share of the industry. As with many markets, the remaining market share in this industry is made up of a large number of very small brands. The table below shows the top five brands in the market in line with their market share.

<i>Brand</i>	<i>Penetration</i>	<i>Market Share</i>	<i>Probability of defecting from the brand</i>
Brand 1	79%	57%	18%
Brand 2	45%	32%	21%
Brand 3	11%	8%	31%
Brand 4	4%	3%	24%
Brand 5	0.3%	0.2%	28%

Bigger brands have a lower ‘churn’ rate than smaller brands in the same market. For example, the biggest brand (Brand 1) is expected to lose only 18% of its current customers, while the smallest brand (Brand 5) is expected to lose 28% of its customers. We can also identify deviations from this pattern (ie, that Brand 3 has a higher than expected probability of defecting). Given the pattern demonstrated across the remaining brands, we would expect Brand 3's probability of switching to be around 22%. This may suggest that this brand is losing market share. For example, assuming that all other things are as expected (such as the brand's rate of customer acquisition), a relatively high rate of defection would necessarily mean a reduction in market share. In this data, however, it was not possible to determine whether the predicted acquisition rate was at an expected rate.

Another illustration of this phenomenon is shown in previously published data, although the source did not explicitly discuss the economies of scale issue. This data is not from a subscription market, but from a repertoire market with long interpurchase intervals. Because of this long interpurchase interval, one could arguably say that buying one brand then another brand represents a ‘switch’, with that customer being ‘lost’ until they next re-buy. The data is on brand switching for cars,

taken from Colombo, Ehrenberg & Sabalava {2000}, specifically data for France 1989 (p. 28).

Brand	Market share	% of customers switching to another brand
Renault	31	36
Peugeot	23	40
Citroen	12	45
VW	8	44
Ford	7	45
Fiat	6	54
GM	5	47
Rover	2	65
Seat	2	74
Mercedes	1	30*
Volvo	1	52
BMW	1	54
Lada	1	60
Alfa	1	62

* *outlier*

Market share *down*, switching rate *up*

We see a clear pattern of increasing switching rates as market share decreases. There are some apparent exceptions such as Mercedes, which has a lower switching rate than expected given its small market share, but the general relationship is apparent. Car brands with smaller market shares have much higher rates of customers switching away from them. Therefore, they must either attract new customers at a higher rate than their larger competitors or lose market share. The correlation between market share and switching rate is -0.75 .

Implications and Recommendations for Further Research

Viewing defection in this way provides norms for the level of switching that a firm of a given market share in a market with a given underlying rate of churn 'should' experience. Competitors of similar market share should have similar defection rates. If one brand has a higher defection rate than another brand of the same size, this may indicate market share change. This logically flows if all other factors, such as a brand's rate of acquiring customers is as expected, and the share of category requirements for defecting and acquired customers is similar.

Obviously, brands that are losing share suffer from a greater rate of defection than their rate of acquisition, however, what has not been stated elsewhere is that brands that are losing share have rates of defection that are greater than the defection rates of competitors of a similar size. Investigating whether brands that change market share have unusual rates of defection is an empirical question in need of further

investigation, however, this paper demonstrates a pattern in churn data that occurs for stationary brands, and provides a benchmark against which we can compare brands that change their market share over time.

A brand's defection rate may also indicate what market share level a brand is currently trending towards. For instance, if the defection rate is lower than what we would expect given its current level of market share, this may indicate that the brand is in the process of growing. It, in effect has the defection rate of a larger brand. Once again, there is a need to examine data sets that include both rates of defection, and rates of customer acquisition. In addition, there is also a need to examine panel data that shows brands changing market share in order to draw conclusions about the relationship between churn and market share change. By knowing how defection and acquisition rates differ from what is expected, it may be possible to show how much larger (or smaller) a brand is going to become. By determining the expected rate of defection for all brands in the market, it would be possible to calculate the future size of the unusual brand. If the brand is trending towards a different market share, the question then is how long does it take for a brand to establish a new level of market share? This is an empirical question and is currently the subject of further investigation.

The most important implication for managers is for managers to be realistic about setting objectives regarding customer retention. Clearly, small brands cannot be expected to have defection rates equal to those of their larger competitors.

References

Brennan, Mike and Don Esslemont (1994), "The Accuracy of the Juster Scale for Predicting Purchase Rates of Branded, Fast-Moving Consumer Goods," *Marketing Bulletin* (5), 47-53.

Buzzell, Robert D., Bradley T. Gale, and Ralph G. M. Sultan (1975), "Market Share - A Key to Profitability," *Harvard Business Review*, 53 (January-February), 97-106.

Colombo, Richard, Andrew Ehrenberg, and Darius Sabavala (2000), "Diversity in Analyzing Brand-Switching Tables: The Car Challenge," *Canadian Journal of Marketing Research*, 19, 23-36.

Ehrenberg, Andrew S.C. (1974), "Repetitive Advertising and the Consumer," *Journal of Advertising Research*, 14 (2, April), 25-34.

Ehrenberg, Andrew S.C., Mark D. Uncles, and Gerald G. Goodhardt (2003 (forthcoming)), "Understanding Brand Performance Measures: Using Dirichlet Benchmarks," *Journal of Business Research*.

Kohli, Ajay K., N. Venkatraman, and John H. Grant (1990), "Exploring the Relationship Between Market Share and Business Profitability," *Research in Marketing*, 10, 113-33.

Rao, Ambar G. and Peter B. Miller (1975), "Advertising/Sales Response Functions," *Journal of Advertising*

Marketing Bulletin, 2002, 13, Research Note 1

Research, 15 (No. 2, April), 7-15.

Scherer, Frederick and David Ross (1990), *Industrial Market Structure and Economic Performance* (3rd ed.). Boston: Houghton Mifflin.

Sharp, Byron and Malcolm Wright (1999), "There are Two Types of Repeat Purchase Markets," in 28th European Marketing Academy Conference Vol. Cd proceedings. Berlin, Germany: Institute of Marketing, Humboldt-University.

Szymanski, David M., Sundar G. Bharadwaj, and P. Rajan Varadarajan (1993), "An Analysis of the Market Share-Profitability Relationship," *Journal of Marketing*, 57 (July), 1-18.

All authors are from the Marketing Science Centre, University of South Australia.
www.MarketingScienceCentre.com

Dr Byron Sharp is Director, Erica Riebe, Dr John Dawes and Nick Danenberg are Senior Research Associates.