

Do you open new stores.... just to send other stores broke!

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In a large retail network, when you plan to open a new store, you MUST consider both the new store's sales, and the effect it will have on your surrounding stores. To ignore the later can force other stores to close, or franchisees to go broke, and create a huge amount of bad will across your network.

When opening new stores, there are only 3 types of sales:

1. Those that are new customers for you (either new to your industry, or have come from one of your competitors) - GOOD
2. Those that come from another of your own stores - BAD
3. Transient customers that come from far away - NEUTRAL

If you are a monopoly, such as a lottery company or a wagering company, where you hold the exclusive licence, then this is an even clearer issue. There is NO taking business from competition in this case.

If you are a gaming company such as in Victoria where there is a duopoly, then again it is a bit simpler as you can only take sales from yourself, the competitor, or they are new to the industry.

As you move into businesses with more competition, it becomes harder to detect the sales from your own stores. My background was the oil industry, so there was always the issue in opening a new store on where those sales have come from, because in that industry the total pie is very well defined. Opening a new site will not sell any more fuel, just take it from other sites nearby, or from that great cloud of customers we all call "Transients".

We believe the way to estimate incremental sales for your business, and by deduction, the cannibalisation of your surrounding stores is the use of a statistical Gravity model.

Simple version – Think like the planets!

We know planets exert a gravitational field depending on their size. Earth is bigger than Mars and therefore it has a bigger gravitational field. A meteoroid floating between Earth and Mars is likely to be pulled towards (attracted to)

Earth than Mars. However, a meteoroid which is floating very close to Mars might be pulled towards Mars despite Earth's bigger gravitational field. Similarly, customers are attracted to bigger and better stores unless they are based very close to a smaller, less attractive store (convenience factor). This can all be modelled in the retail context.

The more complex version.....

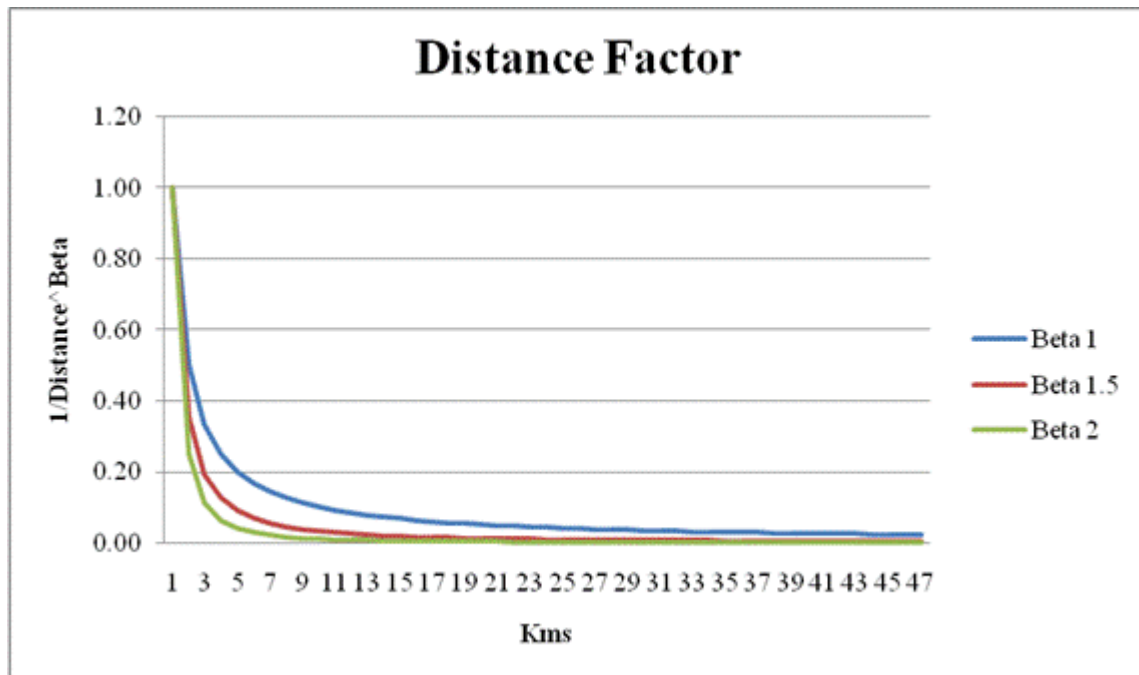
Just a bit of background about the incremental sales model or gravity model. According to the model, every site in the network has a gravitational field or a sphere of influence. Bigger, more attractive sites have larger spheres of influence, and smaller, less attractive sites have smaller spheres of influence. When a new site is opened it creates its own sphere of influence by cannibalizing on the nearby sites depending on the distance and attractiveness, and generates some new business. When a site is closed down its sphere of influence is distributed to the sites nearby depending on the distance and attractiveness of those sites, and some business is lost in the process. This creates a measure of incremental sales, and sales from existing stores.

Therefore, the two factors important to study the change in market dynamics are –

- Attractiveness of the site
- Distance to the site from any given location

Sales can be chosen as the measure of attractiveness of an existing site. Sales of a store are normally a function of the location, quality of facilities, customer services, brand, franchisee involvement and all the other factors that make up a successful store. More attractive sites have higher sales and vice versa. For any new sites, one can use the predicted sales as the measure of attractiveness. The sales can be predicted using a regression or analogue modelling approach.

Distance is used as inverse of distance raised to the power beta in the gravity model calculations i.e. $1/(\text{Distance}^{\beta})$. The choice of beta depends on factors like the nature of the product/brand and how far the customers would be willing to travel. A low value of beta (lets say, a beta equal to 1) is appropriate for situations where customers would be willing to travel far, for instance, one can imagine travelling 10kms to go to a Bunnings' warehouse. A high value of beta (lets say, a beta equal to 2) is appropriate for situations where customers are not very likely to travel far, for instance, one would not like to travel more than 1-2kms to buy a bottle of milk not matter what brand or shop is offering it.



The beta is then set as part of the modelling process to best reflect the nature of the products and the number of players offering it.

The model can be calibrated using real life situations from a client on known sites that have opened or closed. Once calibrated to best reflect the actual occurrences on a selection of sites that have opened or closed in the last few years, you begin feeling confident in using it for future predictions.

Summary

If you are opening a new store, especially if you have a large network already, it is critical to not only estimate the new store's sales properly, but also essential to have an idea of the effect on other stores in your network, so as not to send your other stores or Franchisee's broke.

From a Franchisee's viewpoint, some indication of the effect a new store will have on you is much better than it just opening, and sending you broke, with no forethought or explanation.

I believe it is the responsibility of the Retailer or the Franchisor to have some feel on what will occur, not just the famous SWAG – Scientific Wild Ar..d Guess!