

BY INVITATION | KARTHIK RAMAMURTHY & ANKUR HAZARIKA

The new science of retail

The real challenge for retail management is to convert foot falls into sales

RETAIL in India is undoubtedly a growth story. In various global rankings, India has emerged as one of the most favoured retail destinations. The considerable investments made by large-scale domestic and international players have accelerated the development of large, modern store chains gradually superseding the 12 million or so traditional family-run retail outlets. Today, organised retail is estimated to represent only about 5-7% of Indian retail and yet is estimated to grow to about a quarter of sales in two to three years.

Organised, western-style retailing has brought with it efforts to effectively address the market and retailers have been trying out a variety of product mixes and store formats—super markets, hyper markets, malls etc. The early entrants have tried, occasionally erred and then tweaked their systems to improve their business models. The time is right for Indian players to take advantage of this high growth phase by leapfrogging the more gradual evolution of retail optimisation seen overseas. By learning from the most successful retailers in advanced economies, Indian retailers can benefit from the latest scientific study of consumer behaviour. One of these successful tools is footfall analytics.



the store's footfall. For example, there was a mid-sized store in Bangalore, situated on a busy arterial street. Around evening time, the heavy traffic on the road nearly cut off the customer traffic from the other side of the road. The customer traffic, therefore, did not increase during the peak hours. Merely counting the aggregate traffic at the store during the day would not bring forth this anomaly. Only a profiling of the hourly traffic can help diagnose this problem.

Another example comes from a leading front runner in organised retail. The company started out with huge sized stores, but soon realised that most of the area remains unaccessed by the bulk of the customers. It then spent time working out the optimal size of the stores and downsized many of them. Fast food chains as well have noticed dull business at some of their stores located in malls and then moved out in favour of stand alone shops.

After price and accessibility, variety is the most important consideration in a retailer's list. Do products get stocked out on peak occasions, are too many varieties confusing the customer, what are the products on which the customers expect a lot of variety? Analytics maps the sales data from the electronic point of sales (EPOS) counter and maps it to the consumer traffic detected by the footfall equipment. Data might, for example, show that a certain brand of shaving foam is being favoured at a men's store when the customer enters as a couple. Algorithm would be able to suggest whether the brand would generate good sales during gift occasions. This would lead the retailer to over stock this brand during occasions like Valentine's day or Diwali.

Customer motion studies can help store layouts and store sizes. By visually studying the customer through security CCTVs, analysts can determine what layout would best attract the customers. Which products should be shelved at the entrance for impact buying and which ones should in the aisles so that the customer can study and feel it at leisure? If too many areas in the store remain unvisited, does that call for downsizing the store or sub-letting concessions, improving the lay-outs and ambience or expanding the ranges? Only proper analysis can tell.

Where does this lead to? The competition can only get fiercer as organised retail grows. Retailers need precise tools in hand that will allow them to target individual consumer bases and invest with greater confidence. As this industry grows, it will become increasingly imperative for retailers to adopt the 'analytics' approach. Radical innovation in IT processes helped India leapfrog to become one of the biggest IT destinations of the world. Given the current scenario, adaptation of a similar attitude towards retail science could catapult India to the global leaders of retail too.

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What is footfall?

Footfall (literally a term representing the number of people who visit a store) is one conventional measure of a store's opportunities to make sales. Many retailers have traditionally believed, quite wrongly, that the conversion ratio (the proportion of each day's footfall, which makes a purchase) is directly proportional to the footfall itself. The gatekeeper at the stores will merrily click on his or her counter every time another customer sets foot into the store and this goes to the store manager as a measure of potential sales.

Simply put, sales = footfall X conversion ratio X average transaction value (ATV).

Retail space is priced on the basis of the footfall it receives. Malls price their shops on the basis of the footfall they receive during weekdays and weekends. Even stand alone shops are sensitive to accessibility by customers.

But, could mere footfall count be the true measure of a store's business? Some retailers today are happy to believe so; it justifies the price they have paid for the retail space. But analysis seems to say that getting business is more than just generating footfalls. The basic need of retail management is to convert footfalls into sales. The tenet of 'Know thy customer' remains inviolable in retail. This is what footfall analytics tries to achieve.

Footfall analytics

Footfall analytics is a part of what is known as 'Scientific Retail Knowledge'. It studies the demographic and psychographic behaviour of the retail customer and corre-

lates it with the sales of the store. It begins, of course, with accurately measuring the number of customers that enter the store. Unobtrusive equipment placed at the store entrances achieves this end. To accurately measure the traffic and automatically log it on to the data servers, 3D imaging techniques (infra red cameras) are used.

Here, in one example, the emphasis is not on the number of distinct customers, but on the shopper groups. A family of four walking into a supermarket or a children's clothing store, would not be four customers, but one shopper group making a family purchase.

The data that the footfall equipment collects is time-stamped before being sent to the data servers. A computer logs the data and periodically transmits it to the central hub. The communication channel could be anything from a modem to a GSM network. The central processing hub sits at the service provider's office. This hub (the men and the machines) aggregates the data, analyses it using sophisticated proprietary algorithms, and prepares the reports. Store specific suggestions are made on the basis of these reports and sent back to the clients, according to the information they are looking to harvest; ATVs, staff-stretch, effectiveness of marketing campaigns, conversion rates etc.

There is an accurate profiling (a time vs traffic graph) of the store traffic. A passive count of footfall at the end of the day gives mere seasonality. Hourly profiling helps know the periods when the store receives the bulk of its customers. This can help schedule the staff and can help managers determine whether it is better to pay for more staff to cover busy periods or be prepared to save money on additional

wages but sacrifice some sales. With accurate data, managers can see how staff training, for instance, can improve conversions. A 'Happy hour' or other time-dependent policy can help improve traffic during the dull hours or even wean away a portion from the over-hecktic hours.

Taking the analytics technology to the next stage, introduces the 'Know thy consumer' part. Using the same equipment that you had so far been using for security—the closed-circuit televisions, but instead of passive security monitoring, a team of experts does an active study. A random sampling of the store traffic shows some distinctive consumer behaviour and how they 'shop' your store. From the video clippings analysts can deduce the hotspots of the store—the areas that receive most attention and visibility.

And also what exactly makes the hotspot, a hotspot. Consumers react to store layouts, ambience, lighting, product display—a host of controllable variables. Once the peculiarities in consumer behaviours of a population are mapped to these controllable variables, the optimum layout can be achieved. Though a lot of stores do eventually achieve it, the consideration with analytics is that it's much faster and accurate—because it's backed by hard, repeatable, accurate research and analysis.

The results of analytic studies of each store can then be compared to others in the chain. The data generated by an electronics store in Mumbai, for instance, can be compared with the data from stores in Pune, Chennai, Hyderabad and Delhi. This, in turn can be compared with the basket of consumer electronics retailers. This brings us to the concept of a retail index.

A retail index gives the relative traffic during a period across a group of peer stores (stores with same or similar merchandise/format/market sector). There would be different indices based on region, merchandise, distance from city centre (high street and suburban).

One such index is the SPSL (now part of Synovate) retail traffic index (RTI), which has been tracking traffic levels in the UK since 1998 and is the longest running and most respected index of its kind. Its principal role is to keep track of clients' traffic levels relative to a comparative set. They provide a means to gauge how busy the client's stores are (in traffic terms) relative to the rest of the UK market over time. The reports show indexed traffic rather than aggregate total traffic flows so that each store contributes equally to the overall client index value that is reported weekly. RTI tracks 'pure retail'—only the customers entering the stores. This is because an aggregate footfall in a mall or Galleria, as counted by some rival companies, has less relevance to exact store figures.

Does footfall analytics help sales?

Bespoke end-to-end systems help clients achieve business growth in a variety of ways—right from staff scheduling to optimising store layout and always with a measurable return on investment, sometimes within mere weeks. For instance, for any retail store, assuming ideal traffic conditions and population distribution, the catchment area (or area that generates customers) is a circle centred on the store. But this never happens—accessibility and consumer psychology is what determines

Malls price their shops on the basis of the footfall they receive during weekdays and weekends

STATISTICS SPEAK

Take a chill pill

The pharmaceutical industry in India is poised for double-digit growth. Signaling this is the increased outsourcing of clinical research to India and contract manufacturing offering cost-effective sourcing for global companies. Marketing conditions tailored to local conditions will propel higher growth in revenue of small and medium size companies, according to a CII-Interlink white paper on "Growth Agenda of pharmaceutical industry in India", tabled recently. In the current scenario, Generics contribute 7% of the branded formulations market and 3% of the total pharma market at Rs 2,173 crore. Branded formulations constitute the bulk of the market at Rs 31,073 crore.

Indian pharmaceutical market

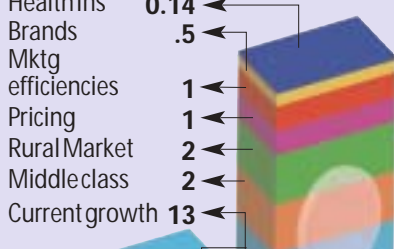
Share of acute vs chronic therapies in Indian pharmaceutical market

Therapy	2005	2004	2003
Acute	76.6%	77.1%	77.9%
Chronic	23.4%	22.5%	22.1%

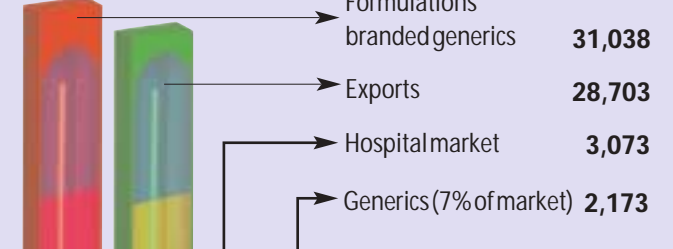
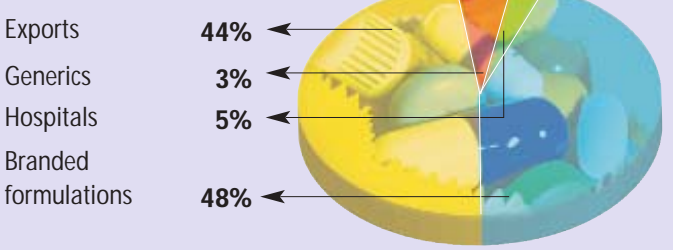
Growth rate of acute vs chronic therapies in Indian pharmaceutical market

Therapy	2007	2006	2005	CAGR
Acute	11%	18%	8%	12%
Chronic	21%	17%	11%	16%

Composition of the pharma industry



Value of brands in the Indian pharma market



Source: ORG IMS Market Intelligence Report 2007 and Interlink Knowledge Cell