

Mumbai's dabbawalas: heterarchy and responsible autonomy

In Mumbai, India, 4,500 dabbawalas collect and deliver 175,000 packages within hours. What should we learn from this unique, simple and highly efficient 120-year-old logistics system?

Hungry? Would you like a fresh, hot meal from home? Most managers don't have that choice. It's either a sandwich, a pizza or a trip to the wine bar/restaurant. Unless you live in Mumbai, that is, where a small army of 'dabbawalas' picks up 175,000 lunches from homes and delivers them to harried students, managers and workers every working day. At your desk. 12.30 pm on the dot. Served hot, of course. And now you can even order over the Internet.

The Mumbai Tiffin Box Suppliers Association is a streamlined 120-year-old organisation with 4,500 semi-literate members providing a quality door-to-door service to a large and loyal customer base.

How has MTBSA managed to survive through these tumultuous years? The answer lies in a twin process that combines competitive collaboration between team members with a high level of technical efficiency in logistics management. It works like this...

After the customer leaves for work, her lunch is packed into a tiffin box provided by the dabbawala. A color-coded notation on the handle identifies its owner and destination. Once the dabbawala has picked up the tiffin, he moves fast using a combination of bicycles, trains and his two feet.

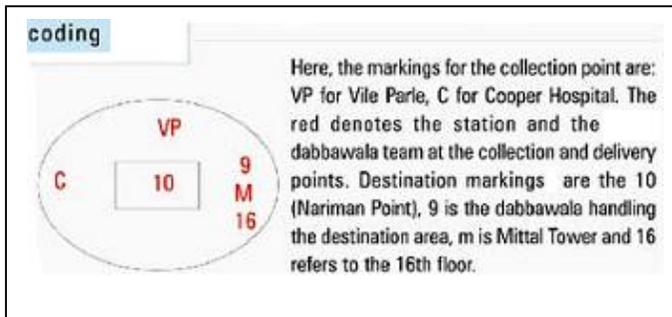
A BBC crew filming dabbawalas in action was amazed at their speed. "Following our dabbawala wasn't easy, our film crew quickly lost him in the congestion of the train station. At Victoria Terminus we found other fast moving dabbawalas, but not our subject... and at Mr Bhatpat's ayurvedic pharmacy, the lunch had arrived long before the film crew," the documentary noted wryly. So, how do they work so efficiently?

Team work

The entire system depends on teamwork and meticulous timing. Tiffin boxes are collected from homes between 7.00 am and 9.00 am, and taken to the nearest railway station. At various intermediary stations, they are hauled onto platforms and sorted out for area-wise distribution, so that a single tiffin box could change hands three to four times in the course of its daily journey.

At Mumbai's city stations, the last link in the chain, a final relay of dabbawalas fan out to the tiffins' destined bellies. Lunch hour over, the whole process moves into reverse and the tiffin boxes return to suburban homes by 6.00 pm.

To better understand the complex sorting process, let's take an example. At Vile Parle Station, there are four groups of dabbawalas. Each has twenty members and each member services 40 customers. That makes 3,200 tiffin boxes in all. These 3,200 boxes are collected by 9.00 am, reach the station and are sorted according to their destinations by 10.00 am when the 'Dabbawala Special' train arrives.



The railway provides sorting areas on platforms as well as special compartments on trains travelling south between 10.00 am and 11.30 am.

During the journey, these 80 dabbawalas regroup according to the number of boxes to be delivered in a particular area, and not according to the groups they actually belong to. If 150 tiffin boxes are to be delivered in the Grant Road Station area, then four

people are assigned to that station, keeping in mind one person can carry no more than 35-40 boxes.

During the earlier sorting process, each dabbawala would have concentrated on locating only those 40 boxes under his charge, wherever they come from, and this specialisation makes the entire system efficient and error-free. Typically it takes about ten to fifteen minutes to search, assemble and arrange 40 tiffin boxes onto a crate, and by 12.30 pm they are delivered to offices.

In a way, MTBSA's system is like the Internet. The Internet relies on a concept called packet switching. In packet switched networks, voice or data files are sliced into tiny sachets, each with its own coded address which directs its routing.

These packets are then ferried in bursts, independent of other packets and possibly taking different routes, across the country or the world, and re-assembled at their destination. Packet switching maximises network density, but there is a downside: your packets intermingle with other packets and if the network is overburdened, packets can collide with others, even get misdirected or lost in cyberspace, and almost certainly not arrive on time.

Elegant logistics

In the dabbawalas' elegant logistics system, using 25 km of public transport, 10 km of footwork and involving multiple transfer points, mistakes rarely happen. According to a *Forbes* 1998 article, one mistake for every eight million deliveries is the norm. How do they achieve virtual six-sigma quality with zero documentation? For one, the system limits the routing and sorting to a few central points. Secondly, a simple colour code determines not only packet routing but packet prioritising as lunches transfer from train to bicycle to foot.

Who are the dabbawalas?

Descendants of soldiers of the legendary Maharashtrian warrior-king Shivaji, dabbawalas belong to the Malva caste, and arrive in Mumbai from places like Rajgurunagar, Akola, Ambegaon, Junnar and Maashi. "We believe in employing people from our own community. So whenever there is a vacancy, elders recommend a relative from their village," says Madhba, a dabbawala.

"Farming earns a pittance, compelling us to move to the city. And the tiffin service is a business of repute since we are not working under anyone. It's our own business, we are partners, it confers a higher status in society," says Sambhaji, another dabbawala. "We earn more than many *padha-likha* (educated) graduates," adds Khengle smugly.

The proud owner of a BA (Hons) degree, Raghunath Meghe, president of MTBSA, is a rare graduate. He wanted to be a chartered accountant but couldn't complete the course because of family problems. Of his three children, his daughter is a graduate working at ICICI, one son is a dabbawala and the younger son is still studying.

Education till standard seven is a minimum prerequisite. According to Meghe, "This system accommodates those who didn't or couldn't finish their studies. It's obvious that those who score good

marks go for higher education and not to do this job, but we have people who have studied up to standard twelve who couldn't find respectable jobs." There are only two women dabbawalas.

Apart from commitment and dedication, each dabbawala, like any businessman, has to bring some capital with him. The minimum investment is two bicycles (approximately Rs 4,000 / £50), a wooden crate for the tiffin boxes (Rs 500 / £6), at least one white cotton *kurta-pyjama* (Rs 600 / £7), and Rs 20 / £2.50 for the trademark Gandhi topi.

Competitive collaboration

MTBSA is a remarkably flat organisation with just three tiers: the governing council (president, vice president, general secretary, treasurer and nine directors), the mukadams and the dabbawalas. Its first office was at Grant Road. Today it has offices near most railway stations.

Here nobody is an employer and none are employees. Each dabbawala considers himself a shareholder and entrepreneur.

Surprisingly MTBSA is a fairly recent entity: the service is believed to have started in the 1880s but officially registered itself only in 1968. Growth in membership is organic and dependent on market conditions.

This decentralised organisation assumed its current form in 1970, the most recent date of restructuring. Dabbawalas are divided into sub-groups of fifteen to 25, each supervised by four mukadams. Experienced old-timers, the mukadams are familiar with the colours and codings used in the complex logistics process.

Their key responsibility is sorting tiffin boxes but they play a critical role in resolving disputes; maintaining records of receipts and payments; acquiring new customers; and training junior dabbawalas on handling new customers on their first day.

Each group is financially independent but coordinates with others for deliveries: the service could not exist otherwise. The process is competitive at the customers' end and united at the delivery end.

Each group is also responsible for day-to-day functioning. And, more important, there is no organisational structure, managerial layers or explicit control mechanisms. The rationale behind the business model is to push internal competitiveness, which means that the four Vile Parle groups vie with each other to acquire new customers.

Building a clientele

The range of customers includes students (both college and school), entrepreneurs of small businesses, managers, especially bank staff, and mill workers.

They generally tend to be middle-class citizens who, for reasons of economy, hygiene, caste and dietary restrictions or simply because they prefer wholesome food from their kitchen, rely on the dabbawala to deliver a home cooked mid-day meal.

New customers are generally acquired through referrals. Some are solicited by dabbawalas on railway platforms. Addresses are passed on to the dabbawala operating in the specific area, who then visits the customer to finalize arrangements. Today customers can also log onto a website www.mydabbawala.com to access the service and, breaking news, as of 20th June 2006, customers can now order dabbawalas services by text message on their mobile phones.

Service charges vary from Rs 150 / £2 to Rs 300 / £4 per tiffin box per month, depending on location and collection time. Money is collected in the first week of every month and remitted to the mukadam on the first Sunday. He then divides the money equally among members of that group. It is assumed

that one dabbawala can handle not more than 30-35 customers given that each tiffin box weighs around 2 kgs. And this is the benchmark that every group tries to achieve.

Typically, a twenty member group has 675 customers and earns Rs 100,000 / £1,200 per month which is divided equally even if one dabbawala has 40 customers while another has 30. Groups compete with each other, but members within a group do not. It's common sense, points out one dabbawala.

One dabbawala could collect 40 tiffin boxes in the same time that it takes another to collect 30. From his earnings of between Rs 5,000 / £60 to Rs 6,000 / £70, every dabbawala contributes Rs15 per month to the association. The amount is used for community improvement, loans and marriage halls at concessionary rates. All problems are usually resolved by association officials whose ruling is binding.

Meetings are held in the office on the 15th of every month. During these meetings, particular emphasis is paid to customer service. If a tiffin box is lost or stolen, an investigation is promptly instituted. Customers are allowed to deduct costs from any dabbawala found guilty of such a charge.

If a customer complains of poor service, the association can shift the customer's account to another dabbawala. No dabbawala is allowed to undercut another.

Before looking into internal disputes, the association charges a token Rs 100 to ensure that only genuinely aggrieved members interested in a solution come to it with their problems, and the officials' time is not wasted on petty bickering.

Learnings

Logistics is the new mantra for building competitive advantage, the world over. Mumbai's dabbawalas developed their home-grown version long before the term was coined.

Their attitude of competitive collaboration is equally unusual, particularly in India. The operation process is competitive at the customers' end but united at the delivery end, ensuring their survival over a century and more. Is their business model worth replicating in the digital age?

Pradip Thakker

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