
DABBAWALLAHS OF MUMBAI (A)

Chandra Sekhar Ramasastry prepared this case under the supervision of Professor Larry Menor solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation. The authors may have disguised certain names and other identifying information to protect confidentiality.

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INTRODUCTION

On November 7, 2003, Raghunath Medge, president of the Nutan Mumbai Tiffin Box Suppliers Charity Trust (the Trust), had just returned to his office in suburban Mumbai after meeting with Britain's Prince Charles who was on an official visit to India's commercial capital. The Trust was the managing organization of the dabbawallah meal delivery network (see Exhibit 1). The dabbawallahs' service, often referred to as tiffinwallahs outside of Mumbai, was cited internationally by management scholars and industry executives as an exemplar of supply chain and service management. The service had acquired a reputation for its delivery reliability in Mumbai. International interest in the dabbawallahs was largely due to a 1998 article published in *Forbes*:¹

Mumbai's "tiffinwallahs" have achieved a level of service to which Western businesses can only aspire. "Efficient organization" is not the first thought that comes to mind in India, but when the profit motive is given free rein, anything is possible. To appreciate Indian efficiency at its best, watch the tiffinwallahs at work.

¹Subrata N. Chakravarty and Nazneen Karmali, "Fast Food," *Forbes Global*, October 8, 1998.

Documentaries on the dabbawallahs were produced by the *BBC*, *MTV* and *ZEE TV*, and their delivery performance earned them recognition in the *Guinness Book of World Records* and *Ripley's Believe It or Not!*

Medge, who had personally demonstrated to Prince Charles how the dabbawallah meal delivery system worked, was himself in the spotlight of late. He had recently been invited by the Confederation of Indian Industry to speak to its members at a leadership summit in a special module titled “Leading Without Suits and Ties.” He was also approached by human resource executives and asked to present seminars on team building. Additionally, he was asked by corporations, such as Siemens India, to make a presentation to their employees on the dabbawallahs’ working practices. Finally, he was also regularly sought by the print and television media within and outside of India.

Medge had begun to see a pattern in his interactions with these diverse audiences. The questions he was asked were, by and large, predictable. Typical queries revolved around the dabbawallahs’ workforce, customers and strategy:

- How do the dabbawallahs find recruits?
- How can an incentive system based on “equal pay for all” work?
- Do the dabbawallahs know their clients?
- How does the dabbawallah system ensure that the individual links in the delivery network do not break down?
- How is the Trust dealing with the issue of growth?
- How is the Trust coping with dabbawallah competitors?
- The world around you is changing but the dabbawallahs have not changed; why not?

The question that Medge was asked most often — and which amused him the most — was: Is there a future for the dabbawallahs? Based on his own personal experience over the last three decades, Medge had developed a standard response to this particular question.

HISTORY OF THE DABBAWALLAHS

The dabbawallah service had begun informally in 1890 in Mumbai. According to Medge:

A Parsi banker working in Ballard Pier employed a young man, who came down from the Poona district to fetch his lunch every day. Business picked up through referrals and soon our pioneer dabba-carrying entrepreneur had to call for more helping hands from his village. Such was the origin of the dabbawallahs.

However trivial the task may sound, it is of vital importance since havoc is caused if the client had to skip his home-cooked food or worse, carry the dabba himself in the ever so crowded Mumbai trains during the rush hour!

By the early 20th century, people from all parts of India were migrating to Mumbai in large numbers. Once they found a source of livelihood and settled down, they wanted home-cooked food at their workplaces. Home-cooked food had a comfort level for various reasons. First, the food was prepared in the ambience of a domestic kitchen, with recipes that were tried and tested, and that resulted in familiar fare. Second, home-cooked food was comparatively inexpensive. The dabbawallahs were initially charging two annas per month per dabba for their delivery service.²

Working independently and in small groups for decades, the dabbawallahs had united in 1954 to put together a rudimentary co-operative. This umbrella organization was officially registered in 1956 as a charitable trust under the name Nutan Mumbai Tiffin Box Suppliers Charity Trust. At that time, some of the dabbawallahs employed delivery boys to carry their dabbas and transport them along their routes on bicycles and pushcarts. These dabbawallahs would collect the fees from their clients every month and pay the boys whatever they could negotiate with them. This changed in 1983 when the Trust adopted an owner-partner system. Under this new system, the practice of subcontracting was dispensed with and dabbawallahs started to receive equal earnings. The delivery boys' system was converted into an apprenticeship system wherein new recruits were trained for at least two to three years on a fixed remuneration before they became full-time dabbawallahs.

By 2003, more than 5,000 dabbawallahs worked under the aegis of the Trust. Together they delivered about 175,000 lunches daily in Mumbai (see Exhibit 2). They served a total area that covered approximately 75 kilometres (km) of public transport. The dabbawallah business generated approximately Rs380 million per annum. Given the two-way route for each dabba, the number of deliveries worked out to more than 350,000 per day. Despite the sheer number of daily deliveries, the failure rate reported by the media numbered one in two months, or one in every 15 million deliveries.

The Nutan Mumbai Tiffin Box Suppliers Charity Trust

The Trust was responsible for managing the overall meal delivery system. It worked in close co-ordination with the Mumbai Tiffin Box Suppliers' Association, a forum that provided opportunities for social interactions among the

²16 annas comprised one rupee (Rs) at that time. The anna was replaced by the paise in 1960, and 100 paise comprised Rs1. As of November 2003, Cdn\$ = Rs31.40.

dabbawallahs, and the Dakkhan Mavle Sahakari Patpedhi, a credit union that catered to the financial needs of individual dabbawallahs by providing personal loans. Given its charitable trust status, the Trust was also involved in community initiatives by providing free food and accommodation to low-income families at some pilgrimage centres.

The Trust had a three-tier structure: Executive Committee, mukadams and dabbawallahs (see Exhibit 3). Under this structure, the basic operating unit was the team. Each team, which comprised between five and eight dabbawallahs, was headed by a mukadam. Having risen from the ranks of the dabbawallahs, a mukadam's primary daily responsibility involved the sorting of the dabbas. However, as team leader, the mukadam performed several administrative tasks that included maintaining records of client payments, arbitrating disputes between dabbawallahs and customers, and apprentice training. The mukadam was also in charge of acquiring new clients for the team and managing customer satisfaction. New customers purchased their dabba from the dabbawallahs when service was commenced. Dabbas were typically replaced, at cost to the customer, once every two years.

Seven to eight mukadams typically aggregated their efforts and constituted a profit centre; each profit centre was referred to as a "group." There were about 120 groups in total. While each group was managed autonomously, its members stepped in without hesitation to help other groups in dealing with emergencies such as dabbawallah absenteeism. Monthly group maintenance costs totalled Rs35,000, covering the maintenance of the bicycles, pushcarts and wooden boxes the dabbawallahs used in their daily deliveries.

The 13 members of the Executive Committee, which were elected by the general body every five years, co-ordinated the activities of the various groups. The Committee, which undertook all major decisions for the Trust and worked on the principles specified in the Co-operative Societies Act, met on the 15th of each month. Operational issues typically dominated each meeting's agenda. Examples of such issues included disputes with the Mumbai city railways over dabbawallahs not carrying their monthly passes or the ID issued to them by the Trust, and with the city police when dabbawallahs parked their pushcarts or bicycles where parking was not permitted. Annually, there were few reports of lost or stolen dabbas. In such instances, clients were reimbursed by the individual dabbawallah or given a free dabba.

Dabbawallah Profile

The dabbawallahs were a homogenous group in many ways. Its members, traditionally male, hailed from the same geographical region — known as Mavla — located east of the Sahyadri (Western Ghats) near Pune, and they spoke the

same language (Marathi). They shared similar customs and traditions, such as g

athering together for a week every April for a festival in their hometown. They wore the same dress, a loose white dhoti shirt, cotton pajamas and their trademark white oval cap.

All of these combined to form a distinct local identity for the dabbawallahs. They were easily recognized even in the busiest of locations. Pedestrians and commuters yielded to the dabbawallahs in order not to interfere with their service delivery. Seemingly always in a rush, the dabbawallahs were known for their reliability and work ethic. They ascribed to the traditional Indian belief that "work is worship." Averaging 55 years in age, dabbawallahs were typically lean, agile, active and physically fit. While the minimum level of education of a dabbawallah was grade seven, most never got past grade eight schooling.

Each dabbawallah earned a monthly income between Rs5,000 and Rs6,000. Out of this income, each dabbawallah was responsible for paying:

1. Rs120 for the monthly railway pass that allowed for unlimited access to Mumbai's railways;
2. Rs60 for the maintenance of the bicycle or the pushcart (which were owned by the group or profit centre); and
3. the compulsory monthly contribution of Rs15 to the Trust.

"It is a good earning for a semi-literate by Indian standards," observed Medge.

Each new recruit would undergo an apprenticeship for two years on a fixed remuneration of Rs2,000 per month. Each apprentice was then required to purchase a delivery route before being admitted as a dabbawallah. The price for the route was fixed as a ratio of the average monthly earnings of the group at 1:7. For instance, most groups' monthly earnings were approximately Rs140,000, so the apprentice was expected to deposit Rs20,000 for a delivery route. This money went to the Shared Capital of the Trust and would be returned to the dabbawallah upon retirement. Once admitted, the dabbawallah was guaranteed a monthly income and a job for life.

DABBAWALLAH MEAL DISTRIBUTION NETWORK

The dabbawallah meal distribution network was characterized by a combination of a "baton relay system" in which dabbas were handed off between dabbawallahs at various points in the delivery process and a "hub and spokes" system in which the sorting of dabbas was done at specific railway locations from where individual spokes branched out for distribution. There was no local historical model on which this distribution network was designed. All design decisions were driven by the singular purpose of delivering a dabba in time for the customer's lunch. The

delivery processes had largely remained unchanged since their inception even though the environment of service delivery had changed. For example, the delivery system did not rely on the use of computers. According to Medge:

If we were to use computers, we would be out of business. It is not because we do not know how to use computers but the system itself is not amenable to the use of technology in whatever form.

The only major change in the dabbawallahs' delivery model was the fine-tuning of the coding system in 1966. The number of customers using the delivery service had continued to grow, and without some form of common identification that all dabbawallahs could follow, the sorting process at the hubs was likely to become overly time-consuming. Medge observed:

We decided to decentralize the coding at the level of groups and each group was free to develop its own coding system based on simple and easily identifiable numbers and signs. In time, each group gradually developed its own distinctive color code — from a spectrum of combinations of the seven primary colors — serving as the first line of identification for any dabbawallah.

The workday for a dabbawallah started with the first delivery pick-up at 8:30 a.m. (see Exhibit 4). Leaving their Mumbai home, most of the time by bicycle, the dabbawallahs arrived punctually to the minute at the doorstep of each collection point, although they might not be wearing a watch. The collection point would typically be the client's home. Customers were aware of their responsibilities in the delivery process. Each knew that if the dabba was not ready for pick-up, the dabbawallah simply moved on; the dabbawallah did not wait. Each dabbawallah was personally responsible for the daily delivery of 30 to 35 dabbas. Dabbawallahs found that number to be usually manageable in terms of personal memory and physical handling capacity.

As each dabba was picked up, it was hitched to the handle or the back-carrier of a bicycle. Sometimes it was placed on a wheeled wooden trolley pushcart. Once the pick-up route was covered and all the dabbas were finally collected, they were transported to the nearest of 68 suburban railway stations the dabbawallahs used. It was at this station that a second set of dabbawallahs, already positioned on the platforms, took over. They sorted the dabbas according to destinations and placed them in destination-specific wooden cartages. The cartages came in two standard sizes, accommodating 24 and 48 dabbas each. As the train arrived, at two-minute intervals, the cartages were placed in a specially designated cargo carriage on the train located next to the driver's cabin. The loading had to be completed in 30 seconds, the time for which the train halted at each station. The cartages, accompanied by one or two dabbawallahs, were now ready to be transported to various hubs and destination terminals in Mumbai.

The hub was essentially a mid-point station in the suburban railway network where trains converged before branching out to other parts of the city. Dadar, Bandra, Andheri and Kurla were the four major hubs for the dabbawallahs' meal distribution network (see Exhibit 5). As epicentres that had to be passed through while moving from one end of the city to the other, the hubs were crucial links in the delivery system. They were also places where delivery errors could take place. That was why each of the hubs was actively managed by the mukadams, who stepped in to co-ordinate the sorting operation at each hub. As trains kept arriving in rapid succession, it became imperative to orchestrate three activities — sorting, loading and unloading — simultaneously. Doing so was a challenge during Mumbai's rush hour when thousands of commuters were also getting on or off each train. Given the tight time schedule for Mumbai's railways, the dabbawallahs had to complete their tasks quickly and precisely.

From these hubs, the sorted dabbas spoked out to various destinations — including the terminal stations of the city railway — where a third set of dabbawallahs was waiting to take over. The dabbas were off-loaded at various terminals and re-sorted, depending now upon specific customer location information, such as the street, building and the floor. The dabbas were then handed over to the fourth set of handlers, individual dabbawallahs, who were assigned to specific delivery routes in Mumbai city. Placing the dabbas on pushcarts or bicycles, or in some cases carried by hand or in crates on top of their heads (a full crate of dabbas could weigh up to 100 kilograms), the dabbawallahs delivered the home-cooked lunches to the designated recipient by 12:30 p.m.

An hour or two later, the empty dabbas — dropped off by the satiated client at the same spot used for dabba pick-up — were collected to be routed backwards on their return journey. In short, each dabba was picked up at the source by one dabbawallah for transport to the railway terminal, sorted and loaded by a second dabbawallah, unloaded and re-sorted at the hub or destination station by a third dabbawallah and delivered by a fourth dabbawallah to the home from which the dabba was picked up earlier in the day. The exact combination of dabbawallahs used each day varied with the volume and density of traffic, but it remained the same on the return route.

Since each dabba traveled through four sets of hands each day, it was important to identify and monitor the dabbas while in transit. This was done through a system of codes painted on the top of each dabba's exterior (see Exhibit 6). The originating station and the destination station were the primary codes. They were crucial for the sorting operations that took place at each of the hubs, and they were normally identified by alphabets that any sorter could recognize. The other encoded data included the apartment, floor, building and street the dabba originated from and was to be delivered to. The codes included symbols (e.g. dashes, dots, etc.), alphabets, numbers and other forms of notation which likely made little sense outside of the dabbawallah community, but which the

dabbawallahs recognized and understood instantly. The movement of the dabbas was monitored solely through these codes and client names were not utilized. Pulling one dabba aside, Medge explained:

The codes “K-BO-10-19/A/15” on top of this dabba mean the following: K was the dabbawallah who picked it up; BO meant Borivali, the area from where the dabba was collected; 10 referred to the Nariman Point area, the destination; 19/A/15 referred to the 19th building; A was the dabbawallah who delivered it; and 15 was the floor of the building where the customer’s workplace was located.

DABBAWALLAHS’ OPERATING ENVIRONMENT

For many decades, the labor-intensive textile mills in Mumbai made the single largest contribution to the overall pool of dabbawallah customers. While the customer composition had recently changed to include school children, the basic customer profile had remained unchanged. The majority of dabbawallah customers comprised the Indian middle class of fixed income earners. Approximately 4,000 dabbawallahs daily served workforce clients. Given the larger geographic spread of these clients from their homes, dabbawallahs typically employed bicycles, pushcarts and the Mumbai railways to make these deliveries. Servicing school children, on the other hand, did not require the use of the railway system as most were located close to their residences. Despite the shorter distances for delivery, the dabbawallahs charged more for these deliveries since school lunch timings and their pick-ups varied.

Dabbawallahs had three primary lunch competitors: fast-food chains, restaurants and roadside vendors. Kamat and Udipi were chains of both fast-food counters and restaurants located throughout Mumbai, catering to the lunch hour needs of their customers. These local chains were in direct competition with global chains, such as McDonalds, which entered the Mumbai market in 1997. Specialty food stalls, sans frills, serving local favorites provided another lunch option for Mumbai’s workforce, as did roadside vendors offering fast and efficient service and a varied lunch fare. Lastly, some Mumbai companies — for tax shelter purposes — offered their workers lunch coupons that were redeemable at select food outlets known as “Ticket Restaurants.”

In Medge’s view, the growing presence of these lunch competitors did not meaningfully impact the dabbawallahs’ business. He observed:

Dabbawallahs have a niche of their own. We do not see any of them as competitors. They prepare food, but we are not in the business of preparing food. We do not manufacture; we only deliver. There is

no other meal delivery service in Mumbai. We work in a unique operating space where we have a monopoly.

Several factors worked in the Trust's favor. First, people in Mumbai, given a choice, seemed to prefer home-cooked food. Those who were already using the dabbawallah service were not inclined to switch to other providers as lunch hour routines were habit forming. Second, and perhaps most important, was the cost of home-cooked lunches. Home-cooked food delivered by a dabbawallah almost always cost far less than having lunch at a food counter or a restaurant. For instance, at Nariman Point, Mumbai's central downtown location, a vegetarian lunch, served in a steel plate called a thali, purchased at a restaurant would cost Rs120. Further, a combination of snacks that passed off for lunch at a fast-food counter would cost about Rs30, while similar fare from a roadside vendor would cost Rs18. All these options required that customers leave their workplace to eat food whose quality was not assured. A lunch delivered by a dabbawallah from a catering establishment would cost an average of Rs20 (including Rs5 for delivery). A home-cooked lunch delivered by the dabbawallah would cost the home-owner about Rs8, with the majority of that cost paid for the dabbawallah delivery.

Some of the smaller courier firms, known in Mumbai as angadias, were viewed in the local media as potential threats to the dabbawallahs in terms of their ability to develop a parallel delivery service. Medge was doubtful about this potential threat as "an angadia would require an army of couriers to handle the meal delivery business." Mobilizing and motivating the requisite workforce would likely prove challenging for angadias, many of whom were mom-and-pop businesses that lacked the resources and skills to manage a substantially larger business demand.

Larger courier firms operating in Mumbai, such as Blue Dart, DHL and FedEx, were not interested in pursuing a service similar to that offered by the dabbawallahs, given the unique requirements of this type of delivery and their concerns about the inability to extend this service beyond Mumbai.

FOUNDATIONS FOR THE SUCCESS OF THE DABBAWALLAH SERVICE

Observers generally agreed that there were five distinct reasons for the success of the dabbawallahs.

Low-Cost Delivery

Clients typically paid between Rs150 and Rs200 per month for delivery, depending upon the route and the geographical distance traveled by the dabbawallah. According to Medge:

If a courier company were to be involved in this business, it would be charging at least Rs20 per transaction for a box weighing 1.5 kilograms. But we charge far less — between Rs4 and Rs5 per transaction — even while ensuring that every dabbawallah makes enough money for a living.

The prices charged to the customer were fixed at the discretion of the group. There were two broad considerations in determining the price. First, the pick-up location was considered. For example, the delivery charges for large residential complexes and apartment buildings were lower because of the concentration of customers that allowed for delivery pick-up economies. Less populated areas typically meant fewer customers and longer pick-up/delivery times for the dabbawallahs, and therefore, the prices to service those areas were higher. The second consideration was time. For customers who could not deliver dabbas by the stipulated pick-up time, their charges were higher by up to 25 per cent. If the pick-up time was too close to the lunch hour, requiring an expedited delivery service, the charges were double. Medge observed:

We see future potential for revenue enhancement with such premium pricing. Indeed, customers with special needs and requests have gone up by 25 per cent, from about 20,000 to about 25,000, in 2002 alone.

Client service charges were generally increased across the board once every two years by about 15 per cent. This increase usually coincided with a major development, such as an increase in railway fares by the government.

Delivery Reliability

The service reliability of dabbawallahs was rooted in the following factors. First, dabbawallahs considered themselves as entrepreneurs, not employees. That explained why, for instance, they had never gone on strike. They worked six days a week, taking a break for five days in April every year to attend an annual village festival en masse. Second, they were not governed by a hierarchy that defined working relationships in terms of a boss and subordinates. Everyone worked as part of a team with a common goal that had to be achieved every working day: No customer should go without food. Third, they lived and worked in clans. All apprentices were recruited through referrals from relatives and friends migrating to Mumbai from the same geographical region. It ensured that there was no dilution of service culture or erosion of the basics. Fourth, each dabbawallah was solely responsible for the delivery for his 30 to 35 clients. While others may fill in occasionally, he generally maintained total control over his route.

Decentralization

The group structure allowed for independent operations. Each group maintained its own records of revenue and expenditure, serviced its own pool of customers, and managed its own system of billing, collection and expenditure allocation. Each group was also responsible for generating and distributing the monthly revenue among its members, resolving disputes on its own and acquiring new customers entirely independent of the Trust. In fact, the Trust had distanced itself completely from the day-to-day activities of each group. It had no centralized records of group clients or the dabbawallahs' and mukadams' incomes and expenses. The Trust's Executive Committee dealt only with those matters that the mukadams deemed necessary for discussion at the monthly meeting. Decentralization had been instrumental to building cohesion within each group, and operational autonomy helped to provide focus on delivery effectiveness and improvement.

Perceived Equality

Given the design of the delivery service, not every dabbawallah was required to put in equal time and effort. Yet each dabbawallah in the group earned equal remuneration. As such, senior dabbawallahs earned the same monthly income as dabbawallahs with less experience and tenure. According to Medge:

The dabbawallah system has its own checks and balances because of the large component of physical labor which is integral to effective service delivery. For example, a senior dabbawallah undertook only those tasks, like sorting at a hub, which required co-ordination. Tasks involving legwork like collection, loading, unloading and delivery were done by the younger workforce. This system was a leveler. It helped forge equal relationships among the dabbawallahs.

Suburban Railway Network

Mumbai's longitudinal-based geography provided a great deal of latitude in logistics management because the movement of dabbas towards the various north to south destination points remained largely unhindered. This helped in reducing the amount of food spoilage during delivery. The dabbawallahs made extensive use of Mumbai's suburban railway network. Indeed, one popular saying in Mumbai was: "If the local train is the lifeline of the city, then the dabbawallahs are the foodline." It was only on days when the suburban railways grounded to a halt, such as the once or twice a year that monsoons flooded the tracks, that dabbas were not delivered. However, few recipients of the dabbas reached their workplaces when the railway system was not working. The railways provided the most convenient and economical mode of transport for the dabbas. On average, a

dabbawallah covered 70 km to 80 km in two-and-a-half hours by train; on bicycle, dabbawallahs covered much less territory.

RAGHUNATH MEDGE AND THE FUTURE OF THE DABBAWALLAHS

Medge was an independent businessman in his own right, running a profitable operation known as the Tiffin Box Suppliers & School Bus Service. All dabbawallahs were allowed to pursue a business outside the delivery system as long as it did not interfere with their delivery activities. "But this is an exhausting and demanding job, and it is only after one becomes a mukadam that one has some free time," said Medge. Medge, now in his late-40s, had worked his way through the Trust's organizational structure and was currently serving his second three-year term as president. He also served as secretary of the Dakkhan Mavle Sahakari Patpedhi Credit Union. Medge's father, himself a dabbawallah for four decades, also had served as a previous president of the Trust.

Observers of the service generally cited three broad issues as potentially impacting the future of the dabbawallahs.

Shrinking Customer Base and Customer Loyalty

The number of dabbawallah clients peaked at around 275,000 in 1980. The closure of several textile mills during the 1980s explained much of the subsequently decline in customers as thousands of mill workers lost their jobs. The number of customers shrunk gradually to less than half by the end of the decade, forcing dabbawallahs to tap new customer segments, such as delivering to school children or delivering lunches produced by caterers.

Targeting new customers was a task that was left to individual groups and the mukadams, as there was no co-ordinated effort at the level of the Trust aimed at new customer acquisition. According to Medge:

We have a great deal of decentralization in this business and each group is free to pursue new customers depending upon its ability to mobilize resources and to cope with demands of servicing new customers. There is no interference from the Trust and no pressure of any kind on any of the dabbawallahs to get new customers. We do not want to stretch our human resources to a point where our delivery system faces the risk of a breakdown, leading to a loss of reputation built assiduously over decades.

The delivery system had built-in mechanisms that allowed for accommodating fluctuations in demand (e.g. customers going on annual vacations or schools being

closed during summer). Clients were required to pay for the full month if a dabba was to be delivered for more than seven days in a month. Every customer paid on time, usually immediately upon being presented with the monthly invoice, and there was no credit for services not rendered (see Exhibit 7). More than 3,000 of the current dabbawallah clients had stayed with the service for more than two decades.

Lifestyle Changes

As double-income families became the norm in Mumbai and the demand for convenience foods rose, the time that might be spent cooking at home became a precious commodity for most. As a result, what constituted home-cooked or convenience food was likely to change over time, as new lunch items were becoming available on grocery shelves (e.g. microwavable food). In Medge's view:

These changes are superficial and will not affect the core of our business, because at the end of the day, everyone prefers home-cooked food to all other foods. It is that innate preference that has been the basis of our survival so far. It will continue to be so in the future.

Workforce Management

While each dabbawallah worked as an owner-entrepreneur, there were workforce management issues that currently needed to be addressed at the operational level. For example, some dabbawallahs had been in the business for more than four generations, and they were finding it difficult to get their children interested in following in their footsteps. Some of the dabbawallahs themselves seemed to prefer different careers for their children mainly because of the large component of physical labor involved in the job. To Medge, however:

For every current generation member of our families in Mumbai who fancies an office job, there are many others from our villages willing to join us as apprentices with hopes of becoming a mukadam.

While recognition of individual effort through monetary rewards was generally considered to have a positive and demonstrative impact on general work performance, the dabbawallah system had no provision for such individual rewards. Excellence was normally expected from every dabbawallah every day. There were three broad service expectations mukadams had for each dabbawallah: timely delivery to the client, courteous attitude and behavior towards the customer,

and understanding the special needs, if any, of each customer. Dabbawallahs were expected to avoid drinking alcohol during business hours, to always wear their white cap on the job and to carry their identity cards. There were two measures of service performance actively monitored at the individual dabbawallah level: the number of customer complaints and the number of encounters with the authorities. There were no financial incentives for achieving excellence on either measure. For Medge:

Excellence is a state of mind that every dabbawallah automatically gets conditioned to, once he is part of the system. While we do not offer extra incentives, we offer little disincentives. In particular, we do not fire anyone.

CONCLUSION

Medge was scheduled to address the faculty and students of the Indian Institute of Management in Lucknow in early January 2004 on how the dabbawallah meal distribution network worked. He was aware that this audience would be interested in the learning that the dabbawallahs could provide to improve supply chain — and service — design and execution. He was also aware that it was likely that most of the audience would have concerns about the future of the dabbawallahs. Since he anticipated being asked about that concern, Medge already knew what he was going to say in response:

The dabbawallah is a Mumbai institution that has survived for over a century now. It will survive for the next century and beyond. There will of course be a churning of customers. But children will continue to go to school, people will continue to go to work, everyone feels hungry at lunch hour and, if given a choice, everyone wants to have home-cooked food delivered personally to them. Dabbawallahs facilitate that choice. We will continue to be there as long as people exercise that choice. We will continue to be there because no one can provide the kind of error-free service that we provide.

Exhibit 1

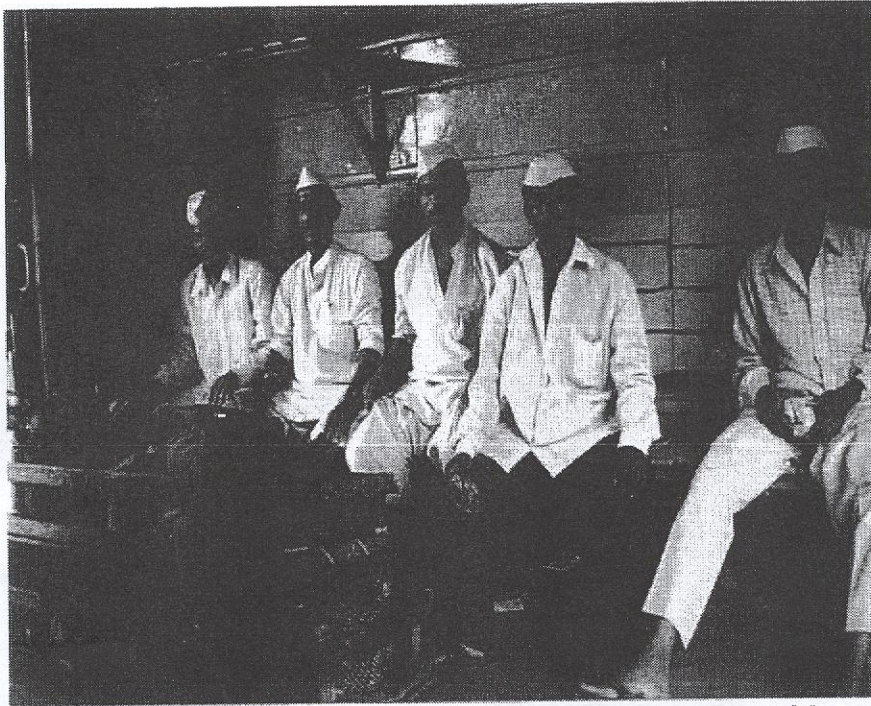
DABBAWALLAHS OF MUMBAI



Dabba was a generic, colloquial term used explicitly in Mumbai to describe any cylindrical box. In the context of meal delivery service, a dabba was an aluminum box carried by its handle like a tin of paint. Each dabba housed three to four interlocking steel containers and was held together by a collapsible metallic wire handle. Each of these containers accommodated an individual food item found in a typical midday lunch.

Wallah was a label for a tradesperson in a particular profession. For example, a paperwallah was an individual who delivered newspapers. Taken together, a *dabbawallah* was a courier who picked up a lunch-full dabba from a client's home in the morning, left it outside of the client's workplace for pick-up, retrieved the empty dabba after the lunch was consumed and returned the empty dabba to the client's home in the evening.

Exhibit 1 (continued)



This is a special pushcart that holds 150 dabbas. It takes between three to four dabbawallahs to maneuver this pushcart.

Source: Company files.

Exhibit 2

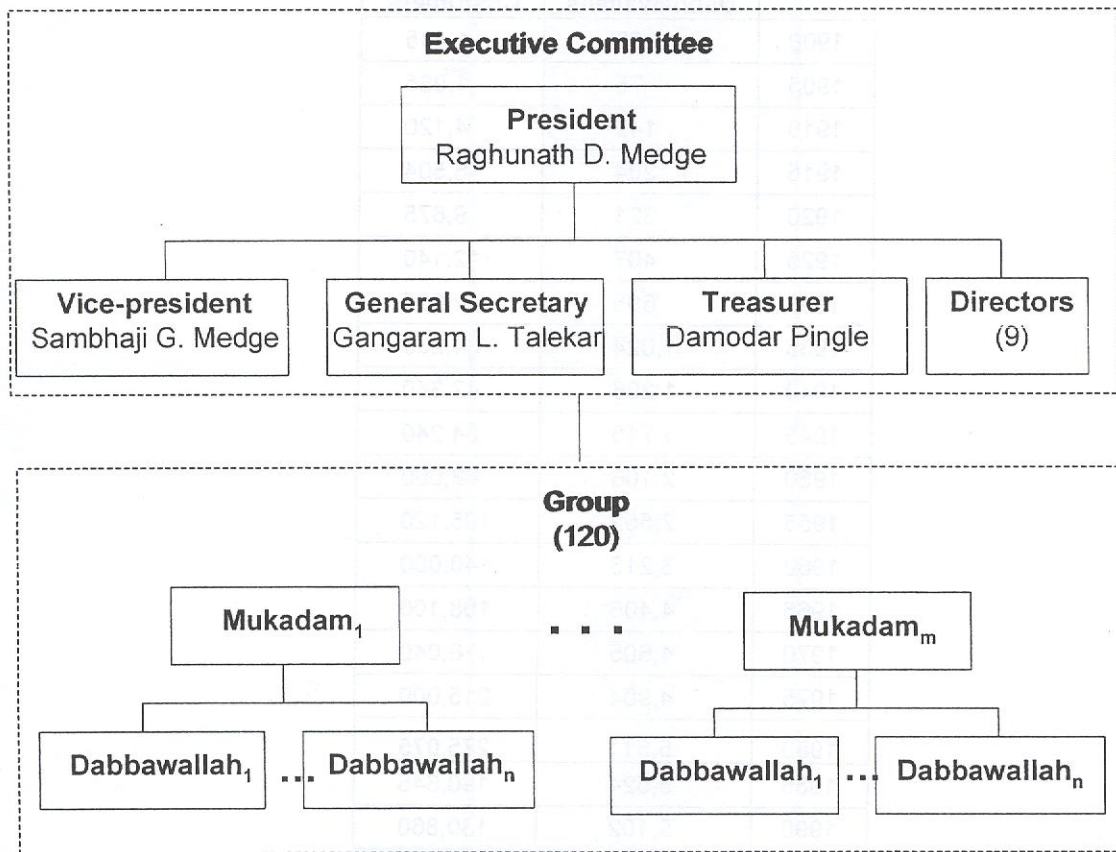
DABBAWALLAHS AND CUSTOMERS

Year	Number of Dabbawallahs	Number of Customers
1900	58	1,445
1905	75	1,965
1910	142	4,120
1915	204	6,504
1920	321	9,675
1925	407	12,140
1930	695	22,865
1935	1,024	34,230
1940	1,206	42,340
1945	1,715	64,240
1950	2,106	82,000
1955	2,552	105,120
1960	3,216	140,000
1965	4,406	198,100
1970	4,605	176,040
1975	4,904	215,000
1980	5,511	275,075
1985	5,524	190,645
1990	5,102	130,860
1995	5,180	142,260
2000	5,164	165,670
2003	5,142	175,040

Source: R. Medge

Exhibit 3

THE NUTAN MAMBAI TIFFIN BOX SUPPLIERS CHARITY TRUST'S ORGANIZATIONAL STRUCTURE



Note:

- m* # of mukadams in a group
- n* # of dabbawallahs in a team

Source: R. Medge

Exhibit 4**SAMPLE MORNING JOURNEY OF A DABBA**

- 8:25 a.m. The dabba is filled with lunch at the client's kitchen and kept outside the door of the residence.
- 8:30 a.m. The dabbawallah arrives, picks up the dabba and moves on knocking at the door only if the dabba is not seen. Under normal circumstances there is no interaction with any member of the client's household.
- 8:38 a.m. The dabba is placed on the bicycle or pushcart together with dabbas collected from other customers.
- 9:20 a.m. Bicycles and pushcarts drawn by individual dabbawallahs arrive from various collection centres to the suburban railway station.
- 9:30 a.m. The sorting operation begins with dabbas sorted according to destinations and placed in cartages that are specific to each destination. The cartages come in two standard sizes, accommodating 24 and 48 dabbas each.
- 9:41 a.m. The suburban train arrives. The cartages, normally numbering five to six, are loaded into the special compartment located next to the driver's cabin.
- 10:21 a.m. The train arrives at one of the major hubs. The cartages are unloaded and bundled with those arriving from other collection centres. They are resorted according to destinations.
- 11:05 a.m. Cartages are loaded into the suburban train for onward journey to the final destination terminals.
- 11:45 a.m. The suburban train reaches the terminal station. Cartages are unloaded and dabbas are re-sorted, now according to specific delivery routes.
- 12:10 p.m. Dabbas are placed in destination-specific cartages and hitched typically on to bicycles or pushcarts for delivery to individual clients.
- 12:30 p.m. The dabba is delivered at the doorstep of the client's workplace.

The delivery process is reversed in the afternoon. The empty dabba is picked up between 1:15 p.m. and 2:00 p.m. for its return to the client's home early that evening (e.g. by 5:30 p.m.).

Exhibit 5

MUMBAI CITY'S SUBURBAN RAIL NETWORK

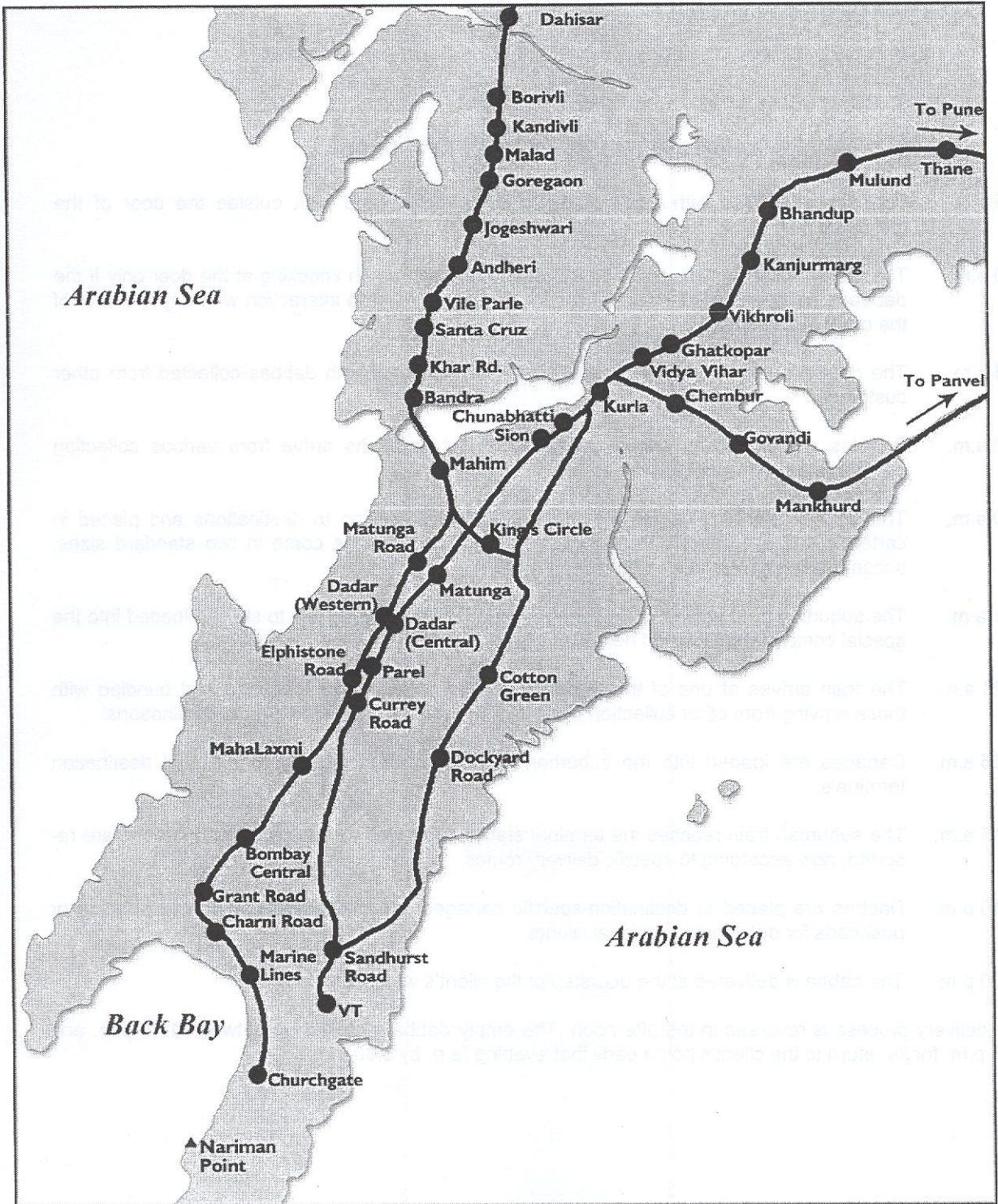
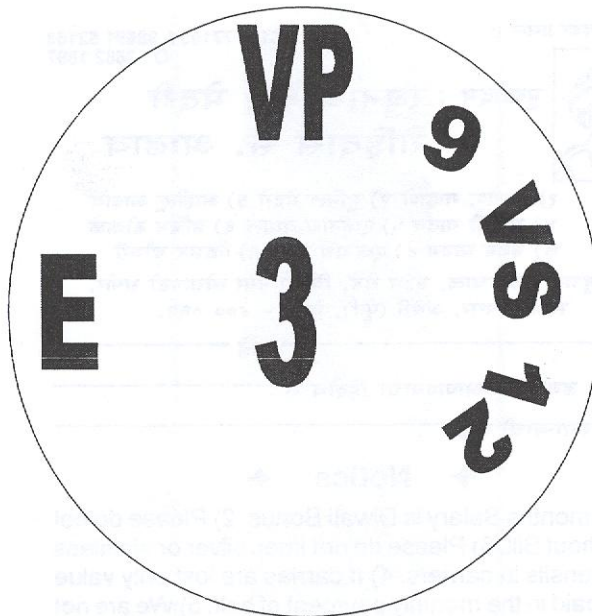


Exhibit 6

SAMPLE DABBAWALLAH DELIVERY CODES



Coding Key:

- VP** Code for the residential location (e.g. Vile Parle, a suburb of Mumbai)
- 9 VS 12** Code for dabbawallahs to use at the destination location where:
- 9** is the code for dabbawallahs at the destination station
 - VS** is the code for the building name
 - 12** is the code for the floor number
- E** Code for dabbawallahs at the residential railway station
- 3** Code for destination railway station (e.g. Nariman Point)

* Codes are painted on the top of each dabba in distinct group colors.

Source: R. Medge

Exhibit 7

SAMPLE DABBAWALLAH INVOICE

॥ श्री ज्ञानेश्वर प्रसन्न ॥

M : 98194 77199 / 98691 52163
O : 2682 1897

मुकादम : रघुनाथ धों. मेदगे
रोहिदास स. आढाव

१) लक्ष्मण गव्हाणे २) सुनिल मेदगे ३) आहीलू आढाव
४) मारुती यादव ५) एकनाथ बघाले ६) सचिन ढोकळे
७) बबन कदम ८) एकनाथ बच्चे ९) किसन चौधरी

३, रघुनाथ पाठकचाळ, सहार रोड, विजय नगर सोसायटी समोर,
संभाजी नगर, अंधेरी (पूर्व), मुंबई - ४०० ०६९.

दिनांक _____ माहे _____

भोजनाचा डबा नेणे आणण्याचा हिशोब रु. _____

वसूल करणाऱ्याची सही _____

◆ Notice ◆

1) One months Salary is Diwali Bonus. 2) Please do not pay without Bill. 3) Please do not keep silver or stainless steel utensils in carriers. 4) If carries are lost only value will be paid in the monthly payment of half. 5) We are not responsible for carries lost in your office. 6) Delivery will depend as per train timings. 7) If train are late for 1-30 Hours of more than carrier will be return as it. 8) If any have any complaint about our servants Please let us know by post. 9) Please look carrier having single supporters hence are will not be held responsible for damage of the lunch. 10) Payment to be made in full even carrier fails to carry for 8 to 10 days in a month 11) If carriers lost we pay half from my only.

The Marathi text at the top of the invoice specifies the name of the specific dabbawallah servicing the delivery route, the nine other dabbawallahs in his team and the mukadam overseeing this team's efforts (e.g. Raghunath Medge in this instance).