

Lessons for Harvard from the Dabbawalas of Mumbai

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Abstract

In Hindi, a "dabbawala" is a guy who carries, owns, or sells boxes. But in Bombay, a "Dabbawala" is a guy whose duty it is to collect freshly prepared, home-cooked food packaged in a Tiffin from the house of the client and bring it to the customer's workplace (Patel & Vedula, 2006). In the case of Dabbawala, the company's 5,000 or so "workers" are really "business partners" of the Charitable Trust NMTBSA. The company's first priority is providing its clients with nutritious meals prepared by experts who appreciate their preferences and adhere to the highest standards of cleanliness. Without spending a dime on technology, having no impact on the environment, and being recognized as one of the most promising organizations with a six sigma certification for a 99.9997% accuracy rate of deliveries, Dabbawala possesses one of the most efficient supply chains in the world.

Keywords: Dabbawala, home-made, freshly cooked, partners, customers, business, investment

Introduction

The Mumbai Dabbawala Association is an Indian group well recognized for its extensive network and experience in the field of supply chain management. In this article, we examine how Dabbawala, a Mumbai-based food delivery service, has built a successful business without spending a dime on technology. All of Dabbawala's staff members are equal participants in the business, not just workers. The Dabbawala family in Bombay has been bringing customers' home-cooked meals to their workplaces for the last 150 years, with an error rate of fewer than one per sixteen million deliveries.

Over eighty-five percent of the association's staff and partners are illiterate, but they have maintained a perfect 100 percent satisfaction score among their clientele. As a result of the Dabbawalas' tremendous success, their business model has been included into a Harvard University management lecture.

Dabbawalas: A Historical Perspective

The first Dabbawala was employed by a Parsi banker who wanted to eat home-cooked meals on a daily basis, as recounted by the Bombay Dabbawala Association. Several more Indians shared this need and expressed enthusiasm for the concept by calling for the same service. The now-iconic "Mumbai Dabbawala" service arose in response to this demand around 1890, when the world-famous

"Mahadeo Havaji Bachche" was still a teenager. It's interesting to note that almost 85% of the Mumbai Dabbawala staff are uneducated.

Dabbawala originated 150 years ago, when a code system was created to properly assign supplies to their intended recipients. The coding system is unusual in that it has not had to change significantly to accommodate the changing needs of businesses. The Dabbawalas not only bring customers' freshly prepared breakfasts and lunches to their workplaces each morning, but they also return their empty tiffins to them each evening.

Six days a week, fifty-one weeks a year, or around 400,000 tiffins every day, the Dabbawala's process transactions from an average of 200,000 clients (to and fro). Whether it was a natural calamity, like the floods in Bombay, or a man-made tragedy, like the bombings in Mumbai, the Dabbawalas never missed a delivery of tiffins to their customers' offices. The Mumbai Dabbawala are well-known all over the globe for their punctuality due to the efficiency of their business's general structure. The Dabbawalas have hosted notable figures including Prince Charles at their home. Forbes was the first publication to certify the Dabbawala family as Six Sigma experts, and the company is now second only to Motorola in terms of supply chain management in terms of size. Yet, if you were to question any old Dabbawala, "Have you committed a mistake like exchanging tiffin's, arrived after lunch hours?" he probably wouldn't admit to such a thing.

Supply Chain Management: Key Elements

The Mumbai Dabbawala's have successfully been able to meet the strategic fit. Let us examine this using the methodology of Chopra and Meindl:

- a). According to Chopra & Meindl's 2013 article "Understanding the Customer and Supply Chain Uncertainty," in this scenario, customers can tolerate a short response time, a moderate number of product variants, a high service level, a low rate of anticipated innovation in the service, and a moderate level of implied demand uncertainty. Most indicators point to a modest and predictable level of Demand uncertainty. Natural disasters, terrorist attacks, and other emergency situations are the only times when individuals would rather eat at home than elsewhere, at least until it is safe to return. The Dabbawalas, on the other hand, have been able to fulfill these requirements, which indicates that they have minimal implied demand uncertainty and are good at anticipating uncertainties in the supply chain.
- b). Capabilities in the Supply Chain (Chopra & Meindl, 2013): For the most part, Bombay Dabbawala's doesn't fulfill any of the criteria listed here for determining whether or not a firm is a good strategic fit. First, they are not required to react to wide ranges of numbers, since the quantity necessary does not change dramatically. Yet, it is somewhat attentive to its consumers because of the requirement to satisfy short lead times. As this is a totally distinct service, they are not need to deal with a wide range of items, nor do they need to create ground-breaking innovations. Yet, Dabbawalas in Mumbai have acquired the skill of meeting these high standards of service via years of practice and mentoring from their more seasoned colleagues. Finally, the Dabbawala doesn't have to deal with supply chain risk since, if the customer's house hasn't prepared the Dabba by the time he comes, he won't stay too long out of respect for his other

customers. Thus, "Somewhat efficient" and "Very Efficient" best describe their Supply Chain Capabilities.

- c). The last phase in "Achieving Strategic Fit" (Chopra & Meindl, 2013) is to harmonize the aforementioned considerations. Chopra and Meindl's (2013) hypothesis of locating the zone of strategic fit is shown in the accompanying graph, which can be seen by clicking [here](#).

The Mumbai Dabbawalas are located in the zone of strategic fit, since they have "low implied demand uncertainty" and a "highly efficient Supply Chain."

Mapping the Supply Chain Process Map

The Dabbawalas operate with a one-of-a-kind supply chain, one that begins at the customer's home, with the customer's wife, mother, or chef preparing the meal. Around 8:30 a.m., a Dabbawala begins his day by visiting the homes of his customers to collect their Dabbas (tiffins), which he then transports to the nearby train station, where he and the other Dabbawalas in the neighborhood gather to sort the food into boxes based on their final destinations. It takes around two hours for the tiffins to be given to the Dabbawalas in the delivery region, and then the Dabbawalas begin delivering the Dabbas to the customer's workplaces, where the employees may have their lunches in the comfort of their own homes, as described in Patel and Vedula (2006).

After making their deliveries, the Dabbawalas sit down to a quick meal for half an hour before heading to the offices of their customers to retrieve the empty tiffin boxes and then on to the train station. As they go back to the stop where they picked up the Dabba, they'll begin delivering the tiffins to the customers' homes.

Vineet Nayar, CEO of HCL Technologies, one of the world's fastest-growing IT companies, and author of a book published by Harvard Business Press in June 2010, asserts that "Employees should be first and Customers should be second for a company," a philosophy that has helped propel HCL Technologies to the forefront of the IT industry. The Dabbawala group in Mumbai exemplifies this attitude to some degree.

The majority of Dabbawalas come from the same village, thus they are extremely close and treat each other like relatives. The Dabbawala in the area where a new member is needed first contacts a member of his own family to see if they are interested in joining the organization. This is how knowledge is handed on from one Dabbawala to the next, without the interference of bureaucracy. Several of the world's largest companies devote considerable resources on employee development. Yet the Dabbawala family doesn't mind paying such a little sum. The Dabbawalas have spent little money on staff training and development beyond the expense of setting up computer laboratories for them to use. Employees get along well with one another and are supportive of one another, which is a major factor in the company's success.

Working Model of the Dabbawalas

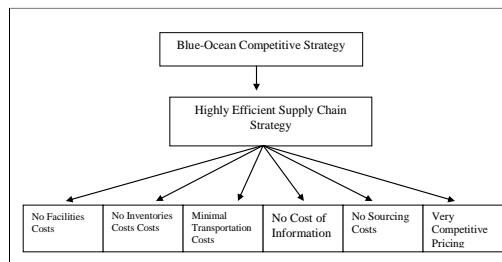
Deliveries along the Western Line serve as a convenient example of the Dabbawalas' supply chain process. All tiffins are brought from the regions along the Western Line before Virar and delivered there. The train is sluggish and pauses at every station till Borivli. The Dabbawala who set out from

Virar will stop to pick up any more lunches that need to be delivered. He organizes the Dabbas by place of arrival while in route. A rapid train, making just the most important stops after Borivli. The leader of the convoy receives the Tiffins and is responsible for distributing them to their intended locations. Up till Churchgate, one of Mumbai's busiest locations, the same Dabbawala who began in Virar drops down all Tiffins at the heads of Convoy. When he reaches Churchgate, just as in other areas, the Tiffins are sorted by destination and sent out to be delivered to various workplaces. After the Tiffins have been retrieved from the workplace, the procedure is reversed.

In a nutshell, a Dabbawala's day begins at 8:30 a.m. and ends at 5 p.m., during which time he receives the customer's tiffin from his or her home and delivers it to the customer's workplace, and then returns the empty tiffin from the customer's workplace to his or her home. Speaking at the Indian Institute of Management in Calcutta, Dr. Pawan Aggarwal said, "many of the customers trust the Dabbawala's so much, that when they get their salaries which is too risky too travel with in the local trains because of the high number of pick pockets, they put their salaries in the empty tiffin's because they feel that this is much more safer." The Dabbawala family of Bombay has built a stellar reputation over the last 150 years.

Analysing the Dabbawalas Supply Chain

The Dabbawala family of Bombay uses a "Blue Ocean" approach to competition. If delivery services were included in the list of rivals, this business plan would still be considered a "Red Ocean Strategy." The Dabbawalas set themselves apart from traditional delivery businesses in several ways. The courier services provide a wide range of services, including the delivery of electronic goods, documents, clothing, fast moving consumer goods, and more. Nonetheless, the Dabbawalas have a "Blue Ocean" competitive strategy despite just delivering tiffins. This is because they have a highly distinct pricing strategy and business model.



We believe that the Dabbawala family of Mumbai has a Very Efficient Supply Chain Strategy. The effectiveness of a company's Supply Chain strategy hinges on how quickly and efficiently it can react to changes. The indicated demand unpredictability is rather low, hence the association's supply chain approach is effective. The association's efficiency and cost savings are due to a number of causes, including those listed below, which are why no other business in Bombay can hope to compete with the Dabbawala's.

Logistical Drivers a. Facilities: The Dabbawala company, based in Mumbai, has no need for office space. There is no need for a distribution center, storefront, or factory to make this happen. The true hub for Dabbawala deliveries in Mumbai is the city's railway stations, saving the company money. One of the biggest expenses in any supply chain is facilities, but Dabbawala doesn't have to worry

about that because of how they do business. In this case, the corporation is able to reduce its Supply Chain expenses, which is a major boon to the surplus the department brings in. As compared to other courier services, this Dabbawala fee is rather modest. While courier businesses don't require a storefront or factory, they nevertheless must spend heavily in distribution centers and/or warehouses. While a courier service may not need the warehouse and distribution center for tiffin deliveries, it will require it for its other courier services, increasing the shared cost of such facilities. As a result, the Dabbawalas use a very effective supply chain approach from a purely operational point of view.

Inventories: Finished items, work in progress, and raw materials are all examples of inventories that Investopedia classifies as "current assets" for a company. The Dabba's or the Customer's Tiffin's are the completed products in the organization; the work-in-progress goods and the raw materials would be the expenses spent to prepare the meal, but they are not a part of the Dabbawala's organization and are not accounted for in the Dabbawala's records. If appropriate, the completed items have a one-day inventory turnover. Since the Dabbawalas' completed items incur no further expenses, applying this principle to their business would not be beneficial. Deliveries to the customer's workplace and home on the same day mean that the Dabbawalas don't need to keep any completed items in stock. So, the Dabbawalas have an extremely well-organized inventory system inside their supply chain.

Transportation: According to Robello, "the quickest, most efficient, cheapest, and reliable means of transportation accessible to the people living in Mumbai is the Suburban Railway Network," which can be found on page 19 of the ebook *Sao Paulo and Mumbai: The Effect of Rail-Based Networks upon Two BRIC Mega Cities*.

New Delhi does not have authority over Mumbai, India's financial and commercial metropolis, in the same way that Washington does not have authority over New York (Thomas, 2007). Over its 603 square kilometers of territory, Mumbai is home to 12.47 million people as of 2011. (Indian Government, 2011). More than 150 years after its initial design by the British in India, the Mumbai railway system is still going strong. Mumbai (previously Bombay) is a city whose layout was planned on the construction of a railway system. Over 160 separate communities exist there, with the most majority falling into one of two camps on each side of the railroad. Station No. 11 Dadar, for instance, is physically one train station but administratively serves the two distinct neighborhoods of Dadar East and Dadar West. Simply put, this is the division of Dadar into the eastern and western halves of the train station. The Local Rail is the quickest and cheapest way to go around Mumbai. The Dabbawala family of Bombay has been taking advantage of this aspect by relying heavily on the railway system. The Dabbawalas of Bombay, India, employ something called "Intermodal Transportation," which entails using more than one kind of transportation to get the Dabbas from home to work and back again. The system in question is a cross-docking one.

The Dabbawalas of Mumbai use several modes of transportation including bicycles, trains, and foot travel. Each Dabbawala is recognized as a business partner and must purchase their own delivery equipment, as noted by Patel and Vedula (2006) in their study. Two bicycles for about Rs. 4,000, a tiffin box for Rs. 500, and a monthly train ticket costing Rs. 300 are among our biggest purchases.

Fig 3: Coding System



- “Initial coding system used colored threads to mark 7 islands
- Then utilized thrown away cotton waste from tailors
- Non using color markers

E = Code for Dabbawal street at residential stations

VLP = Residential station ville Parle

3 = Code for destination station

E.G. = Church Gate

9 = Code for Dabbawala at Destination

Ex = Express towards (Building Name)

12 = Floor No. in the building”

Source: Mane, S, 2013

Design and implementation of the Dabbawalas of Mumbai

- a) Rigid Supply Chain Design of Dabbawala’s– While the Dabbawalas of Mumbai have found a lot of success in satisfying their customers, their Supply Chain is very fragile. Except for original equipment manufacturers, most businesses always have a second source of supplies ready to step in if their first provider is unable to satisfy demand. Now, let's see how this does in comparison to the market analysis in this article. If the Mumbai train station is closed for whatever reason, the Dabbawalas probably won't make their delivery. A backup supply chain strategy should always be in place to ensure that the tiffins go to the proper consumer, even if the Dabbawalas have never failed before.
- b). Mode of Transportation is not totally safe – Knowing Mumbai, the local train is one of the top targets of pick pockets, which means the Dabbawalas might become a target. Some customers trust the Dabbawala's so much that they place their wages in the empty tiffin boxes because they consider it safer method to arrive home than to carry it personally, Dr. Pawan Aggarwal(2013) said in his address. Because of these factors, the Dabbawala family is more likely to be robbed. Even if just one Dabba or Tiffin is taken, the Dabbawala's reputation will suffer severely. This is

why riding the local train is a risky way to get about town. This has never occurred in the last 150 years, but it may if the Dabbawala family keeps using the same method of conveyance.

- c). High labor-intensive Exercise – The company is plainly excessively labor intensive, thus its supply chain operates on the principle of pushing products to customers. The company recruits a large number of workers and partners, which is why. One Dabbawala is needed once a region has thirty tiffins to collect, but more are hired as needed to handle peak periods. This means that if he doesn't attract a lot of clients in the following six months of his training, his revenue will be rather low in comparison to the other Dabbawala's. The Dabbawala family of Mumbai does not need more tiffin to hire someone fresh. They have a push-based Supply Chain since they allocate workers based on forecasts rather than actual needs. The company may struggle to satisfy its labor needs if demand continues to rise, since it only recruits from a small number of communities. This may cause the Dabbawalas to get overwhelmed, which in turn might disrupt the distribution process.

Conclusion

The Mumbai Dabbawala family is one of more than 5,000 contributors to the nonprofit NMTBSA. The Dabbawalas aren't technically NMTBSA employees; rather, they're partners in the trust's benevolent endeavor of providing consumers with healthful, home-cooked meals. The Dabbawalas are a group of people that distribute lunch boxes (Dabbas) to office workers and students in the area at very low prices. The Dabbawala's run one of the most successful and well-oiled supply networks of any logistics organization in the world. The charitable trust has been honored by several visitors and certificates for the exceptional time management and service they provide. One error in every sixteen million deliveries is enough to earn the trust a six sigma accreditation. Dabbawalas are hired from the same small set of communities as the rest of the organization's partners and workers.

Indeed, "the Dabbawala's have zero percent utilization of gasoline, zero percent investment in technology, zero percent conflicts, one hundred percent customer happiness, zero percent investment, and 99.99999% precision in delivery," as Purohit puts it. The Dabbawalas have set a standard for excellence in customer service, which will encourage other businesses to adopt their supply chain policies.

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