

Starting Dabbawala Service at the city of Kolkata

1. INTRODUCTION

1.1 Background:

Dabbawala service is famous Tiffin delivery service of Mumbai, which caters to thousands of people in very low cost. Dabba means Tiffin in local language. It provides lunch boxes to people in their offices at a specified time. The meals are fresh and home cooked mostly by House wives, giving them immense opportunity to earn, working at home. Nowhere is mass scale cooking done. Every household prepare the Dabba with food that they prepare for their own family. This ensures quality food made with all possible care. Apart from the cooks/house wives, the next most important part of this service are the Dabbawalas or the delivery personals. The Dabbawalas are the one who collect the Dabbas/Tiffin from the household and deliver it to the clients directly to their Office spaces at Lunch time. They almost always commute through train as it is the cheapest mode of communication in India. Where one Dabbawala collect Tiffin prepared by house wives in one location and deliver it to another fellow Dabbawala at the nearest station at a specific time, who then commute through the train and at each specific location (as indicated by color coded stickers on the Dabbas), the Dabbawalas in the train would pass the Tiffin to other dabbawala in the station, who then delivers it to the destination by walking or by bicycle. This system of Delivery is unique and very much cost efficient, making the service very cheap and yet very high quality.



Image Credits: marathimedia.com

This service had been a topic of many research papers of top most Management Schools and even Harvard Business School added the case study *The Dabbawala System: On-Time Delivery, Every Time* to their compendium for its high level of service with a low-cost and simple operating system. This is a service which give employment to semi skilled workers and produce employment opportunity to women who cannot leave their house to work outside due to myriads of family responsibility. Therefore the social significance of Dabbawala service is huge.

1.2 Business Problem:

Despite the popularity of the service it is not replicated in other cities like Kolkata. There is huge potential of growth of the service in the city of Kolkata as Kolkata also have very good local train connectivity, a huge demand for food service and many semi skilled persons looking for employment. The Dabba service is known for very little investment required to kick start.

Now if someone wants to start a Dabba service in the city of Kolkata with minimum investment, where should he/she start with? Which are the location where the advertisement for the service be targeted. Where the advertisement for cooks be targeted.

1.3 Audience:

- Individuals looking for a social entrepreneurship opportunity with minimum investment and good social benefits.
- House holders looking for opportunities to earn money cooking same food that they already cook for their own family.
- Semi skilled people looking for job in cities can earn decent money through delivery service.
- Government and NGOs can also invest in such a service as it provides immense opportunity for women to be included in work force of the country and thus giving a boost to the country's GDP.

2. DATA

2.1 Data Source:

- Wikipedia Page on list of Kolkata suburban railway stations
- FourSquare Location data.

2.2 How it will be used:

- List of Local Train Stations in Kolkata is required as the Dabbawala service heavily rely on commutation through Train. Kolkata Suburban railway Station list is extracted from [WikipediaPage](https://en.wikipedia.org/wiki/List_of_Kolkata_Suburban_Railway_stations) (https://en.wikipedia.org/wiki/List_of_Kolkata_Suburban_Railway_stations) through web scrapping using Pandas bs4 flavor. We fetch the table in the Wikipedia page that consist of all train stations name along with their line. We discard all Stations from the list other than

those falling in 'Chord Link Line' and 'Circular Line', as these two are the only Lines running inside city within the periphery of city of Kolkata.

- The coordinates (Latitude & Longitude) of each Station to be fetched using **Geopy API** of Python.
- Using **FourSquare API** all venues around these Stations would be fetched. The 'Explore' feature of the FourSquare API is used here. The request is made for each Station location. The result is a JSON file for each request, which consist of top 100 venues within 1Km of each requested locations along with their Name, Category, Latitude and Longitude. For example if the request is sent to FourSquare API for Ballygunj Station location, all the venues like Restaurant, Park etc within a specified radius(say 1KM) of the Ballygunj station would be returned. After all Venues within a Km distance around all the stations is retrieved we will filter out stations around which the Dabbawala service would probably flourish. We would need to find areas which are *office places with high demand for food services*. Also we would need to find *residential areas from where cooks would be recruited*. The Venue Category would be used to find such areas. Closer these locations are to each other and closer they are to a stations, better is the business opportunity as the commutation expense as well as time would be minimum.