

The Astounding And Outstanding Dabbawalas - An Empirical Study

Researcher: Dr. Vanisree Talluri

Lecturer, St. Francis College for Women, Hyderabad.

vanisree.talluri@gmail.com

9490073198

Abstract

Technology assumes lot of significance in the present world especially in the business field where many complex issues are solved and resolved using technology. Many people are of the opinion that technology is indispensable when it comes to logistics and quality service. This hypothesis is proved wrong by Mumbai Dabbawalas who have been serving home cooked food in lunch boxes to around 200000 office goers for the past 100 years. It is interesting to note that the Dabbawalas carrying the lunch boxes are not e-literates or literates. Though they are not techno savvy, yet have a proven track of rendering services with almost hundred percent accuracy. It is a fact that organisations work hard and harder for 3 and 4 Sigma certification and the staff is made to learn management courses to implement the tools to achieve it. Hence it is felt interesting and necessary to study the success story of Dabbawalas, an organisation certified with 6 Sigma certification, without even knowing what it is and without applying for it. A structured questionnaire has been administered to 300 respondents and the primary data so collected have been analysed using data reduction technique to extract the factors influencing the success of this poorly literate community that serves the customers at surprisingly low and affordable rates. A SWOC Analysis has been carried out. It is found from the study that the Dabbawalas made it a point that with commitment, discipline and a methodical approach as the wherewithal, one would be able to render superior quality service. These Dabbawalas proved that one need not possess extraordinary talent or a technical qualification when the system is right and efforts are unified and coordinated.

Keywords: *Astounding (Greatly surprising); Dabbawalas; 6 Sigma certification; Error free transaction; MTBSA (Mumbai Tiffin Box Suppliers Association)*

1.1 Introduction: The dream city Mumbai, which is well appreciated by all and sundry for its propensity for entrepreneurship is known for a lot of things ranging from the world famous Vada Pav to Bollywood. There is one more thing that defines Mumbai in its true way - Mumbai Dabbawalas. This hypothesis *that one needs to be highly techno savvy and highly qualified in order to be successful* is proved wrong by **Mumbai Dabbawalas** who have been serving home cooked food in lunch boxes to around 200000 office goers for the past 100 years. It is interesting to note that the Dabbawalas carrying the lunch boxes are not e-literates or literates. Though they are not techno savvy, yet have a proven track of rendering services with almost 'hundred percent accuracy'. Dabbawalas started rendering service when the then British Government was ruling undivided India comprising of India and Pakistan.

The British, who were averse to eating local food, wanted a mechanism that would help one in bringing lunch from their home to their workplace. That's how *Dabbawalas Concept* gained momentum. The very purpose of such service is aimed at enabling one in eating a healthy, proper, homemade meal during lunch. Most of their customers commute daily through local trains. The railway network during the peak hours is jam-packed. On the other hand, majority of the commuters do not prefer outside food for two reasons - the costs involved and health. One more point to be noted is, most of the concerns do not provide canteen or cafeteria service to their employees. These factors became the most opportune

opportunities for the Dabbawalas. They are building *Ayushman Bharat* by delivering food prepared at home to an estimated 200000 people. Their fee for the service is abysmally low and is just Rs 500 to Rs 700 per month depending upon the distance to be covered and the time at which the Lunch or Tiffin box is to be handed over to the customer.

1.2 Research Problem: Many service organisations are finding it difficult to withstand in the market due to the fast changing technological environment even after availing the services of management as well as technical experts. Organisations work hard and hard for 3 and 4 Sigma certification and learn management courses to implement the tools to achieve it. Hence it is felt interesting to study the success story of Dabbawalas, an organisation certified with 6 Sigma certification, without even knowing what it is and without applying for it. Their role as social entrepreneurs and the success achieved by them gives an insight on why the Dabbawalas are world famous. Being illiterates, they have not only earned name and fame but contributed to the society as well by providing employment opportunities.

Their ability to gain success without having educational qualifications had inspired to do this research work. Literature Review: To better understand about this topic, a number of research papers have been reviewed. A number of articles have been published on this topic. From Harvard to IIM-A, many scholars and professors have spent time studying the success of their delivery system.

1.3 Literature Review: To better understand about this topic, a number of research papers have been reviewed. A number of articles have been published on this topic. From Harvard to IIM-A, many scholars and professors have spent time studying the success of their delivery system. A few studies relating to the areas to improve upon are given below:

Ashutosh D. Gaur¹ has observed that India is going through many radical reforms which will improve business environment in the country significantly. As government of India has aim to reach at top 50th Rank of ease of doing business it will boost manufacturing sector. Business environment will be better with good regulation and their implementation on policy rapidly. Government should move all important legislation bill which is important for Ease of doing business like land reform and labour reform bill.

Lokesh Vijayvargy² has stressed on the environmental aspects involved in supply chain management. The results of the study reveal that the Indian organizations are actively implementing all the items in the internal environmental management and investment recovery practice sets but they are not that active with green purchasing, eco design and customer cooperation. They need to work on reduction in cost of raw materials and energy consumption, and expenses on waste treatment and waste discharge.

Venkatesh Ganapathy³ has pointed out rightly that Dabbawalas adopt green logistics measures to deliver what the customer wants and believe that service to customers is akin to serving God. They have a strong sense of community orientation and the simplicity of their operations has made them endure for so long. The Mumbai Dabbawala system has been difficult to run as efficiently as in Mumbai in other cities in India despite attempts to do so. There is growing awareness about health concerns resulting from incessant consumption of junk food. Though delivery of food through apps has become a popular mode of ordering food in Bangalore, the problem with these services is that they deliver food cooked in

restaurants/ hotels which may not be healthy. There is no match for food cooked in home with proper care and caution. Sedentary lifestyles, unhealthy eating habits, stress and lack of physical exercise have led to the onslaught of life style diseases even among the younger generation. The time is ripe for introducing a food delivery service that can deliver food cooked at home.

1.4 Objectives: The research is carried out with the following objectives:

1. To carry out a SWOC analysis on Dabbawalas of Mumbai.
2. To evaluate the consumers' perceptions for the success of Dabbawalas.

1.5 Methodology: The methodology followed for the study is explained below:

1.5.1 Respondent Sample: 300 consumers from Mumbai (majority were male and 38 female) are approached for the sample. Convenient sampling technique has been adopted.

1.5.2 Data Collection: The history and other information on Dabbawalas has been collected from secondary sources.

The primary data on perceptions have been collected by administering questionnaires.

1.5.3 Statistical Tools: SWOC analysis, factor analysis and averages based on five point rating scale are used for data analysis. SPSS has been used for analysis of data.

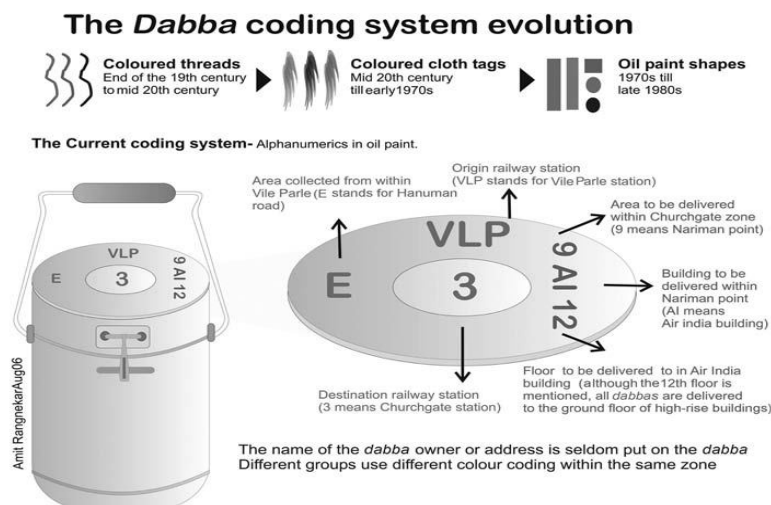
1.6 Analysis and Findings: The history, SWOC analysis and Factor analysis have been presented below:

1.6.1 History of Dabbawalas: This service was originated in 1890 when it was felt by a Parsi banker that he be helped by someone in getting the home cooked food from his home to his office for a reasonable service charge. He was the first one to avail the service of a Dabbawala. Seeing the soaring demand for Dabbawalas, Mahadeo Havaji Bachche, with about 100 men, started delivering Lunch from home. In 1956, A charitable trust by name Nutan Mumbai Tiffin Box Supplier's Association was registered. It is now known as MTBSA [Mumbai Tiffin Box Supplier's association]. It is a streamlined 129-year-old organisation with 5,000 semi-literate Dabbawalas who have perfected a delivery system that has become a research topic for many academic studies.

MTBSA is a three-tiered organisation: *The Governing Council* consisting of president, vice president and general secretary, treasurer and nine directors, the *mukadams* and the *Dabbawalas*. This organisation acts as a regulatory body of Dabbawalas and solves conflicts which arise between the stakeholders.

1.6.2 The coding system provides information which enables one in knowing where the Lunch/ Tiffin boxes are supposed to be delivered is silent about the full address.

Figure 1.1



Source: <https://open.org/download?type=document&docid=633752>

It is due to the fact that the Dabbawalas have been serving people in the same route for years and inserting too many details would slow down the sorting process. In addition to this, there is a possibility for errors and lids getting cluttered.

1.6.3 Achievements: It is interesting to note that the Forbes Global magazine conducted a quality assurance survey on the services rendered by Mumbai Dabbawalas in 1988 and found that the Dabbawalas made one error in six million transactions. As a result of this very exciting result of the study, Mumbai Dabbawalas were awarded SIX SIGMA EFFICIENCY RATING with 99.999999 percentage accuracy. (The full six sigma equals 99.9997% accuracy); In short, the Dabbawalas made one error in six million transactions.

The following points highlight the accomplishments and some of the interesting facets of Dabbawalas:

- ✚ Prince Charles during his visit to India had to adhere to the schedule of Dabbawalas as their as they had a little pause time to spare with him; he was so very gracious that he visited them at their convenience. The prince invited them to his wedding in London on 9th April 2005.
- ✚ In 2007, the New York Times stated that the 129 Dabbawala Industry is quite industrious and it continues to grow at stunning rate of 5 to 10 percent per annum.
- ✚ Dabbawalas were accredited with ISO 9001: 200 certification by the joint accreditation system of Australia and New Zealand.
- ✚ Inspired by the services of Dabbawalas, Pawan G. Aggrawal submitted his PhD thesis on the topic titled “A Study on the Logistics and Supply Chain Management of Dabbawalas in Mumbai. He has also written a book titled- 'Masters of supply chain management- Dabbawala of Mumbai'. He gives motivational speeches all over the world.
- ✚ Apart from being a subject matter for various research studies, the logistics perspective of Dabbawalas was added as a case study by IIM in 2005 and by the Harvard University in 2010.
- ✚ Mr. Richard Branson actually moved along with Dabbawalas, delivered Tiffin to his employees and enjoyed working like a Dabbawala.

✚ Dabbawalas have been enlisted in the '50 Indians have influenced Mumbai' which includes prominent people such as Tata, Birla, Ambani, Thakarey, Sharukh Khan and Amitabh Bachhan.

✚ In 2014, A researcher by name UMA. S was awarded PhD on her thesis which revolves around cross cultural study of the literacy practices of Dabbawalas.

✚ Documentaries have been made on Dabbawalas by BBC, Aaj tak, Zee TV, MTV, CNBC, TV 18, CNN etc.

✚ The critically acclaimed movie- The Lunchbox based on a faulty Dabbawala delivery was released in 2013.

✚ Dabbawalas is now a topic in some of the subjects prescribed by the University of California, Berkeley.

1.6.4 The reasons behind Dabbawalas success is analysed using SWOC Analysis model.

Strengths: One of the main strengths of Dabbawalas is the dedication they have towards their work, which is feeding around 1,75,000 to 2,00,000 people every day. **Other strengths include:**

Simplicity with Innovative Service: With a poorly educated, decentralised workforce Dabbawalas work on a simple system of symbols and cater to lakhs of people every single day where mistakes are extremely rare.

Coordination & Team Spirit: Most Dabbawalas have the same culture, language, values, work ethic, diet and religious beliefs. Their strong ties contribute to their extraordinary track record. Customer Satisfaction: Dabbawalas have received SIX SIGMA EFFICIENCY RATING with 99.999999 percentage accuracy with one error in six million transactions. That said, customer satisfaction is, undoubtedly, attained.

For them customer means God and delivering food for customers means serving the God.

Low Cost: The Dabbawalas are able to manage and operate efficiently, render quality service at a very low cost. Their success can be attributed to factors such as hiring right people, logistics, customer acquisition, conflict resolution and above all their commitment.

Eco-friendly: The entire system is operated with bicycles and usage of public transport system, the Mumbai suburban railways. No usage of disposables and single use plastics. MTBSA cares for the employees in the form of financial assistance, marriage halls at concessional rates, etc., Strong support of suburban Railways, Mumbai. Maintains the health of customers with home cooked food. Service to middle class at a low cost is one of the major strengths.

Weakness: Dependence on public transport: Their dependence on Mumbai local trains makes it difficult for them to work during harsh weather conditions.

Limited education: Dabbawalas are not highly educated. They are semi- literates. This limits them from switching over to other jobs.

Low income: The income of Dabbawalas is abysmally low and ranges between Rs.12,000 and Rs.15,000.

Opportunities: The following are the opportunities for Dabbawalas:

Tie up with caterers: Dabbawalas entered into an understanding with caterers to provide varieties of meals for their customers. This expands the network of Dabbawalas so as to

include all those people who live alone. Internet booking: Booking of service through internet by visiting their page www.mumbaiDabbawala.in.

Generation of revenue by promotions: Dabbawalas generate extra revenue by promoting brands such as Star plus. They also spread awareness on various issues such as AIDS, Swatch Bharat Abhiyan, etc. Improved awareness on healthy food habits can generate more employment to Dabbawalas.

Threats or Challenges: The challenges are listed hereunder:

Direct competition from other caterers: These days there are many caterers who provide meals to working people. Being just one click away, they pose a threat to the Dabbawalas.

Threats from fast food joints , small restaurants and Office canteens.

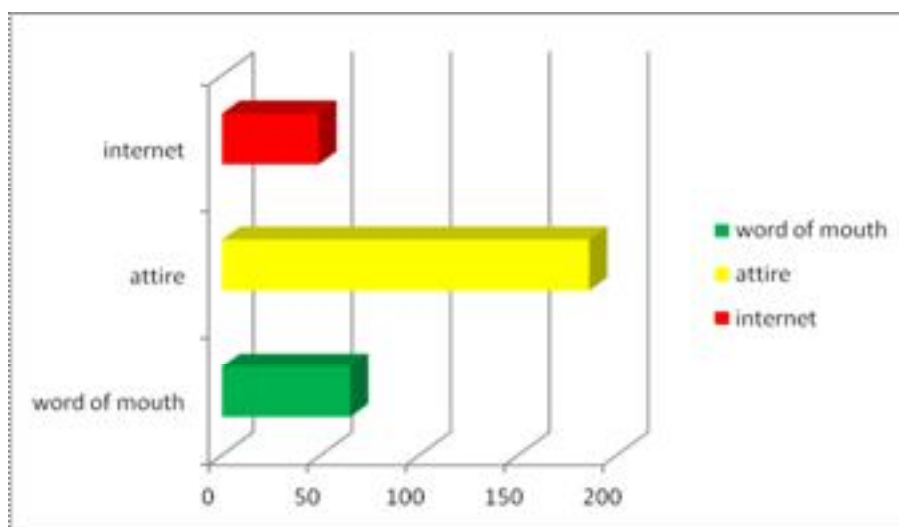
Increase in nuclear families: Reduction in joint families and increase in nuclear families where both male and female work to meet both ends is posing a threat to this kind of systems. To overcome this, they are in tie up with good caterers for the supply.

1.6.5 Consumers’ Perceptions: A survey is conducted on 300 consumers availing the services of Dabbawalas.

The *consumers got the awareness to hire the services* majorly through seeing them with same type of attire from the childhood, word of mouth followed by browsing through internet.

Graph 1.1

Awareness on Dabbawalas to Hire the Service



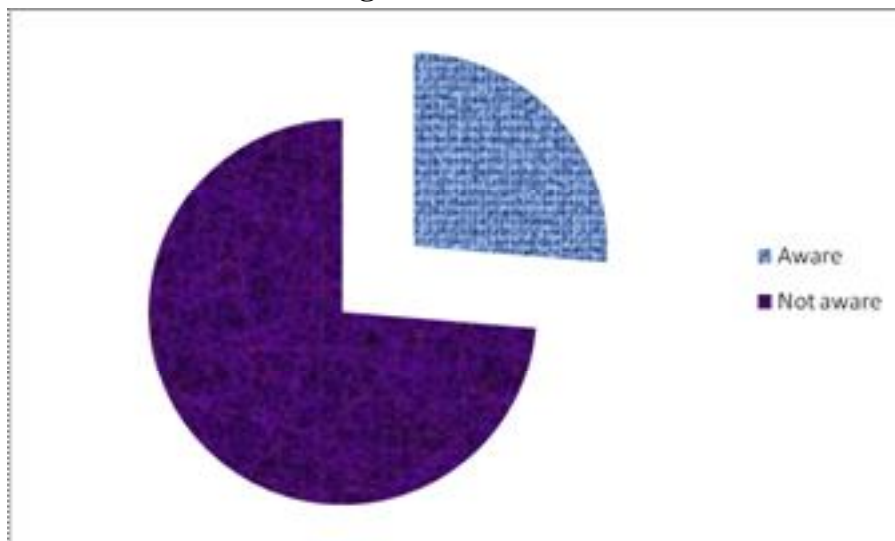
Source: Primary data

They are instantly recognisable; most sport a white kurta pyjama set, though not mandatory, with the iconic Nehru cap which makes them easy to spot in a crowd. The cap also protects their heads as Dabbawalas are expected to carry wooden tiffin baskets, which can weigh up to 90 kgs, containing around 45 metal lunch-boxes on their heads.

Majority of the respondents were not even aware of the *6 Sigma certification* achieved by Dabbawalas which embraced them automatically due to their dedicated services and came to them unintentionally and unknowingly.

Graph 1.2

Awareness on 6 Sigma Certification to Dabbawalas



Source: Primary data

It is evident from the responses that the awards and certificates achieved by the organisation do not play an important role in the selection of hiring services. It is the promptness, reliability and quality of service rendered that influence the customer.

Data reduction technique is applied to find the factors influencing the success of Dabbawalas. 14 attributes are identified and tested through Factor Analysis, which is a data reduction technique which allows simplification of the relationships between a number of continuous variables/attributes.

The opinion of respondents is taken on a rating scale of 1 to 5 with '1' being the least important and '5' being most important for the success of Dabbawalas which are as follows:

**Table 1.1
Communalities**

Attributes	Initial
Behaviour of employees	1.000
Cleanliness of employees	1.000
Eco-friendly transactions	1.000
Extra services rendered	1.000
Food safety	1.000
Error free service	1.000
Advertising the service	1.000
Awards and certificates achieved	1.000
Charges	1.000
Promptness in service	1.000
Reliable	1.000
Longstanding organisation	1.000
Social responsibility	1.000

Home taste	1.000
------------	-------

EXTRACTION METHOD: PRINCIPAL COMPONENT ANALYSIS.

ANALYSIS.

Source: Primary data

The sampling adequacy and correlation of the data are tested. The test results are as follows:

Table 1.2

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.567
Bartlett's Test of Sphericity	Approx. Chi-Square	492.260
	df	91
	Sig.	.000

Source: Primary data

KMO test result of more than 0.5 is acceptable. 0.567 is the measure of sampling adequacy. It indicates that the sample is good enough for Factor analysis. With the significance value <0.05 in Bartlett's Test of Sphericity the sample is approved for Factor analysis as this indicates that the data do not produce an identity matrix.

Factor analysis is carried out employing Principal Component analysis. It determines the factors underlying the relationships between a number of attributes.

Table 1.3

Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.240	15.998	15.998	1.974	14.101	14.101
2	1.741	12.435	28.433	1.733	12.376	26.478
3	1.472	10.516	38.950	1.414	10.098	36.575
4	1.183	8.448	47.398	1.413	10.095	46.671
5	1.046	7.471	54.869	1.148	8.198	54.869
6	.951	6.789	61.658			
7	.948	6.771	68.430			
8	.872	6.231	74.661			
9	.838	5.984	80.644			
10	.716	5.115	85.759			
11	.674	4.815	90.574			
12	.514	3.675	94.249			
13	.436	3.115	97.365			
14	.369	2.635	100.000			

EXTRACTION METHOD: PRINCIPAL COMPONENT ANALYSIS.

Source: Primary data

The Total Variance Explained suggests that it extracts one factor which accounts for 54.869 percent of the variance of the relationship between attributes. The criteria for extracting initial factors are Eigenvalue of over 1. Five factors are extracted with a total variance explained being 54.869%. Varimax rotation is applied for the selected 14 attributes.

The numbers in each column are the attributes loadings for each factor, roughly the equivalent of the correlation between a particular item and the factor.

Table 1.4

Rotated Component Matrix

	Component				
	1	2	3	4	5
HOME TASTE	.734		-.251		
RELIABLE	.709		-.219	.276	.144
PROMPTENESS	.637	-.113	.194		
BEHAVIOUR OF EMPLOYEES	.455			.294	.129
FOOD SAFETY	.429	.332		.269	-.358
ECO-FRIENDLY TRANSACTIONS		.833		-.131	
LONG STANDING ORGANISATION		.811			
AWARDS AND CRTIFICATES RECEIVED		.142	.703	.140	
ADVERTISING THE BUSINESS		-.152	.636	-.278	
ERROR FREE SERVICE	.202	.348	.529		.199
SOCIAL RESPONSIBILITY	-.153	.123	.155	.718	-.126
CLEANLINESS OF EMPLOYEES		.154	.121	.617	
CHARGES	.137			.103	.828
EXTRA SERVICES OFFERED	.196	-.222	-.187	.380	.459

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

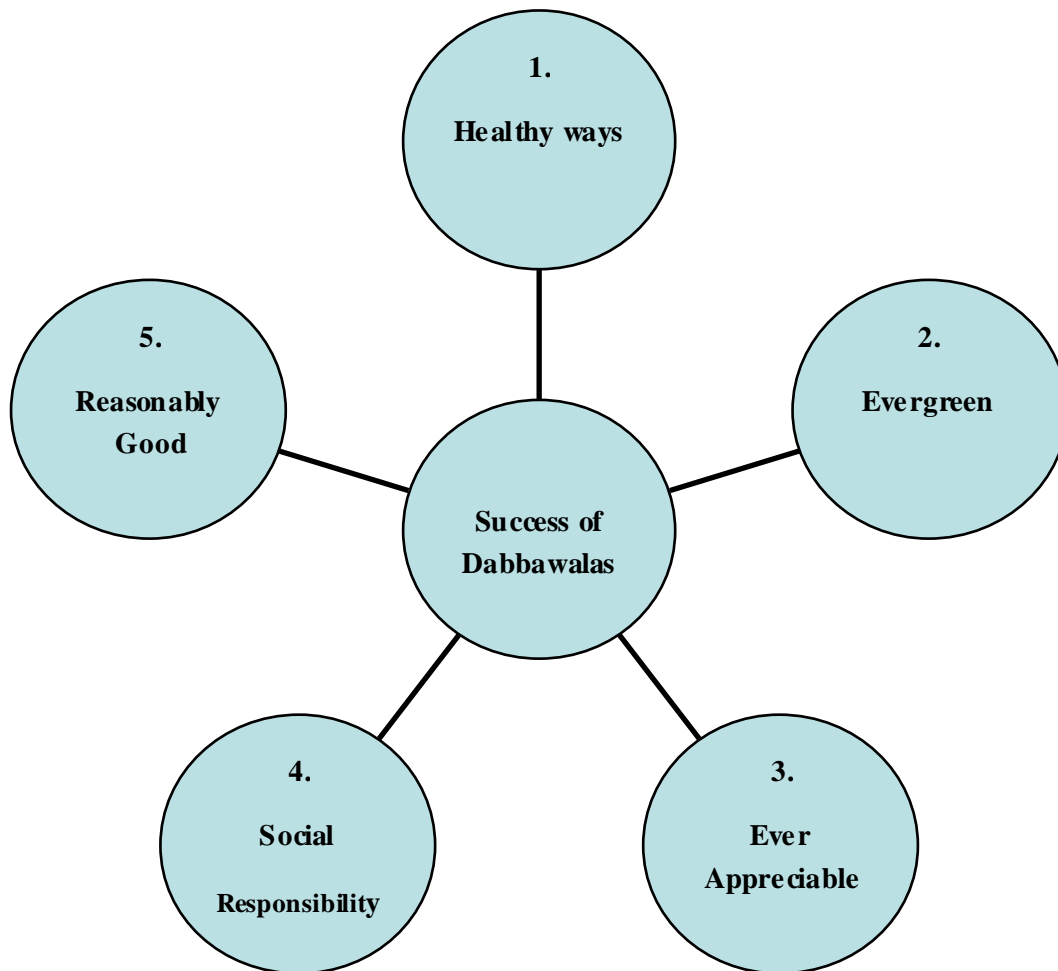
a Rotation converged in 6 iterations.

Source: Primary data

The factor loadings of the 14 attributes are observed and clubbed into 5 factors. If the loading is high, the factor is more important.

Chart 1.1

Factors Influencing Success of Dabbawalas



Source: Primary data

The above chart explains clearly that ‘Healthy ways’ (that include home-made food, reliable services, promptness in delivery of services, decent behaviour of employees and food safety), + Ever green organisational process (eco-friendly transactions, long standing organisation) + Ever appreciable organisation (error free service, awards and recognitions) + Social responsibility of the organisation + Extraordinary service at reasonable cost put together influence the success story of Dabbawalas.

1.7 Conclusion: The business model of Mumbai Dabbawalas is an epitome of excellence and simplicity. They unintentionally possess the most efficient supply chain management techniques. The only objective of Dabbawalas is to serve God and their God is the customer. They can provide value added services to an aspiring social entrepreneur due to their innovative ability, error free delivery model and steadfast adherence to their core competence

leading to effective transfer of knowledge. The Mumbai Dabbawalas proved that the basic requirements to achieve perfection that automatically brings success are:

- ✓ Commitment
- ✓ Contentment
- ✓ Concentration
- ✓ Coordination and
- ✓ Cooperation

The Mumbai Dabbawalas are truly Astounding and Outstanding.

References

1. Ashutosh D. Gaur and Jasmin Padiya; *Ease of Doing Business in India: Challenges & Road Ahead; International Conference on Technology and Business Management* ; ISBN: 978-1-943295-06-7;
2. https://www.researchgate.net/profile/Ashutosh_Gaur4/publication/316062485_Ease_of_Doing_Business_in_India_Challenges_Road_Ahead/links/58ee876aaca2724f0a28adab/Ease-of-Doing-Business-in-India-Challenges-Road-Ahead.pdf
3. Lokesh Vijayvargya; *Empirical Study on Adoption of Green Supply Chain Practices for Developing Economy; Proceedings of the International Multi Conference of Engineers and Computer Scientists 2017;Vol II; ISBN: 978-988-14047-7-0; http://www.iaeng.org/publication/IMECS2017/IMECS2017_pp895-900.pdf*
4. Prof. Venkatesh Ganapathy et al. (2016); *An Empirical Study of the Feasibility of Introducing the Mumbai Dabbawala Food Delivery System in Bangalore; SIBM Pune Research Journal; Vol XII; ISSN : 2348-5329;*
5. <http://samvad.sibmpune.edu.in/index.php/samvad/article/download/109753/77213>.

Bibliography

1. http://shodhganga.inflibnet.ac.in/bitstream/10603/87185/11/11_chapter3.pdf
2. <https://www.injustoneday.com/Dabbawalas-mumbai/>
3. <https://hbr.org/2012/11/mumbais-models-of-service-excellence>
4. <http://healthmarketinnovations.org/sites/default/files/Dabbawalas%20of%20Mumbai.pdf>
5. <https://yourstory.com/2012/03/Dabbawala-customer-service-excellence-of-six-sigma-quality-withouttechnology/>
6. <http://knowstartup.com/2015/08/the-story-of-mumbai-Dabbawalas/>
7. <http://mumbaiDabbawala.in/>
8. https://www.researchgate.net/publication/324029060_SIX_SIGMA_CONCEPT_AND_DMAIC_IMPLEMENTATION