

“A Study on the Effects of Plastic Ban on Take Away Food Outlets”

Dr. Kiran M. Shende ¹

Associate Professor, AISSMS College of HMCT, Pune

Dr. Anuradha V. Karmarkar ²

Assistant Professor, AISSMS College of HMCT, Pune

Ms. Mansi H. Pande ³

Student TY BSc. HS, AISSMS College of HMCT, Pune

ABSTRACT

Plastic has created a great challenge for the plastic users and businesses which relied on the use of plastic to a great extent. However, people always find the way out for all the challenging situations and so these restaurant owners also have opted for alternatives available for plastic. A few of them were use of paper bags, cloth bags, clay pots, alumni, steel, wooden containers etc.

This paper however focuses mainly on the impact of this plastic ban on QSRs having take away facilities and home deliveries, as this segment of industry is totally dependent on these options on a day-to-day basis for delivery of food items to customers.

The study is based on the information and data collected through a structured questionnaire from 30 take away restaurant outlets in Pune city.

Keywords: Take away outlets, Plastic Ban, Food Deliveries.

INTRODUCTION

All businesses have a MICRO and MACRO environment which affects and or impacts the business in both positive and negative manner. The Micro environment is usually controllable, but many a times the business gets affected due to changes happening in the uncontrollable Macro environment. The reasons for this could be economic, natural, social, environmental or political.

The decision taken by the government to ban the use of plastic has been welcomed by the environmentalists and other parts of the society, in view of protecting the deteriorating environment. It's a great initiative as we common and ignorant people have been very careless about our surroundings and the environment we live in. It is an obvious human behaviour that unless a strict measure is taken, people do not take the responsibility of environment preservation and also then realize its importance. They were not prepared for this drastic initiative of the govt. They had never thought of the alternative options for their businesses. Even if they were aware of these alternatives, they knew that was an expensive option.

Plastic was the most common form of material that was used for carrying anything and everything in the day-to-day life. The common public faced the inconvenience of carrying the containers or cloth bags every time they step out of the house for buying groceries or food from the food take away joints.

As we all know every coin has two sides, and similarly any policy declared by the authorities will have its benefits as well as repercussions. Through this paper we have tried to study the impact of Plastic Ban on QSRs providing take away or home delivery facility. The reason being their business completely relies on the use of packaging material containers, plastic bags, spoons, forks, wrappers; straws etc. which are usually made up of plastic or the other options available are costlier than plastic due to limited options.

The Maharashtra government issued a notification on March 23, 2018 imposing a ban on the manufacturing, use, sale, distribution and storage of all plastic material. Immediately after this announcement, many industries manufacturing such goods and the consumers who used such goods got affected. It had a Multiplier effect as in the ban affected not only the restaurant joints but also the suppliers of these products. Some of the take away joints announced discount, if containers were carried by customers while food pickup. This was in order to cope with the challenge and also to encourage and avoid use of plastic.

The ban on plastic created an opportunity in the market for new ideas. Inventors had an opportunity for introducing a competent product for plastic, which was required to be convenient, pocket friendly and also suitable for delivering food items. It compelled the QSRs dealing in take away joints and home deliveries to completely switch to other alternatives keeping in view of 3 R theory – Reduce, Reuse, Recycle.

At the restaurant front where the consumption of plastic is fairly huge like garbage bags, butchery bags, straws, take away containers etc, replacing them with reusable material was supposed to be a significant shift. In this view a few restaurants have switched to steel clay pots and tiffin boxes in order to counter major losses on home delivery. In order to minimize the costs, one needs to keep a container ready at the doorstep with a serving bowl as the delivery boy will pour out the gravy items from his steel container into it. Many shopkeepers have started charging the customers for the poly-bags in order to commercially discourage them. The shops have also made available cloth bags on chargeable basis for carrying commodities.

While several restaurants have shifted to paper, cardboard, and cane-based packaging to deliver food, some have discontinued parcel service until viable alternatives were found, in view of the country-wide plastic ban. In case of a takeaway order, some eateries are even contemplating to keep monetary deposits, which would be refunded when the steel container is returned. Clay pots are also looked at as an option for eco-friendly packaging.

The scenario looks difficult but still manageable as the government has banned the plastic below 50 microns, it being non-biodegradable; however the option of 125 microns plastic is still legal and can be used for packaging. However, its environmental implications still cannot be ignored.

Need of the study

The Government of India has always been concerned about the people, their health and of course the nation. We or the entire world's population is witnessing a scenario which is harming our environment tremendously and we people are solely responsible for this downfall. Therefore before it's too late we need to take corrective decisions and try to bring back what was witnessed by our previous generations. Our government has taken several measures leading to environmental protection and one of the admirable initiatives to protect our environment and natural habitat is seeing India plastic free by the year 2022. In view of this commendable decision to impose blanket ban on the use of plastic has been taken by our Government. This decision has been welcomed by most strata of the society, but it has certainly affected the hotel and restaurant industry to a great extent, as it relies greatly on the use of plastic for various purposes ranging from packaging, containers, plates etc.

Although there were alternatives available, but they were not economically viable for everyone and resulted in financial implications leading to high costs and adversely affected the profitability. There was also a change or shift in packing and delivery options which also eventually affect their cost and profitability and business.

LITERATURE REVIEW

G Sitharaman (2019) In this article the author says that there are lot of plastic that cannot be recycled & the most common is multilayered plastic (MLP) packaging, used for chips, biscuits, chocolates, etc. Plastic waste generated in India is 26,000 tonnes per day, which is a massive and threatening figure.

Manusri G. and Pradheep Manikandan (2019) This research deals with the plastics and their impacts socially, economically and health-wise and the efforts taken by the UN to control the usage of several kinds of plastics and a brief discussion about the 2019s single use plastic ban in Tamilnadu.

Anisha Bhatia (2017) Experts have estimated that annual waste generation in India will increase to 165 million tonnes by 2030. This means that around 66,000 hectares of land is needed to set up a landfill site which is 10 metres high and can hold up to 20 years' waste. That is almost 90% of Bangalore's area. If we do not change our waste practices now then we will soon be buried in our own muck.

Legesse Adane and Diriba Muleta (2011) recommended in his study to educate the public (1) not to use plastic bags, (2) to use eco-friendly alternative materials and (3) city level legislation as a solution of serious environmental pollution and health problems due to plastic products. Plastic bag wastes pose serious environmental pollutions and health problems in humans and animals.

Md Alamgir Jalil (2011) The paper talks about how consumers are responsible for environmental pollution (such as in the United States) by the problems created by blockage of drains due to water borne discarded plastic bags which have ultimately caused severe flash floods in major urban and suburban areas entailing innumerable financial sufferings.

Aline Marques Rolim, Luis Felip Nascimento (2010) the goals of this paper were to analyze post-consumer plastic recycling technological and market aspects and to identify difficulties and benefits involved with this activity. They have suggested on their study that post-consumer plastic recycling can be sustainable development tool which help to solve the problems of solid waste. "Post-consumer recycling was a technological trend that recovers the economic value from objects discarded by consumers (e.g. bottles and packaging).

Dr. Harshad M. Tandell (2016) In this research paper author have attempted to measure the profit available to the Equity Shareholder of growing sector of plastic industry of Gujarat during 2005-06 to 2014-15 by taking a sample of 14 public limited ,ie listed companies at BSE(Bombay Stock Exchange)Mumbai which are functioning in the Gujarat.

Dr. Zareena Begum I (2007) in her study 'The Plastics and Environment' she studied the economic aspects of plastics and its impact on ecology. She has suggested some solutions of plastics waste management and alternatives of plastic carry bags and insisted for the improvement in the system of waste disposal management.

Business Today (2019) The article talks about the Prime Minister Narendra Modi efforts rts to scrap single use plastics by 2022, is set to launch the campaign with a ban on as many as six items on Oct. 2, the birth anniversary of independence leader Mahatma Gandhi. These include plastic bags, cups, plates, small bottles, straws and certain types of sachets, said the officials, who asked not to be identified, in line with government policy. "The ban will be comprehensive and will cover manufacturing, usage and import of such items,"

OBJECTIVES OF THE STUDY:

- To identify substitutes of plastic packaging material for delivery of food items.
- To analyze the effects on selling price and delivery costs on substituting plastic with alternatives.
- To find the most appropriate packing material used by the take away outlets.

RESEARCH METHODOLOGY

This was one of the most integral part of study. In order to carry out this research study the insights of the objectives was studied. The impact of plastic ban and use of various other alternative substitutes were identified and floated in the form of a questionnaire. This feedback from various targeted respondents was collected with the help of the survey questionnaire. It was circulated amongst mixed samples of various small food outlet dealers, take away outlets and home delivery services. This survey was specifically carried out to evaluate and fulfil the set objectives for the study.

Type of Research: A descriptive form of research was used to study the various other alternatives apart from plastic and how they are adopted by the take away outlets for deliveries. This also includes surveys and fact finding enquiries in different manner.

Methods of Data Collection

Primary data - was collected from the mixed sample of various take away outlets, Primary data was collected through survey in the following ways:

1. **Personal Interviews:** The answer was sought to a set of pre-conceived questions through personal interviews and the data was collected in a structured way.
2. **Questionnaires:** Considering the Reviews, and the additional inputs, one questionnaire was prepared and distributed to various respondents.

3. **By observation:** The data was collected by observing the non verbal behavior to understand dynamic behavioral process.

Secondary data – was collected from published / unpublished literature on effects of plastic on the environment and other alternatives available instead of plastic and also the latest references available from the journals, newspapers, research publications and magazines, past records and other relevant sources available online.

Questionnaire – Design and implementation: The questionnaire design was done with the aid of experts in statistical techniques and taking into account the depth needs & objectives of the study. The questionnaire was administered to the sample population and sample size.

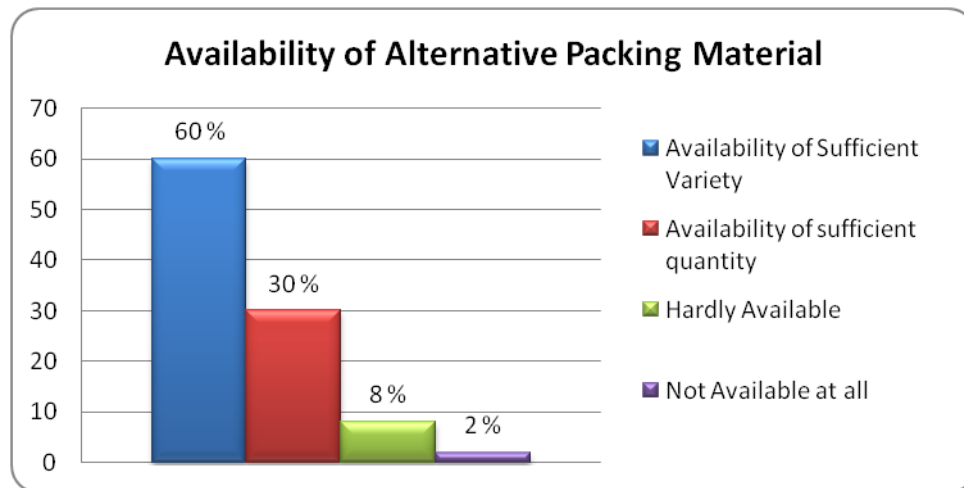
Sampling Techniques: To conduct this study different respondent was selected from various take away outlets dealing with the Delivery Process, to achieve the minimum sample requirement a total of 50 questionnaires were distributed and in return 30 were received.

DATA ANALYSIS & INTERPRETATION

The data collected was analyzed using basic and advanced analytical tools. This also includes the detailed analysis of the data which was conducted with the purpose of attaining the set objectives of the research. Mentioned below is the analysis which is presented graphically and in tabulated form for better interpretation. The Interpretation of the collected data was done by drawing inferences from the collected facts after the analysis of the study.

Table I – Frequency Analysis – Availability of alternative packing material after the Plastic Ban

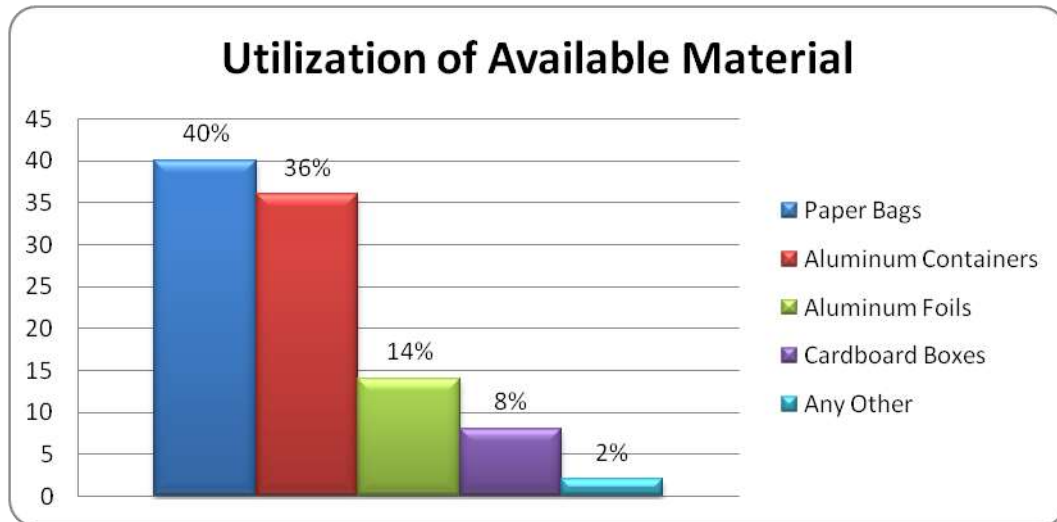
Frequency				Total
Available of sufficient Variety	Availability of sufficient quantity	Hardly Available	Not Available at all	
60	30	8	2	100%



Interpretation: According to the above chart it can be stated that majority of the respondents i.e. 60% were of an opinion that there were sufficient options available after a sudden plastic ban declared. The percentage of people agreeing for availability of sufficient quantity is 30%, where as 08% of the respondents says that there were hardly any options available and 2% says that options were not available at all.

Table II – Frequency Analysis – Utilization of Alternative Packing material which was available after the Plastic Ban

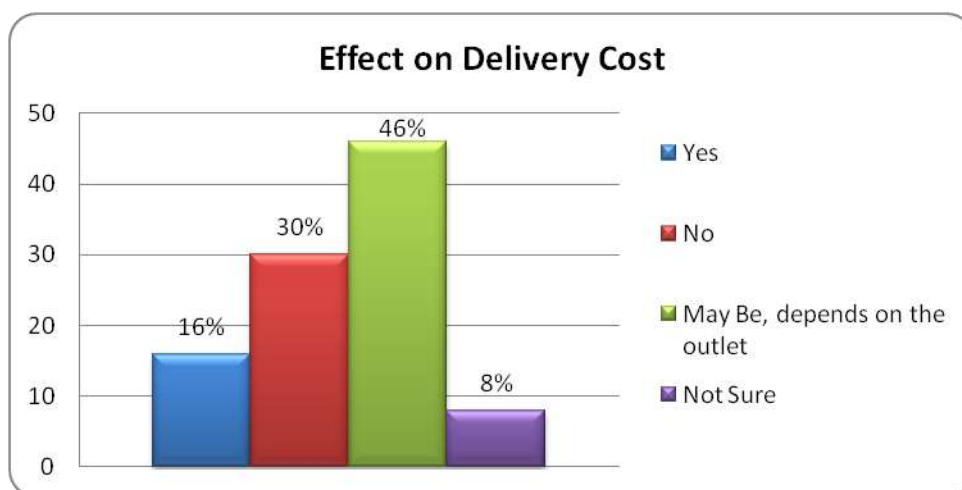
Frequency					Total
Paper Bags	Aluminum Containers	Aluminum Foils	Cardboard Boxes	Any Other	
40	36	14	8	2	100%



Interpretation: According to the above chart it can be stated that majority of the respondents i.e. 40% and 36% were of an opinion that Paper bags and Aluminum Containers are the most useful alternatives instead of plastic. Whereas, the utilized percentage of Aluminum Foils was 14% and Cardboard Boxes was 8% and 2% of other materials were somewhat useful as an alternative to plastic.

Table III – Frequency Analysis – Effect of Alternative Packing material on the Delivery Cost

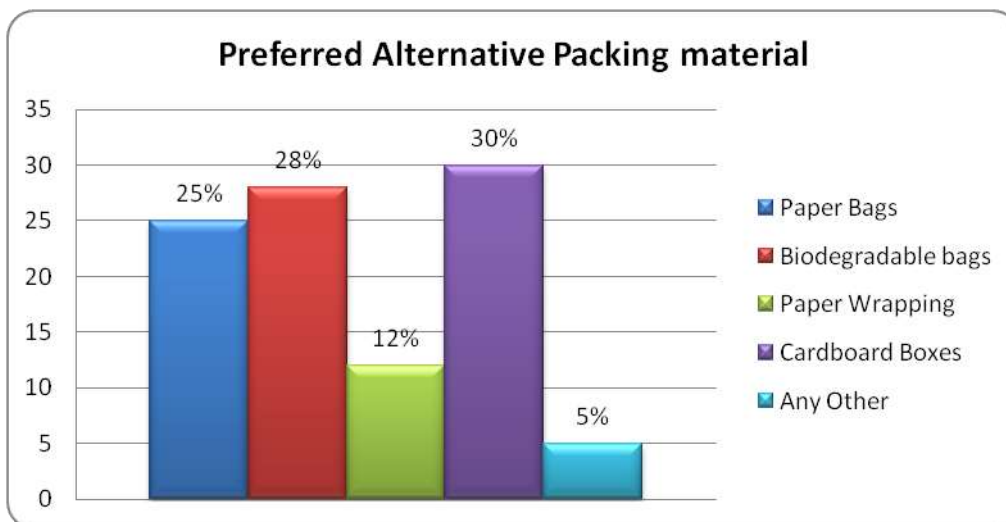
Frequency				Total
Yes	No	May Be, depends on the outlet	Not Sure	
16	30	46	8	100%



Interpretation: According to the above chart it can be stated that majority of the respondents i.e. 46% of the respondents were of an opinion that it depends upon the outlet, 30% of the respondents did not agree whereas 16% had agreed its effect, the percentage of the neutral respondents were very low i.e. 8% from the total percentage of respondents.

Table IV – Frequency Analysis – The most Preferred Alternative Packing material

Frequency					Total
Paper Bags	Biodegradable bags	Paper Wrapping	Cardboard Boxes	Any Other	
25	28	12	30	5	100%



Interpretation: According to the above chart it can be stated that majority of the respondents i.e. 30%, 28% and 25% were of an opinion that Cardboard Boxes, Biodegradable Bags and Paper bags were the most preferred alternative instead of plastic. The percentage of paper wrapping i.e. 12% and any other material i.e. 5% were the least preferred alternative instead of plastic.

Table V – Frequency Analysis – Effect of Alternative Packing material on the Selling Price

Frequency				Total
Yes	No	May Be, depends on the outlet	Not Much	
32	26	24	18	100%



Interpretation: According to the above chart it can be stated that most of the respondents i.e. 32% had agreed that plastic ban had an impact on the selling price whereas, the percentage of disagreement was 26%. The percentage of the respondents i.e. 24% were of an opinion that the effect on the selling price depends upon the type of outlet, while 18% of the respondents feel that there was not much of an impact on the selling price.

Observations and Findings

It has been observed that the costumers and the owners of take away food outlets have the cut down the usage of plastic drastically and have replaced the same with biodegradable material as pressed leaves, molded containers, paper and cloth bags etc

1. The recent Plastic ban in the state had created a tremendous challenge on the food industry especially the take away outlets. This has forced them to explore and adopt the various alternatives to plastic available in the market for delivery of food items.
2. It was found that the market already provided a good number of other options which were user friendly, transport friendly and most importantly eco-friendly but was not used due to high cost factor.
3. Most of the outlets had started adopting the best and most suitable option for the delivery of food to the customers. Consumers have been asked to get their own containers for take away.
4. Some restaurants also offered discounts for not asking for plastic bags.
5. Some of the unique edible cutlery is also gaining popularity.
6. The demand for biodegradable alternatives like Paper was most preferred alternative used by most of the outlets, thus contributing towards their green practice initiatives.
7. These practices have contributed towards reducing the pollution in many ways. The exclusion of reduced the plastic waste on a large scale and reduced the air, water and surrounding pollution due to use of plastic.
8. The government had also introduced many other alternatives such as pressed leaf containers and plates, paper and cloth bags, jute bags etc instead of plastic which had been found during the course of study.
9. The use of paper bags and aluminum containers were found to be the most convenient and utilized alternative instead of plastic.
10. This further resulted to increased cost of the delivery of food items.
11. Due to the sudden plastic ban has generated a huge scope for new business avenues for manufacturers of eco-friendly disposables.
12. The use of plastic is banned but it is still illegally available which a matter of concern is.
13. The change in these delivery techniques also escalated the selling price of the food items to a certain extent depending upon the type of outlet and cuisines required to be delivered.
14. The most preferred packing material was cardboard box over paper or cloth due to its stiffness and durability.

Suggestions

1. The ban in plastic is indeed welcomed by the industry but there is a need to make the available alternatives more affordable to the food delivery outlet as well as to the customer.
2. The supply of these plastic alternatives would become comparatively cheap if there is a competition in the market for sale of these alternatives.
3. There is a need to educate the population about the importance of uses of plastic alternatives primarily from the health perspective and secondarily from the ecological perspective
4. It is suggested that strict regulations against the illegal use of plastic while delivering food items should be imposed and defaulters should be heavily penalized for breach.
5. Government should give subsidiary for SSI for encouraging manufacturing of eco-friendly disposables and packing material.

Conclusions:

1. A sudden plastic ban had impacted the food industry to a greater extent as it was the most preferred, cheaper, and easily available and most convenient option for the delivery of food items.
2. There was a direct effect on revenues, as the alternatives of plastic are expensive due to which the selling cost has increased.
3. The delivery cost had increased as the alternative containers are costly and the outlet needs to adjust their revenue somewhere or the other to meet profit margins.
4. Take away outlets are making their best efforts to shift to the use of biodegradable alternatives to achieve the global need of curbing plastic pollution.

REFERENCES:

1. "Earning Per Share in the Plastic Industry of Gujarat." Vol.04 Issue-12, (December, 2016) ISSN: 2321-1784 International Journal in Management and Social Science (Impact Factor- 6.178)
2. "How plastic ban will affect businesses and consumers " (<https://economictimes.indiatimes.com/industry/indl-goods/svs/paper/-/wood/-/glass/-plastic/-marbles/how-plastic-ban-will-affect-businesses-and-consumers/articleshow>)
3. "Plastic Ban in India – An Effort to Reduce Environmental Pollution" Volume 5, January 2019 ISSN 2581-5504
4. "Survey on the usage of plastic bags, their disposal and adverse impacts on environment: A case study in Jimma City, Southwestern Ethiopia" Journal of Toxicology and Environmental Health Sciences Vol. 3(8) pp. 234-248, August 2011, ISSN 2006-9820
5. "Using Plastic Bags and Its Damaging Impact on Environment and Agriculture" International Conference on Sustainable Development 2011 organized by Ontario International Development Agency, Canada.
6. Business Today August 2019 – Article on Plastic ban by our Prime Minister.
 - a. <https://economictimes.indiatimes.com/industry/indl-goods/svs/paper/-/wood/-/glass/-plastic/-marbles/how-plastic-ban-will-affect-businesses-and-consumers>
7. Online article on <https://swachhindia.ndtv.com>
8. S. Diwanji & P. Patil (2019) A Study of the Operations of Food Trucks in Pune and Their Challenges, Atithya: A journal of Hospitality, Vol 5, Issue 02.