

# Model Design for Waste Plastic to Resolve Environmental Pollution



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*Waste management has become a rising field that offers entrepreneurial opportunities, room for improvements and investment prospects. Our topic is conducted with the objective of exploring the opportunities primary waste management and how their exploitation contributes to the development of green entrepreneurship. The researcher found that there are vast business opportunities in the recycling of plastic, metal, paper, glass and e-waste, as well as composting. The challenges faced by green entrepreneurs involved in recycling and composting include mainly high startup capital, and lack of financial support. The challenges faced by green entrepreneurs involved in recycling and composting include mainly high startup capital, and lack of financial support.*

## 1. Introduction

The plastics industry has developed considerably since the invention of various routes for the production of polymers from petrochemical sources. Plastics have substantial benefits in terms of their low weight, durability and lower cost relative to many other material types. Waste has been a major environmental issue everywhere since the industrial revolution. Recycling is clearly a waste-management strategy, but it can also be seen as one current example of implementing the concept of industrial ecology, whereas in a natural ecosystem there are no wastes but only products.

In this paper, we will review the current systems and technology for plastics recycling, life-cycle evidence for the eco-efficiency of plastics recycling, and briefly consider related economic and public interest issues. We will focus on production and disposal of packaging as this is the largest single source of waste plastics in MIDC jalgaon and represents an area of considerable recent expansion in recycling initiative.

## 2. Review of Literature

TOM ZELLER (JANUARY 2008) national geographic Magazine in his article entitled that, "Recycling The Big Picture" mentioned about important of recycling in his article and also mentioned about how recycling solves environmental pollution problem.

In the book the title is "Modern Technology of Waste Management Pollution Control", recycling and treatment and utilization published by Asian Pacific Business modern technology for plastic recycling to solve the air pollution, soil pollution, water pollution etc. also to solve the problem on plastics generated waste.

John Tierney (3 Oct 2015) The New York Times in this article entitles that "The reign of recycling" nothing that modern recycling movement had really just begins just a few years earlier they predicted it would flourish as an industry matured and a public learned how to recycle properly.

## 3. Research Methodology

### 3.1 Objective

1. To study the impact of recycling of waste material on society.
2. To study effect of waste material on environment
3. To study the working hour and age of the employee
4. To find out the ratio of male and female employee
5. To study the capital source of the business
6. To suggest the measure about recycling of waste material

### 3.2 Importance of Study

Today waste is a major problem. There are varies type of waste like plastic, paper, can, etc. Plastic waste is a harmful to the environment and that way it's adversely affected to the human being and the society also. To avoidance of such a type of waste, the recycling is a best method for the waste material because recycling is to solve the environmental pollution problem also the minimized the waste by reusing them.

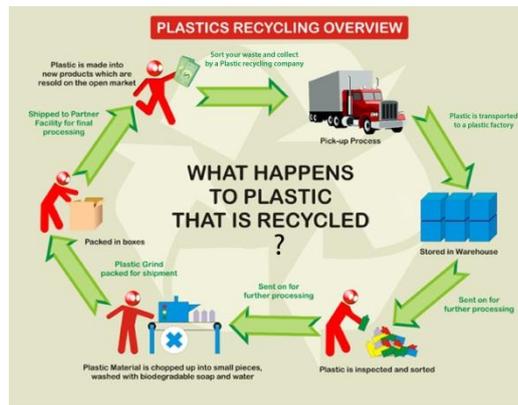
### 3.3 Data Collection

Primary data is collected by research through the questionnaire method, discussion with employees and entrepreneur and also through the observation. For this data analysis and collection we can use the simple random sampling. Research is collected also through the secondary data source like books, internet, websites, articles, newspaper, etc.

**Research Mythology- Simple Random Sampling**

**Sample Size** - For Research we selected randomly 20 entrepreneurs and 80 employees from their factories or companies in MIDC, Jalgaon.

**4. Model for Flow of Recycling the Plastic and to Save the Environment**

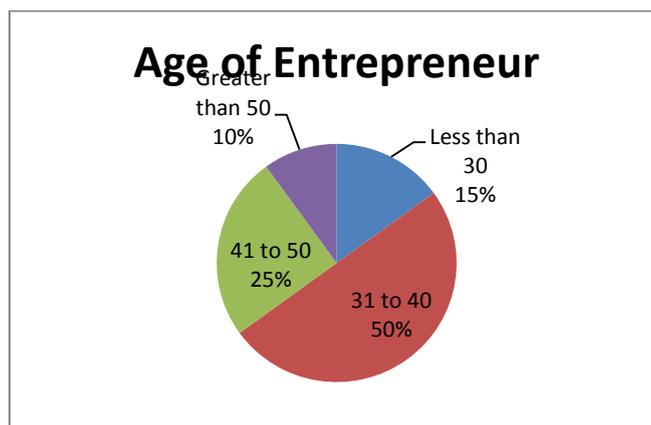


**5. Data Analysis and Interpretation**

**5.1 Age Criteria for Entrepreneurs**

*Table 1 Age Criteria for Entrepreneurs*

Age Criteria	Nos. of Entrepreneur	Percentage
Less than 30	3	15%
31 to 40	10	50%
41 to 50	5	25%
Greater than 50	2	10%
Total	20	100%

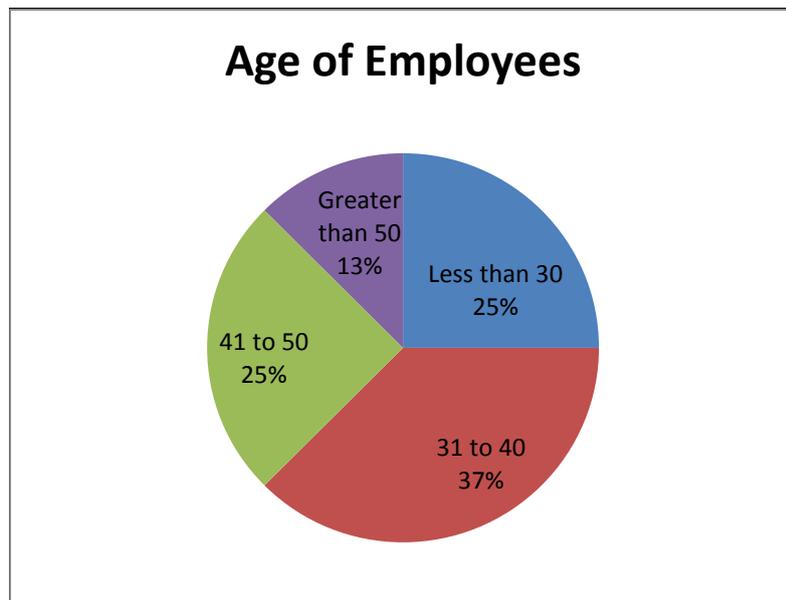


**Interpretation** - Out of 20 respondents, 15% respondent's are in less than 30 year group and 50% respondent's are in 31 to 40 year group and next 25% respondent's are in 41 to 50 years group and remaining 10% respondent's are in greater than 50 years age group.

**5.2 Age Criteria for Employees**

*Table 2 Age Criteria for Employees*

Age Criteria	Nos. of Employees	Percentage
Less than 30	20	25%
31 to 40	30	37%
41 to 50	20	25%
Greater than 50	10	13%
Total	80	100%

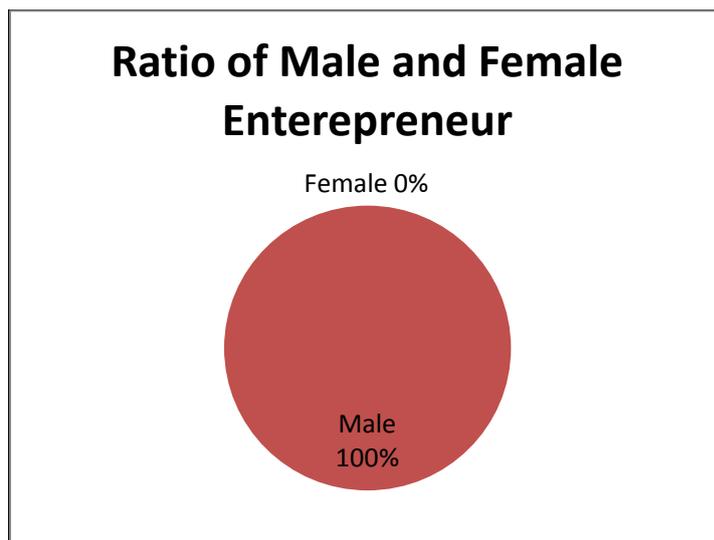


**Interpretation-** Out of the 80 respondent's, 25% respondent's are in less than 30 year age group and 37% respondent's are in 31 to 40 year age group next 25% respondents are in 41 to 50 year age group and last 13% respondents are in greater than 50 year age group.

**5.3 Ratio of Male and Females**

**Table 3** Ratio of Male and Female Entrepreneur

Male	20	100%
Female	0	0%
Total	20	100%

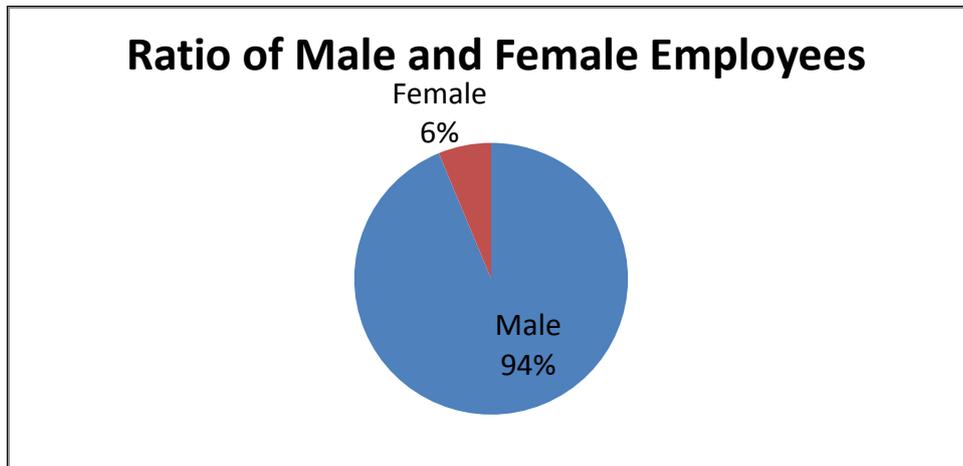


**Interpretation -** Out of the 20 respondent's, 100% respondent are male Entrepreneur not a single one is female entrepreneur at all.

**5.4 Ratio of male to female employees**

**Table 4** Ratio of Male and Female Employees

Male	75	94%
Female	5	6%
Total	80	100%

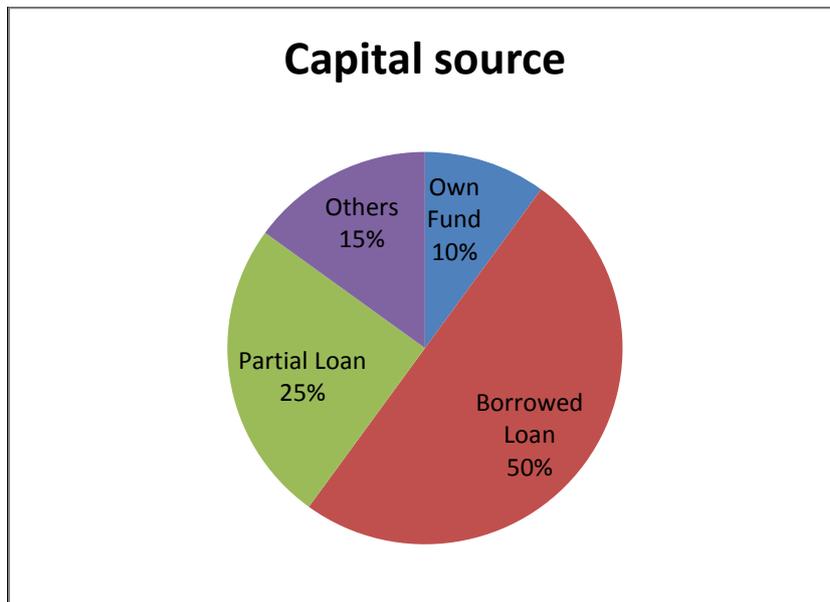


**Interpretation** - Out of the 80 respondents, 94% respondents are male and only 6% respondents are female employees.

**5.5 Study of Capital Source**

**Table 5 Capital Source**

Own Fund	2	10%
Borrowed Loan	10	50%
Partial Loan	5	25%
Others	3	15%
Total	20	100%



**Interpretation** -Out of the 20 respondent's,10% respondent's invest their own funds,50% respondent's borrowed loan , 25% respondent's used partial loan and 15% respondent's used other sources.

**5.6 Study of Positions of Employees**

**Table 6 Position of Employees**

Manager	15	19%
Supervisor	15	19%
Worker	50	62%
Total	80	100%

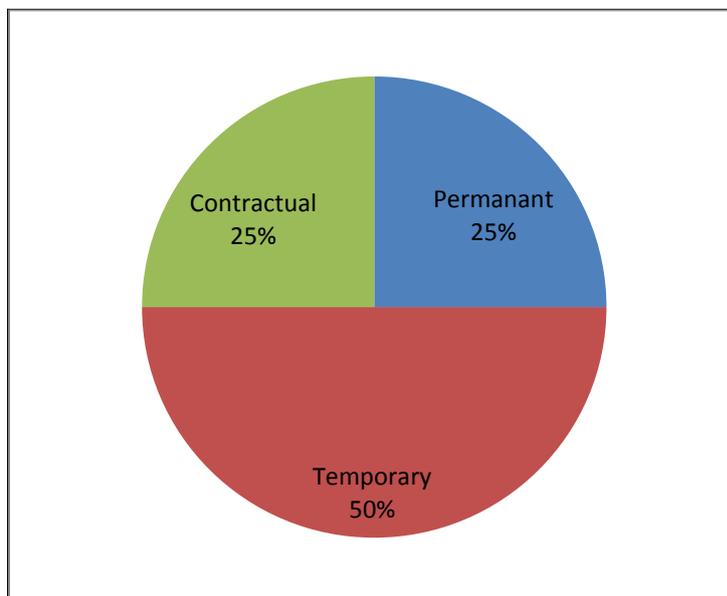


**Interpretation** - Out of 80 respondent's, 19% respondent's are at manager post, 19% respondent's are at supervisor post and 62% respondent's are at worker position.

### 5.7 Study of Type of Worker

**Table 7** Types of Workers Ratio

Permanent	20	25%
Temporary	40	50%
Contractual	20	25%
Total	80	100%

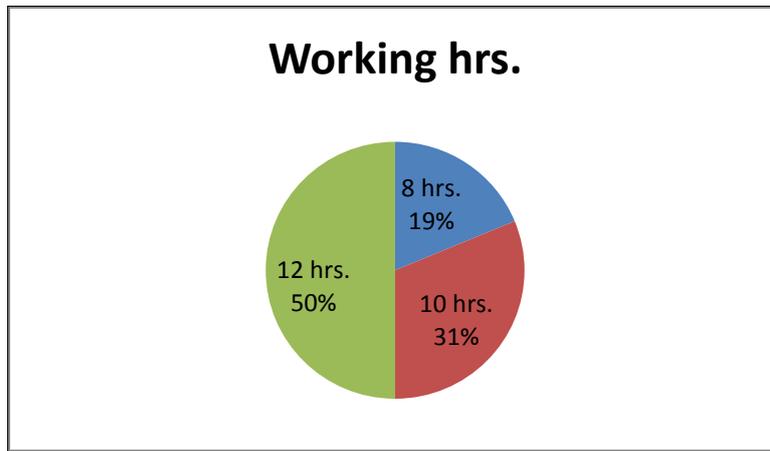


**Interpretation** - Out of the 80 respondent's, 25% respondents are permanent, 50% respondent's are temporary and 25% respondents are contractual basis.

### 5.8 Study of working Hour of Employees

**Table 8** Working Hrs

8 hrs.	15	19%
10 hrs.	25	31%
12 hrs.	40	50%
Total	80	100%

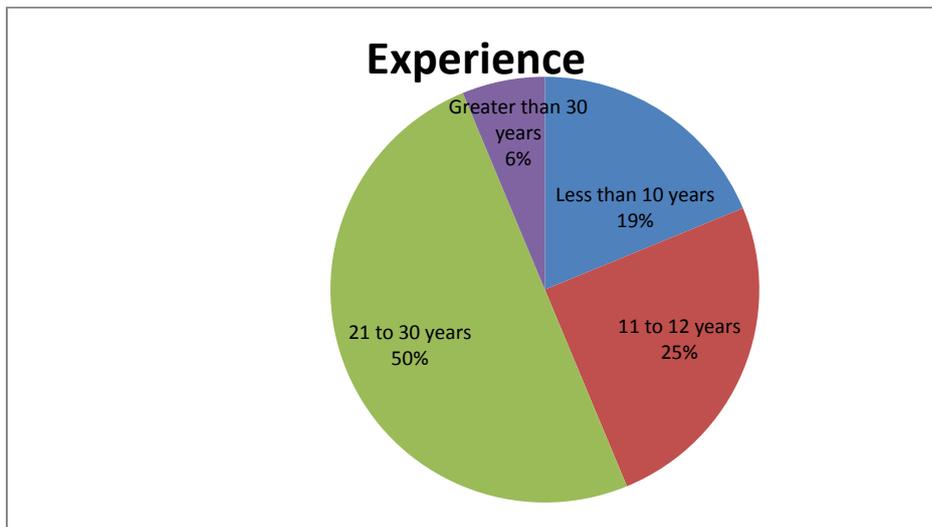


**Interpretation** - Out of the 80 respondent's,19% respondent's work for 8 hours,31% respondent's work for 10 hours and 50% respondent's work for 12 hours for a day.

**5.9 Study of Experience of Employees**

**Table 9 Experience**

Less than 10 Years	15	19%
11 to 12 years	20	25%
21 to 30 years	40	50%
Greater than 30 years	5	6%
Total	80	100%

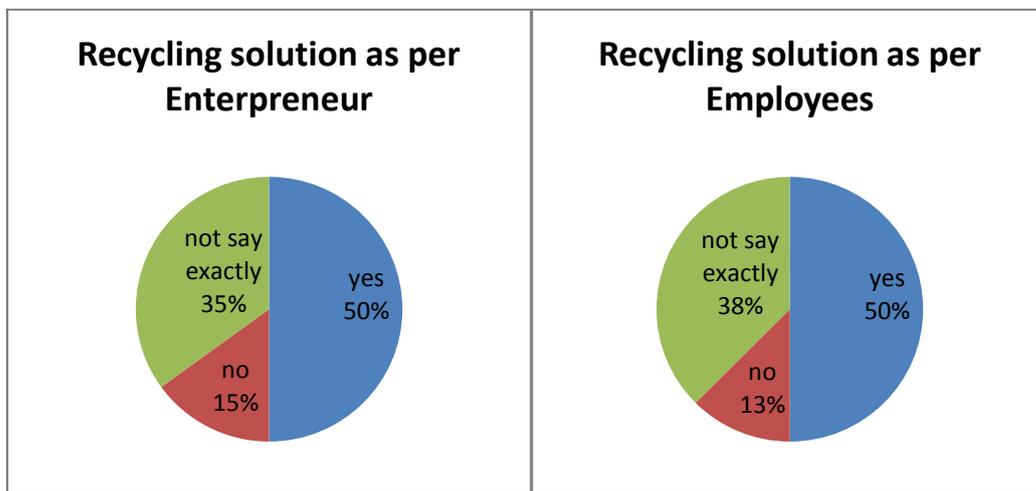


**Interpretation** - Out of the 80 respondent's, 19% respondent's had less than 10 year experience,25% respondent's had 11 to 12 year of experience,50% respondent's had 21 to 30 year experience and 6% respondent's had greater than 30 year experience.

**5.10 Study of Solving Pollution Problems**

**Table 10 Recycling Solves Pollution Problems**

Option	Employees	Percentage	Entrepreneur	Percentage
Yes	40	50%	10	50%
No	10	12.5%	3	15%
Not say Exactly	30	37.5%	7	35%
Total	80	100%	20	100%



**Interpretation** - Out of 80 respondent's of employees, 50% respondent's say yes, 12% respondent say no and 38% respondents say not say exactly. Out of 20 respondent entrepreneurs 50% respondent's say yes, 15% respondent's say no and 35% say not say exactly.

## 6. Findings

- Maximum number of male entrepreneurs (100%) and employees (94%) are working.
- Maximum number of entrepreneurs (50%) is in age group 31 to 40 years and employees (37%) in same age group.
- Maximum 50% entrepreneurs borrowed loan for their business as capital source.
- As per position of employees 62% are workers.
- Near about 50% worker is work on temporary basis.
- Working hour's maximum workers (50%) works 12 hours daily.
- According to experience 50% employees had 21 to 30 years of experience.

## 7. Conclusions

- Maximum numbers of respondents are from plastic factories in MIDC area jalgaon which are involved in recycling process.
- Maximum respondent's say that this recycling process help of environmental problems.
- Recycling of plastic solves the pollution problem.
- Employments arises due to this new projects.
- Waste plastic management is done properly.

## 8. Suggestions

- MIDC start the recycling of plastic project but they had to think about all other plastic which are equally harm to environment.
- Find some new projects and increases the employment.
- MIDC had to collect waste plastic from society or hospital sectors also to increase the raw material sources.

## 9. References

1. National Geographic Magazine TOM ZELLER (Jan 2008) in his article name that, "Recycling the Big Picture".
2. The New York Times JOHN TIERNY (3 Oct2015) in this article name that "The Reign of Recycling".
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