

# A Study on status of Informal Waste Management Entrepreneurs in Bengaluru

Dr. Ritika Sinha  
Senior Asst.Professor  
CBSMS, Department of Management  
Bangalore University  
Bangalore , INDIA

B.C. Prabhudev  
Faculty / Research Scholar  
CBSMS, Department of Management  
Bangalore University  
Bangalore , INDIA

**Abstract :** Waste management is all those activities and actions required to manage waste from its inception to its final disposal. Increase in volume and types of solid waste have become an unmanageable problem for national and local governments. It has come to be a major challenge for all developing economies. Waste mountains have come to be a regular scene in many cities around the world, especially in the developing world. According to latest World Waste Survey Report, some 4 billion tonnes of municipal, industrial and hazardous waste are produced every year globally. It is estimated that the world market for waste, from collection to recycling, is worth about \$410 billion a year.

Waste management used to be considered a public good, where municipal authorities provided this service. However municipal authorities alone cannot deal with the challenge of managing waste in today's world, owing to rapid rise in solid waste creation.

Waste management is an emerging field that offers entrepreneurial opportunities. Future waste management offers many business opportunities for the private sector such as: waste-collection/disposal services; operation of recycling plant; e-waste recycling; Consultancy; equipment supply; organic fertilizer manufacturing; transportation; trade in recycled materials.

Hence there is a need to study characteristics of employment in the waste management industry.

## 1. INTRODUCTION

Waste management is all those activities and actions required to manage waste from its inception to its final disposal. Increase in volume and types of solid waste have become an unmanageable problem for national and local governments. It has come to be a major challenge for all developing economies. Waste mountains have come to be a regular scene in many cities around the world, especially in the developing world. According to latest World Waste Survey Report, some 4 billion tonnes of municipal, industrial and hazardous waste are produced every year globally. It is estimated that the world market for waste, from collection to recycling, is worth about \$410 billion a year.

Waste management used to be considered a public good, where municipal authorities provided this service. However municipal authorities alone cannot deal with the challenge of managing waste in today's world, owing to rapid rise in solid waste creation. Waste management is an emerging field that offers entrepreneurial opportunities. Future waste management offers many business opportunities for the private sector such as: waste-collection/disposal services; operation of recycling plant; e-waste recycling; Consultancy; equipment supply; organic fertilizer manufacturing; transportation; trade in recycled materials.

Interestingly, micro, small and medium enterprises (MSMEs) can play a huge role in providing the service economically and efficiently. The role of MSMEs is well accepted in policy circles across the developing countries. There are multiple benefits arising from increased participation of MSMEs. Apart from the possibility of fast technology adoption, innovation potential in waste management technology and processes and new ways of recycling, MSMEs can contribute by creating thousands of new jobs in the recycling and waste management industry and help create cleaner cities and a give boost to a greener economy.

The MSMEs have immense business opportunities in this sector, because out of the total 4 billion tonnes of waste produced worldwide, just one billion is currently being recovered and only part of them recycled.

There are two aspects that define prospects for private sector, especially, MSMEs in the waste management sector. Firstly, the tremendous speed at which urbanization is happening across the developing economies and secondly, the scope and huge potential for international trade in secondary raw materials recovered from waste. Recycling of waste has huge business potentials and it can emerge as a core sector of the emerging green economy. Within MSMEs sector, the micro and the small sectors serve as a green field for nurturing of entrepreneurial talent and helping the units to grow into medium and large size. The promotion of MSMEs, therefore, becomes a major area for policy focus, both in developed as well as developing countries.

The informal sector in waste management can be an asset to rural as well as urban system, if given an opportunity to develop. There is a need to mainstream informal sector employment. Informal sector employment is in general low paid, due to poor skills of the workers in this sector. The possible reasons for low skill are lack of opportunity to avail skill-building facilities. Hence, most households engaged in this sector are unable to escape the poverty cycle over generations. The only way to break out this poverty cycle is by improving existing skills of the workforce in informal sector. Technical programs are needed tailored to requirements of the existing workforce.

For sustainable business, Recycling of waste presents a chance to innovate, streamline business operations and create cost savings. Waste management is also an emerging field that offers entrepreneurial opportunities. Future waste management offers many business opportunities for the private sector such as: waste-collection/disposal services; operation of recycling plant; e-waste recycling; Consultancy; equipment supply; organic fertilizer manufacturing; transportation; trade in recycled materials.

**Abbreviations and Acronyms**

MSME – Micro Small Medium Enterprises

SME – Small and Medium Enterprises

UNDP – United Nations Development Programme

**2. RESEARCH METHODOLOGY****2.1 Population and Sample :****Sampling Frame :** MSMEs in waste management**Sampling Method :** Prospective Entrepreneurs – Judgemental Sampling

MSME Entrepreneurs – Snowball Sampling

**Sample Size :** 154 respondents

122 Prospective Entrepreneurs

32 Established MSME Entrepreneurs

**2.2 Data Collection :**

This research includes both primary and secondary data collection method.

**Primary Data Collection :***Observation Method* – Disguised Observation , Human Observation Technique.

Personal Interview Method

**Secondary Data Collection :***Internal data sources* - MSMEs Record , Employee record , Sales data , Financial data , Others publications.*External data sources* – Published sources , Computer – based Information centres , Syndicated data sources , Government and records.**2.3 Statistical tools and econometric models**

We have used correlation to analyse the relationship between the selected variables , chi square test to prove the hypothesis framed in our research. Bar graphs are used to give an observational inferences about our research. The detail of methodology is given as follows.

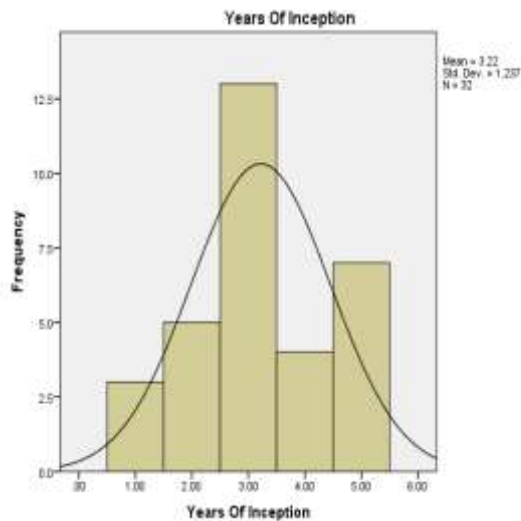
**2.3.1 Descriptive Statistics****Status of Informal waste Management entrepreneurs :****A) Number of years versus Employee performance.**

To understand the status of Informal entrepreneurs in MSMEs, there is a need to study the employee performance. Performance is based on satisfaction of social and economical needs. If the employee can lead an affordable lifestyle, then their performance will be good.

Statistics		
	Years Of Inception	Contractual Emp Performance
Valid	32	32
Missing	0	0
Mean	3.2188	3.0000
Std. Deviation	1.23744	1.04727

**Table 1**

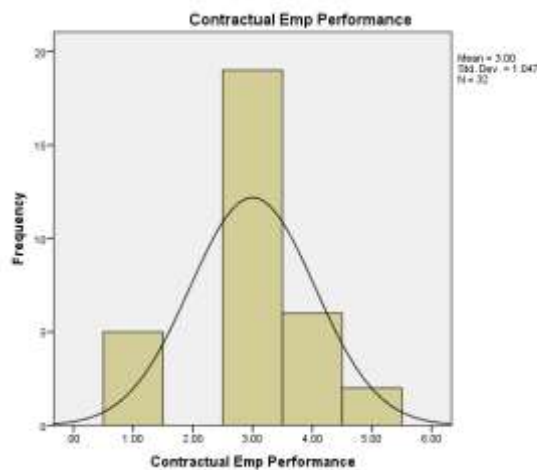
**Table 1** indicates, that the mean is around 3 and Std deviation around 1 units.



No of Years	Frequency	Percent	Valid Percent	Cumulative Percent
<5	3	9.4	9.4	9.4
5-10	5	15.6	15.6	25.0
10-15	13	40.6	40.6	65.6
15-20	4	12.5	12.5	78.1
>20	7	21.9	21.9	100.0
Total	32	100.0	100.0	

Table 2

From above Table 2 there are more business units running successfully from the past 10 to 15 years since their inception and the equal deviation from the mean value in the distribution curve indicates new entrepreneurs have started to enter the industry to earn their living and senior entrepreneurs have managed to grow consistently as a family business.



Employee Performance in percent	Frequency	Percent	Valid Percent	Cumulative Percent
0-20	5	15.6	15.6	15.6
40-60	19	59.4	59.4	75.0
60-80	6	18.8	18.8	93.8
80-100	2	6.3	6.3	100.0
Total	32	100.0	100.0	

Table 3

Almost all the employees working in this Industry are contractual employees. The employee performance is around 40 to 60 percent. This indicates that the employees working are unskilled or semiskilled. There are hardly any Skilled employees in solid waste management industry. There is a need to give training and convert these unskilled and semiskilled employees as skilled employees to increase the performance. This will indirectly promote the Industry for expansion.

**H<sub>0</sub> : There is significant relationship between years of Inception and employee performance.**

**H<sub>1</sub> : There is no significant relationship between years of Inception and employee performance.**

From the crosstabulation Table 4 , Less than 5 years firms have around 20 percent employee performance and struggling to survive. Firms with 5 to 10 years have around less than 20 to 60 percent. We find that firms with 10 to 15 years from their inception have 40 to 60 percent employee performance. Firms with 15 to 20 years have 60 to 80 percent. From this it can be understood that policy makers must focus on firms which are less than 15 years to encourage employment opportunities.

Years Of Inception \* Contractual Emp Performance Crosstabulation

		Contractual Emp Performance ( % )				Total	
		0-20	40-60	60-80	80-100		
Years Of Inception	<5	Count	2	1	0	0	3
		Expected Count	.5	1.8	.6	.2	3.0
		% within Years Of Inception	66.7%	33.3%	0.0%	0.0%	100.0%
	5-10	Count	2	2	1	0	5
		Expected Count	.8	3.0	.9	.3	5.0
		% within Years Of Inception	40.0%	40.0%	20.0%	0.0%	100.0%
	10-15	Count	1	11	1	0	13
		Expected Count	2.0	7.7	2.4	.8	13.0
		% within Years Of Inception	7.7%	84.6%	7.7%	0.0%	100.0%
	15-20	Count	0	1	2	1	4
		Expected Count	.6	2.4	.8	.3	4.0
		% within Years Of Inception	0.0%	25.0%	50.0%	25.0%	100.0%
	>20	Count	0	4	2	1	7
		Expected Count	1.1	4.2	1.3	.4	7.0
		% within Years Of Inception	0.0%	57.1%	28.6%	14.3%	100.0%
Total	Count	5	19	6	2	32	
	Expected Count	5.0	19.0	6.0	2.0	32.0	
	% within Years Of Inception	15.6%	59.4%	18.8%	6.2%	100.0%	

Table 4

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.145	12	.064
Likelihood Ratio	19.549	12	.076
Linear-by-Linear Association	10.161	1	.001
N of Valid Cases	32		

Table 5

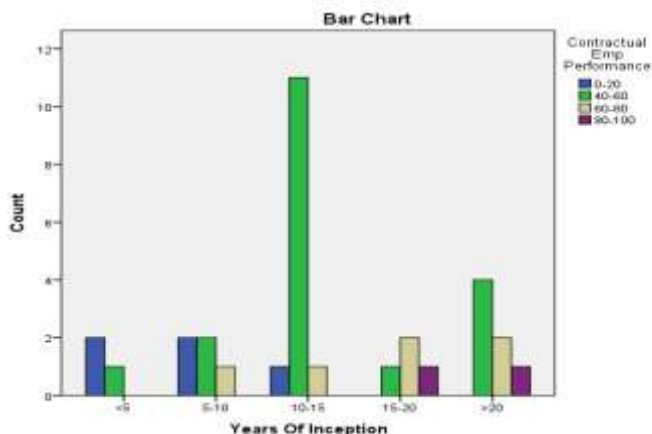
The Table 5 shows that Chi square value of 20.145 ( degrees of freedom = 12 , N = 32 ) , p = 0.064 , here p > 0.05 , hence H<sub>0</sub> is accepted , i.e., There is significant relationship between years of Inception and employee performance.

Symmetric Measures

	Value	Asymp. Std. Error <sup>a</sup>	Approx. T	Approx. Sig.
Pearson's R	.573	.112	3.825	.001
Spearman Correlation	.553	.134	3.639	.001
N of Valid Cases	32			

Table 6

From the **Table 6**, we can find that relationship between years of Inception and employee performance follows positive moderate correlation with Pearson’s R as 0.573.



From the above bar chart, we can find that entrepreneurs with 10 to 15 years in business have an employee performance of 40 to 60 percent. It is also important to note from the graph that entrepreneurs with more than 15 years of inception have achieved employee performance of 80 percent and above.

**Observation :**

The status of informal entrepreneurs considering number of years from its inception and the improvement in the performance of its employees are positively correlated. This clearly means that, more the number of years from its inception, the better will be the performance of its employees. Chi-square analysis also proved that there is significant relationship between years of Inception and employee performance.

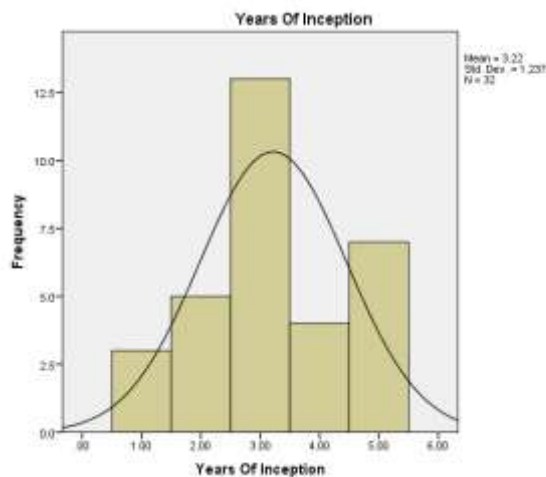
**B) Number of years versus Total number of employees.**

**Statistics**

	Years Of Inception	No. of Labourers
Valid	32	32
Missing	0	0
Mean	3.2188	1.5000
Std. Deviation	1.23744	1.21814

**Table 7**

Next to understand the status of Informal entrepreneurs in MSMEs, there is a need to study the number of employees in connection with the number of years from its start. More employees in an firm is an indication that the firm is prospering. This will help in understanding as to why a firm is successful by observation.

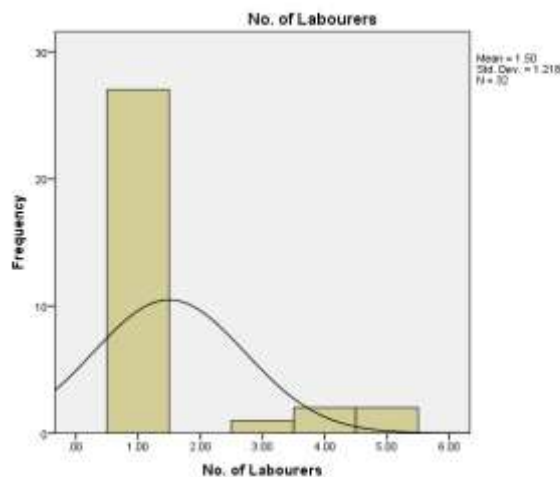


**Years Of Inception**

	Frequency	Percent	Valid Percent	Cumulative Percent
<5	3	9.4	9.4	9.4
5-10	5	15.6	15.6	25.0
10-15	13	40.6	40.6	65.6
15-20	4	12.5	12.5	78.1
>20	7	21.9	21.9	100.0
Total	32	100.0	100.0	

**Table 8**

From the above graph, the normal distribution is bell shaped, which indicates that there are equal number of new entrants in comparison with existing entrepreneurs. From the graph and **Table 8** we can observe that firms with 10 to 15 years of Inception have maximum number of employees. The maturity phase for firms in solid waste management is very limited.



**No. of Labourers**

	Frequency	Percent	Valid Percent	Cumulative Percent
1-5	27	84.4	84.4	84.4
10-20	1	3.1	3.1	87.5
20-50	2	6.3	6.3	93.8
>50	2	6.3	6.3	100.0
Total	32	100.0	100.0	

**Table 9**

The **Table 9** shows that the number of employees are 1 to 5 in most of the respondents in our study and this is same even when considering population in the City. The distribution curve indicates that finding firms with more employees in waste management industry was more difficult. The distribution curve is skewed towards right and the bar graph by observation indicates that more needs to be worked to increase the number of employees in bigger firms by providing latest technologies, facilities, training, etc for the employees, so that they feel they can make their living in these firms.

**H<sub>0</sub> :** There is significant relationship between years of Inception and total number of employees.

**H<sub>1</sub> :** There is no significant relationship between years of Inception and total number of employees.

The cross tabulation **Table 10** below shows that :

Firms with less than 5, 5 to 10, 10 to 15, 15 to 20 and more than 20 years from their inception have less than 5 or 5 employees atmost. This gives a hint, that there is more attrition rate in this industry. Strategies to promote reduction of attrition rate needs to be framed and increase employable opportunities.

Firms need to provide facilities and improve life quality for the employees to stay in the firm, so that the firm can grow, provide more employment and more opportunities to its employees for their growth.

**Years Of Inception \* No. of Labourers Crosstabulation**

		No. of Labourers				Total
		1-5	10-20	20-50	>50	
Years Of Inception	Count	1	1	0	1	3
	<5 Expected Count	2.5	.1	.2	.2	3.0
	% within Years Of Inception	33.3%	33.3%	0.0%	33.3%	100.0%
	Count	4	0	1	0	5
	5-10 Expected Count	4.2	.2	.3	.3	5.0
	% within Years Of Inception	80.0%	0.0%	20.0%	0.0%	100.0%
	Count	12	0	1	0	13
	10-15 Expected Count	11.0	.4	.8	.8	13.0
	% within Years Of Inception	92.3%	0.0%	7.7%	0.0%	100.0%
	Count	4	0	0	0	4
	15-20 Expected Count	3.4	.1	.3	.3	4.0
	% within Years Of Inception	100.0%	0.0%	0.0%	0.0%	100.0%
	Count	6	0	0	1	7
	>20 Expected Count	5.9	.2	.4	.4	7.0
	% within Years Of Inception	85.7%	0.0%	0.0%	14.3%	100.0%
Total	Count	27	1	2	2	32
Expected Count	27.0	1.0	2.0	2.0	32.0	
% within Years Of Inception	84.4%	3.1%	6.2%	6.2%	100.0%	

**Table 10**

The Table 11 shows that Chi square value of 18.868 ( degrees of freedom = 12 , N = 32 ) , p = 0.092 , here p > 0.05 , hence H<sub>0</sub> is accepted , i.e., There is significant relationship between years of Inception and total number of employees.

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.868 <sup>a</sup>	12	.092
Likelihood Ratio	13.898	12	.307
Linear-by-Linear Association	1.565	1	.211
N of Valid Cases	32		

**Table 11**

new entrants to the industry.

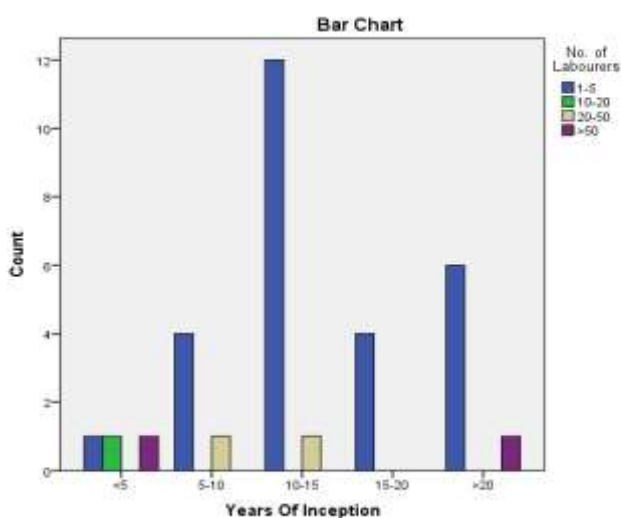
their own firms as

Symmetric Measures				
	Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Pearson's R	-.225	.231	-1.263	.216 <sup>c</sup>
Spearman Correlation	-.257	.213	-1.456	.156 <sup>c</sup>
N of Valid Cases	32			

Table 12

From the **Table 12**, we can find that relationship between years of Inception and number of employee follows minor negative correlation with Pearson’s R as -0.225.

This clearly indicates the more experienced an entrepreneur is, he tries not to employ unskilled or semiskilled employees to get maximum profit. This is because, unskilled and semi skilled employees are less paid.



From the graph we can observe that employees strength is about 1 to 5 in all the categories. Hence a boost is required by the government by encouraging entrepreneurs through different possible schemes to uplift.

**Observation :**

Most of the entrepreneurs have employees below 5 in number. There is minor negative correlation between Years of Inception and number of employees working in a firm. There is significant relationship between Years of Inception and Number of employees.

**C) Number of years versus Type of employees.**

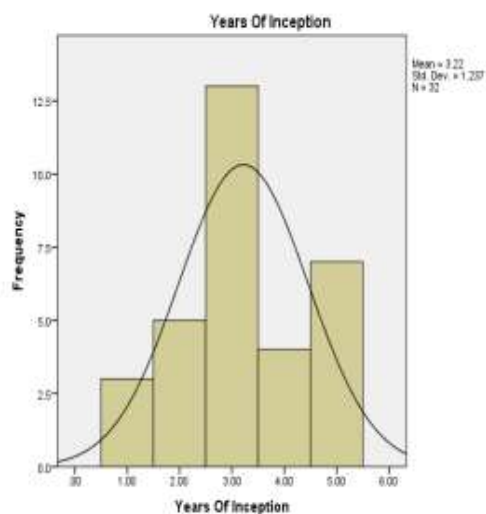
Statistics		
	Years Of Inception	Type of Labourer in Business
Valid	32	32
Missing	0	0
Mean	3.2188	1.5625
Std. Deviation	1.23744	.71561

Table 13



The mean for years of Inception is 3.21 , a deviation around 1.23 units. Mean for type of Labourers is 1.56 and with a deviation of 0.71 units.

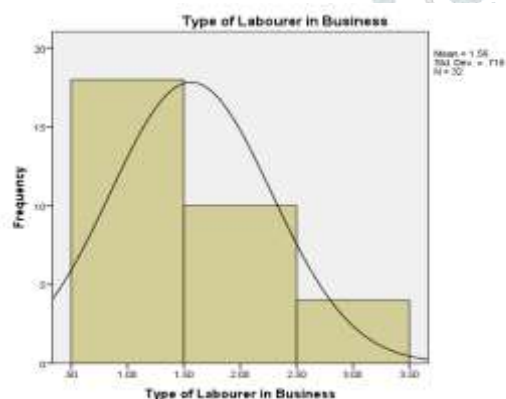
This is an indication that 10 to 15 years since its Inception, firms have more of unskilled and semi skilled employees.



	Frequency	Percent	Valid Percent	Cumulative Percent
<5	3	9.4	9.4	9.4
5-10	5	15.6	15.6	25.0
10-15	13	40.6	40.6	65.6
15-20	4	12.5	12.5	78.1
>20	7	21.9	21.9	100.0
Total	32	100.0	100.0	

Table 14

From the bar graph and Table 14 we can observe that the data follows normal distribution with more firms in the category 10 to 15 years and more than 20 years.



	Frequency	Percent	Valid Percent	Cumulative Percent
Unskilled	18	56.3	56.3	56.3
Semi Skilled	10	31.3	31.3	87.5
Skilled	4	12.5	12.5	100.0
Total	32	100.0	100.0	

Table 15

From the above graph and Table 15, we can observe there are more unskilled and semi skilled employees. These employees are illiterates and have minimal knowledge of waste management.

Skilled employees are hardly available. This is because the entrepreneurs cannot pay skilled employees with the income they generate in waste management.

Proper methodology , technical knowledge needs to be given to the entrepreneurs so that they can earn more profit and recruit more employees in their firms.

**H<sub>0</sub> : There is significant relationship between years of Inception and type of labourer.**

**H<sub>1</sub> : There is no significant relationship between years of Inception and type of labourer.**

From the crosstabulation Table 16 we can find that firms between 15 to 20 years followed by 10 to 15 years , since inception have the most number of unskilled employees compared with others.

It is interesting to observe that firms with 5 to 10 years have more semi skilled employees. This means that the young entrepreneurs have understood the waste management better than their seniors and investing more on semi skilled employees. Skilled employees are more in firms with more than 10 to 15 years since its inception.

**Years Of Inception \* Type of Labourer in Business Crosstabulation**

		Type of Labourer in Business			Total	
		Unskilled	Semi Skilled	Skilled		
Years Of Inception	Count	1	1	1	3	
	<5	Expected Count	1.7	.9	.4	3.0
		% within Years Of Inception	33.3%	33.3%	33.3%	100.0%
	Count	2	3	0	5	
	5-10	Expected Count	2.8	1.6	.6	5.0
		% within Years Of Inception	40.0%	60.0%	0.0%	100.0%
	Count	8	3	2	13	
	10-15	Expected Count	7.3	4.1	1.6	13.0
		% within Years Of Inception	61.5%	23.1%	15.4%	100.0%
	Count	3	1	0	4	
	15-20	Expected Count	2.3	1.3	.5	4.0
		% within Years Of Inception	75.0%	25.0%	0.0%	100.0%
	Count	4	2	1	7	
	>20	Expected Count	3.9	2.2	.9	7.0
		% within Years Of Inception	57.1%	28.6%	14.3%	100.0%
Count	18	10	4	32		
Total	Expected Count	18.0	10.0	4.0	32.0	
	% within Years Of Inception	56.2%	31.2%	12.5%	100.0%	

**Table 16**

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.772	8	.782
Likelihood Ratio	5.358	8	.719
Linear-by-Linear Association	.638	1	.425
N of Valid Cases	32		

**Table 17**

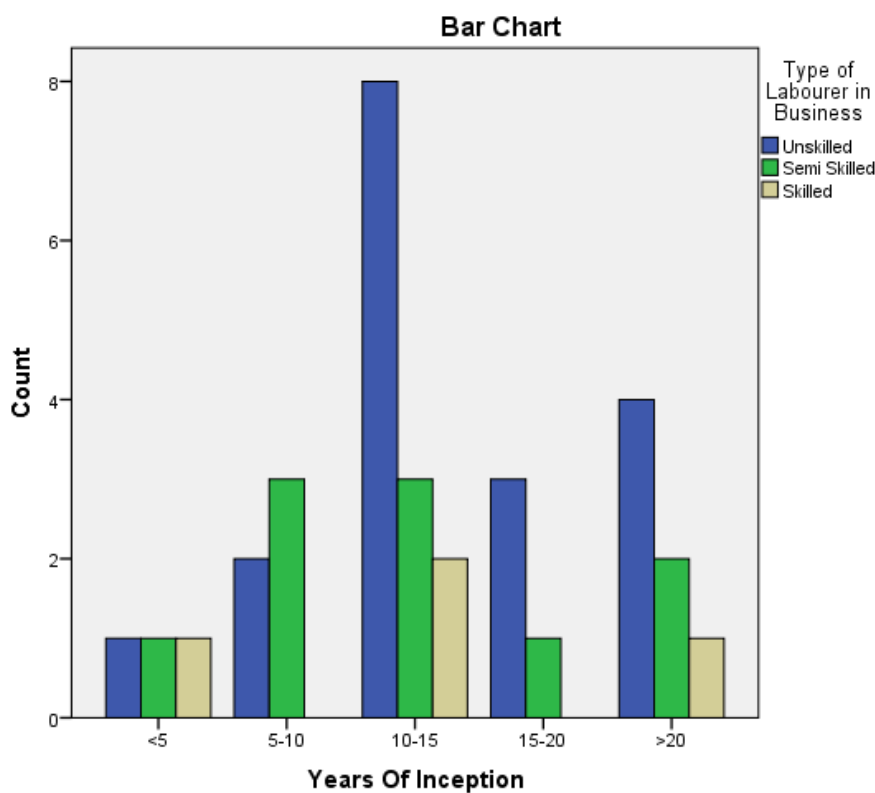
The **Table 17** shows that Chi square value of 4.772 ( degrees of freedom = 8 , N = 32 ),  $p = 0.782$  , here  $p > 0.05$  , hence  $H_0$  is accepted , i.e., There is significant relationship between years of Inception and type of labourer.

Symmetric Measures				
	Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Pearson's R	-.143	.186	-.794	.434 <sup>c</sup>
Spearman Correlation	-.157	.179	-.869	.392 <sup>c</sup>
N of Valid Cases	32			

Table 18

✚ From **Table 18**, we can find that relationship between years of Inception and type of employee follows minor negative correlation with Pearson's R as -0.143.

✚ This clearly indicates the more experienced an entrepreneur is, he tries to employ unskilled or semiskilled employees to get maximum profit. This is because, unskilled and semi skilled employees are less paid.



D)

- ✚ From the graph, we find that unskilled employees are more in this industry.
- ✚ Skilled employees are used only by experienced and senior entrepreneurs.
- ✚ Sometimes, the owner himself is a skilled labour, this can be observed in less than 5 years kind of firms.

**Observation :**

- ✚ Unskilled employees are more in this industry. There is minor negative correlation between Years of Inception and type of employees working in a firm. There is significant relationship between Years of Inception and type of employees.
- ✚ Skilled employees are used only by experienced and senior entrepreneurs. Sometimes, the entrepreneur himself is a skilled labour, this can be observed in less than 5 years kind of firms.

**3. FINDINGS AND SUGGESTIONS**

**a) Findings :**

- ✚ Almost all the employees working in this Industry are contractual employee.
- ✚ Senior entrepreneurs have managed to grow consistently as a family business.

- + New entrepreneurs have started to enter the industry to earn their living confidently but is still in infant stage.
- + Most of the entrepreneurs in this industry are illiterates or with minimal education but with good ideas to successfully manage the business.
- + There is a need to give training and convert the unskilled and semiskilled employees as skilled employees to increase the performance. This will indirectly promote the Industry for expansion.
- + From this it can be understood that policy makers must focus on firms which are less than 15 years to encourage employment opportunities
- + There is significant relationship between years since Inception and employee performance and follows moderate positive correlation.
- + The status of informal entrepreneurs considering number of years from its inception and the improvement in the performance of its employees are positively correlated. This clearly means that, the more number of years from its inception, the better will be the performance of its employees.
- + As the firm becomes older, the employees are quitting and joining other jobs or are starting their own firms as new entrants in the waste management industry. Small firms in Waste management does not need more educational knowledge to operate.
- + Less than 5 years firms have around 20 percent employee performance and struggling to survive. Firms with 5 to 10 years have around less than 20 to 60 percent. We find that firms with 10 to 15 years from their inception have 40 to 60 percent employee performance. Firms with 15 to 20 years have 60 to 80 percent. From this it can be understood that policy makers must focus on firms which are less than 15 years to encourage employment opportunities.
- + More needs to be worked to increase the number of employees in bigger firms by providing latest technologies, facilities, training, etc for the employees, so that they feel they can make their living in these firms.
- + That there is more attrition rate in this industry. Strategies to promote reduction of attrition rate needs to be framed and increase employable opportunities.
- + There are more unskilled and semi skilled employees. These employees are illiterates and have minimal knowledge of waste management.
- + Skilled employees are hardly available. This is because the entrepreneurs cannot pay skilled employees with the income they generate.
- + We can find that firms between 15 to 20 years followed by 10 to 15 years, since inception have the most number of unskilled employees compared with others.
- + The more experienced an entrepreneur is, he tries to employ unskilled or semiskilled employees to get maximum profit. This is because, unskilled and semi skilled employees are less paid.
- + Unskilled employees are more in this industry. There is minor negative relationship between Years of Inception and type of employees working in a firm. There is significant relationship between Years of Inception and type of employees.
- + Skilled employees are used only by experienced and senior entrepreneurs. Sometimes, the owner himself is a skilled labour, this can be observed in less than 5 years kind of firms.
- + As the firm becomes older, the employees are quitting and joining other jobs or starting their own firms as new entrants to the Industry.
- + Firms from 10 to 15 years since its Inception, have entrepreneurs with age above 45 years.
- + There are more entrepreneurs between the age of 25 to 35 years and followed by entrepreneurs of age 55 years and above.
- + Entrepreneurs of age between 35 to 55 years are very less, indicating entrepreneurship in waste management is still not taken as a profession on a long run, rather it is taken as a short run business while doing other businesses.
- + There is no significant relationship between years of Inception and age of entrepreneur.
- + we can observe that firms successful with 10 to 15 years since inception are managed by entrepreneurs with the age between 25 to 35 years.
- + Interesting fact is, firms more than 20 years are all managed by entrepreneurs aged above 55 years and lesser than 5 years firms are managed by 25 and 35 years.
- + Another interesting fact is, entrepreneurs with age between 35 to 55 years are losing interest in waste management business and shifting to other business.
- + relationship between years of Inception and age of entrepreneur is having moderate positive correlation
- + the more experienced an entrepreneur is, if nurtured properly, all aged entrepreneurs can be attracted to waste management industry and more jobs can be created to live a sustainable life. The business can also be a sustainable business if all aged entrepreneurs participate.
- + Hardly any entrepreneurs exist in the age of 18 to 25 years. Government policies to be framed to encourage youths of this age to enter this industry. Lot of unemployment problems can be solved. Graduates and Post Graduates can be well trained, technically and a revolution of sustainable employment opportunities can be maintained. Lot of unskilled, semi skilled labourers can get jobs. Entrepreneurs will sustain in business as they will start the business at a very young age.
- + More unskilled employees and skilled employees are hardly available. This is because the entrepreneurs cannot pay skilled employees with the income they generate in waste management.
- + If the age of entrepreneur is low, he is not in a position to maintain more employees because there is no financial system which will support startup.

✚ the more experienced an entrepreneur is, he tries to employ unskilled or semiskilled employees to get maximum profit. This is because, unskilled and semi skilled employees are less paid. Unskilled and semi skilled wont remain in the same firm as attrition rate is very high. Entrepreneurs aim of growing big is not achieved in reality.

✚ All the age category entrepreneurs like to employ unskilled employee to take the benefit of cheap labour cost. However entrepreneur with age 45 to 55 years would give a try for semi skilled employee but are not in a position to sustain their employment on long run.

✚ Skilled employees are used limitedly when required only by experienced and senior entrepreneurs and sometimes by risk taking young entrepreneurs.

✚ As age of the entrepreneur increases, the capacity to invest more also increases in waste management industry too like any other industry.

✚ From the graph, we find that most of the investments made starts from zero to about Rs.50,000

✚ Entrepreneurs aged more than 55 years are investing more than 5 lakhs.

✚ Investment around 1 lakh to 3 lakh are made by entrepreneurs with the age between 45 to 55 years.

✚ Most of the entrepreneurs below 35 years do not have the capacity to invest more.

✚ Senior entrepreneurs can be used to train young entrepreneurs

✚ There is no significant relationship between number of employees and type ( unskilled, Semi skilled , Skilled ) of employees recruited.

✚ Businesses want to remain informal , as the labour is cheap and can sustain easily because there is not much of investment.

✚ About half of the businesses in waste management wants to avoid tax hence wants to be informal. Remaining half do not have idea about tax and its benefits as most are illiterates.

✚ Most of them agree that they want to remain informal as it requires minimal investment.

✚ Entrepreneurs wants to be informal and strongly agree because if they are informal, the working capital will be minimal and managing the business will be easy, otherwise it becomes difficult in uncertain conditions.

#### b) Suggestions :

✚ Efforts to promote permanent jobs rather than contractual jobs.

✚ Senior Entrepreneurs given incentives by inviting them to train young entrepreneurs

✚ Special Incubation centres to be formed by the Government / Institutions to support and promote young entrepreneurs in waste management.

✚ Conduct educational programmes to young interested entrepreneurs. Promote Graduates and Higher Education students to become entrepreneurs in waste management with attractive incentives, etc.

✚ Policy makers must focus on firms which are less than 15 years to encourage employment opportunities.

✚ Government must focus on citizens between the age of 18 and 25 years and make initiatives to encourage them to be entrepreneurs in waste management.

✚ Increase the number of employees in bigger firms by providing latest technologies , facilities, training, etc for the employees, so that they feel they can make their living in these firms

✚ Strategies to promote reduction of attrition rate needs to be framed and increase employable opportunities.

✚ Government policies to be framed to focus waste management as a main business for entrepreneurs.

✚ Create more skilled employees by conducting appropriate training programmes.

✚ Financial Institutions must mandatorily support young entrepreneurs with finance , train them in calculated risk taking abilities.

#### I. ACKNOWLEDGMENT

This research has been funded by Indian Council of Social Science Research , Ministry of Human Resource Development , Government of India. We thank ICSSR, for showing confidence on young researchers like us and supporting in all our endeavours. We would like more support from ICSSR henceforth too.

#### REFERENCES

[1] Report of The Work Group on Micro, Small & Medium Enterprises (MSMEs) Growth for 12th Five Year Plan ( 2012-2017 ) Point No. 1.7 , Pg-35.

[2] Recommendations of the Inter-Ministerial Committee for Accelerating Manufacturing in Micro, Small & Medium Enterprises Sector ; Ministry of Micro, Small and Medium Enterprises , September , 2013 , Focus on Growth , Point 1.13 , Pg-20

[3] Evaluation of the World Bank Group's Targeted Support for Small and Medium Enterprises – Approach paper, January 7, 2013 ,IEG World Bank – IFC – MIGA].

[4] New Industry Policy of Delhi

[5] 10th Five year Plan

[6] Solid Waste Management - Issues and Challenges in Asia , Report of the APO Survey on Solid Waste Management 2004-05 , Pg-62

- [7] Solid Waste Management - Issues and Challenges in Asia , Report of the APO Survey on Solid Waste Management 2004-05 , Pg-72 & 75
- [8] Solid Waste Management - Issues and Challenges in Asia , Report of the APO Survey on Solid Waste Management 2004-05 , Pg-89
- [9] Rajasthan Mission on Skill and Livelihoods ; Innovative approaches in creating Livelihoods: An Overview ; Supported by UNDP India ; April 2010 ; Pg-3
- [10] Rajasthan Mission on Skill and Livelihoods ; Innovative approaches in creating Livelihoods: An Overview ; Supported by UNDP India ; April 2010 ; Pg-4
- [11] Rajasthan Mission on Skill and Livelihoods ; Innovative approaches in creating Livelihoods: An Overview ; Supported by UNDP India ; April 2010 ; Pg-13
- [12] World Trade Report 2016 ; Levelling the trading field for SMEs ; Pg-3
- [13] World Trade Report 2016 ; Levelling the trading field for SMEs ; Pg-13
- [14] World Trade Report 2016 ; Levelling the trading field for SMEs ; Pg-16
- [15] World Trade Report 2016 ; Levelling the trading field for SMEs ; Pg-18
- [16] Informality and micro entrepreneurs in Deveoping countries – Empirical findings from Delhi, India , Takashi Kurosaki , Sept 2015 , Pg-2
- [17] Informality and micro entrepreneurs in Deveoping countries – Empirical findings from Delhi, India , Takashi Kurosaki , Sept 2015 , Pg-9
- [18] IFC 2010 ; ILO 2009
- [19] AAMO, 2007
- [20] World business Council for Sustainable Development, 2007
- [21] ESCAP, 2006
- [22] Report of The Work Group on Micro, Small & Medium Enterprises (MSMEs) Growth for 12th Five Year Plan ( 2012-2017 ) Point No. 1.7 , Pg-48 .
- [23] Report of The Work Group on Micro, Small & Medium Enterprises (MSMEs) Growth for 12th Five Year Plan ( 2012-2017 ) Point No. 1.7 , Pg-239 .
- [24] Recommendations of the Inter-Ministerial Committee for Accelerating Manufacturing in Micro, Small & Medium Enterprises Sector ; Ministry of Micro, Small and Medium Enterprises , September , 2013 , Focus on Growth , Point 1.13 , Pg-1 & 2
- [25] IEG World Bank | IFC | MIGA ; Evaluation of the world Bank Group's Targeted Supported for Small and Medium Enterprises ; January 7, 2013 , Pg40-41

