
DETERMINANTS AND DISPARITIES OF HOUSEHOLD SOLID WASTE GENERATION: A CASE STUDY FROM THE COIMBATORE CITY MUNICIPAL CORPORATION

Dr. R. Manikandan¹, K. Sowmitha^{2*}, M. Tamilarasi², R. Keerthi Kumar² and M. Preethi²

¹Assistant Professor, Department of Economics, Bharathiar University.

²Ph. D. Research Scholar, Department of Economics, Bharathiar University.

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***Corresponding Author: K. Sowmitha**

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ABSTRACT

Increasing population, economic activities, and the associated factors put a serious strain on Municipal Solid Waste Management in developing nations. The domestic segments are generating the second-highest waste-generating sector. The Coimbatore City Municipal Corporation was selected for the study, as it is indeed the second-largest municipal corporation in Tamil Nadu, which is facing significant waste management strains in the segregation process. This study aims to focus on the factors influencing household solid waste and also aims to find the disparities in waste generation in the different zones of Coimbatore City. By using the Random sampling method, three zones (West zone, East zone and Centre zone) were selected out of five zones for the study. This study employed average, percentage, Multiple Linear regression, one-way ANOVA and multiple comparisons (Turkey Post hoc test) were used to determine the disparities in waste generation among the zones. This study figured out that there is a disparity between zones in generating household solid waste, and also found that income, family size, and age were the major factors determining household solid waste generation. This study suggests that improving and implementation of the advanced technology for reducing Household Solid Waste.

KEYWORDS: Municipal Solid Waste, Waste generation, Coimbatore City Municipal Corporation, Satisfaction.

JEL Classification: Q53, Q56, R11, H76, and M31

INTRODUCTION

Waste is considered one of the unavoidable by-products in human society. In the urbanizing world, the consumption behaviour has increased, which will automatically lead to an increase in waste generation. The household sector plays a significant role in waste generation, and its impact on the environment and public health is substantial. Generally, the household sector generates two kinds of waste: biodegradable waste and non-biodegradable waste. The biodegradable waste (i.e., food, paper and garden waste) releases methane, which is 25 times more potent than CO₂ (IPCC, 2014). The non-biodegradable waste (i.e., plastic, metal and glass) breaks down into microplastics and contaminates the soil, air and water, which will enter the food chain (UNEP, 2018).

The effective segregation and management of household waste was felt to be more difficult in urban areas, which were generating more waste compared to other rural and semi-urban areas (*United Nations Environment Program 2017*). The quantity of Municipal Solid Waste has increased several times in urban centres of developing countries during the last few decades (Suthar, 2015). According to the United Nations (2018), over 55 percent of people on Earth currently reside in urban areas, and by 2050, that number is expected to increase to 68 percent. Mainly, the urban area in a developing country will generate more waste because they were mainly focused on the development process rather than protecting environment (Shekdar, 2020).

India is a developing country that is focusing on increasing its GDP and the economy, which may risk compromising the environment and public health. India generates over 160,000 tonnes of solid waste daily, with a major proportion originating from the household sector (CPCB, 2024). Waste generation rates of cities in India range between 200 and 600 grams per head of population daily, depending on their socioeconomic characteristics, consumption patterns, and waste management methods (Shekdar, 2009; Hoornweg & Bhada-Tata, 2012). Indian cities, especially the Tier-2 cities, suffer from the infrastructural and governance limitations on their account of increased household waste (Sharholy et al., 2008). Despite the implementation of the *Solid Waste Management Rules, 2016*, last-mile implementation issues such as low segmentation at source, informal collecting, and insufficient public awareness among stakeholders still thrive (MoEFCC, 2016). There are some studies that indicated that urban upper-income households generate higher amounts of non-biodegradable waste like plastics, paper, and e-waste due to increased consumption of packaged products and electronic appliances (Gupta, Mohan, & Prasad, 2015). Lower-income households generate more biodegradable waste as a result of varying consumption and disposal practices

(Sharholly et al., 2008). Further, behavioral and economic parameters influence the willingness of households to adopt sustainable waste management practices, including reduction and reuse of waste, and willingness to pay for the improved services (Mishra et al., 2021). Municipal Solid Waste (MSW) management places a major financial strain on urban local bodies, which dedicate between 20–50 percent of their overall budget to waste management while spending 80–90 percent of that money on collection and transportation (Planning Commission, 2014).

In Tamil Nadu, Chennai, Coimbatore, Madurai, and Tiruchirappalli are the key contributors of the generation of municipal solid waste (TNPCCB, 2020). Coimbatore, a fast-developing industrial-cum-education centre, generates about 1100 TPD of MSW, with a large chunk being contributed by households (Coimbatore City Municipal Corporation, 2022). The Coimbatore City Municipal Corporation was selected for the study. The city is divided into five zones, each reflecting different socioeconomic, educational, and infrastructural characteristics influencing the household waste generation patterns. This study mainly focus on determinants of household solid waste and differences of the waste generation by the households.

METHODOLOGY

Coimbatore City Municipal Corporation was selected for the study. Coimbatore city is divided into five zones. The five zones namely the East Zone, West Zone, North Zone, South Zone, and Centre Zone. From the selected three zones, Vadavalli (west zone), Singanallur (east zone), and Gandhipuram (Centre zone) areas have been selected randomly for this study. A Random sampling method was selected for this study. In each area, 20 sample households were selected randomly. Totally 60 sample households were selected for this study. Primary data was collected through a well-structured questionnaire. This study uses statistical tools such as percentage & average which is used for identifying the socio-economic condition, Quantity of waste generation and the satisfaction and willingness of the corporation services, followed by Multiple Linear Regression was used to find the major factors determining the waste generation in the households and the one-way ANOVA & multiple Comparisons (Turkey Post hoc test) was used to find the difference in the household waste generation among the zones. This analysis is used to find the following hypothesis.

- Age, Number of family members, and Family income are the key factors determining the Household solid waste generation.
- There is no significant difference between the zones of Coimbatore city with respect to

different types of quantity waste generation.

Data Analysis

Table 1: Socio-Economic condition of the respondents.

Particulars	West Zone	East Zone	Centre Zone	Total
Gender				
Male	7 (35.0)	5 (25.0)	5 (25.0)	17 (28.3)
Female	13 (65.0)	15 (75.0)	15 (75.0)	43 (71.1)
Age				
21 – 36	1 (5.0)	2 (10.0)	4 (20.0)	7 (11.7)
37 – 53	15 (75.0)	13 (65.0)	11 (55.0)	39 (65.0)
54 and above	4 (20.0)	5 (25.0)	5 (25.0)	14 (23.3)
Education Qualification				
Illiterate	0 (0.0)	3 (15.0)	3 (15.0)	6 (10.0)
Primary Education	5 (25.0)	8 (40.0)	8 (40.0)	21 (35.0)
HSC	6 (30.0)	5 (25.0)	5 (25.0)	16 (26.7)
UG	6 (30.0)	3 (15.0)	2 (10.0)	11 (18.3)
Diploma	1 (5.0)	1 (5.0)	2 (10.0)	4 (6.7)
BE	2 (10.0)	0 (0.0)	0 (0.0)	2 (3.3)
Occupation				
Government	1 (5.0)	1 (5.0)	2 (10.0)	4 (6.7)
Private	4 (20.0)	6 (30.0)	7 (35.0)	17 (28.3)
Business	4 (20.0)	6 (30.0)	3 (15.0)	13 (21.7)
Daily wages	4 (20.0)	6 (30.0)	7 (35.0)	17 (28.3)
House Wife	7 (35.0)	1 (5.0)	1 (5.0)	9 (15.0)
Income and Expenditure				
Family Members	3.85	3.85	3.95	3.88
Family Income	42225	23150	34500	33291.67
Respondents Income	26861.11	11923.08	22142.86	21077.78
Monthly Expenditure	29745	18765	20325	22945

Source: Primary Data (2025); () – Row-wise percentage

Table 1 shows the socio-economic condition of the respondents in the selected study area. The gender of the respondents reveals that, in all three zones, the majority of the respondents were female's consisting of 70 percent, and 30 percent of the respondents were males. The age of the respondents shows that in the west zone, majority 75 percent of the respondents were belong to 37 – 53 age group, followed by 20 percent of the respondents were belong to 54 and above category and 5 percent of the respondents were belong to 21 – 36 age category, in the East zone, majority 65 percent of the respondents were belong to 37 – 53 age group, followed by 25 percent of the respondents were belong to 54 and above age group, and 10 percent of the respondents were belonged to 21 – 36 age group and in the Centre zone, majority 55 percent of the respondents were belong to 37 – 53 age category, followed by 25

percent of the respondents were belong to 54 and above age category and 20 percent of the respondents were belong to 21 – 36 age group. The Education qualification revealed that in the west zone majority 30 percent of the respondents were completed the higher secondary education and 30 percent were completed the Undergraduate, followed by in the east zone majority 40 percent of the respondents have only completed the primary education level and in the Centre zone majority 40 percent of the respondents were completed the primary education level. In the occupation of the respondents reveals that in the west zone, the majority 35 percent of the respondents were homemakers, 20 percent of the respondents were running their own business, going to private job and on a daily wage, in the centre zone majority 35 percent of the respondents were doing the private job and 35 percent of the respondents were doing the daily wage. The economic variable of the respondents shows that in each zones there are average 3 to 4 members in a family. The average family income and respondents income was stated that in the west zone, the respondents average monthly income was Rs. 26,861.11 and the average family monthly income was Rs. 42,225 followed by in the east zone, the respondents monthly income was Rs. 11928.08, the average family monthly income was Rs. 23150 and in the centre zone, the average respondents monthly income was Rs. 22,142.86. The family expenditure states that, in the west zone the average family expenditure was Rs. 29,745, in the east zone, the average family expenditure was Rs. 18765 and in the centre zone the family expenditure was Rs. 20,325. This table concludes that the west zone was economically improved compared to other zones.

Table 2: Household Waste Generation in a week. (in grams)

Area	Statistics	Kitchen Waste	Plastic Waste	Paper Waste	Other Waste	Total Waste	Per Day Family Waste	Per capita waste generation
West Zone	Sum	66500	13100	8450	1700	89750	12821	3482
	Mean	3325	655	422.5	85	4487.5	641.07	174.11
	N	20	20	20	20	20	20	20
East Zone	Sum	53700	8700	8250	4050	74700	10671	2993
	Mean	2685	435	412.5	202.5	3735	533.57	149.63
	N	20	20	20	20	20	20	20
Centre Zone	Sum	66900	10090	9500	1500	87990	12570	3443
	Mean	3345	504.5	475	75	4399.5	628.5	172.17
	N	20	20	20	20	20	20	20
Total	Sum	187100	31890	26200	7250	252440	36063	9918
	Mean	3118.33	531.5	436.67	120.83	4207.33	601.05	165.3
	N	60	60	60	60	60	60	60

Source: Primary data (2025)

Table 2 shows the types of waste generated in households in a day. In the West zone area, the overall waste generated by a household in week was 4487.50 grams, among them kitchen waste generate 75 percent of the total waste generated, followed by plastic waste which is generated averagely 655 grams, paper waste generated in households was 422.50 grams and the other waste includes (metal waste, medical waste and e waste) was 85 grams. In the west zone area the average waste generated by the households was 641.07 grams and per capita waste generated in a day was 174.11 grams. In the East zone area the average household waste was 3735 grams, among the total waste 71 percent of total waste was generated as kitchen waste, the kitchen waste generated in a week was average 2685 grams, followed by plastic waste was generated averagely 435 grams, the paper waste generated in a week was 412.50 grams and the other waste generated by a households in a week was 202.50 grams and in a day the family generates 533.57 grams and per person generates 149.63 grams of waste in a day. This table concludes that total waste kitchen waste was contributing 70 to 75 percent of the total waste generated in the all the three zones household and the west zone generated high waste than the east and centre zone area. As per the **Table 1** west zone is economically better than the east and centre zone respondents and also the waste generated was also higher than the other zone. **Table 5** have analysed the relationship between the economic status and waste generation, and also proved that they both have positive relationship.

Table 3: Method of Waste Collection.

Name of the Area	Waste Collection	Frequency of waste collection in a week	
	Corporation	Statistics	Frequency
West Zone	20	Sum	38
	(100.0)	Mean	1.9
	[33.30]	N	20
East Zone	20	Sum	28
	(100.0)	Mean	1.4
	[33.30]	N	20
Centre Zone	20	Sum	30
	(100.0)	Mean	1.5
	[33.30]	N	20
Total	60	Sum	96
	(100.0)	Mean	1.6
	[100.00]	N	60

Source: Primary Data (2025); () – Row-wise percentage

Table 4: Satisfaction and Willingness to Pay for Corporation and Sewage Management.

Name of the Area	Satisfaction of Corporation Collecting waste		Waste segregation		Willingness to Pay		Amount (in Rs) / per month	
	Yes	No	Yes	No	Yes	No	Statistics	Amount
West Zone	19	1	11	9	17	3	Sum	6800
	(95.00)	(5.00)	(55.00)	(45.00)	(85.00)	(15.00)	Mean	400.00
	[100.00]	[50.00]	[21.60]	(100.00)	[35.40]	[25.00]	N	17
East Zone	20	0	20	0	16	4	Sum	3800
	(100.00)	(0.00)	(100.00)	(0.00)	(80.00)	(20.00)	Mean	237.50
	[34.50]	[0.00]	[39.20]	[0.00]	[33.30]	[33.30]	N	16
Centre Zone	19	1	20	0	15	5	Sum	3550
	(95.00)	(5.00)	(100.00)	(0.00)	(75.00)	(25.00)	Mean	236.67
	[32.80]	[50.00]	[39.20]	[0.00]	[31.30]	[41.70]	N	15
Total	58	2	51	9	48	5	Sum	14150
	(96.70)	(3.30)	(85.00)	(15.00)	(80.00)	(25.00)	Mean	294.79
	[100.00]	[100.00]	[100.00]	[100.00]	[100.00]	[41.70]	N	48

Source: Primary data (2025); () – Row-wise percentage.

Table 3 and Table 4 shows the waste collection method and the satisfaction level of the corporation and willingness to spend on sewage management. In the west zone, all the waste was collected by the corporation twice a week and 95 percent of the respondents were satisfied with the corporation cleaning work, and 85 percent of the respondents were willing to spend more for the sewage improvement system. The west zone respondents who agreed to spend more for the sewage improvement were ready to contribute Rs. 400/ per month which is they were willing to contribute their 1.49 percent of earnings. In the east zone, once a week the corporation collected the waste and all the respondents were satisfied with the work of the corporation and among them 80 percent of the respondents shows the willingness to pay more for the improvement of the sewage system, the respondents were willing to pay 237.50 which is 2 percent of the respondents income. In the centre zone, twice a week, the corporation collected the waste and 95 percent of the respondents were satisfied with the corporation cleaning process, among them 75 percent of the respondents were willing to pay 1 percent of the respondents income Rs. 236.67/ per month for the improvement of sewage management. This tables concludes that, in all the zones waste was collected by the corporation once in a week or twice in a week and majority of the respondents were satisfied with corporation cleaning process. Among three zones, west zone was economically and waste generating wise highest than the other two zones but they willing to pay 1.49 percent of their income, but comparing to the east zone which is economically lower when compare to other two zones and also this zone was generating less waste compare to other zones, but they were willing to

pay 2 percent of their income, which shows that the respondents in the west zone were more caution on the waste generating, and gives improvement in the sewage management system than others. This shows the west zone area respondents attitude towards the improvement of the environment.

Hypothesis I (Regression)

Age of the respondents, Number of Family members and Family member are the key factor influencing the Household Solid waste generated.

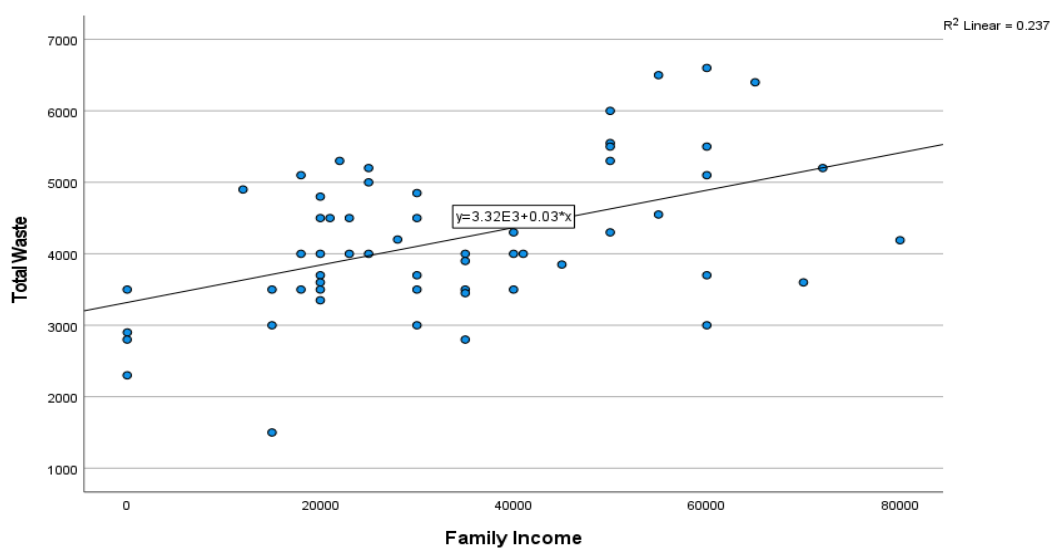
Table 5: Factors Influencing the Household Solid waste in the Selected Areas.

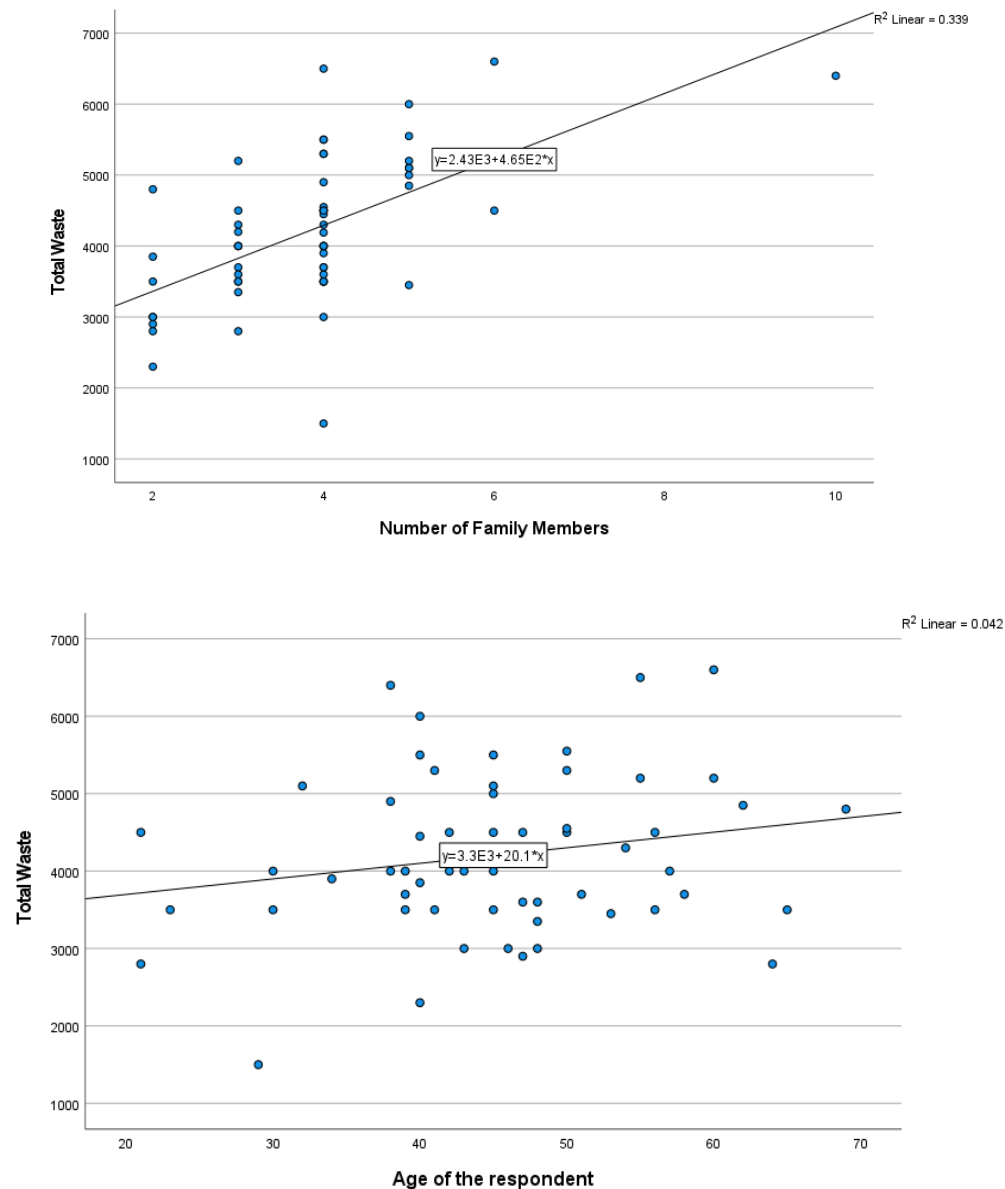
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1289.088	570.424		2.260	0.028
Age of the respondent	22.177	9.952	0.225	2.228	0.030*
Number of Family Members	390.431	91.799	0.489	4.253	0.000**
Family Income	0.012	0.006	0.232	2.017	0.048*
R ²	0.444				
Adjusted R ²	0.414				

Source: Computed primary data ** 1% level of significant, * 5% level of significant

$$y = a + b_{x1} + bx_2 + \mu$$

$$y = a + b_{age} + b_{family\ member} + b_{family\ income} + \mu$$





$$y = 1289.088 + 22.177_{age} + 390.431_{family\ member} + 0.012_{family\ income} + \mu$$

Table 5 shows the factors determining the household solid waste generated in the households. The highly correlated variables age of the respondents, number of family members and family income, were taken as independent variables. The age of the respondents, the number of family members and the family income of the respondents were significantly determining the household waste generation. The age of the respondents was significant at 5 % level. With an increase in the age of the respondents every year will be lead to an increase in household waste by 22.177 grams. The number of members in a family was significant at 1 % level, as the number of family members increases for each person will lead to an increase in the household solid waste at 390.43 grams. The family income was significant at 5 % level. When the family income increases by Rs 1, it leads to an increase in the solid waste

generation of 0.012 grams. The R^2 value was 0.444. The household solid waste generation was 44 percent influenced by the age of the respondents, the number of family members and family income. Among these three independent variables number of family members was a highly influencing variable for the waste generation. The true exploratory factor of the model is around 41.4 percent which suggests that there is a reasonably strong.

Hypothesis II (One Way ANOVA)

The west zone, east zone and Centre zone was generating different amount of kitchen waste, plastic waste, paper waste, other waste and total waste in a week.

H₀: There is no significant difference between the different zones of Coimbatore city with respect to types of waste generation.

H₁: There is a significant difference between the different zones of Coimbatore city with respect to types of waste generation.

Table 6.1: ANOVA for Types of Household Waste Generation.

Waste Generation		Sum of Squares	df	Mean Square	F	Sig.
Kitchen Waste	Between Groups	5637333.333	2	2818666.667	3.605	.034*
	Within Groups	44572500.000	57	781973.684		
	Total	50209833.333	59			
Plastic Waste	Between Groups	505870.000	2	252935.000	3.733	.030*
	Within Groups	3861695.000	57	67749.035		
	Total	4367565.000	59			
Paper Waste	Between Groups	45083.333	2	22541.667	.860	.429
	Within Groups	1494250.000	57	26214.912		
	Total	1539333.333	59			
Other Waste	Between Groups	201083.333	2	100541.667	2.684	.077
	Within Groups	2135375.000	57	37462.719		
	Total	2336458.333	59			
Total Waste	Between Groups	6770403.333	2	3385201.667	3.589	.034*
	Within Groups	53763970.000	57	943227.544		
	Total	60534373.333	59			

Source: Computed Data; * indicates significant at 5% level

Table 6 shows the ANOVA for the type of household solid waste generation in the different zones of the Coimbatore district. The P values of Kitchen waste, plastic waste and total waste are 0.034 (F=3.605), 0.030 (F=3.733) and 0.034 (F=3.589), respectively. Since the P values of Kitchen waste, plastic waste and total waste are less than 0.05, the null hypothesis for these three variables is rejected and reveals that there is a significant difference among different zones of Coimbatore city concerning Kitchen waste, plastic waste and total waste. Similarly, the P values of paper waste (0.429) and other waste (0.077) is above the average level of 0.05. So, the null hypothesis for paper waste and other waste is accepted and proves that there is no significant difference among the different zones of Coimbatore city with respect to types of waste generation. And also the null hypothesis for kitchen waste, plastic waste and total waste was rejected and the alternative hypothesis was accepted and proving that there is significant difference between among the different zone of Coimbatore city with respect to types of waste generation.

Table 6.2: Multiple Comparison.

Dependent Variable: Household Waste Generation							
Turkey HSD							
Waste Generation	(I) Zones	Mean (grams)	Std. Deviation	(J) Zones	Mean Difference (I-J)	Std. Error	P Value
Kitchen Waste	West Zone	3325.00	1138.732	East Zone	640.000	279.638	0.066
				Centre Zone	-20.000	279.638	0.997
	East Zone	2685.00	736.475	West Zone	-640.000	279.638	0.066
				Centre Zone	-660.000	279.638	0.046*
	Centre Zone	3345.00	711.910	West Zone	20.000	279.638	0.997
				East Zone	660.000	279.638	0.046*
Plastic Waste	West Zone	655.00	414.189	East Zone	220.000	82.310	0.026*
				Centre Zone	150.500	82.310	0.170
	East Zone	435.00	90.467	West Zone	-220.000*	82.310	0.026*
				Centre Zone	-69.500	82.310	0.677
	Centre Zone	504.50	153.331	West Zone	-150.500	82.310	0.170

Dependent Variable: Household Waste Generation							
Turkey HSD							
Waste Generation	(I) Zones	Mean (grams)	Std. Deviation	(J) Zones	Mean Difference (I-J)	Std. Error	P Value
				East Zone	69.500	82.310	0.677
Paper Waste	West Zone	422.50	186.713	East Zone	10.000	51.201	0.979
				Centre Zone	-52.500	51.201	0.564
	East Zone	412.50	144.071	West Zone	-10.000	51.201	0.979
				Centre Zone	-62.500	51.201	0.446
	Centre Zone	475.00	151.744	West Zone	52.500	51.201	0.564
				East Zone	62.500	51.201	0.446
Other Waste	West Zone	85.00	184.320	East Zone	-117.500	61.207	0.142
				Centre Zone	10.000	61.207	0.985
	East Zone	202.50	239.778	West Zone	117.500	61.207	0.142
				Centre Zone	127.500	61.207	0.102
	Centre Zone	75.00	144.641	West Zone	-10.000	61.207	0.985
				East Zone	-127.500	61.207	0.102
Total Waste	West Zone	4487.50	1253.928	East Zone	752.500	307.120	0.045*
				Centre Zone	88.000	307.120	0.956
	East Zone	3735.00	780.705	West Zone	-752.500	307.120	0.045*
				Centre Zone	-664.500	307.120	0.086
	Centre Zone	4399.50	804.889	West Zone	-88.000	307.120	0.956
				East Zone	664.500	307.120	0.086
One Day waste	West Zone	641.07	179.133	East Zone	107.500	43.874	0.045*
				Centre Zone	12.571	43.874	0.956
	East Zone	533.57	111.529	West Zone	-107.500	43.874	0.045*

Dependent Variable: Household Waste Generation							
Turkey HSD							
Waste Generation	(I) Zones	Mean (grams)	Std. Deviation	(J) Zones	Mean Difference (I-J)	Std. Error	P Value
				Centre Zone	-94.929	43.874	0.086
	Centre Zone	628.50	114.984	West Zone	-12.571	43.874	0.956
				East Zone	94.929	43.874	0.086
Per capita waste	West Zone	174.11	51.293	East Zone	24.482	15.978	0.284
				Centre Zone	1.946	15.978	0.992
	East Zone	149.63	43.381	West Zone	-24.482	15.978	0.284
				Centre Zone	-22.536	15.978	0.342
	Centre Zone	172.17	56.086	West Zone	-1.946	15.978	0.992
				East Zone	22.536	15.978	0.342

Source: Computed Data; * indicates significant at 5% level

Table 6.2 shows a Tukey post hoc test revealed that the different types of waste generated in the household is statistically different based on different zones in Coimbatore City Municipal Corporation. The kitchen waste is the highest waste generated in the households. The kitchen waste generation was statistically different in the east zone and centre zone ($p=0.046$).

East zone has statistically significantly low generation of kitchen waste generation ($2685.00+736.475$, $p=0.046$), when compare to west zone ($3325.00+1138.732$) and centre zone ($3345+711.91$, $p=0.046$). A Tukey post hoc test reveals that the centre zone households were generating more kitchen waste than the east zone households. The centre zone households generate more kitchen waste because the number of family member was high compare to other zone households (Table 1) and also (Table 5) has shown that the number of family members is highly influencing the total household waste generation.

A Tukey Post hoc test has revealed that the plastic waste generation statistically differ in west zone and east zone ($p=0.026$). East zone has statistically low generation of plastic waste ($435.00+90.467$, $p=0.026$), when compare to centre zone ($504.50+153.331$) and west zone ($655.00+414.189$, $p=0.026$), a Tukey post hoc test reveals that west zone respondents was generating more waste than the east zone respondents. This also seems like the west zone

respondents have no proper knowledge on how the environment were affected due to the high plastic waste generation.

The paper waste generation and other waste generation was statistically not different in the west zone, east zone and centre zone. This shows that the generation of paper waste and other waste was more or less similar in all three zone.

The total waste generated and the per capita waste generated in the household was statistically differ in west zone households and east zone households ($p=0.045$). The east zone was statistically generating low level of total waste and per capita waste ($3735.00+780.705$, $p=0.045$) and ($533.57+111.529$, $p=0.045$) when compare to centre zone ($4399.50+804.889$) and ($628.50+114.984$) followed by east zone ($3735.00+780.705$, $p=0.045$) and ($533.57+111.529$, $p=0.045$). a Tukey post hoc test reveals that overall west zone was generating more household solid waste and also the per capita waste generation than the other zones.

CONCLUSION

This study provides insight into the waste generated in households across different zones of Coimbatore city, Tamil Nadu. Result thus, figured that the west zone respondents were generating more solid waste than the east zone and the centre zone. There are 4 types of waste generated in the households, 75 percent of the portion was generated as kitchen waste, which was high in centre zone because it consists of more family members than the other zones. Followed by plastic waste, which is highly generated in the waste zone, their income and consumption are also higher than in other zones; paper waste was highly generated in the centre zone. Other waste (metal waste, medical waste, and e-waste) is comparatively high in the east zone area. But overall, the per-person waste generation in a day was high in the west zone, which is 174.11 grams, followed by the centre zone and the east zone. The result stated that age, family size and family income were the factors determining the household solid waste; family size was one of the main factors that determined the household solid waste than the other waste. This study provides a precise understanding of household solid waste generation patterns among the different zones of Coimbatore City Municipal Corporation. With this understanding, this study suggests that the municipal corporation should provide effective measures based on zonal disparities in the practicing method, segregation pattern, and also mainly adopt the advanced technology for reducing the household solid waste.

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