

## Individual Project Report

**Name:** Rai Varunkumar Rajesh

**Roll No.:** 183170012

### Comparison with drone based delivery system:

The comparison of the drone based delivery system with the conventional delivery system can be done by evaluating the cost of conventional delivery system in any of the two ways:

1. Running cost based comparison: In this comparison, the amount of cost incurred while delivering the parcel to the given location taking into account the following variables can be done:
  - Fixed cost: Basic salary of the delivery-boy
  - Cost based on number of parcels: Incentives given to the delivery boy for a given amount of parcel done in a given time
  - Fuel cost: Payment done for the fuel burnt while delivering the parcels ( $\text{Mileage} \times \text{Distance} \times \text{Fuel Price}$ )
  - Cost of maintenance: Cost added due to the maintenance of the vehicle
2. Price based comparison: Price comparison based on the payments done by various companies to the delivery agencies for the given parcel based on the chart formulated using following variables:
  - Distance covered for the delivery
  - Weight of the parcel carried

The price comparison in the second method is found to be more precise. But, in the second method of comparison, the initial cost of occupancy of the drones is also taken into account. While in the second method, we are not going to take the initial cost of occupancy into account as only the running cost of both the kind of systems are considered (including the maintenance cost of both the typed of delivery systems).

In the first method the kind of vehicle used for the delivery will also affect the cost comparison.

We have compared the drone based delivery system with the conventional delivery system by following the second method.

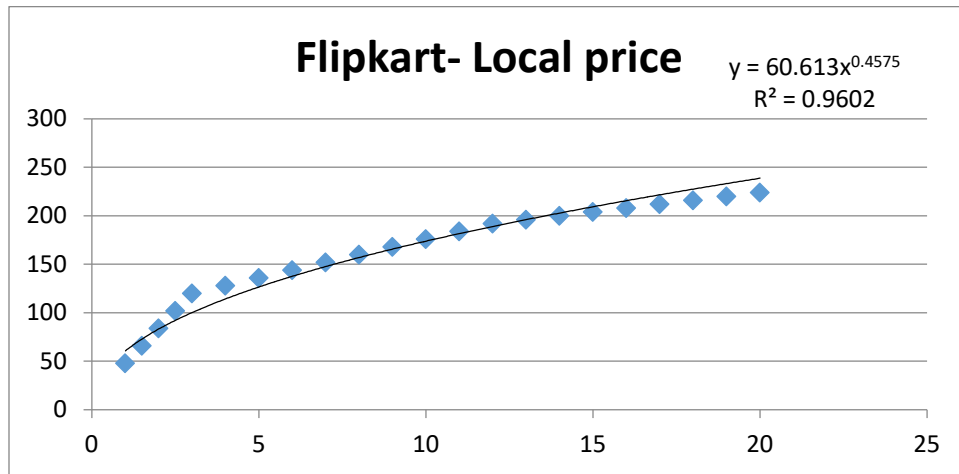
### Market survey of conventional delivery systems:

The cost incurred by different companies for the delivery of the products on the basis of their pricing strategy has been found out and it is mentioned below:

#### Pricing of Flipkart:

Weight Slab	Local (Intracity) in Rs.	Zonal (Intrazone) in Rs.	National (Interzone) in Rs.
Upto 0.5 kg	30	45	65
0.5- 3.0 kg (For every 0.5 kg)	18	23	27
3.0 kg- 12.0 kg (For every 1 kg)	8	10	15
More than 12.0 kg (For every 1 kg)	4	5	8

Taking into account only local pricing of the company, following relation is obtained with the help of the graph plotted between price and weight:



#### Pricing of Amazon:

Weight Slab	Local in Rs.	Zonal in Rs.	National in Rs.
Upto 0.5 kg	27	45	65
Each additional 0.5 kg	16	21	26
Upto 5 kg (fixed minimum fees)	124	10168	213
Each additional 1 kg	7	9	14
Upto 12 kg (fixed minimum fees)	175	255	-
Each additional 1 kg	3.5	4.5	-

