

Dr.D.Y.Patil Unitech Society

**Dr.D.Y.Patil Arts, Commerce & Science Women's  
College**

**Pimpri ,Pune -18.**

**CERTIFICATE**

This is to certify that **Miss Shivani Mahadik** of F.Y B.Sc Statistics completed satisfactorily the project report on **“Mode of transport used by College Students ”**during the academic year 2018-2019 and that the same have been examined and duly signed by the concerned teacher.

Project In-Charge

Head of Department

DR.D.Y.PATIL UNITECH SOCIETY

**DR.D.Y.PATIL ARTS, COMMERCE &  
SCIENCE WOMEN'S COLLEGE**

**PIMPRI,PUNE- 18.**

**F.Y .B.SC**

**DEPARTMENT OF STATISTICS**

**(2018 - 2019)**

**A PROJECT REPORT ON....**

**MODE OF TRANSPORT USED BY**

**COLLEGE STUDENTS**

**Project by;**

**Shivani Mahadik**

**Project Guide;**

**Asst.Prof. Komal Kothawade**

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# **Introduction**

Transportation system is the key feature in day to day life. In a city like Pune, which is spreading day by day in all the directions around it, transportation system becomes very important factor in everyone's life. Though Pimpri-Chinchwad has its own Municipal corporation, it is considered to be one of the major & important part of Pune. The population of the Pune region (including Pimpri-Chinchwad) is increasing drastically so the problem of traffic is also increasing. Pune does not have the connectivity of local trains like Mumbai has. So, people of Pune are highly depending on the local bus service, autos and private vehicles. People who are living in suburban area near the central railway line, they mostly use the local trains.

So as a student of women's college, it was an interesting question that though there are many options for transportation are available, which one generally students (only girls) prefer? Which factors are taking into consideration while making the choice of transportation by students? So these project is nothing but a search of the answers to these questions.

Since, this data is taken from women's college, it consists the data of female student only so the results are applicable for female students only.

## **Study Objectives**

- To understand the perception of mode of transport among the college student
- To know whether income of the family has any effect on the expense of travelling?
- Which mode of transport is preferred by students and why?
- Which mode of transport suits the pockets?

# Data

For this academic project, we used the primary data. Our Population was the students of the Dr. D.Y.Patil ACS Women's College. The questionnaire prepared for the collection of the data.

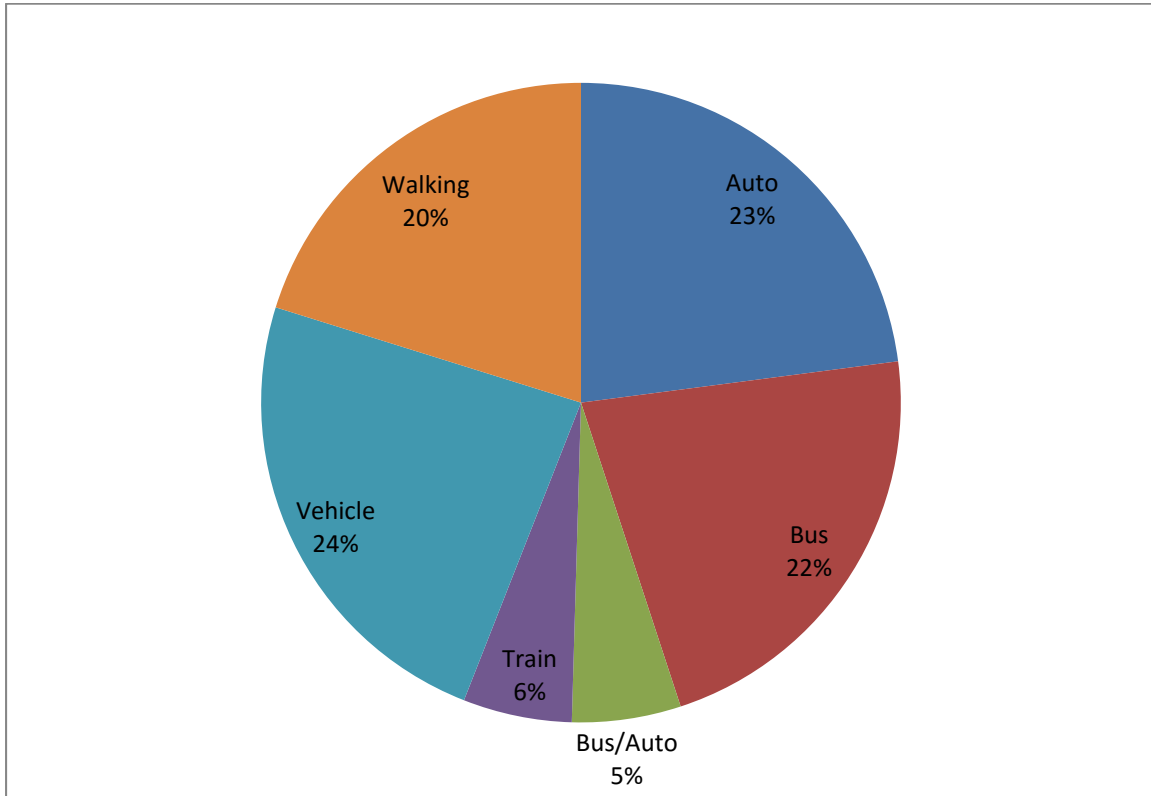
The actual dataset contains the information of 120 students. It has 9 variables i.e name of the student, age of the student, area where the student resides, the mode of transport student used and the reasons behind it, the cost of the travelling and monthly income of the student's family. The partial dataset has shown here:

				Distance From	MODE OF					Travelling		
SR.NO	NAME	AGE	AREA	College	TRANSPORT	T	C	S	M	expenses	Income	CLASS
1	Rohini Shinde	18	Talegaon	25	Train	T	C	S	M	600	100000	FY.BSC
2	Sadichha Dhanve	18	Talegaon	25	Train	T	C	S	M	600	100000	FY.BSC
3	Payal Waghmare	19	Thergaon	10	Bus		C		M	1800	100000	FY.BSC
4	Bhavika Adwani	18	Thergaon	10	Vehicle	T	C		M	800	100000	FY.BSC
5	Siddhi Sonawale	18	Chakan	20	Bus			S	M	750	100000	FY.BSC
6	Ashwini Pawar	19	Chikhli	8	Vehicle	T	C	S	M	1500	540000	FY.BSC
7	Reshma Sonawne	19	S.T.Nagar	0.6	Walking	T				0	60000	FY.BSC
8	Aishwarya	18	Nigdi	10	Bus/Auto	T	C		M	100	50000	FY.BSC
10	Nikita Kamble	20	Nigdi	10	Bus/Auto	T	C	S	M	1800	100000	FY.BSC
11	Ritika Narasappa	18	Dehuroad	13	Train	T	C	S	M	100	540000	FY.BSC
12	Mayuri Kadam	20	S.T.Nagar	0.6	Walking	T			M	0	100000	SY.BCOM
13	Namrata B	20	Pimpri	6	Auto	T	C	S	M	1800	100000	SY.BCOM
14	Maria R.	20	S.T.Nagar	0.6	Walking	T	C	S	M	0	100000	SY.BCOM
15	Yukta Sonawne	19	Pimpri	6	Auto	T	C	S		1800	200000	SY.BCOM

Here, the columns with alphabets "T", "C", "S" & "M" represents Time, Comfort, Safety and Money resp. i.e. these are the reasons behind the preference of the transportation mode by students.

# GRAPHICAL REPRESENTATION

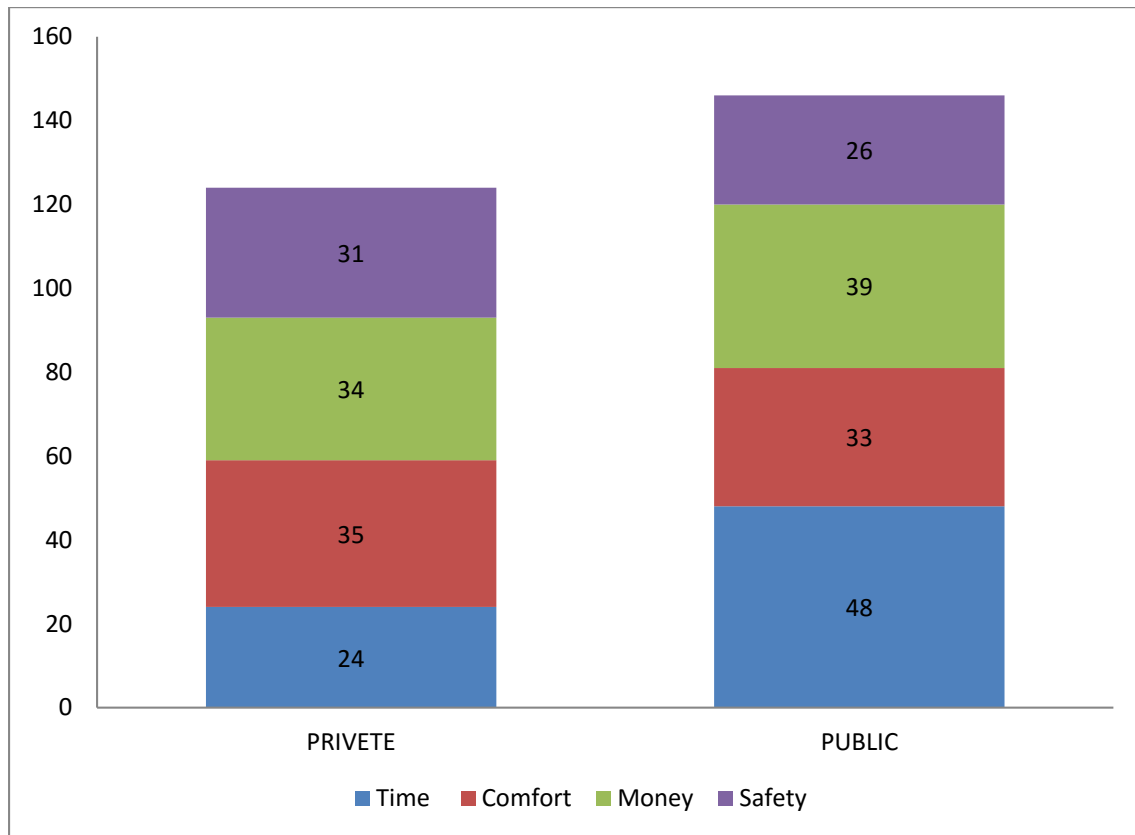
## A) Pie Chart:



**Conclusion:** So from the above pie chart, we can notice that the most of the students prefers private vehicles like scooty, bikes etc. Also, the number of students using Auto and Bus is also comparatively high.

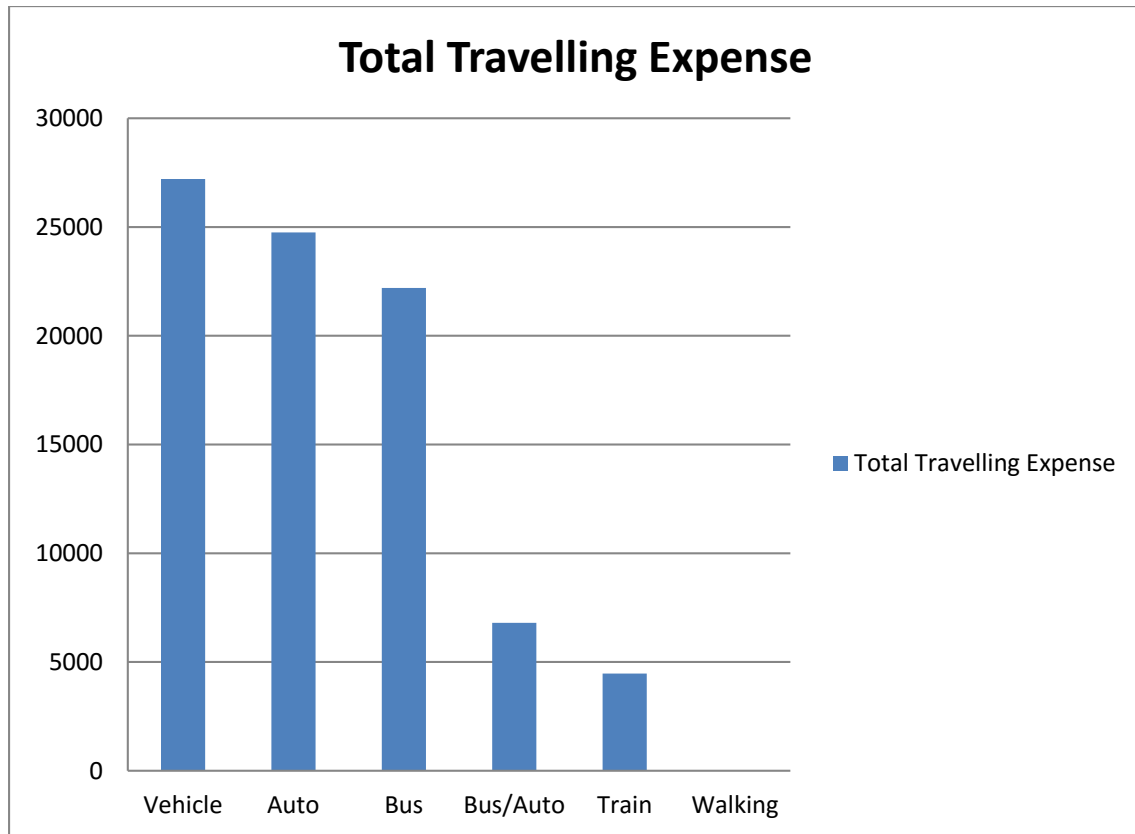


### B) Subdivided bar diagram:



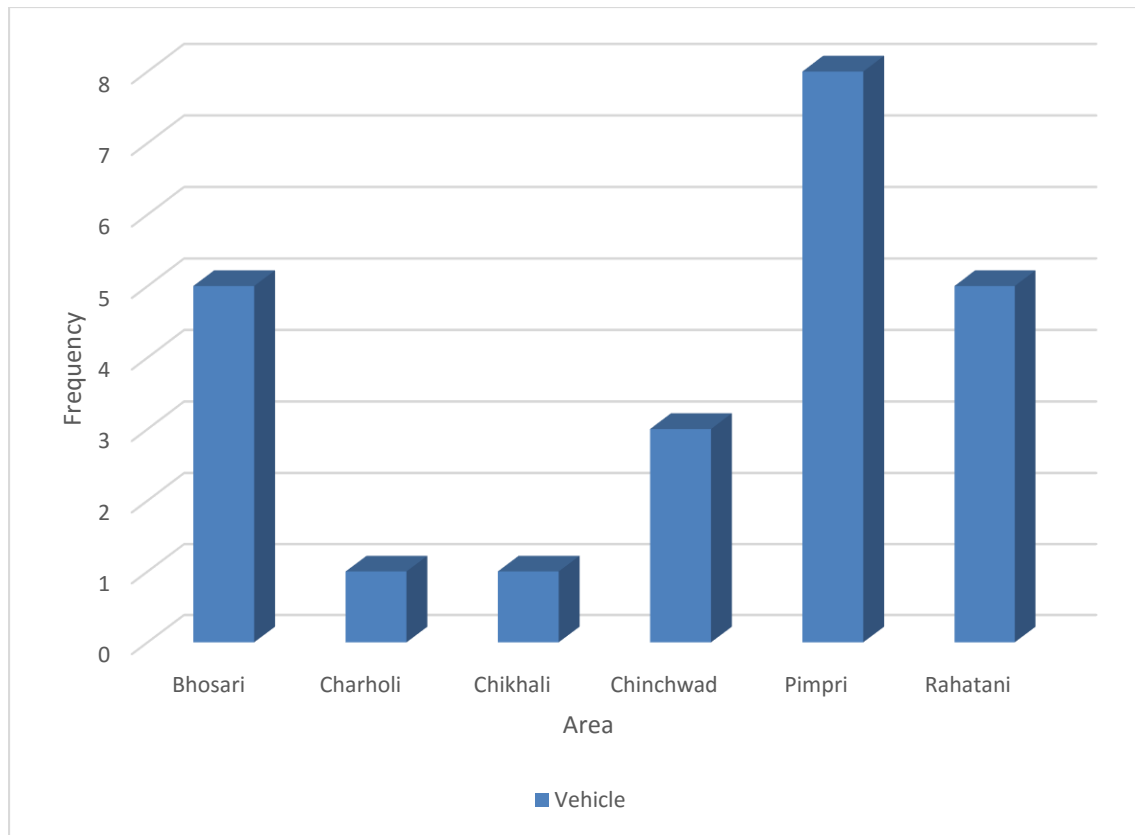
**Conclusion:** It is interesting to know from the graph that the Comfort and Money are the important reasons for the students who are preferring the Private mode of transport but in case of students preferring public transport, Time and money is the reason. So we may say that MONEY is playing important role in transport mode selection.

### C) Simple Bar Diagram:



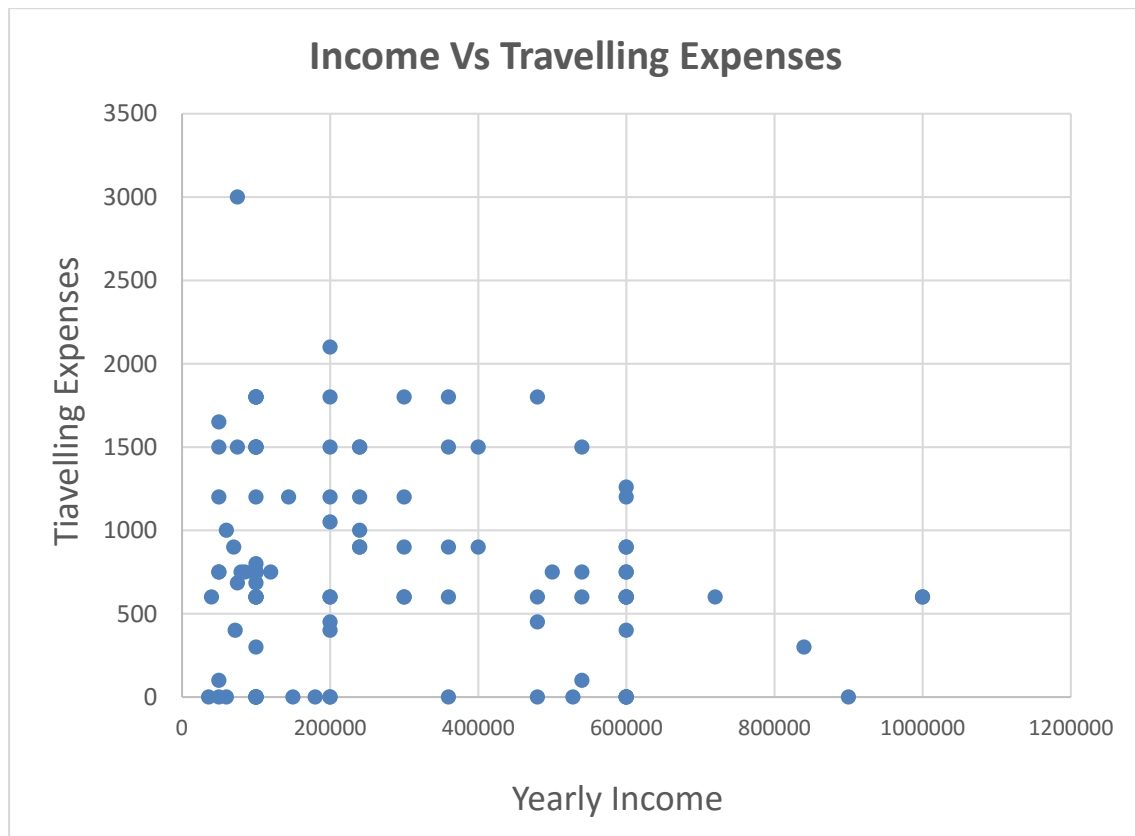
**Conclusion:** From this graph, it is clear that the total travelling expenses are highest for the students who are preferring private vehicle.

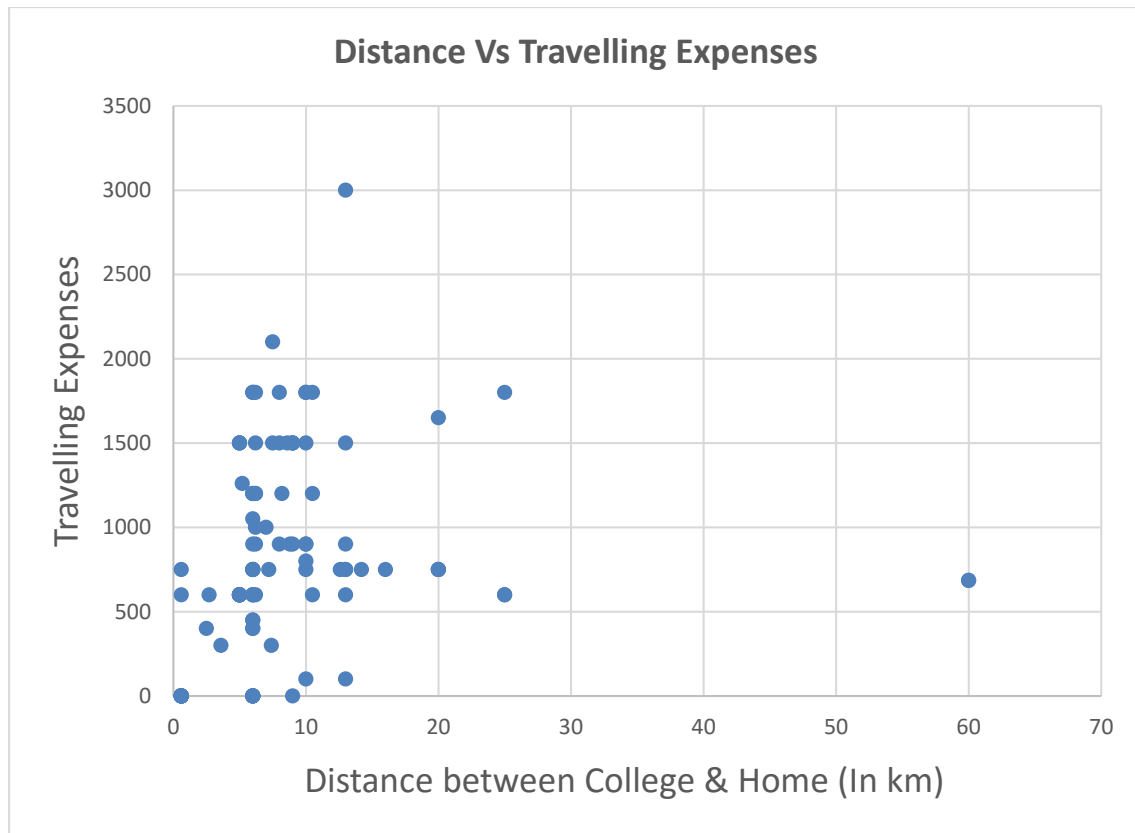
So now, we will see the area wise vehicle users;



**Conclusion:** So most of the students are living in Pimpri area who prefers the vehicle.

**d) Scatter plot:**





**Conclusion:** From this graph, we can notice that most of the students are living in radius of 20 Km from the college. But there is no significant relation between distance and travelling expenses, this is may be because of the different transportation mode use by students.

# Statistical Analysis

## A ) Average Expenditures:

Mode Of Transport	Average Travelling Expense
BUS	1475.454545
TRAIN	678.3333333
AUTO	835
WALKING	0
VEHICLE	3772.928571

**Conclusion:** Earlier we have seen that the percentage of the students using private vehicle is highest and so the travelling expenses are also highest for those. From this table of average expenditure by transportation mode, it gets clear that the average travelling expenses are also highest for the students preferring own vehicles.

**B) Correlation between distance of travelling, Income of family of students and their transportation expenses:**

	<i>Distance from College</i>	<i>T.E.</i>	<i>Income</i>
Distance from College	1		
T.E.	0.200378466	1	
Income	-0.213088663	-0.179645868	1

**Conclusion:**

1. Since the correlation between Distance and Travelling Expenses (T.E.) is positive, we may say that the traveling expenses increases as the distance between college and home increases.
2. The correlation between Income and Travelling expenses is negative that means that as the student who has the higher family income, their travelling expenses are lower side & vice versa.
3. It is actually interesting to see the negative correlation between Income and the travelling expenses. But it may be influenced because of the third variable i.e Distance between home and college.
4. The correlation between Distance and the income is also negatively correlated, so we may say that the families having lower income are residing at greater distances. This may be because the fact that the cost of the houses near the area of Dr. D.Y Patil college has the higher cost which may be not affordable for lower income families so they are residing in Suburban area of the city and the families with higher income can afford to live nearby area of the college.
5. Due to above reason, it may be possible that the travelling expenses are higher for the students who has the lower family income.

## **LIMITATIONS**

- This project was based on the Dr. D.Y. Patil ACS Women's College only.
- We have considered the students of UG only.
- Lack of the seriousness regarding the filling up questionnaire may affect the results.
- We have not considered the other factors (like traffic jam problems) in selection of the transportation mode.

## **SOFTWARES USED FOR ANALYSIS**

- Ms-Excel