

## Case Study-I

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### How would you describe a typical donor

A typical donor is ready to give gifts to someone who needs help or who is in need. We have taken Sex, Own Home, Current donor into the consideration and calculated the percentage of current Donor.

### Tally

Sex	Count	Percent	Own Home	Count	Percent	Current	Count	Percent
						Donor		
F	671	55.92	H	803	66.92	N	477	39.75
M	529	44.08	U	397	33.08	Y	723	60.25
N=	1200		N=	1200		N=	1200	

### What are the attributes of the donors in the sample

The attributes in donors are Male, Female. With regards to the given data we have taken Age, Num children, Income, Total Wealth, Other Gifts, Number of Gifts, Smallest Gift, Largest Gift, Previous Gift, Average Gift, Current Gift, Time between the gifts and calculated the Mean, Median and Skewness of it. And Skewness falls on the negative side of it.

## Statistics

Variable	N	N *	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum	IQR	Skewness
Age	1200	0	61.730	0.428	14.824	20.000	50.000	62.000	73.000	96.000	23.000	-0.06
Num Children	1200	0	0.1667	0.0157	0.5423	0.0000	0.00	0.0000	0.00	4.0000	0.00	3.93
Income	1200	0	3.2592	0.0588	2.0385	1.0000	1.00	3.0000	5.00	7.0000	4.00	0.36
Total Wealth	1200	0	5.4700	0.0779	2.6969	0.0000	3.00	6.0000	8.00	9.0000	5.00	-0.36
Other Gifts	1200	0	3.239	0.187	6.488	0.000	0.00	0.000	3.75	53.000	3.75	3.13
Number of Gifts	1200	0	10.279	0.261	9.038	1.000	4.00	8.000	14.0	91.000	10.0	2.31
Smallest Gift	1200	0	7.218	0.186	6.445	0.000	3.00	5.000	10.0	50.000	7.00	2.42
Largest Gift	1200	0	19.31	0.919	31.82	5.00	12.0	15.00	20.0	1000.00	8.00	25.24
Previous Gift	1200	0	16.270	0.410	14.198	0.000	10.0	15.000	20.0	250.000	10.0	9.10
Time Between Gifts	1200	0	7.610	0.170	5.874	0.000	4.00	6.000	10.0	62.000	6.00	2.17
Average Gift	1200	0	12.390	0.263	9.098	2.450	7.775	10.715	15.0	200.000	7.225	8.93
Current Gift	1200	0	9.734	0.410	14.219	0.000	0.00	7.000	15.0	200.000	15.0	5.91

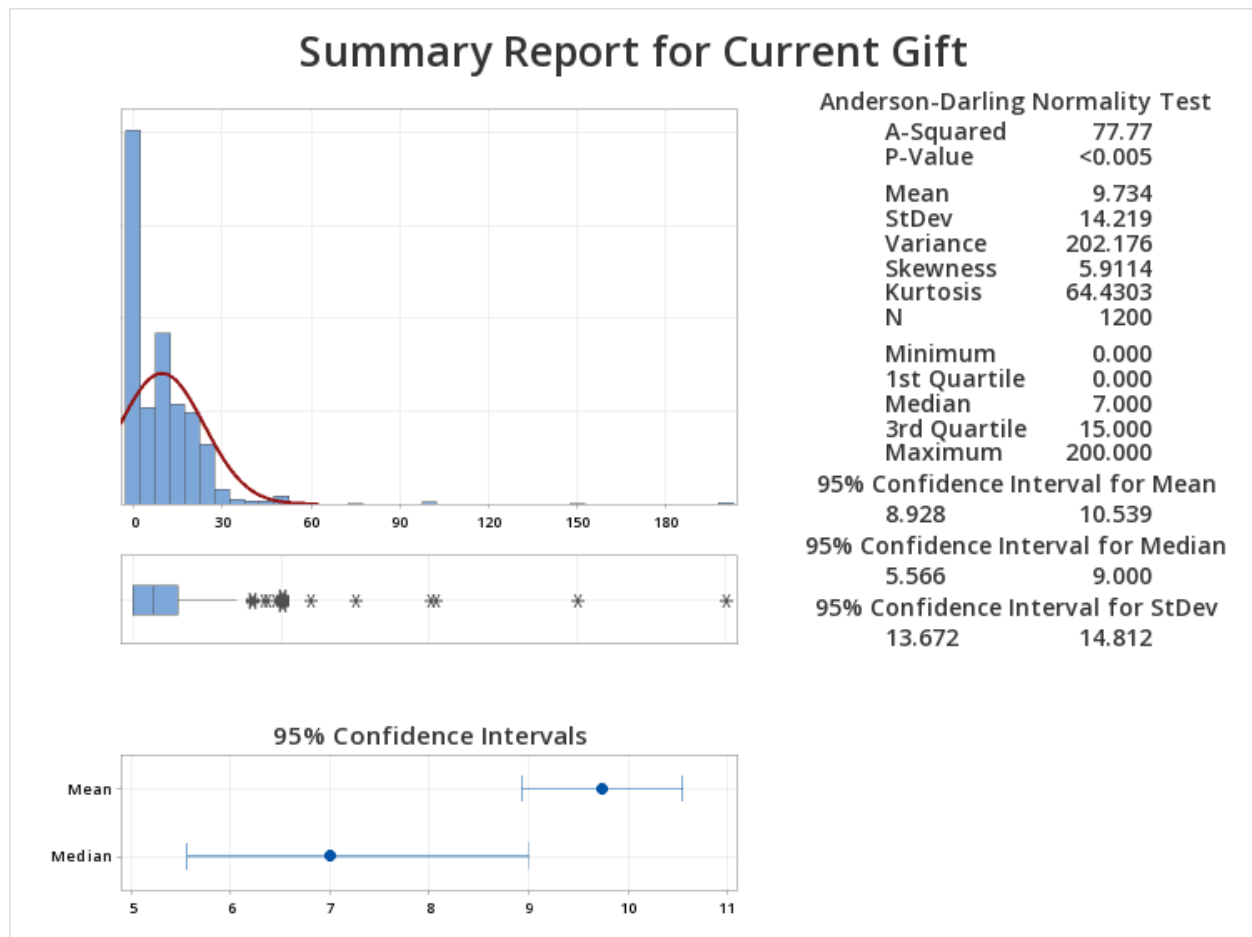
What percent of female

## Tally

Sex	Count	Percent
F	671	55.92
M	529	44.08
N=	1200	

Based upon our analysis the total percentage of Female is 55.92% and the count of female are 671.

Out of all donors what was the average donation in the current campaign



From the given data the average donation to the Current campaign is 9.734. We have calculated the Mean of all the attributes. Out of all Donors we get to know the Female made the average donation to the current campaign. The average donation made in current campaign is given below

## Statistics

Variable	Sex	N	N *	Mean	SE Mean	Std ev	Minimum	Q1	Median	Q3	Maximum	IQR	Skewness
Other Gifts	F	67	0	3.195	0.258	6.680	0.000	0.000	0.000	3.000	53.000	3.000	3.24
	M	52	0	3.295	0.271	6.242	0.000	0.000	0.000	4.000	42.000	4.000	2.96
Number of Gifts	F	67	0	10.577	0.358	9.283	1.000	4.000	8.000	15.000	69.000	11.000	2.10
	M	52	0	9.902	0.379	8.712	1.000	4.000	8.000	14.000	91.000	10.000	2.63
Smallest Gift	F	67	0	6.995	0.246	6.376	0.000	3.000	5.000	10.000	50.000	7.000	2.59
	M	52	0	7.501	0.284	6.526	0.000	3.000	5.000	10.000	50.000	7.000	2.24
Largest Gift	F	67	0	19.98	1.57	40.68	5.00	12.00	16.00	20.00	1000.00	8.00	21.29
	M	52	0	18.467	0.613	14.091	5.000	12.000	15.000	20.000	250.000	8.000	9.59
Previous Gift	F	67	0	16.224	0.554	14.350	2.000	10.000	15.000	20.000	250.000	10.000	8.52
	M	52	0	16.328	0.609	14.017	0.000	10.000	15.000	20.000	250.000	10.000	9.91
Average Gift	F	67	0	12.330	0.406	10.507	2.450	7.560	10.600	15.000	200.000	7.440	9.91
	M	52	0	12.466	0.301	6.919	2.920	8.000	10.750	15.000	51.430	7.000	2.16
Current Gift	F	67	0	9.263	0.420	10.868	0.000	0.000	7.000	15.000	102.000	15.000	1.99
	M	52	0	10.330	0.764	17.567	0.000	0.000	8.000	15.000	200.000	15.000	6.47

**Do people in the sample who give more often tend to make smaller gifts on average**

As a result of examination, The smallest gift has achieved the positive trend of line that is 7.218 in small gifts

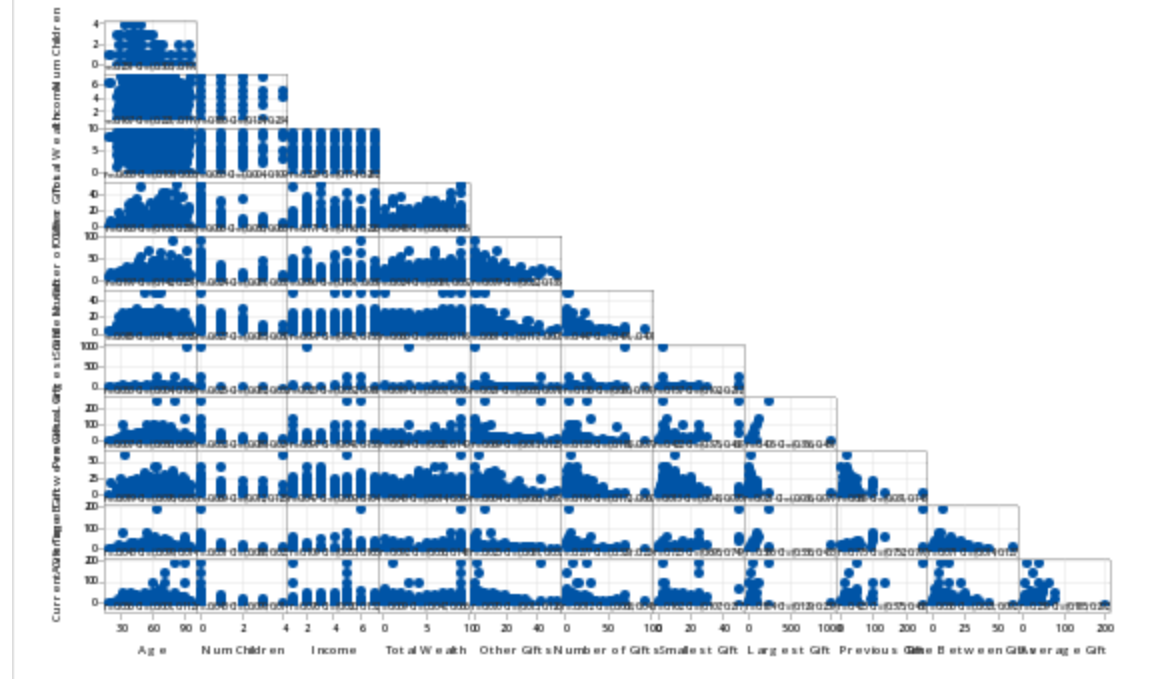
### Statistics

Variable	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
Smallest Gift	7.218	0.186	6.445	0.000	3.000	5.000	10.000	50.000

**Are there any variables that are associated with how much money an individual donated during the current campaign.**

Based on the given data the variables associated with the current Campaign are Wealth, Other Gifts, Number of Gifts, smallest Gift, Largest Gift, Previous Gift. And by the correlation between the variables, we get to know that 95% of money is donated by the individual in the Current Campaign.

# alth, Other Gifts, Number of Gifts, Smallest Gift, Largest Gift, Previous 95% CI for Pearson Correlation



## Method

Correlation type      Pearson  
Number of rows used   1200

	Age	Number of Children	Income	Total Wealth	Other Gifts	Number of Gifts	Smallest Gift	Largest Gift	Previous Gift	Time Between Gifts	Average Gift
Number of Children	-0.251										
Income	-0.167	0.180									
Total Wealth	-0.053	0.053	0.229								
Other Gifts	0.163	0.006	0.171	0.048							
Number of Gifts	0.197	-0.024	-0.096	-0.024	0.079						
Smallest Gift	-0.085	-0.027	0.097	0.060	-0.061	-0.447					
Largest Gift	0.053	-0.025	0.025	0.019	0.021	0.136	0.157				
Previous Gift	0.007	-0.032	0.097	0.084	0.069	-0.133	0.422	0.405			
Time Between Gifts	-0.019	0.069	0.047	0.043	-0.004	-0.116	0.013	0.021	0.088		
Average Gift	-0.043	-0.031	0.109	0.092	-0.025	-0.277	0.723	0.386	0.775	0.071	
Current Gift	0.056	-0.043	0.076	0.009	0.070	-0.012	0.162	0.184	0.423	0.036	0.239

**Which variable has the strongest association with how much money an individual donated during the current campaign**

With Regards to the given data by correlation we get to know that total wealth is the strongest association with the money donated during the current campaign.

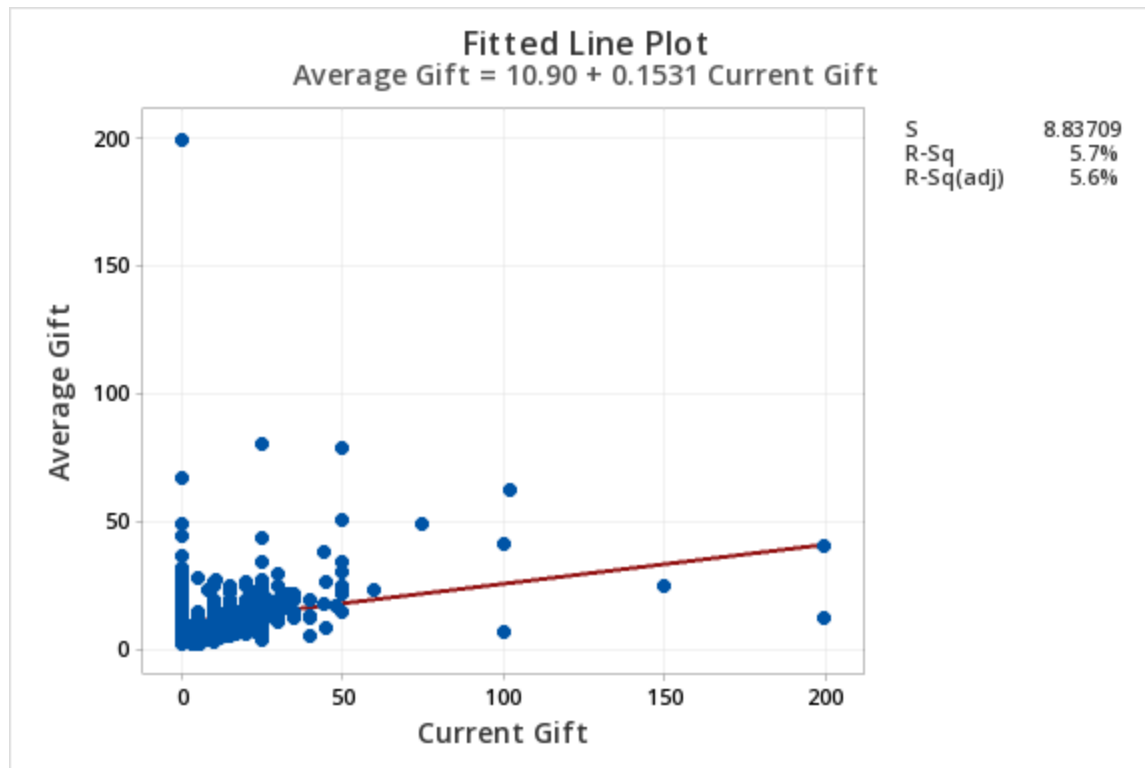
### **Current Gift**

Based upon our prediction the Current Gift donated during the current campaign is around 0.076 which results in positive side.

*How would you predict the amount of money donated during the current campaign using this variable*

*Based on the data, the current gift donated by the Age is 0.056, and by Num Children is -0.043 which resides on the negative skewness, Income is 0.076 , Total Wealth is 0.009, Other Gifts 0.070, Number of Gits is 0.012, Smallest gifts is 0.162, Largest Gifts is 0.184, Previous Gift is 0.423, Time between the Gifts is 0.036, Average Gift is 0.239 which results on positive skewness.*





### How reliable is this prediction

By using the scatter plot on the Current Gift and Average Gift, We predicted the current Gift is around 5.6% .

What advise do you have for the organization share any insights you gleaned from your in

Based on the given data we analyzed and we predict the organization can engage more with the non-active donors as they make up to 40 percentage of the total donors. They can increase the average gifts received by having a minimum donation amount which can help them to get more from the total donors. They can try and increase the current donations by trying to make the non active donars donate more by engaging them or reaching out to them and creating more awareness

