Data

The dataset contains information about the people of France. The dataset contains information about different aspects of the life of the respondent. There are 572 variables in the data. However, for this study, we are going to use only 12 variables relative to our study. We are going to use ‘trstlgl’, ‘trstprl’, ‘psppipla’, ‘vote’, ‘stfdem’, stfgov’, ‘happy’, ‘trstplt’, ‘trstprt’, and ‘polintr’.

Data exploration

All the variables related to trust and satisfaction have values on a scale from 0 to 10. Where 10 indicates complete trust and 0 represents no trust at all.

Trust in the legal system

Only 5.77% of the people have absolutely no trust in the legal system and only 2.26% of the people have complete trust in the legal system. The maximum percentage of the people is 18.67 who selected a score of 5.

Tabulation of trstlgl

Trust in the legal system	Freq.	Percent	Cum.
No trust at all	115	5.77	5.77
1	53	2.66	8.43
2	142	7.13	15.56
3	153	7.68	23.24
4	199	9.99	33.23
5	372	18.67	51.91
6	256	12.85	64.76
7	317	15.91	80.67
8	256	12.85	93.52
9	84	4.22	97.74
Complete trust	45	2.26	100.00
Total	1992	100.00	

Trust in the country's parliament

10.87% of the people have no trust in the country’s parliament and only 0.51% of the people

show trust in the parliament. The maximum percentage of the people is 119.69 who selected a score of 4. It indicates the less trust of the people in the country's parliament.

Tabulation of trstprl

Trust in the country's parliament	Freq.	Percent	Cum.
No trust at all	212	10.87	10.87
1	101	5.18	16.05
2	202	10.36	26.41
3	237	12.15	38.56
4	253	12.97	51.54
5	384	19.69	71.23
6	229	11.74	82.97
7	174	8.92	91.90
8	113	5.79	97.69
9	27	1.38	99.08
Complete trust	18	0.92	100.00
Total	1950	100.00	

The political system allows people to influence politics

People's opinion is the most important thing if we are going to study politics. Variable psppipla gives information about whether the political system allows people to influence politics or not. Data shows that most people think people do not influence politics.

Tabulation of psppipla

Political system allows people to have influence on politics	Freq.	Percent	Cum.
Not at all	709	35.74	35.74
Very little	687	34.63	70.36
Some	479	24.14	94.51
A lot	99	4.99	99.50
A great deal	10	0.50	100.00

Total	1984	100.00

Vote

The voting rate is also on average almost 30% of the respondent didn't vote in the last elections and 11.33% of the respondent are not eligible to vote.

Tabulation of vote

Voted last national election	Freq.	Percent	Cum.
Yes	1173	59.57	59.57
No	573	29.10	88.67
Not eligible to vote	223	11.33	100.00
Total	1969	100.00	

Satisfaction with the way democracy works in the country

9.08% of the respondents are extremely dissatisfied with the way democracy works in the country and only 1.38% of the people have complete trust in the democratic system. The score is bad for the satisfaction of the democracy.

Tabulation of stfdem

How satisfied with the way democracy works in country	Freq.	Percent	Cum.
Extremely dissatisfied	178	9.08	9.08
1	92	4.69	13.77
2	206	10.50	24.27
3	282	14.38	38.65
4	241	12.29	50.94
5	343	17.49	68.43
6	184	9.38	77.82
7	214	10.91	88.73
8	150	7.65	96.38

9	44	2.24	98.62
Extremely satisfied	27	1.38	100.00
Total	1961	100.00	

41% of the candidates are interested in politics and the remaining are not interested in politics.

Tabulation of polintr

How interested in politics	Freq.	Percent	Cum.
Very interested	349	17.41	17.41
Quite interested	482	24.04	41.45
Hardly interested	785	39.15	80.60
Not at all interested	389	19.40	100.00
Total	2005	100.00	

We had the very best score on the trust of people in politics, the average score is 3.54, the score for trust in political parties is also the same as bad as trust in politics. The minimum age of the respondent is 15 and the maximum age of the respondent is 90 years. The average age of the respondents is 52.374. The average score for trust in courtiers' parliament is 4.137 which is also not good. Respondents are also not satisfied with the government and democracy. Despite all the odds, the happiness score is still good, we have an average happiness score of 7.24.

Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Trust in politics	1968	3.54	2.188	0	10
Trust in political parties	1961	3.04	2.071	0	10
Age of respondent	2010	52.374	18.97	15	90
Trust in legal system	1992	5.252	2.453	0	10
Trust in countries parliament	1950	4.137	2.409	0	10
Time spent on internet (mins)	1448	182.601	162.109	5	1380
Satisfaction with democracy	1961	4.333	2.479	0	10
Satisfaction with government	1957	3.512	2.292	0	10

Happiness score	2001	7.24	1.767	0	10

Age VS Vote

Let's see how people how many people participated in the voting in the last election. To get a clear picture, we divide the age data into 5 uniform intervals and created a cross-tabulation between age and the voting to see if the voting rate increased with the increase in age.

Tabulation of Age VS vote

Age	Voted last national election			
	Yes	No	Not eligible to vote	Total
15-30	92	120	91	303
31-45	211	165	64	440
46-60	304	157	31	492
61-75	380	87	29	496
76-90	186	44	8	238
Total	1173	573	223	1969

We can see an increase in the voting rate with the increase in age.

Methods:

T-Test for mean comparison:

A t-test is a statistical test that is used to compare the means of two groups. It is often used in hypothesis testing to determine whether a process or treatment influences the population of interest, or whether two groups are different from one another.

Null Hypothesis: The difference in both groups is zero.

Alternative Hypothesis: The difference in both groups is different from zero.

Decision Rule: to reject the null hypothesis, the p-value must be less than 0.05.

Linear Regression Model

The ordinary least square method is estimating the relationship between a scalar predicted variable and one or more predictor variables. In this, we fit the line to the data that helps us to interpret the relationship between the variables by minimizing the squared residuals from the model.

$$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_k x_k$$

Where Y is the predicted variable and $x_1, x_2, \ldots, x_k$ are predictor variables.

In our case, we are going to model the following relation.

$$Age = \beta_0 + \beta_1 * Vote$$

Results:

Linear regression models work well with the continuous dependent variable. For this purpose, we are using age as a dependent variable instead of the vote. We are considering a vote as the independent variable. The following table shows the result of the linear regression model.

Linear Regression model

agea	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
No	-10.757	.898	-11.97	0	-12.519	-8.995	***
Not eligible to vote	-19.98	1.288	-15.52	0	-22.506	-17.455	***
Constant	57.702	.515	112.11	0	56.693	58.712	***

Mean dependent var	52.309	SD dependent var	18.980
R-squared	0.138	Number of obs	1969
F-test	157.772	Prob > F	0.000
Akaike crit. (AIC)	16890.810	Bayesian crit. (BIC)	16907.566

*** *p<.01*, ** *p<.05*, * *p<.1*

$$Age = 57.702 - 10.757 * Didn't\ vote - 19.98 * Not\ eligible\ to\ vote$$

P-value suggests that voting and age have a statistically significant relationship at the significance level of 0.05. However, we have a very small coefficient for the covariates as compared to the intercept. The coefficient of them didn't voting suggests that a person who didn't vote has 10.757 years of less age than the person who had voted. Similarly, fewer age results in not being eligible to vote. The R-square value suggests that the voting can explain the 13.8% of the variance in the age variable which is not very great.