

Report

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There could be a relationship between age and voting behavior in the UK. Aged people could be more likely to vote for traditional Conservative policies such as lower taxation on higher earners because they are more likely to be at the top of the earnings. However, younger people might more care about social issues such as youth unemployment, thus tend to vote for Labour.

I'm not sure if there will be any statistically significant difference between gender on voting behavior. One assumption is that women might benefit more from Labour's support for welfare and families, while men with average higher income levels may incline to Conservative policies of lower taxation.

Apart from age and gender, the educational background could be a predictor of voting behavior. In the 2015 parliamentary election and the 2016 referendum, there was a division in voting behavior from different educational backgrounds. People who voted for Conservative tend to have a lower level of degree, while a large part of voters on Labour has a high level of degree.

As for the relationship between concerns about public safety and voting behavior, I assume that people with higher concerns about public security could be more likely to vote for liberal democrats. The reason could be that the Lib Dem party once had a strong stand against Brexit and highlight social well-fare such as free childcare.

Party Choice in the UK. Multinomial logistic regression

	Dependent variable:							
	Conservative	Liberal Democrat	others	UK Independence Party	Conservative	Liberal Democrat	others	UK Independence Party
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
genderFemale	-0.077 (0.133)	0.545** (0.224)	0.106 (0.193)	-0.440** (0.220)	-0.041 (0.135)	0.628*** (0.227)	0.163 (0.196)	-0.442** (0.225)
agea	0.014*** (0.004)	0.011* (0.007)	0.002 (0.006)	0.002 (0.006)	0.014*** (0.004)	0.012* (0.007)	0.003 (0.006)	0.001 (0.007)
collegeYes	0.032 (0.149)	0.956*** (0.224)	0.170 (0.208)	-0.915*** (0.296)	0.014 (0.150)	0.910*** (0.227)	0.143 (0.211)	-0.934*** (0.300)
impsafeLike me					0.077 (0.176)	0.363 (0.302)	0.118 (0.257)	0.047 (0.284)
impsafeSomewhat like me					0.117 (0.220)	0.111 (0.391)	-0.102 (0.339)	-0.104 (0.370)
impsafeA little like me					0.241 (0.241)	0.621 (0.382)	0.329 (0.343)	-0.344 (0.451)
impsafeNot like me					0.148 (0.284)	0.879** (0.422)	0.625* (0.369)	-0.125 (0.481)
impsafeNot like me at all					0.491 (0.648)	1.231 (0.820)	0.910 (0.798)	1.530** (0.761)
Constant	-0.583** (0.255)	-2.656*** (0.440)	-1.299*** (0.362)	-1.066*** (0.396)	-0.707** (0.290)	-3.051*** (0.506)	-1.482*** (0.415)	-1.018** (0.454)
Akaike Inf. Crit.	3,583.847	3,583.847	3,583.847	3,583.847	3,594.464	3,594.464	3,594.464	3,594.464

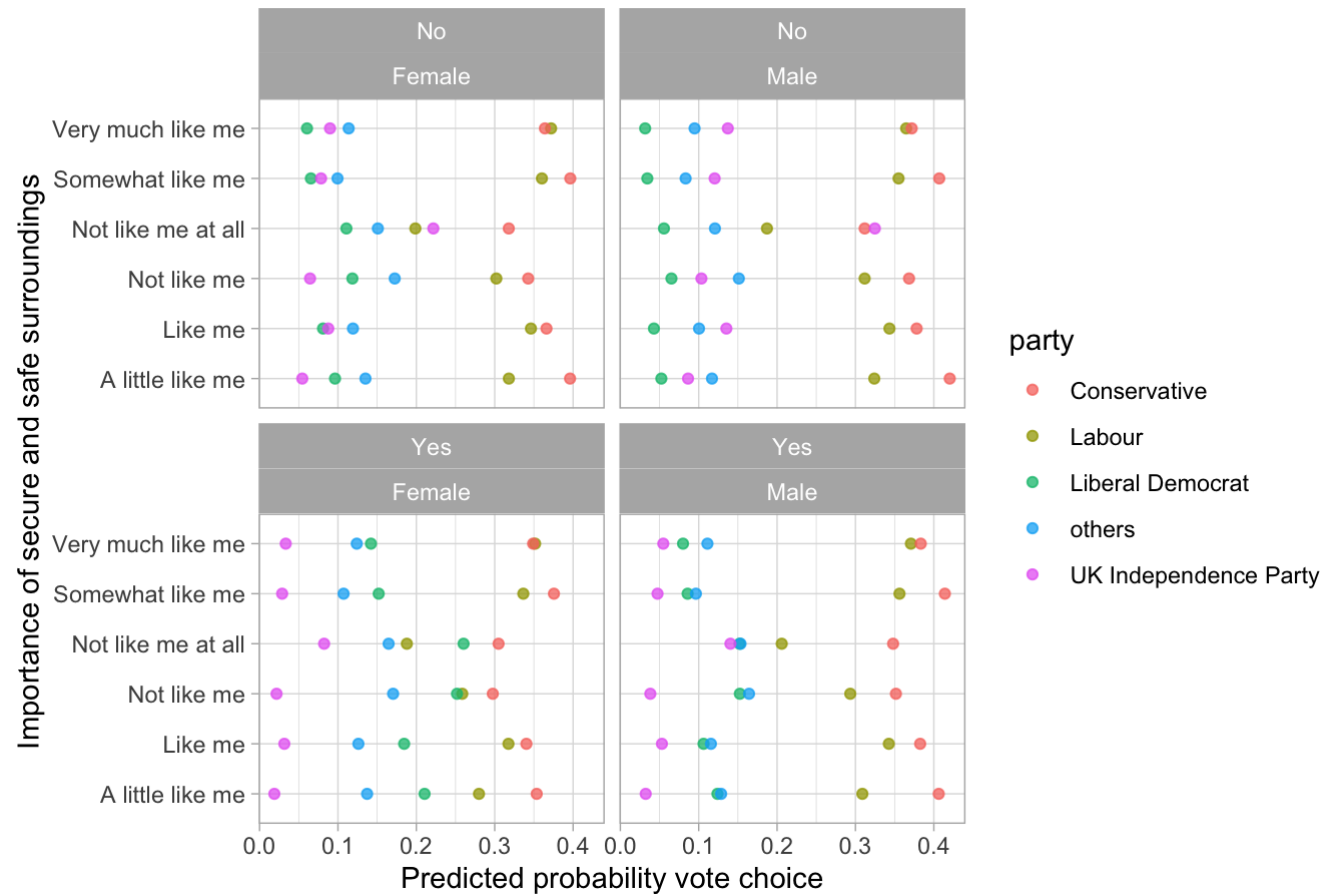
Note: $p < 0.1$; $p < 0.05$; $p < 0.01$

It can be seen from models (5) to (8) that age is a prominent indicator of voting for Labour or Conservative. With voting for Labour as a reference, one unit increase in age is associated with $\exp(0.014)=1.014$ times greater odds of voting for Conservative for the man without a college degree and cares a lot about the safe surroundings. This confirms my hypothesis about the relationship between age and voting behavior. However, note that age as a predictor is not statistically significant for the UK Independence Party and others when comparing to vote for Labour.

Education is also a strong predictor for voting Liberal Democrat and UK Independence Party. Compared to voting for Labour, people with college or above college degree have $\exp(0.910)=2.48$ times greater odds of voting for the Lib Dem party holding other variable constant. But these people have $\exp(-0.934)=0.393$ times smaller odds of voting for the UK Independence party than voting for Labour when other variables are constant. This result doesn't directly confirm my hypothesis on the educational division between Conservative and Labour, but it indicates a prominent correlation between educational background and voting preference for other parties.

The coefficient of gender on voting for the Lib Dem party is statistically significant. It implies that females are more likely to vote for the Lib Dem party than Labour. Those people who don't care much about public safety tend to be more likely to vote for the Lib Dem party and others. This result rejects my expectation of the positive correlation.

Figure: Party Choice in the UK



Based on the regression model, I present a graph with the predicted probabilities for people at meidan age of all respondents. Note that I put the “safe and secure surroundings” variable on the Y-axis on purpose to make a visual-friendly display. In general, voting for Conservative and Labour have higher probabilities than other parties. Females with tertiary education are less likely to vote for the UK independence party and more likely to vote for the Lib Dem party than females without tertiary education or male. The probability to vote for Conservative is higher among males than females at all levels of “safe and secure surroundings” regardless of having tertiary education or not. In addition, people who don't care about public safety at all tend to have a higher probability of voting for the UK independence party compared to other levels.