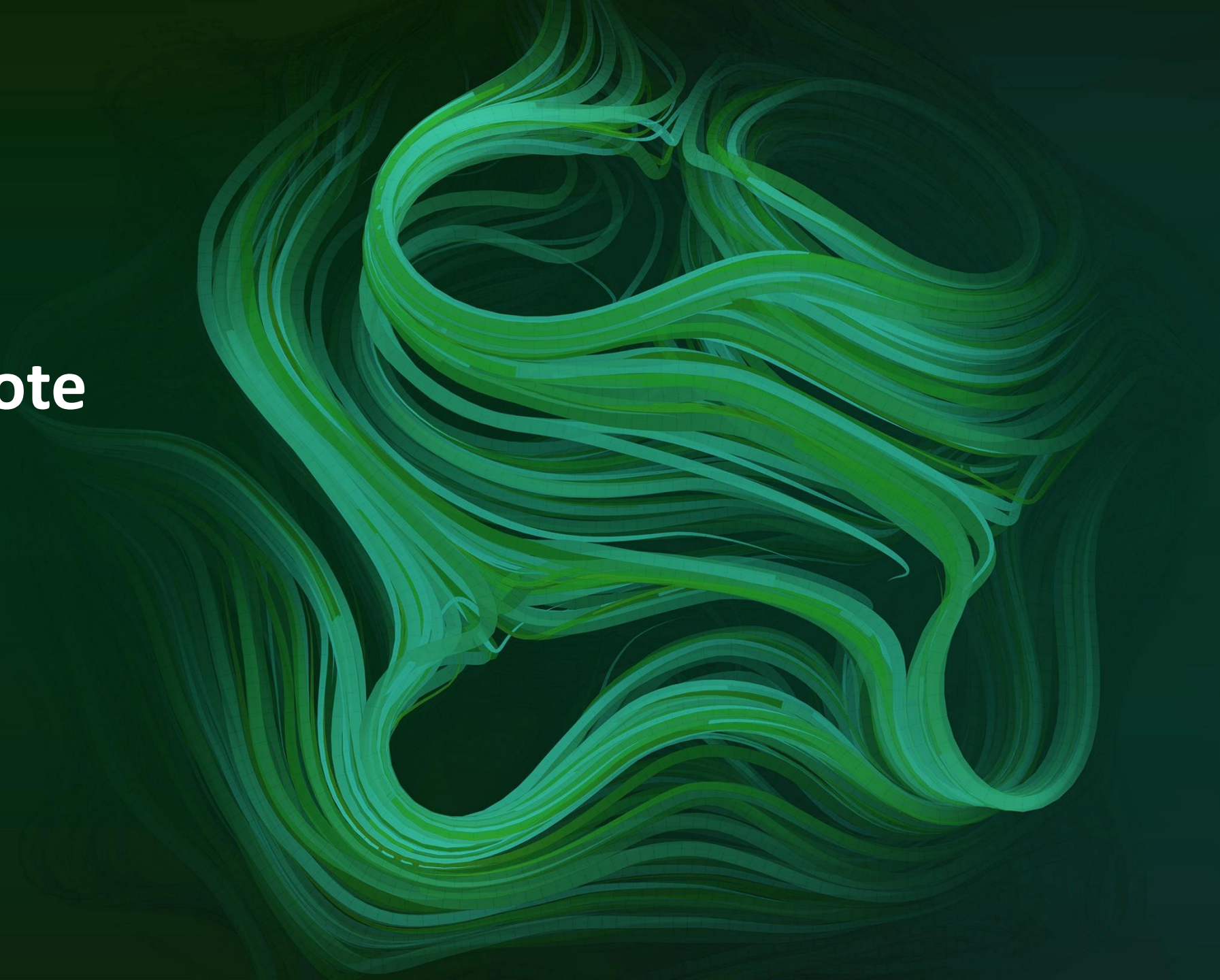


European Union

Membership Vote

Guillem Amat

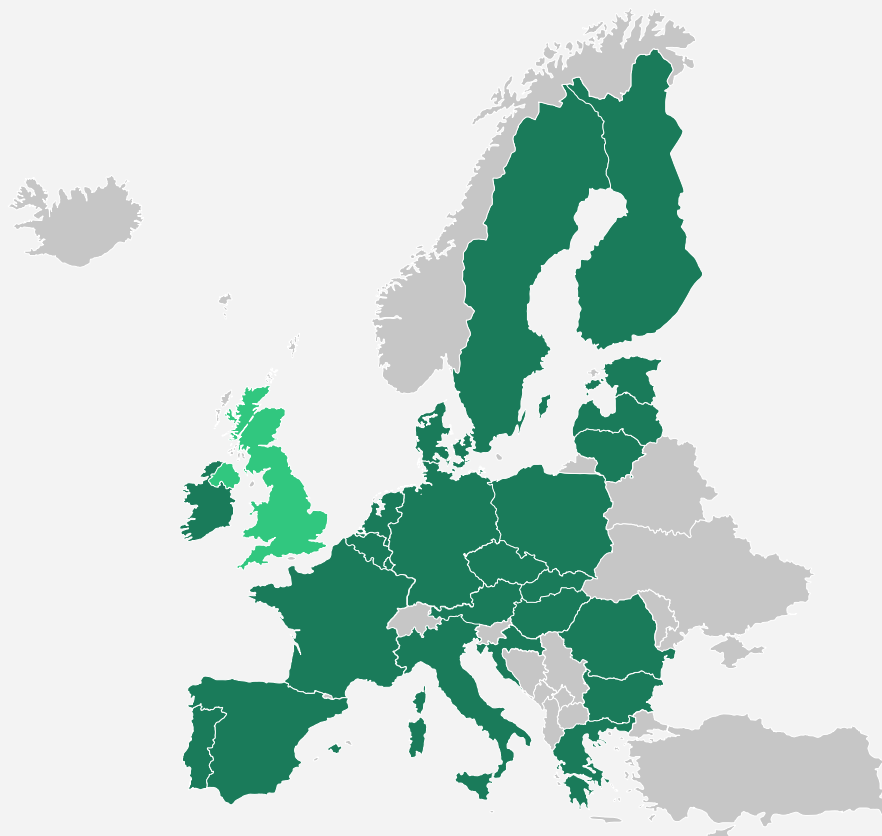
December 5th, 2019





Introduction | *The objective of the project is to identify useful predictors to find people that would vote to leave the European Union across Member States*

Member States of the European Union



The European Union and Project Objectives









- The **European Union** is a group of 28 member states that governs common **economic**, **social** and **security** issues.
- Under the Common Internal Market, the EU guarantees the **free movement of goods, services, labor** and **people**.
- After the Eurozone debt crisis, there has been a surge of Euroscepticism in the continent.
- I wanted to answer two main questions from a **Membership** point of view:
 - What predictors are useful in identifying individuals that would vote to leave the European Union?
 - Are there differences at the country level?



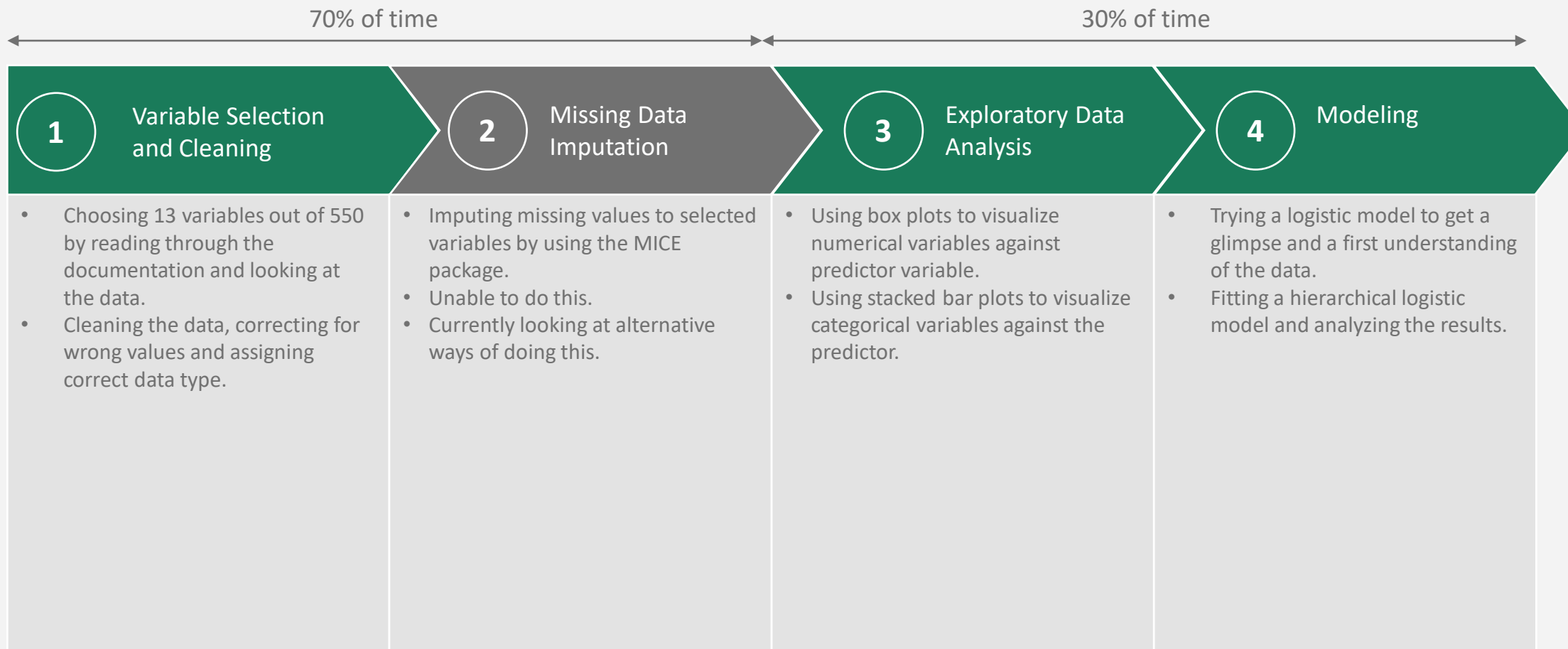
Dataset | *The Dataset contained over 550 variables and 45k observations, of which there were ~2500 per Country.*

Dataset Main Categories

Sample Variables

Socio-Demographic 	<ul style="list-style-type: none">• Age• Gender• Income Level• Marital Status	Human Values 	<ul style="list-style-type: none">• Do you think it is important to have a good time?• Do you think it is important to behave properly?
Group Politics 	<ul style="list-style-type: none">• Did you vote last election?• How interested are you in Politics?	Welfare Attitudes 	<ul style="list-style-type: none">• Are large differences in Income acceptable to reward talent and effort?• Would you vote for your country to remain or leave the EU?
Climate Change 	<ul style="list-style-type: none">• How worried are you about Climate Change?• How often do you do things to reduce Energy Consumption?	Media and Social Trust 	<ul style="list-style-type: none">• How often do you use the Internet?• How much time do you spend watching or reading news on current events?
Country 	<ul style="list-style-type: none">• Country	Well-Being 	<ul style="list-style-type: none">• How happy are you?• How emotionally attached are you to Europe?

Process | Most of the project time was spent selecting variables, cleaning the data and trying to fill in missing values





Variable Selection | *Table with Variables*

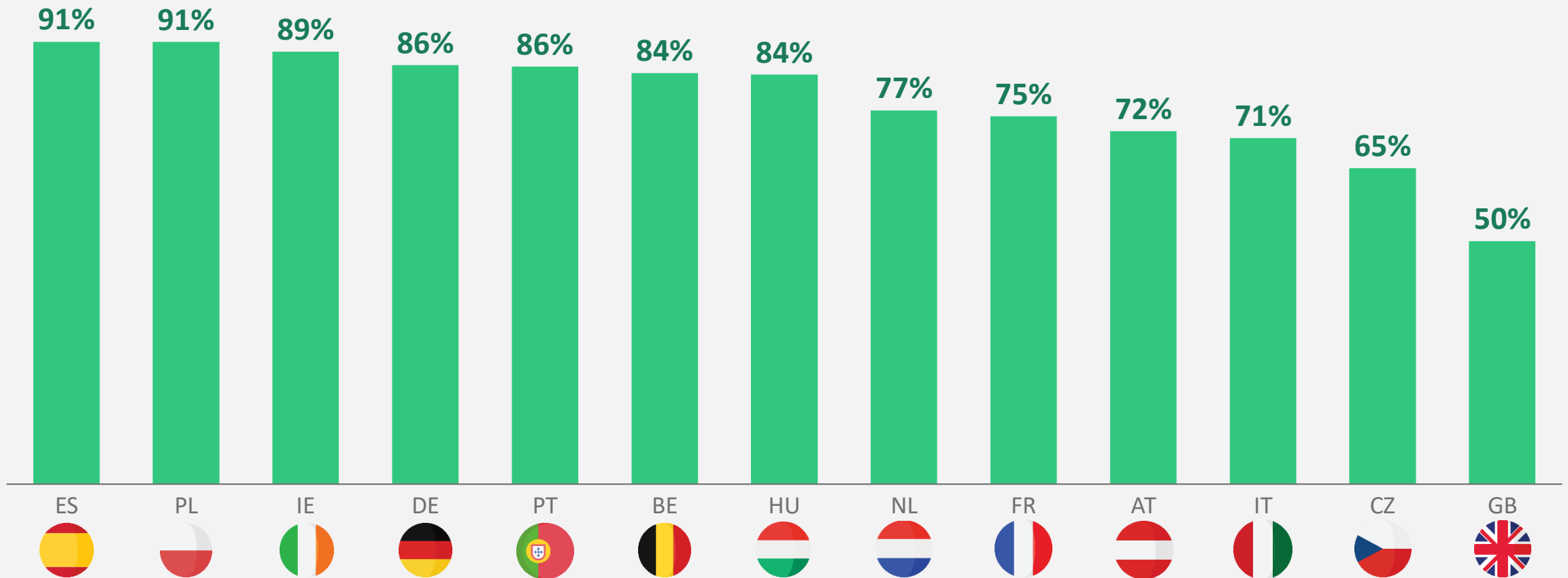
Variable Name	Survey Question	Data Type	Dataset Group	% Missing
Country	Country	Factor	Country	0.0%
Membership	Would vote for [country] to remain member of European Union or leave	Binary	Welfare Attitudes	13.4%
European_Attachment	How emotionally attached to Europe	Numeric	Well-being	1.2%
Country_Attachment	How emotionally attached to [country]	Numeric	Well-being	0.6%
Income_Level	Household's total net income, all sources	Numeric	Socio-Demographic	20.4%
Education_Level	Highest level of education	Factor	Socio-Demographic	0.6%
Generation	Respondent's generation	Factor	Socio-Demographic	0.3%
Gender	Respondent's gender	Binary	Socio-Demographic	0.0%
Minority	Do you belong to a minority in [country]?	Binary	Socio-Demographic	1.1%
Marital_Status	Legal marital status	Binary	Socio-Demographic	2.9%
Happiness	How happy are you?	Numeric	Well-being	0.4%
Political	How interested in politics are you?	Factor	Politics	0.2%



Exploratory Data Analysis | *European Member States showcase significantly different remain ratios on an aggregate level*

Would you vote for your country to remain in the EU?

Amount of People who would vote remain, in %

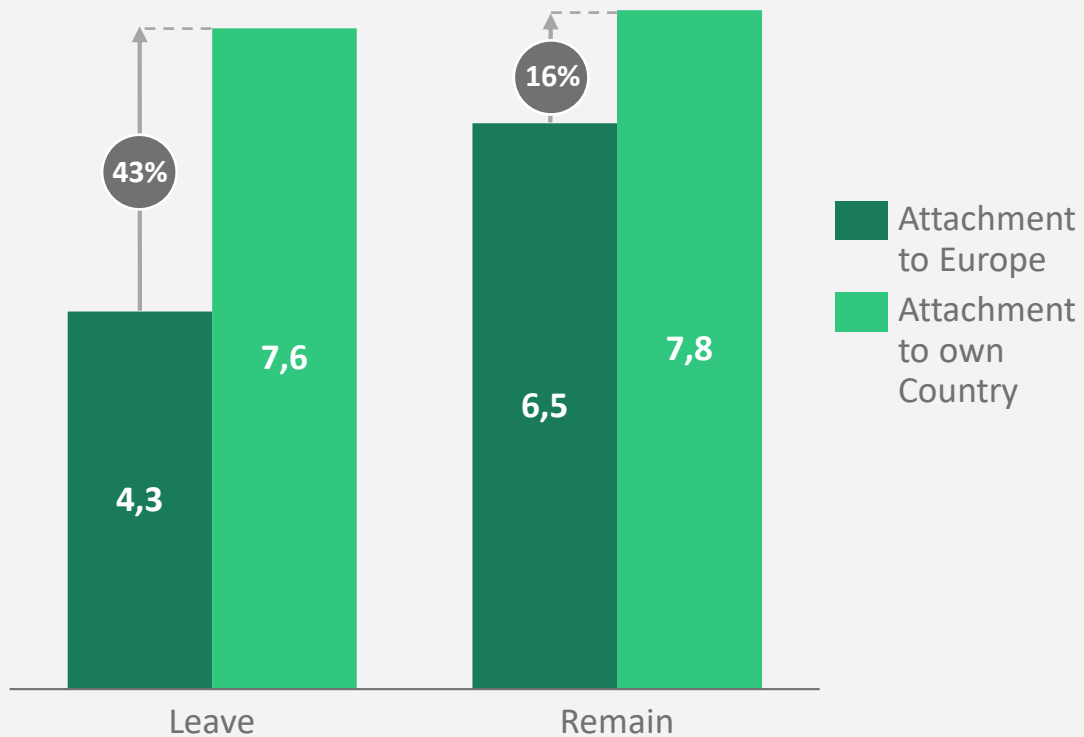




Exploratory Data Analysis | *Individuals with higher total household income are more likely to support voting to Remain in the EU*

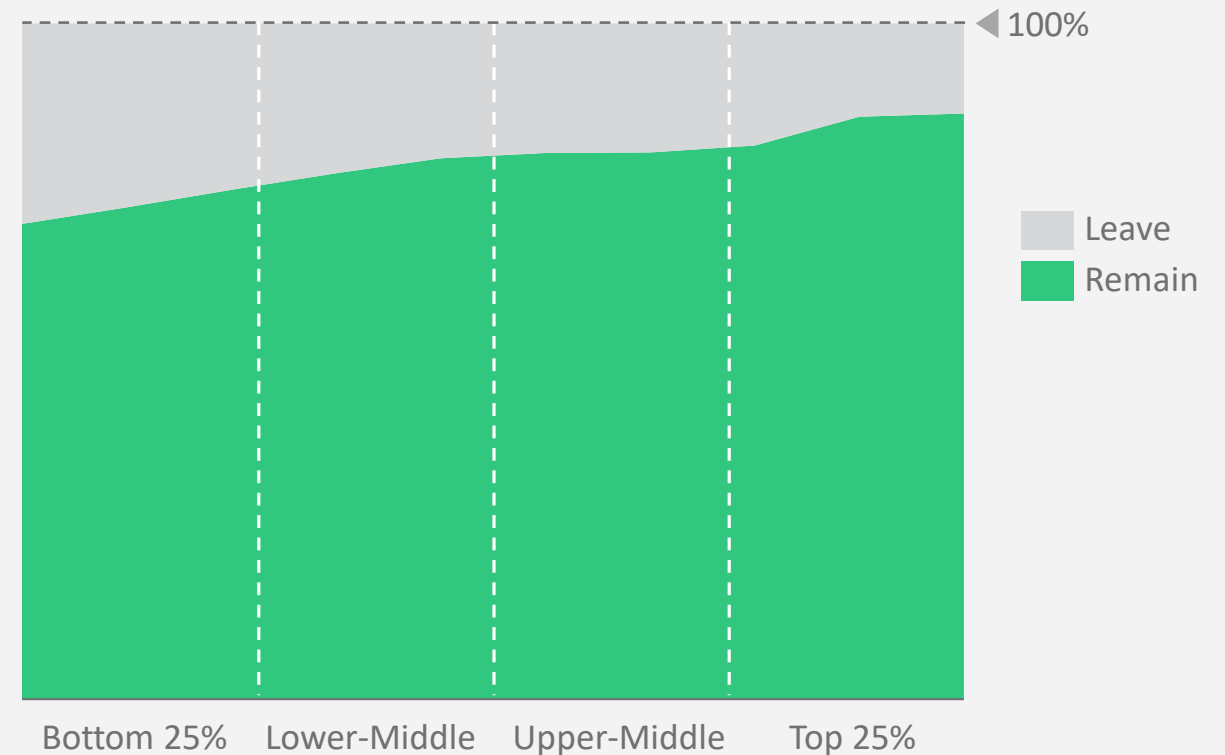
How attached do you feel to Europe vs your own Country?

On a scale where 0 = Not at all, 10 = Very attached



Would you Vote to Remain in the EU?

By income quartile, in %

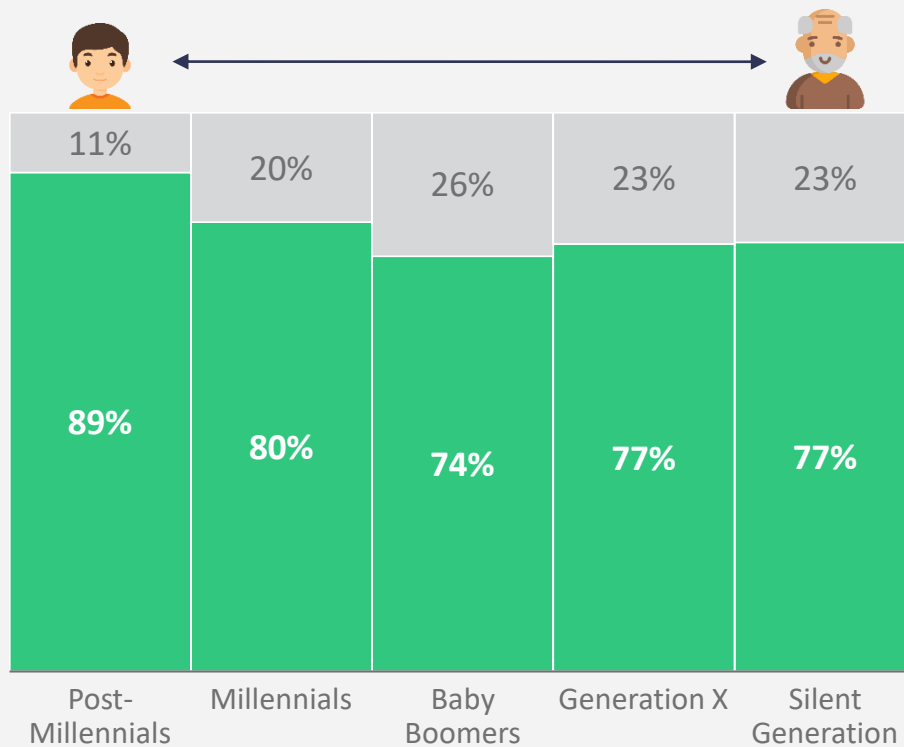




Exploratory Data Analysis | *There seems to be a negative relation between age and voting to Remain in the EU*

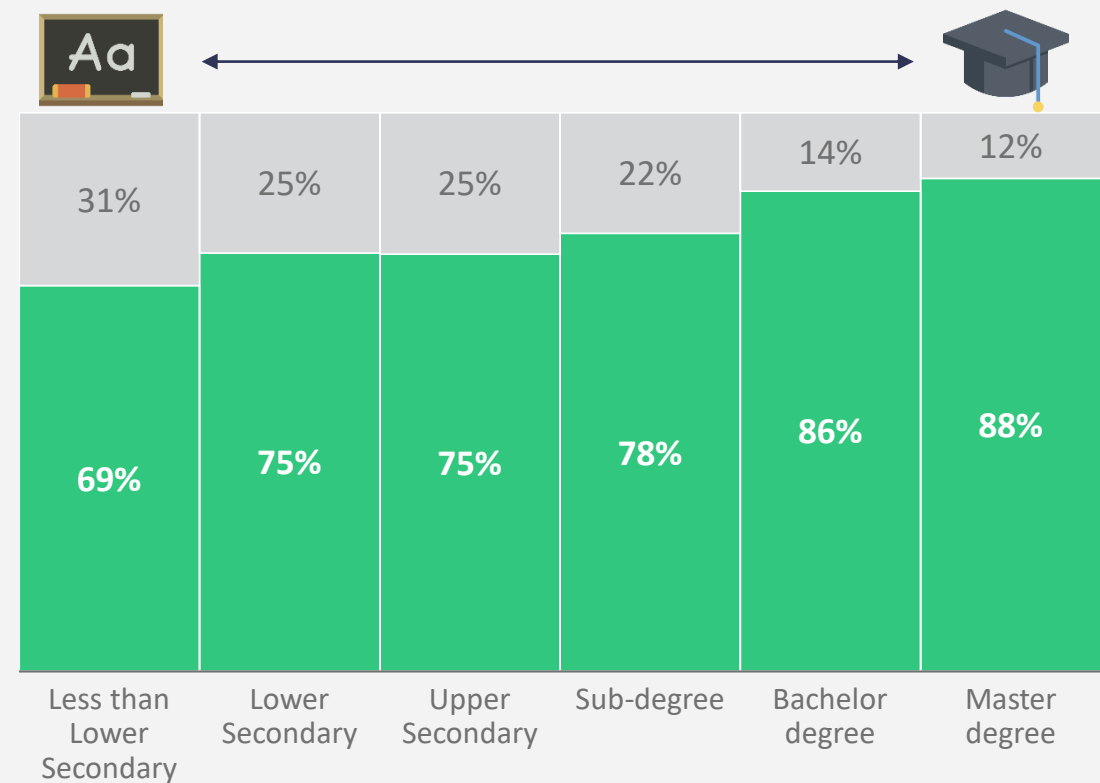
Would you Vote to Remain in the EU?

By Generation, in %



Would you Vote to Remain in the EU?

By Education level, in %





Model | *Results & Conclusions*

Variable Name	Estimate	Significance	Lower Confidence Interval (2.5%)	Upper Confidence Interval (97.5%)
Gender: Female	0.10	*	1.02	1.21
Generation: Baby Boomers	-1.07	***	0.25	0.45
Generation: Generation X	-1.09	***	0.25	0.44
Generation: Millennials	-0.848732	***	0.32	0.57
Generation: Silent Generation	-0.700376	***	0.36	0.67
Minority: Yes	0.262710	*	1.03	1.63
Marital Status: Married	-0.169167	-	0.65	1.08
Income_Level	0.046271	***	1.02	1.06
European Attachment	0.382288	***	1.43	1.49
Country Attachment	-0.139020	***	0.85	0.88
Happy	0.067323	***	1.04	1.09



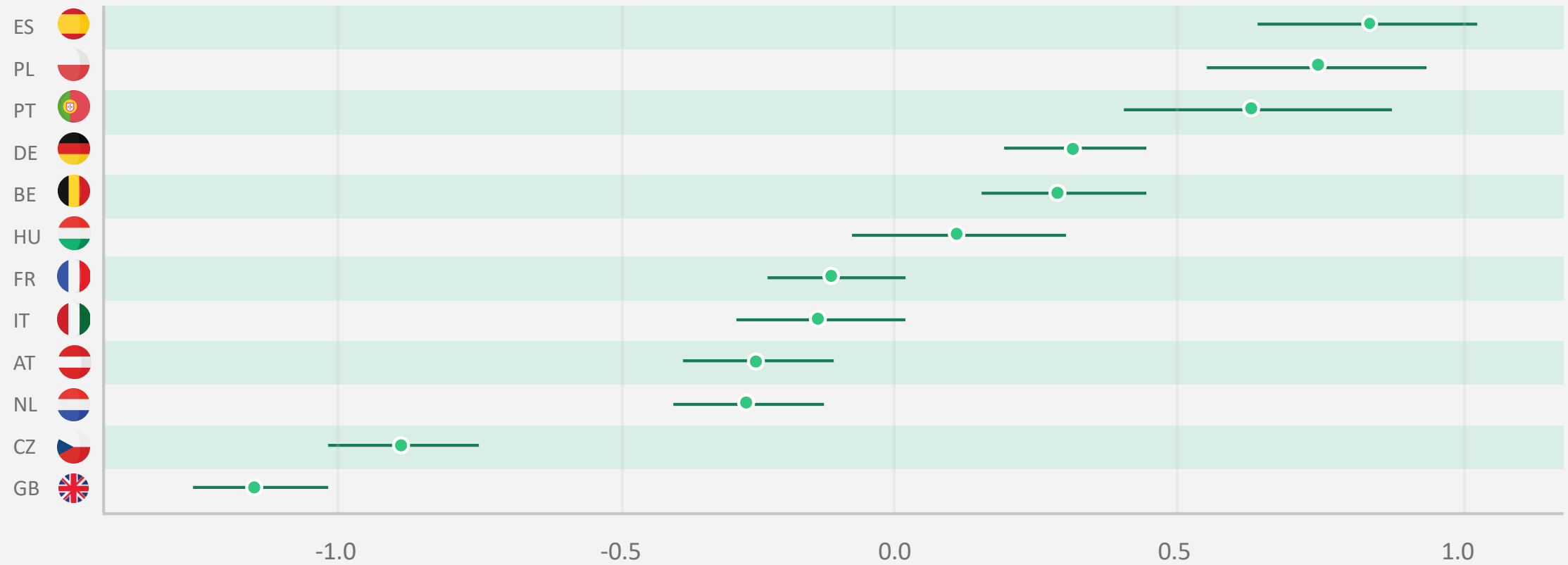
Model | *Results & Conclusions*


Variable Name	Estimate	Significance	Lower Confidence Interval (2.5%)	Upper Confidence Interval (97.5%)
Political: Hardly Interested	0.17	**	1.04	1.34
Political: Quite Interested	0.25	***	1.12	1.47
Political: Very Interested	0.03	-	0.87	1.22
Education_Level: Lower Secondary	-0.04	-	0.80	1.13
Education_Level: Upper Secondary	0.11	-	0.95	1.32
Education_Level: Sub-degree	0.38	***	1.20	1.79
Education_Level: Bachelor	0.67	***	1.57	2.47
Education_Level: Master	0.79	***	1.79	2.75



Model | Dotplot & Conclusions

Intercepts by Country



The background of the slide is an abstract composition of numerous overlapping, flowing lines in various shades of green and teal. These lines create a sense of movement and depth, resembling stylized waves or organic forms. The colors range from dark forest green to bright, almost white-green highlights, giving the background a textured, layered appearance.

Thank you!
Any questions?