DEPRESSION
AND
SOCIAL MEDIA

Data Project
09 | 2019
Laura Würz

A Prevalent Problem

OVER 300 MILLION

PEOPLE OF ALL AGES SUFFER FROM DEPRESSION

*WORLD HEALTH ORGANIZATION

RESEARCH QUESTION

PREDICTING ANTIDEPRESSANTS CONSUMPTION WITH SOCIAL MEDIA USE IN EUROPE

HOW CAN WE USE THE FINDINGS?

- **PHARMA SALESFORECASTING/ MARKETING**
- **GOVERNMENT**
- **HEALTH APPS ETC.**

WORKFLOW

RESEARCH ON TOPIC

WHAT IS THE CURRENT STATUS?

FIND APPROPRIATE DATA

DATASET OECD & WEBSCRAPING

CODE

CLEAN | MANIPULATE | MERGE

TRANSLATE

VISUALIZE | CONTEXT

DATA

DATASET 1

ANTIDEPRESSANT CONSUMPTION BY COUNTRY

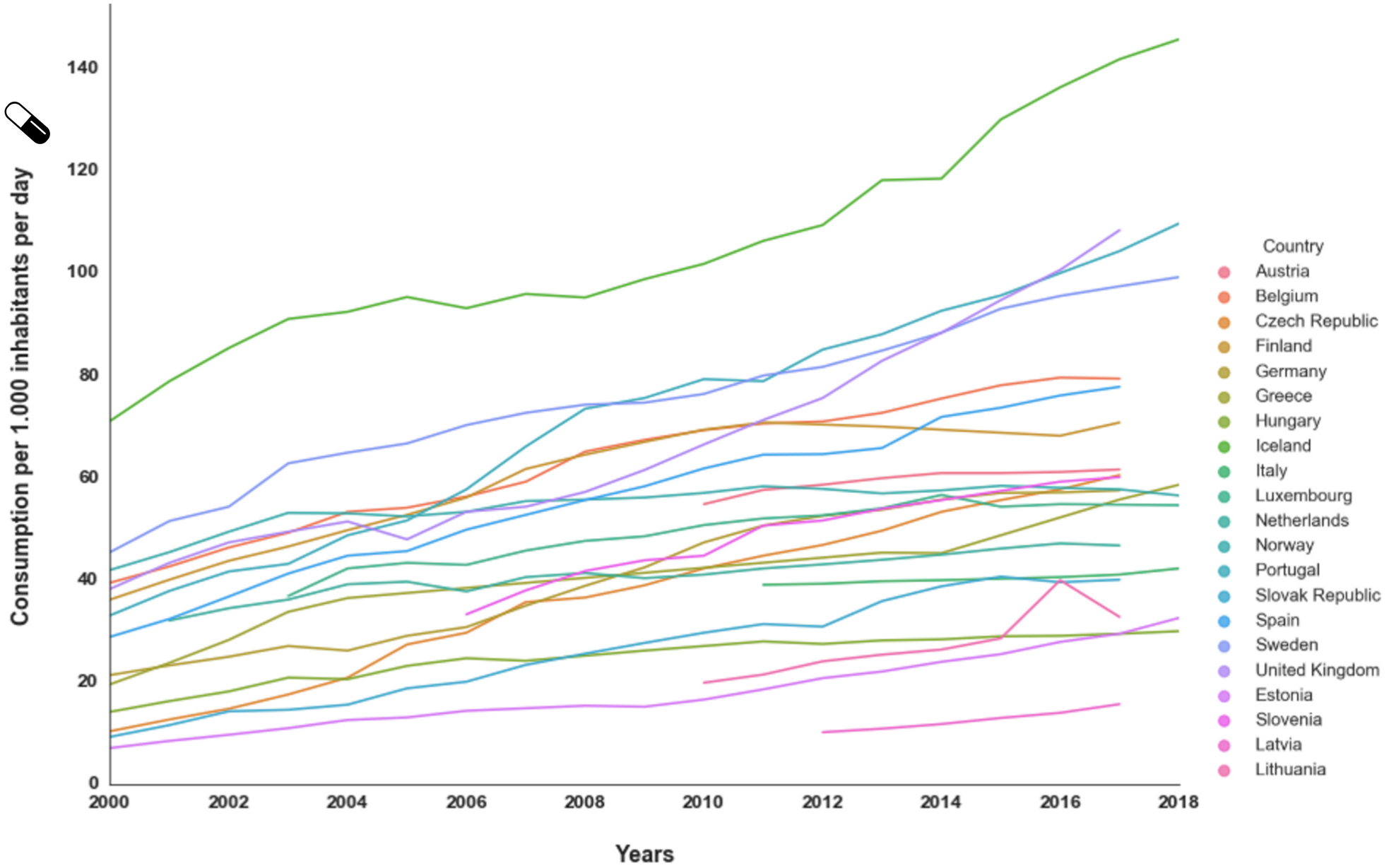
DATASET 2

SOCIAL MEDIA USE BY COUNTRY

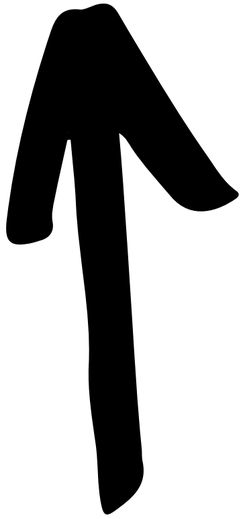
TIMELINE ANTIDEPRESSANTS CONSUMPTION BY COUNTRY

DATASET 1

ANTIDEPRESSANT CONSUMPTION BY COUNTRY



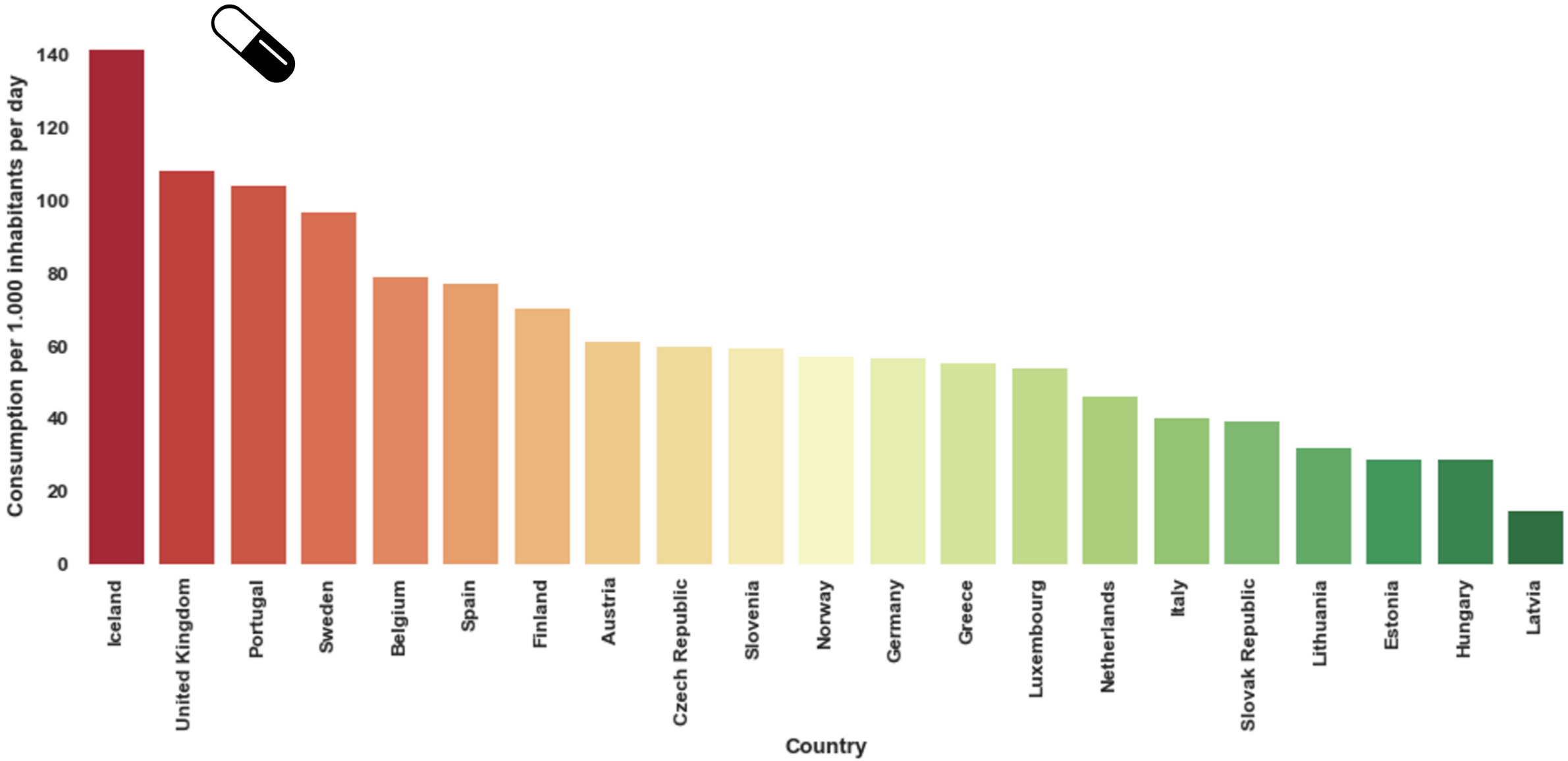
+ 322 %



ANTIDEPRESSANTS CONSUMPTION BY COUNTRY 2017

DATASET 1

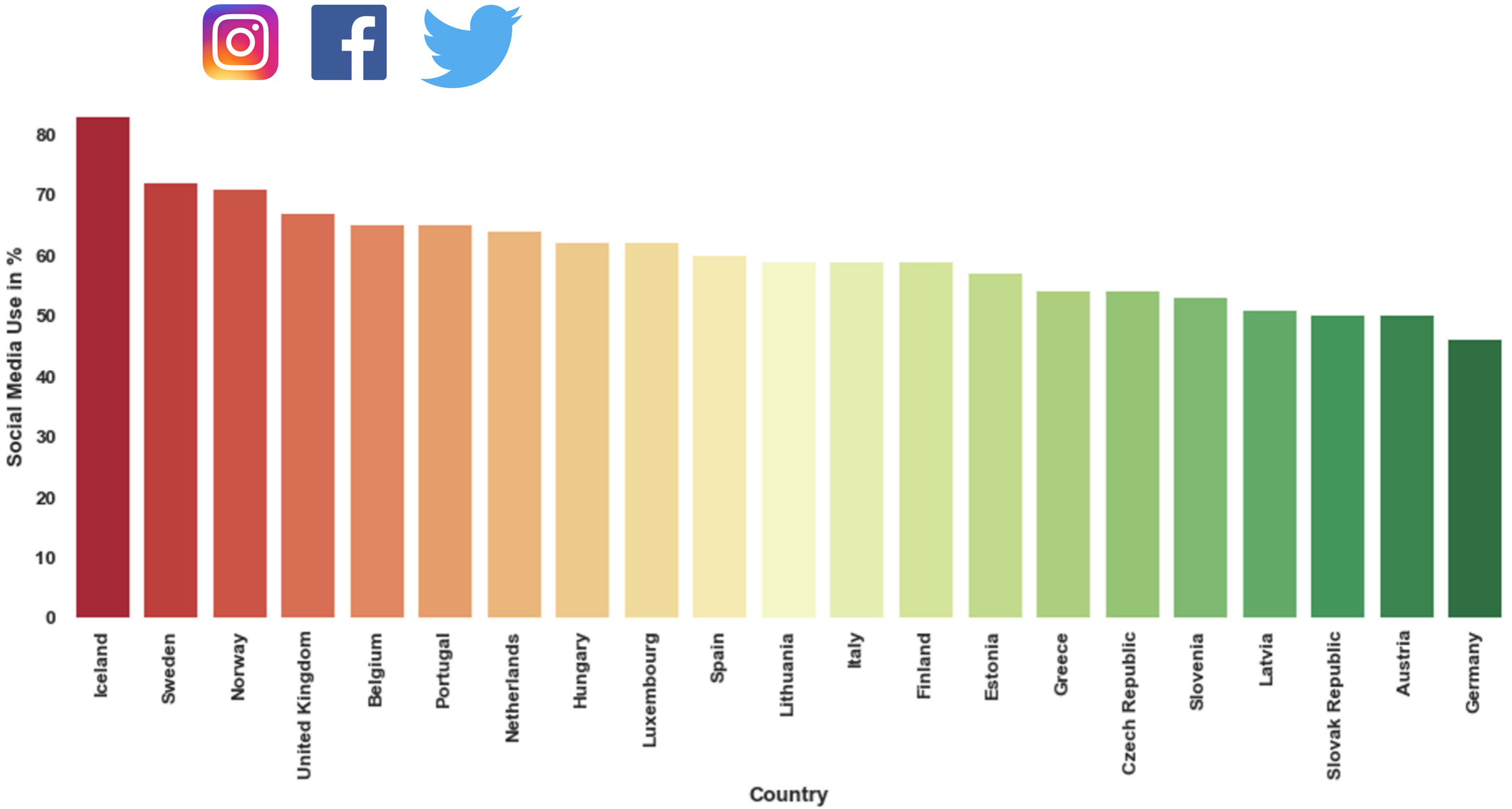
ANTIDEPRESSANT CONSUMPTION BY COUNTRY



SOCIAL MEDIA USE BY COUNTRY 2019

DATASET 2

SOCIAL MEDIA USE BY COUNTRY



DATA

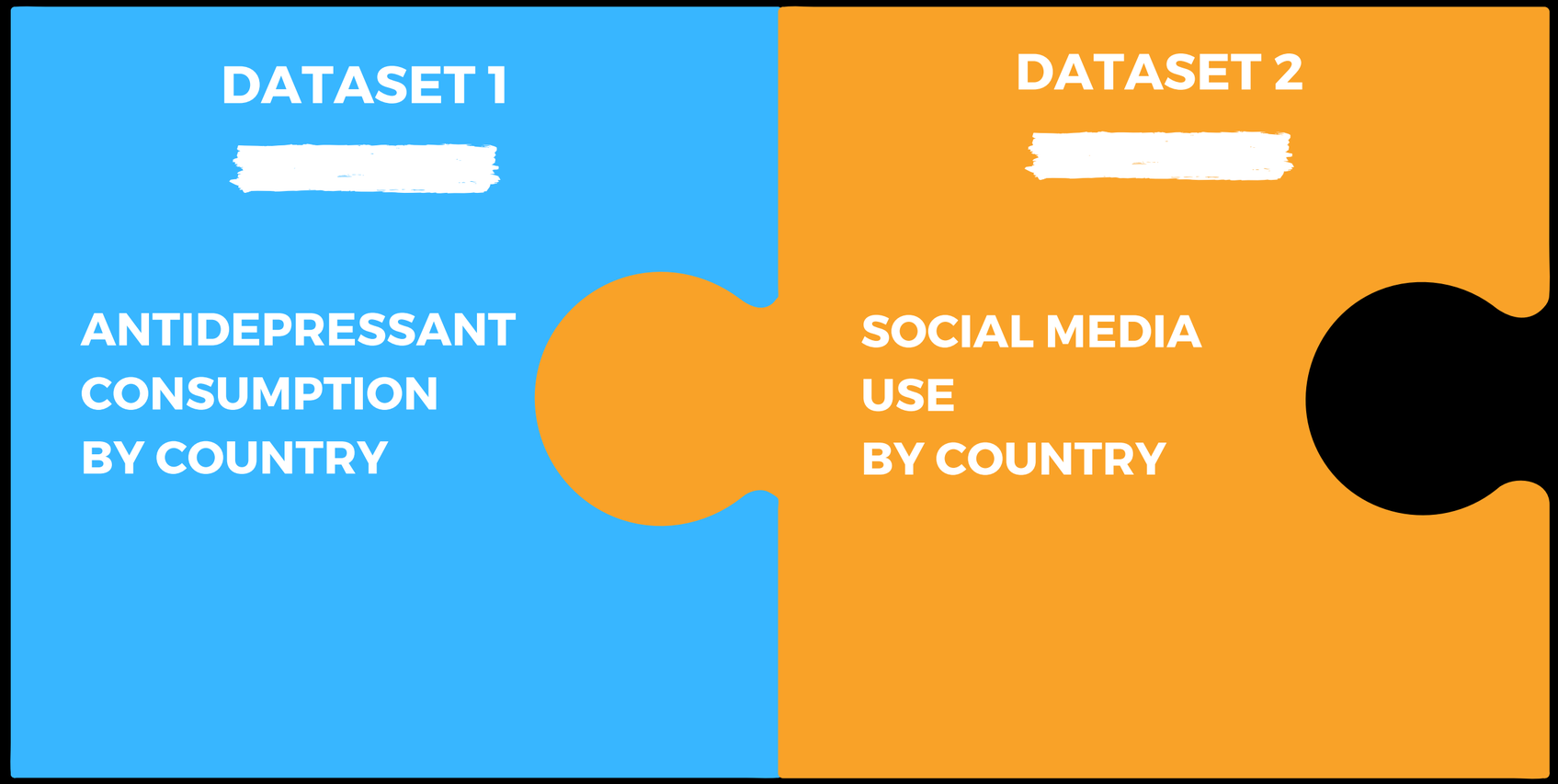
DATASET 1

ANTIDEPRESSANT CONSUMPTION BY COUNTRY

DATASET 2

SOCIAL MEDIA USE BY COUNTRY

DATA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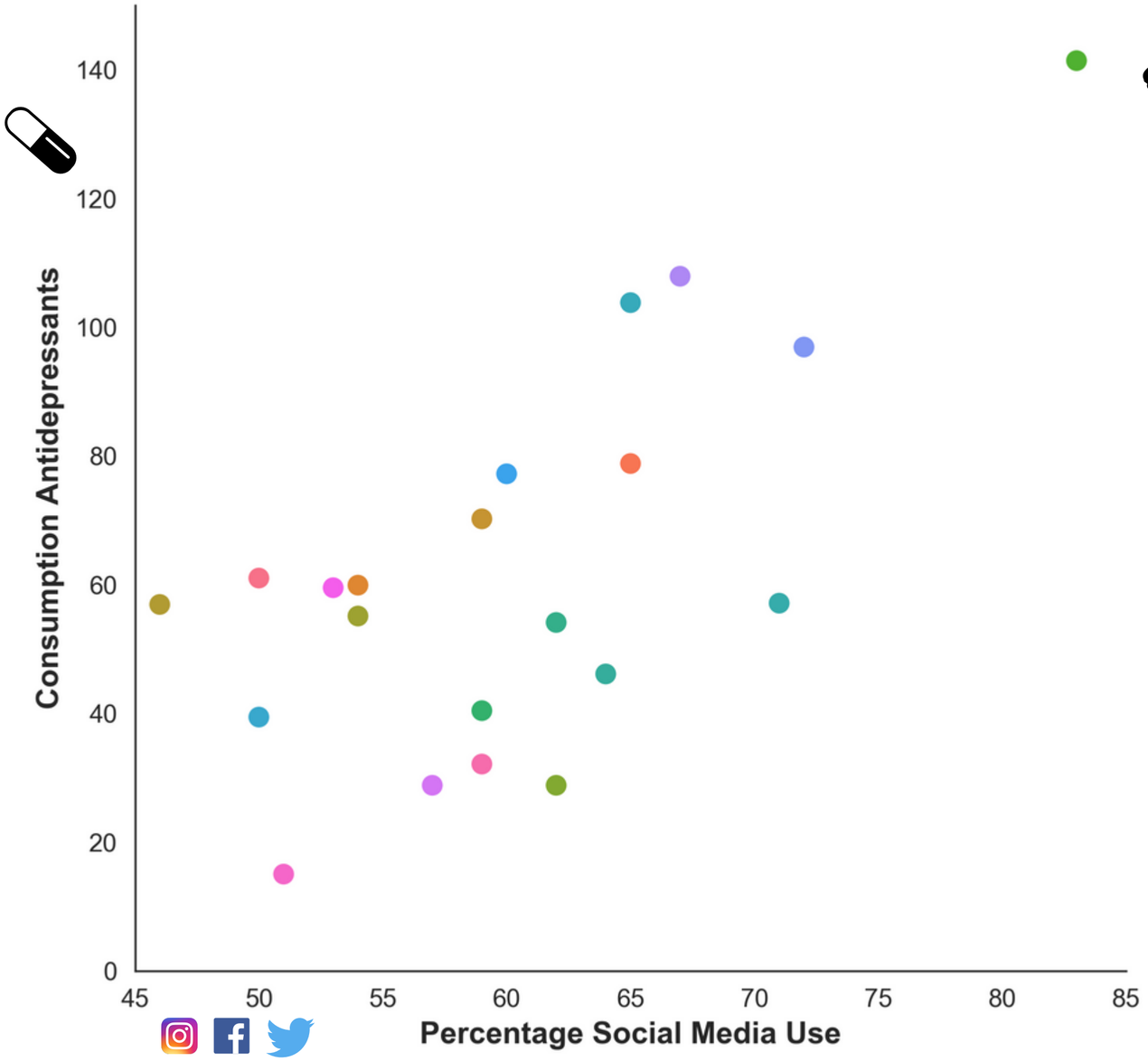
ANTIDEPRESSANTS & SOCIAL MEDIA

DATASET 1
ANTIDEPRESSANT CONSUMPTION BY COUNTRY

DATASET 2
SOCIAL MEDIA USE BY COUNTRY



Country
- Austria
- Belgium
- Czech Republic
- Finland
- Germany
- Greece
- Hungary
- Iceland
- Italy
- Luxembourg
- Netherlands
- Norway
- Portugal
- Slovak Republic
- Spain
- Sweden
- United Kingdom
- Estonia
- Slovenia
- Latvia
- Lithuania

Correlation

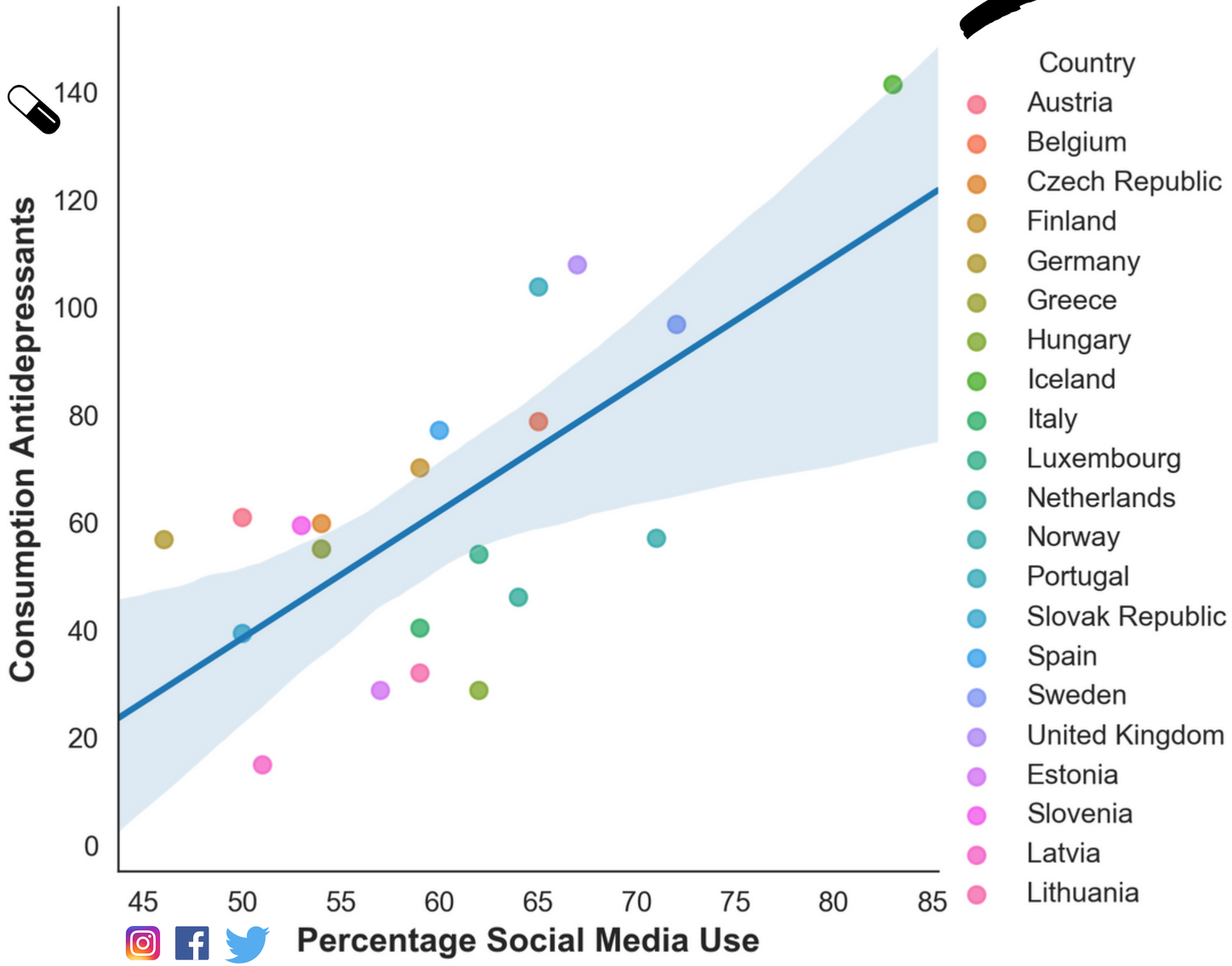
0.675

0 ——— 1

FITTING A LINEAR REGRESSION MODEL

DATASET 1
ANTIDEPRESSANT CONSUMPTION BY COUNTRY

DATASET 2
SOCIAL MEDIA USE BY COUNTRY



Positive linear relationship

FITTING A LINEAR REGRESSION MODEL

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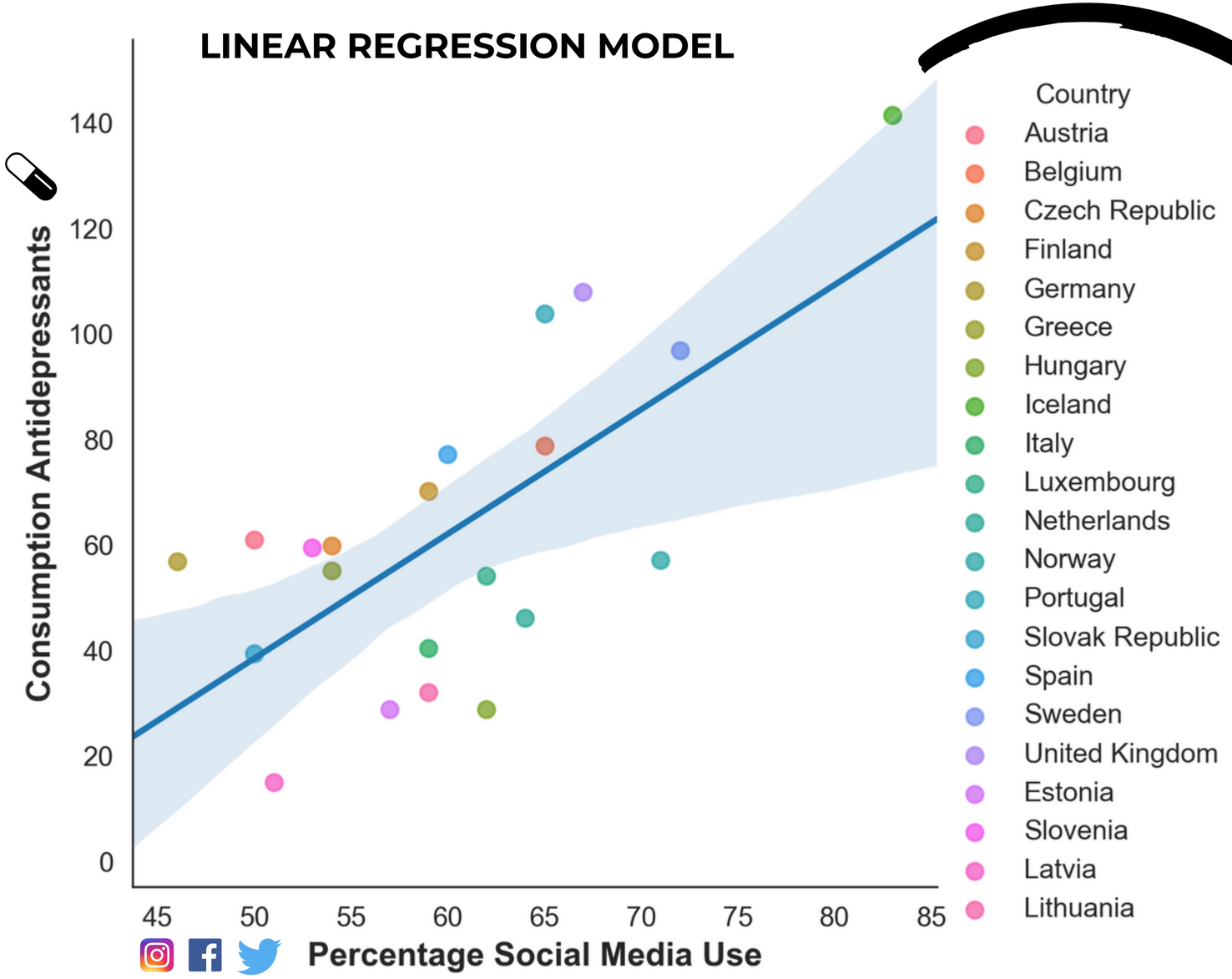
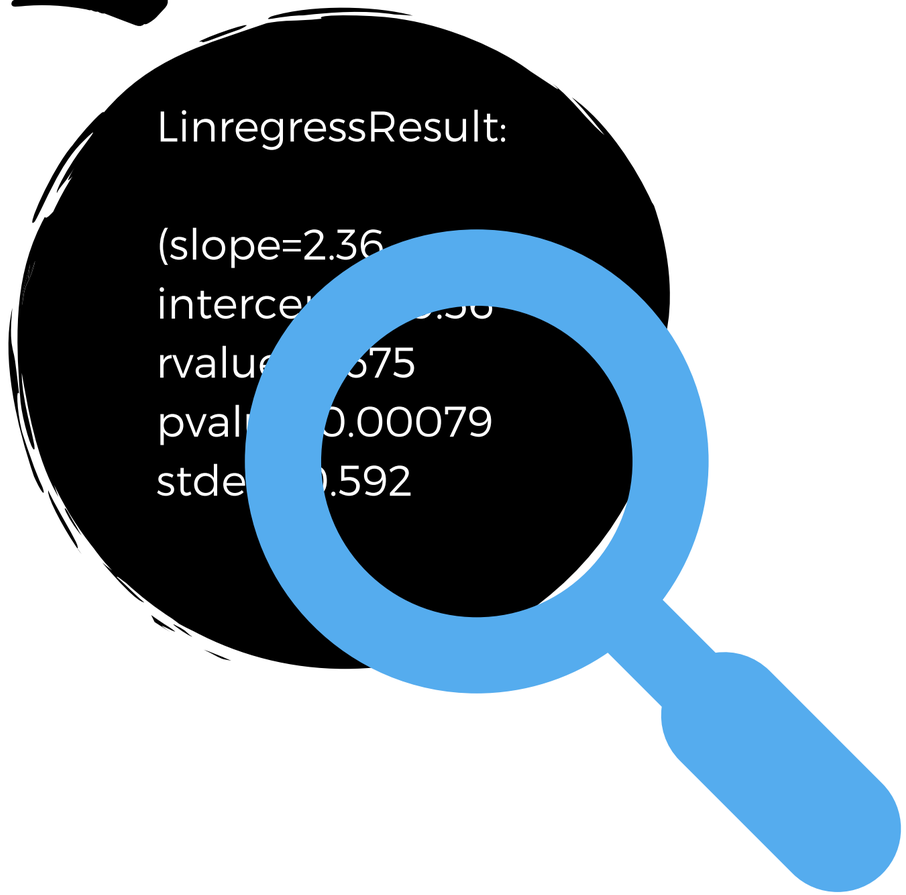
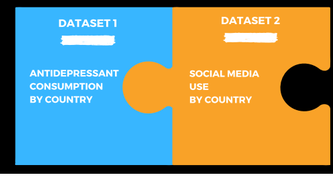




FITTING A LINEAR REGRESSION MODEL



LinregressResult:

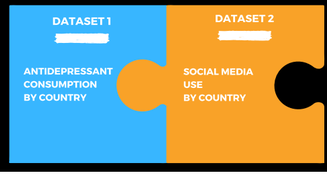
(slope=2.36,
intercept=-79.56,
rvalue=0.675
pvalue=0.0 79
stderr=0.5

Linear Regression Model

$$y = a + b * x$$

$$= -79.56 + 2.36 *$$

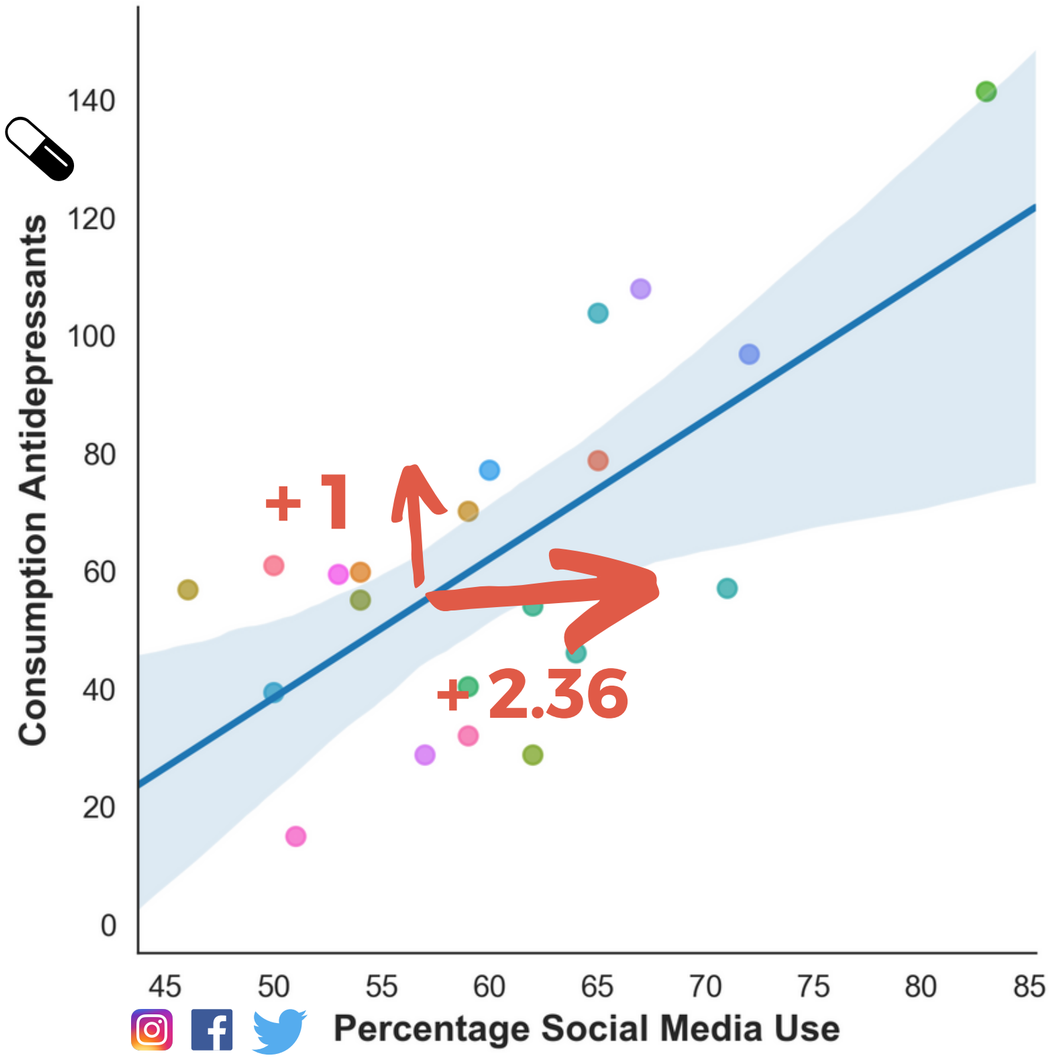
FITTING A LINEAR REGRESSION MODEL



Linear Regression Model

$$y = a + b * x$$

+1 💊 = -79.56 + 2.36 *



HYPOTHESIS TESTING

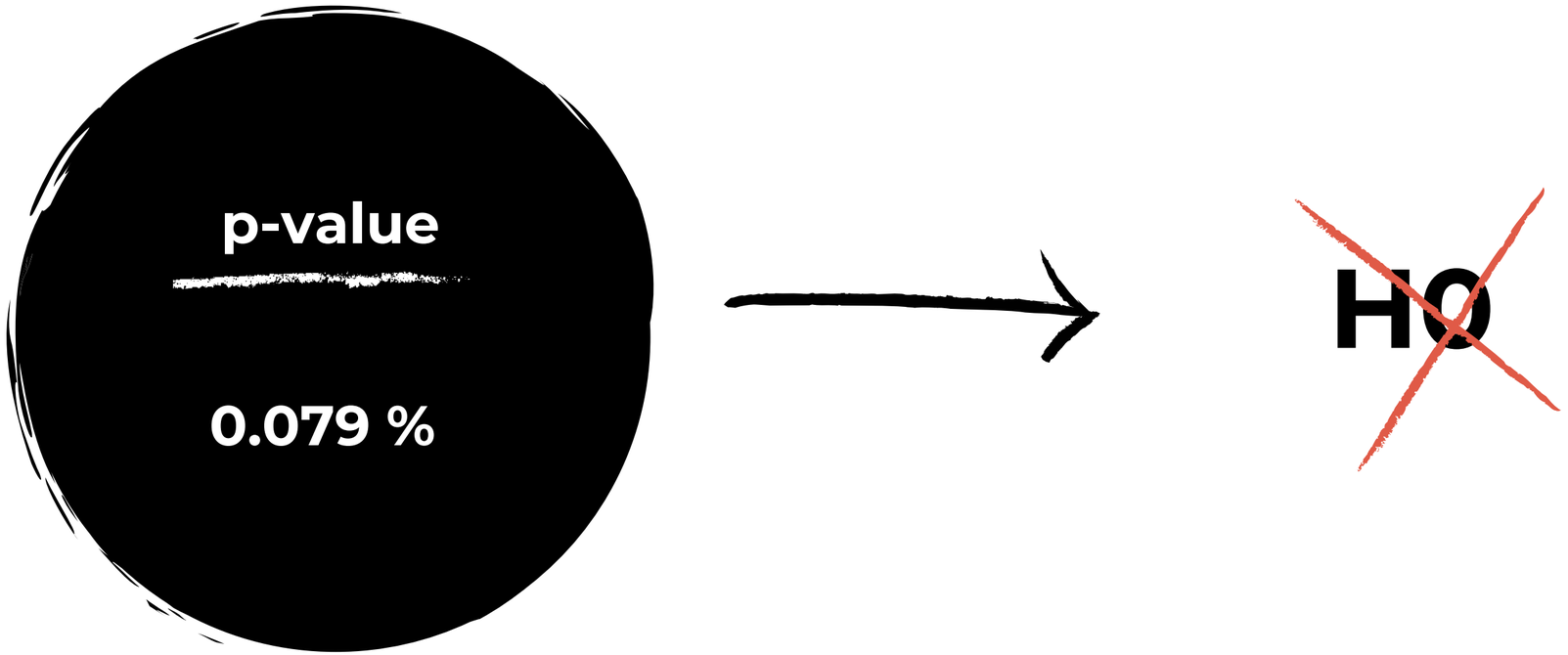
DATASET 1

ANTIDEPRESSANT CONSUMPTION BY COUNTRY

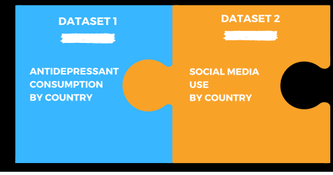
DATASET 2

SOCIAL MEDIA USE BY COUNTRY

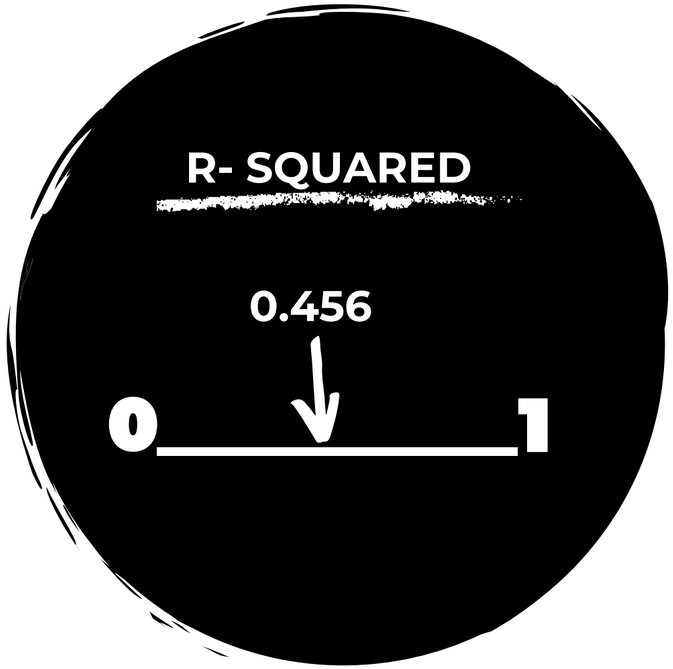
H0 : "*ANTIDEPRESSANT CONSUMPTION & SOCIAL MEDIA ARE INDEPENDENT*"

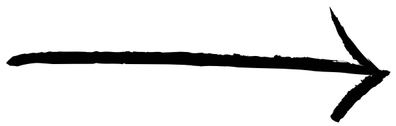


ACCESSING THE MODEL FIT



HOW WELL CAN OUR MODEL PREDICT CHANGES IN THE CONSUMPTION OF ANTIDEPRESSANTS?





ACCESSING THE MODEL FIT

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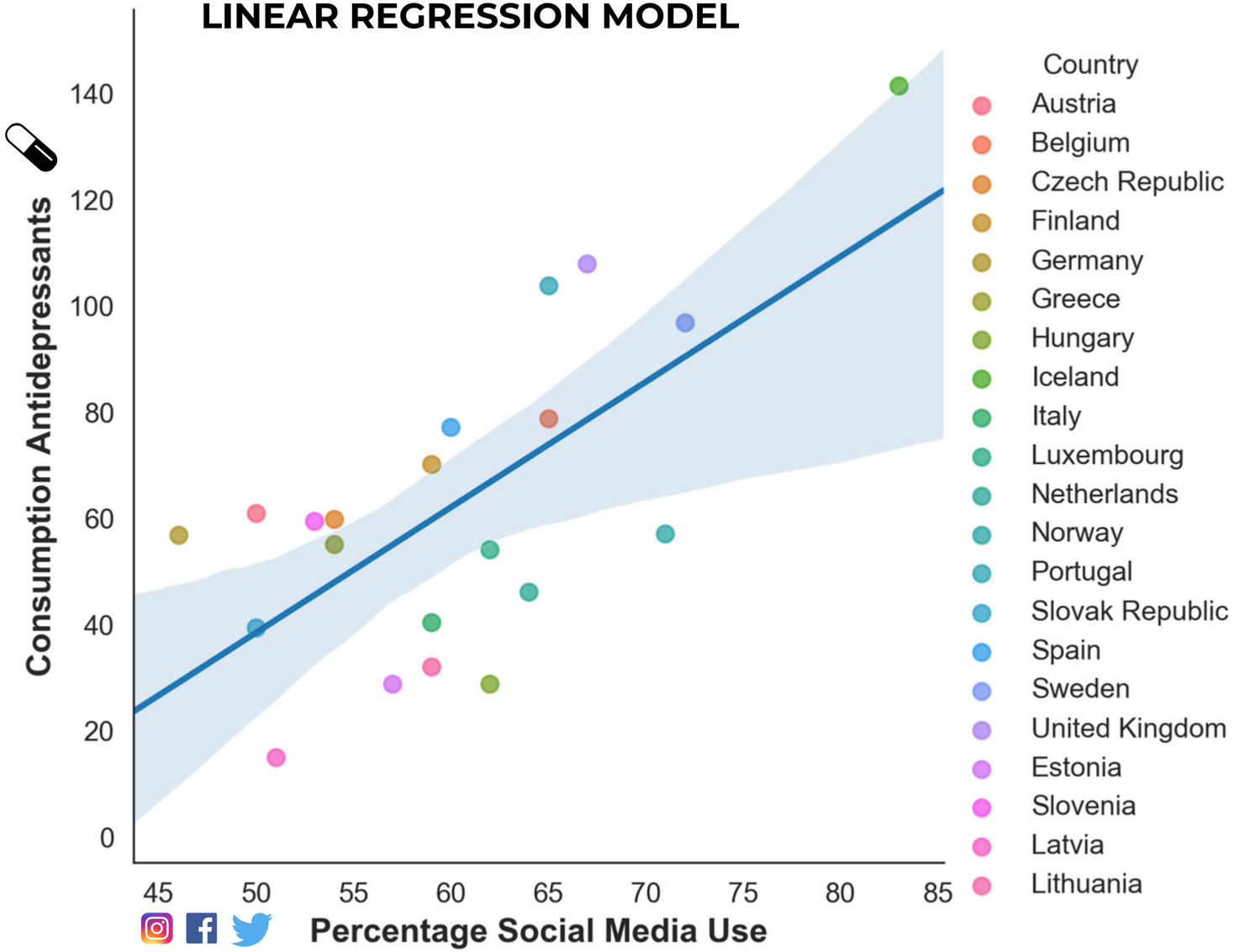
LINEAR REGRESSION MODEL



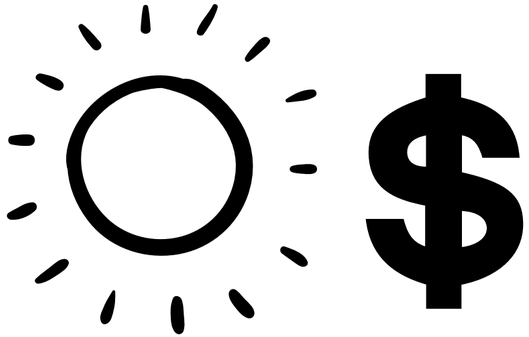
SOCIAL MEDIA NOT THE ONLY PREDICTOR

FINDINGS

- SOCIAL MEDIA USE IN SELECTED EUROPEAN COUNTRIES **HAS AN EFFECT** ON ANTIDEPRESSANT CONSUMPTION
- + 2.36 STEP INCREASE IN SOCIAL MEDIA
  ↓
  + 1 STEP INCREASE IN ANTIDEPRESSANT CONSUMPTION
- CONSUMPTION CANNOT BE SOLELY EXPLAINED BY SOCIAL MEDIA USE

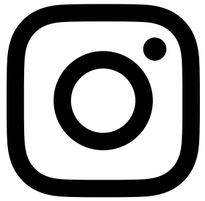
FUTURE ADJUSTMENTS

ADDING MORE PREDICTORS



WORLDWIDE

AVG TIME SPENT ON WHICH CHANNEL



THANK YOU!

QUESTIONS?