



HAPPINESS

Based on World
Happiness Report
2019

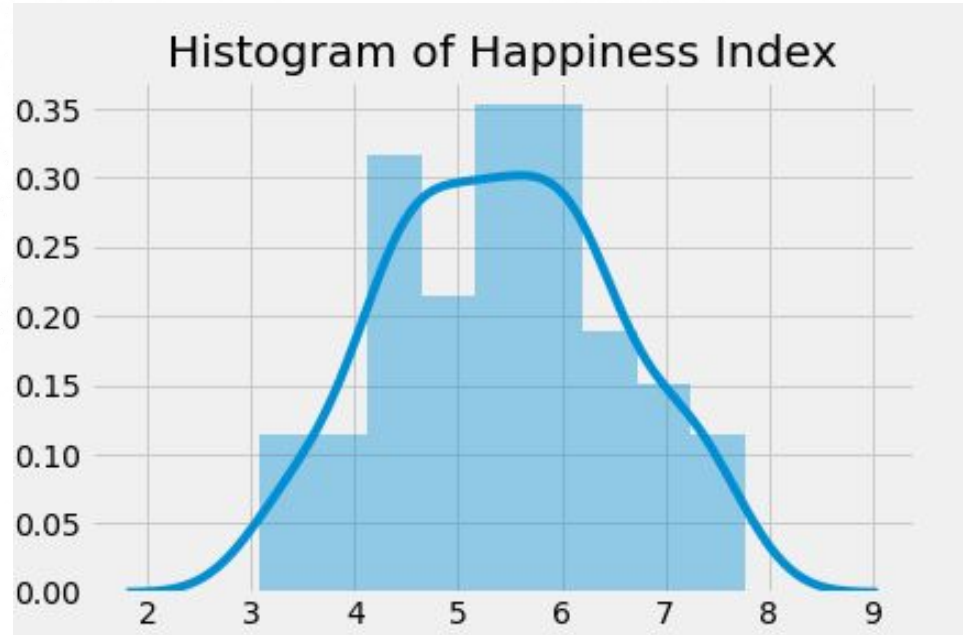
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and
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2020 February

BACKGROUND

World Happiness Report:

The World Happiness Report is an annual publication of the U.N.

It contains rankings of national happiness based on respondent's rating their own lives.



DATA SOURCES

World Bank

API with built-in Pandas
library



Wikipedia

Web scraping with
BeautifulSoup



QUESTION 1: RELATIONSHIP WITH LIFE EXPECTANCY?

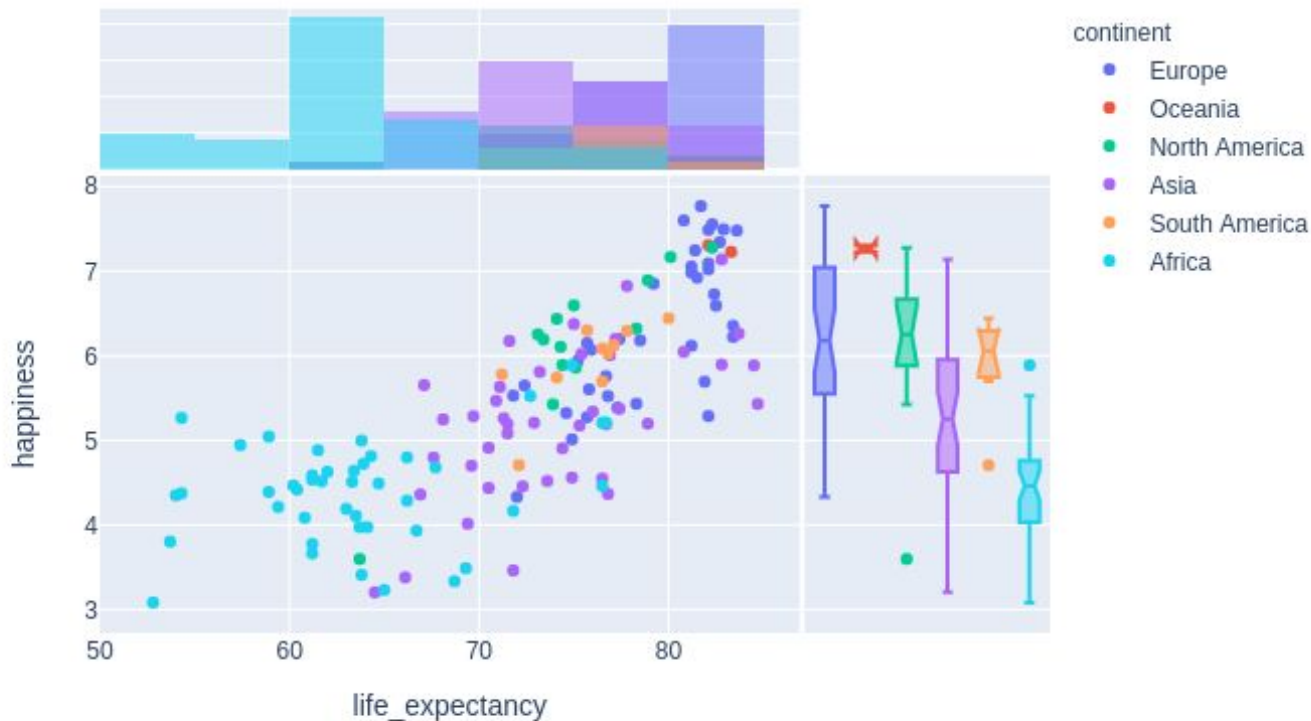
Linear Regression (OLS) Results:

p-value = 0.000

coeff = 0.1090

adj. R^2 = 0.583

**Not independent,
there is positive
relationship**



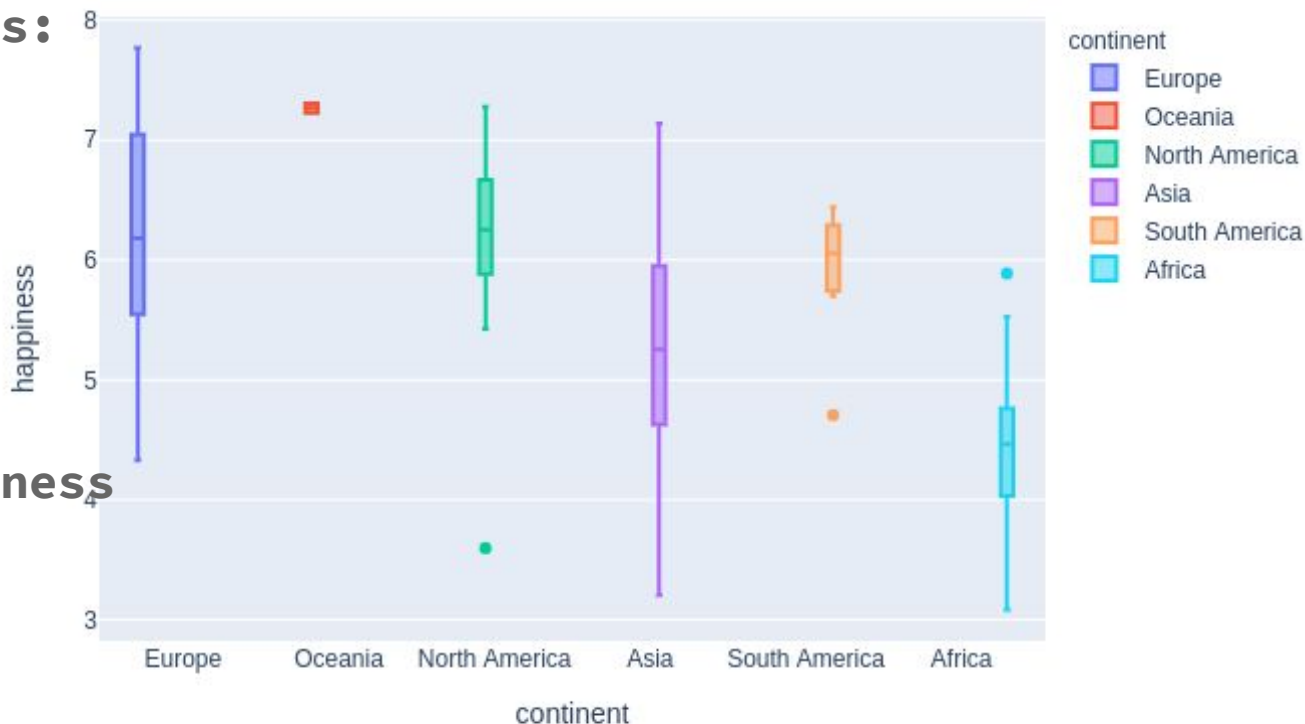
QUESTION 2: CONTINENT?

ANOVA test results:

p-value = 0.000

F-ratio : 56.252
(for Europe,
Asia, Africa)

**The average happiness
differs
by continent**



QUESTION 3: RELATIONSHIP WITH THE GDP?

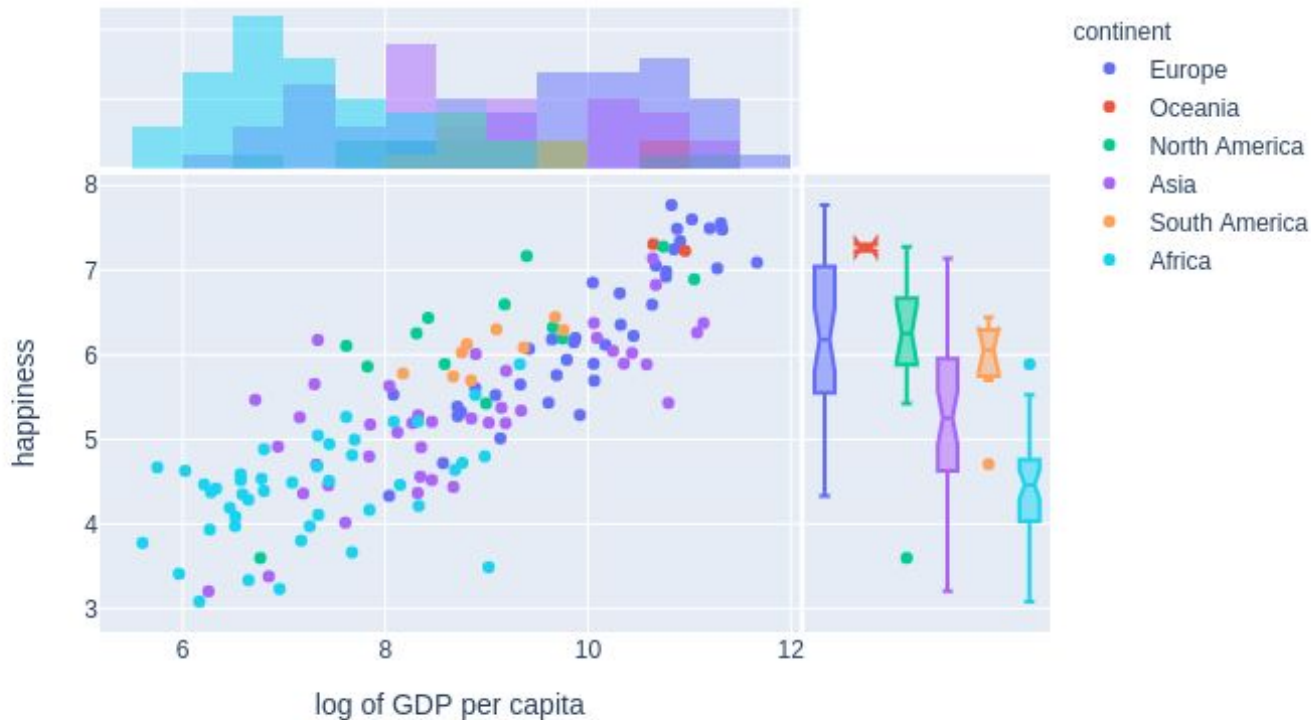
Linear Regression (OLS) Results:

p-value = 0.000

coeff = $3.77e05$

adj. R^2 = 0.541

Rejecting H_0 , the
GDP has an impact
on happiness



QUESTION 4: REPUBLIC OR MONARCHY?

republic group:

mean: 5.26, median: 5.25

monarchy group:

mean: 6.28, median: 6.28

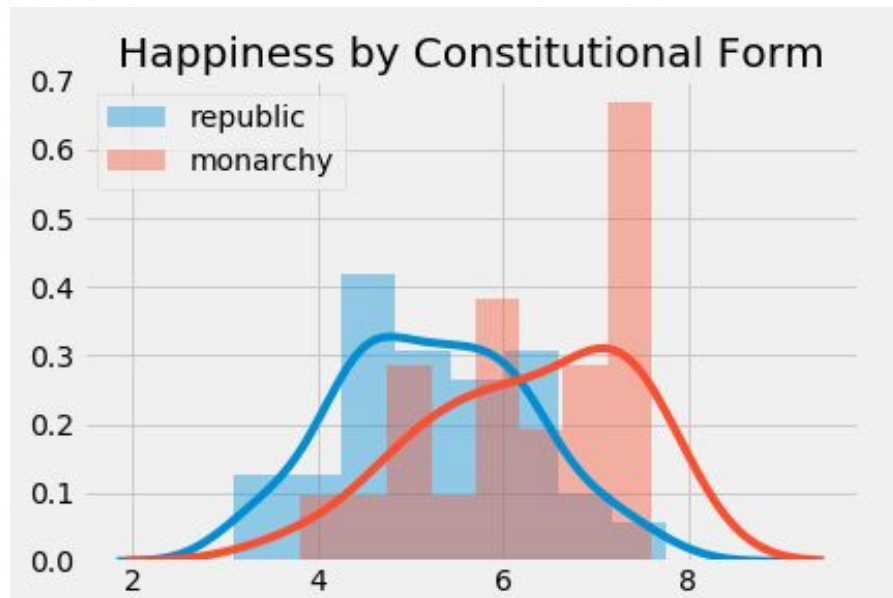
Welch's t-test results:

t-value: 3.832

degree of freedom: 40.988

p-value: 0.000

Monarchy is preferred over republic



QUESTION 5: EXECUTIVE OR CEREMONIAL HEAD OF STATE?

executive group:

mean: 5.13, median: 5.18

ceremonial group:

mean: 5.97, median: 5.89

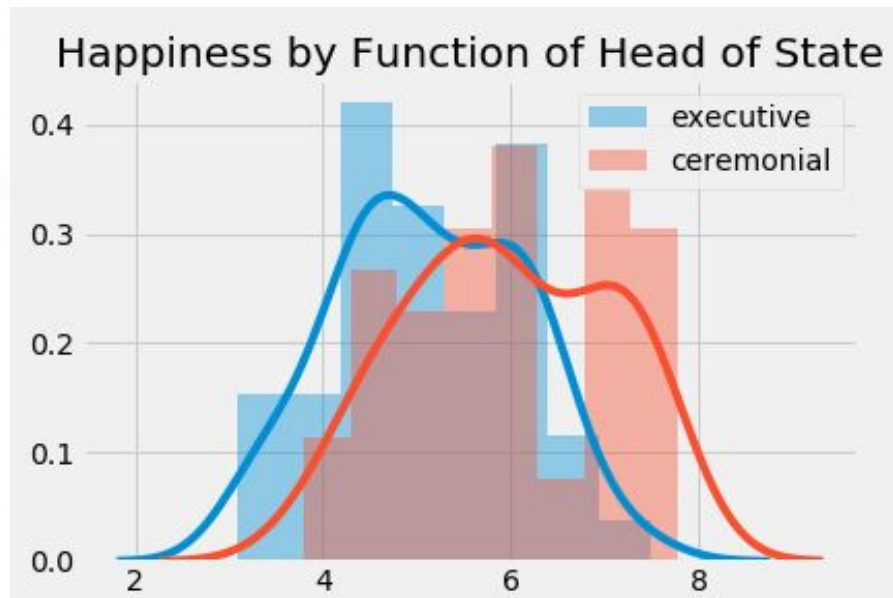
Welch's t-test results:

t-value: 4.647

degree of freedom: 100.685

p-value: 0.000

**Ceremonial head of state
is preferred over executive**



SUMMARY OF OUR FINDINGS

strong relationship:

GDP per capita, life expectancy, monarchy, ceremonial head of state, continent

moderate relationship:

median age, suicide rate, relative weight of economic sectors

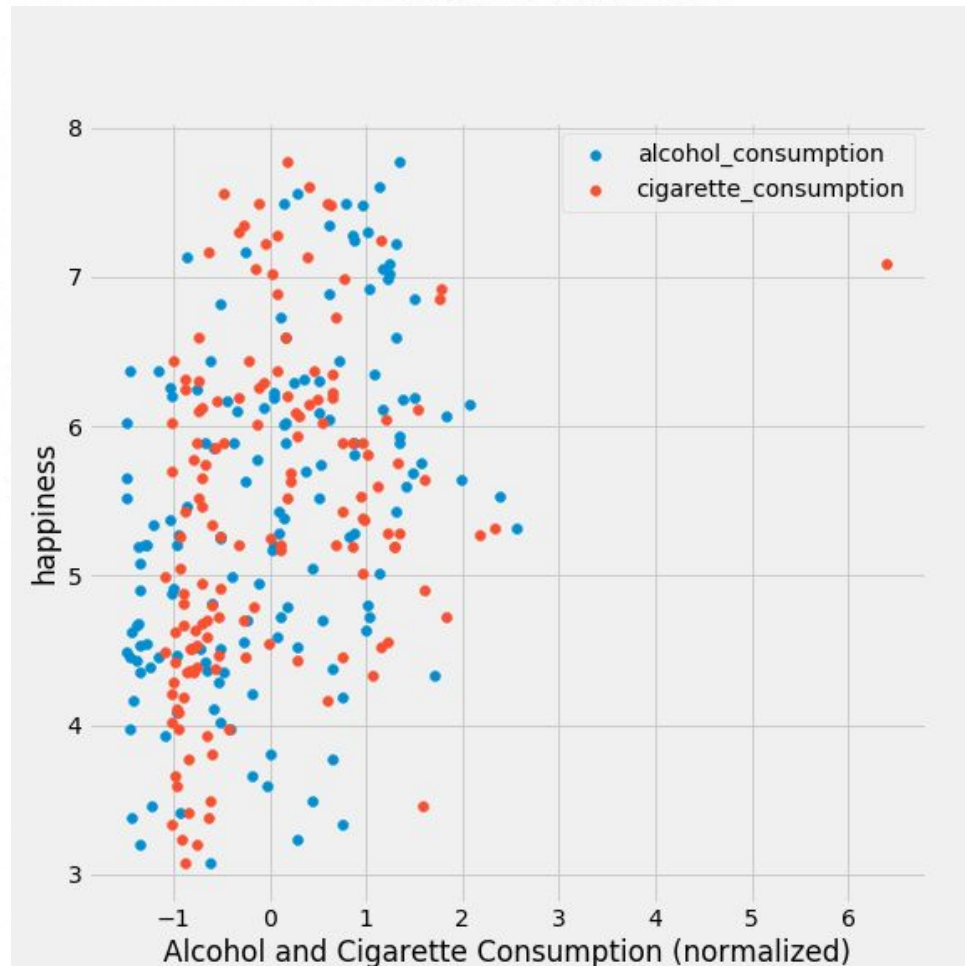
seemingly unrelated:

alcohol / cigarette consumption, railways (pop / km), olympic medals

APPENDIX - ADDITIONAL CHARTS 1

**alcohol and
cigarette
consumption**

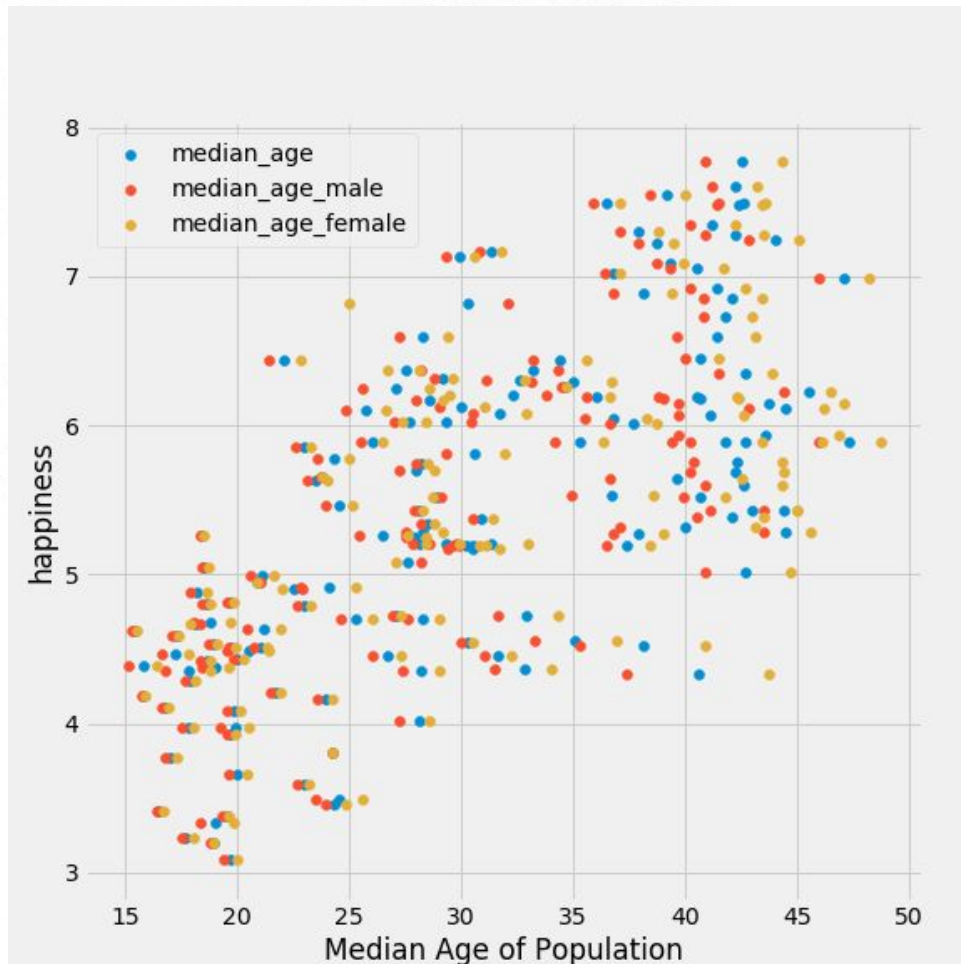
does not
seem to have
a clear
impact on
happiness



APPENDIX - ADDITIONAL CHARTS 2

median age

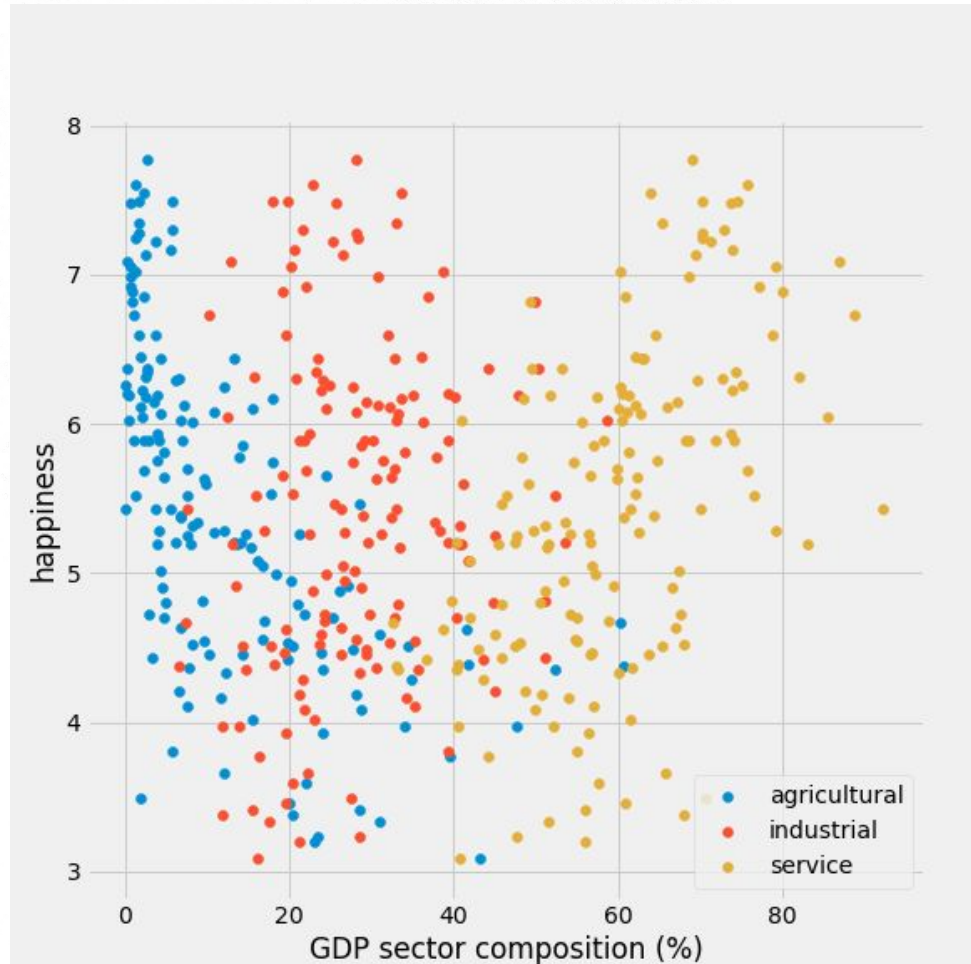
seems to
have a
strong
positive
relationship
with
happiness



APPENDIX - ADDITIONAL CHARTS 3

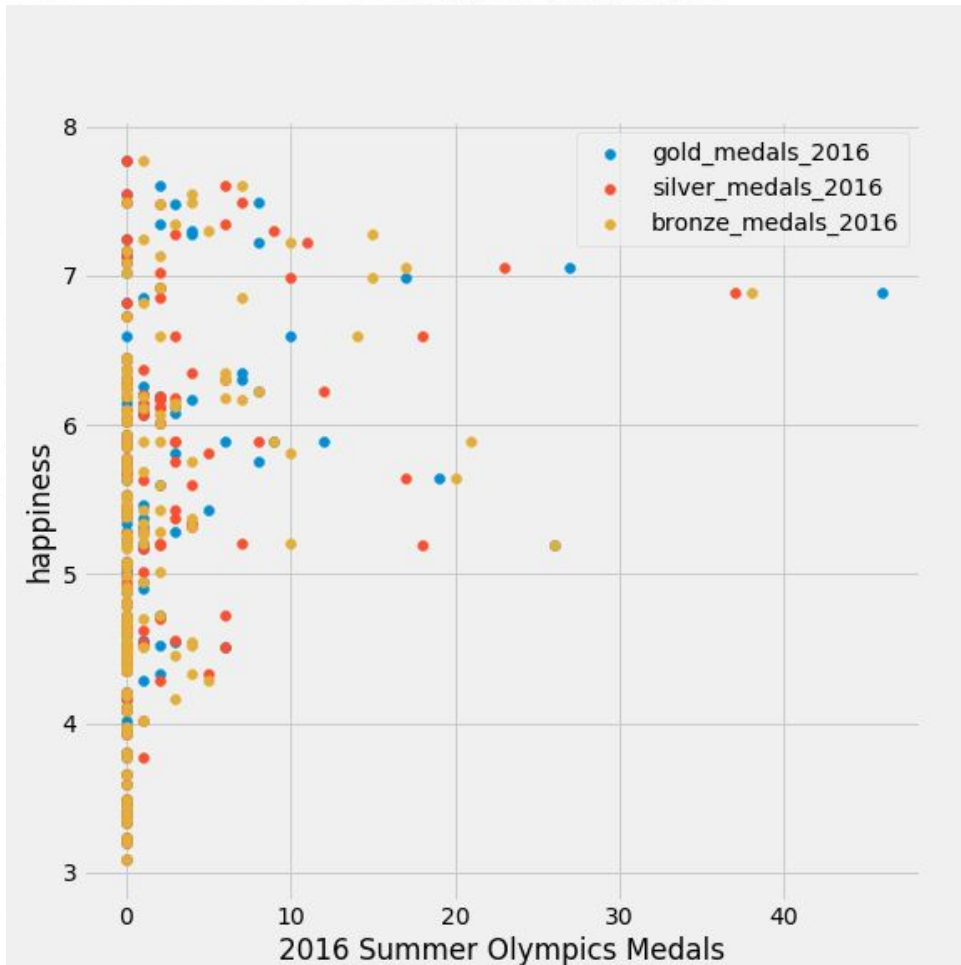
**economic
sectors**

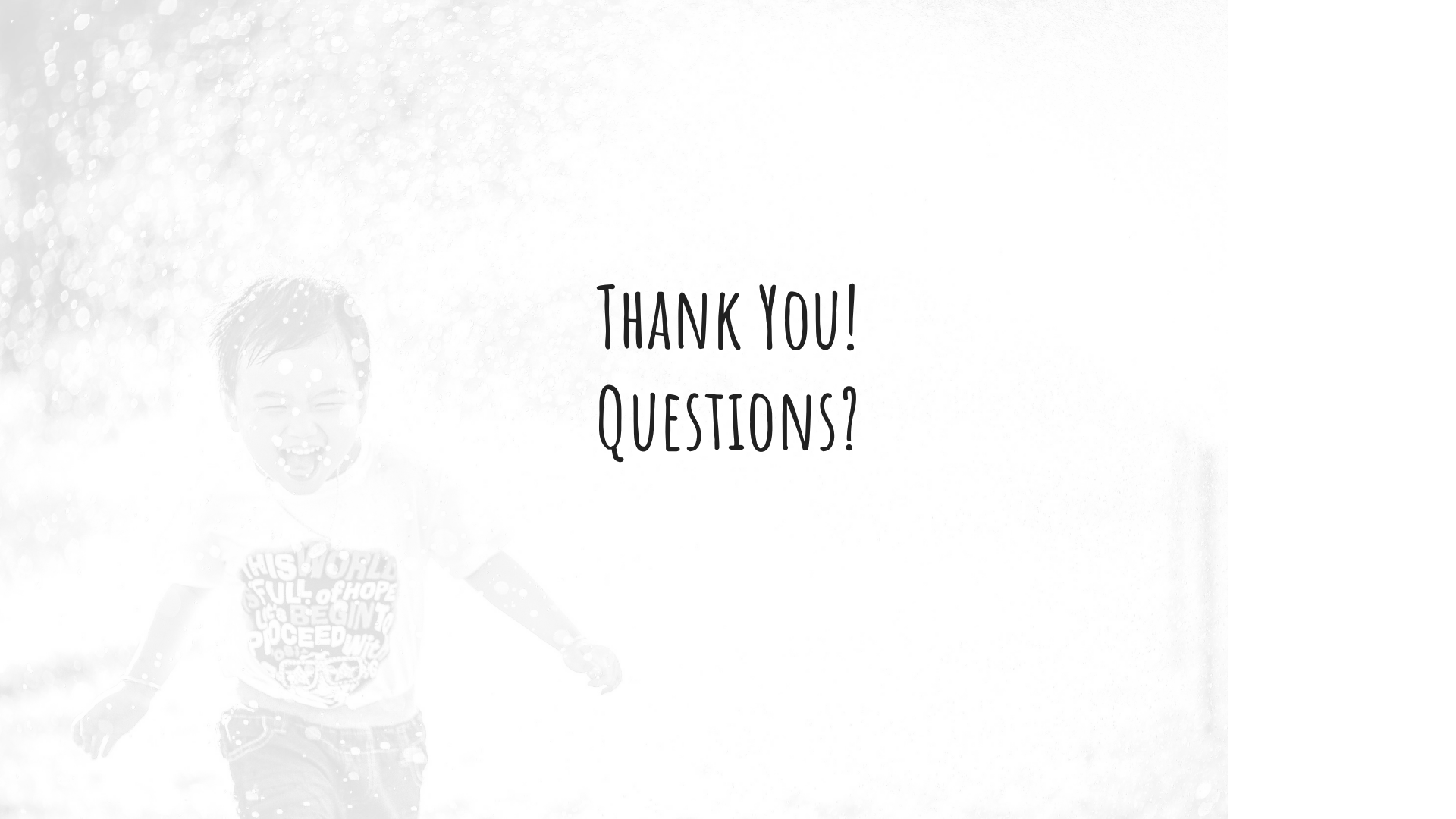
relationship
with agr.,
ind., and
serv. sector
seems to be
(-), 0, and
(+)



medals from
2016 Summer
Olympics

most of the countries have no medals, but there seems to be a slight positive impact



A young boy is running joyfully through a field of tall grass. He is wearing a white t-shirt with the text "THIS WORLD IS FULL OF HOPE LET'S BEGIN TO PROCEED WITH FAITH" and a graphic of a person's face. The background is a soft, out-of-focus field of tall grass under a bright sky.

THANK YOU!
QUESTIONS?