

Basic Income: Influences on Opinion

HCDS 512 Final Project

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Submitted 12/13/17

Basic Income Background

 BUSINESS INSIDER FINANCE

Elon Musk doubles down on universal basic income: 'It's going to be necessary'

 Chris Weller
🕒 Feb. 13, 2017, 12:53 PM 🔥 116,005

 FACEBOOK  LINKEDIN  TWITTER  

Source:

<http://www.businessinsider.com/elon-musk-universal-basic-income-2017-2>

Basic Income Background



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On The Canadian Prairie, A Basic Income Experiment

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ECONOMY

On the Canadian prairie, a basic income experiment

By Sarah Gardner

December 20, 2016 | 11:59 AM



Source: <https://www.marketplace.org/2016/12/20/world/dauphin>

Dalia Basic Income Data

- Dalia is a Berlin-based research firm that specializes in “attitudinal” data.
- They’ve released some *very excited* blog posts about the recent popularity (64% support in 2016) of basic income across Europe.
 - Accompanying these posts is publicly available survey data.

Dalia Basic Income Data

- 2016 Basic Income Survey is released under CC-BY-NC-SA 4.0 on Kaggle.
- Nearly 10K respondents across 28 EU countries.
- Contains demographic and qualitative data--
 - reasons, beliefs, opinions
 - understanding these is key to human-centered work
 - key to obtaining influence of outcome

Project Goals

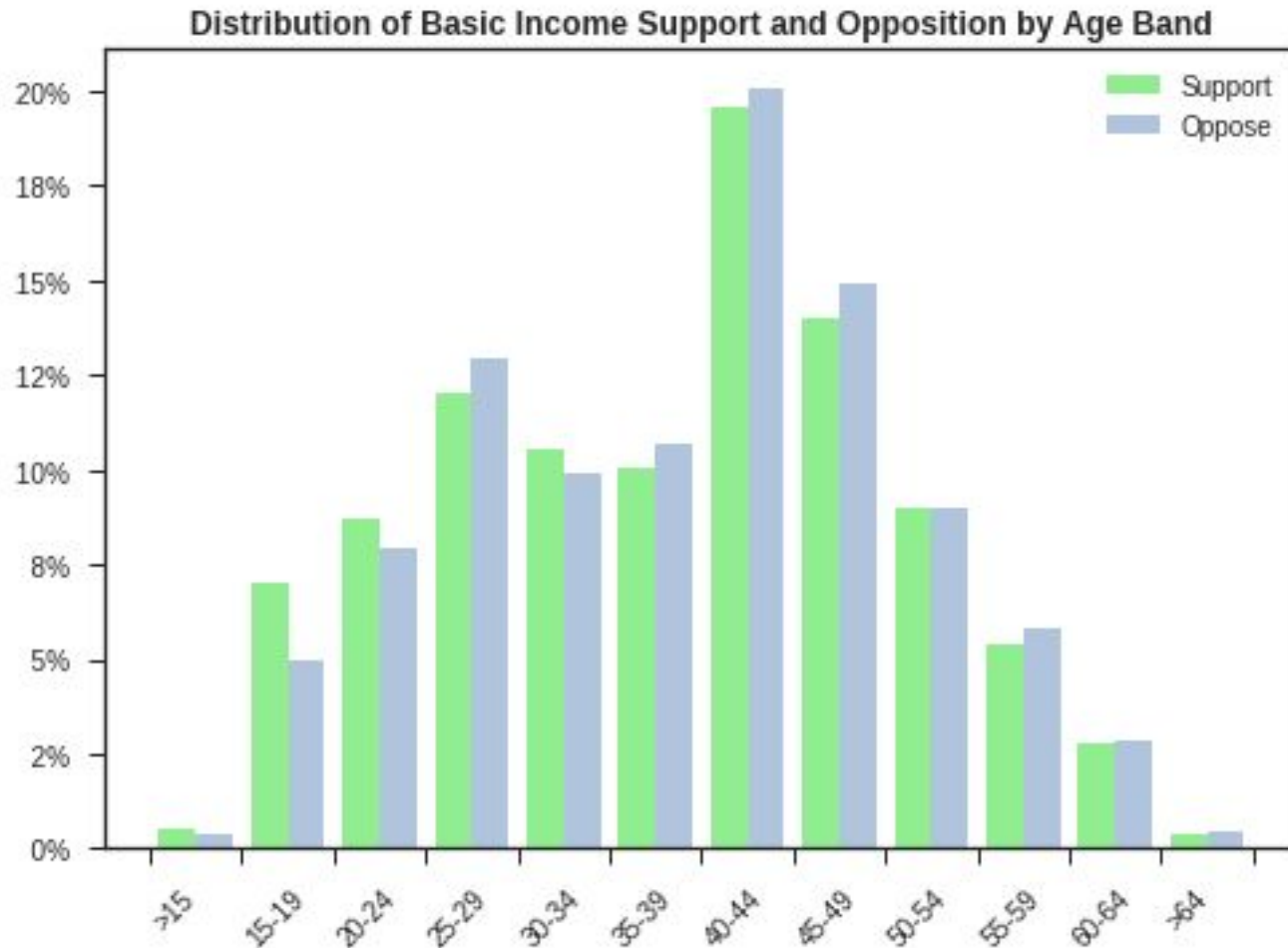
- Gain understanding of basic income attitudes and what features shape them
- Test some (admittedly biased) hypothesis
- Compare support for basic income with other measures of social safety nets at the country-level

Dalia Data Limitations

- Only includes ages 14-65 and binary gender.
- Population weights are garbled.
- No clear indicator of support/opposition for non-voters
 - Some non-voters may be too young to vote.
 - Young people skew toward greater support of basic income AND more likely non-voters.

H1: Young Supports BI

Data Supports H1:



Aggregate Data Hypotheses

- **H2:** Urban dwellers more favorable than rural
- **H3:** People with children more favorable

Aggregate Data Hypotheses

- **H2:** Urban dwellers more favorable than rural

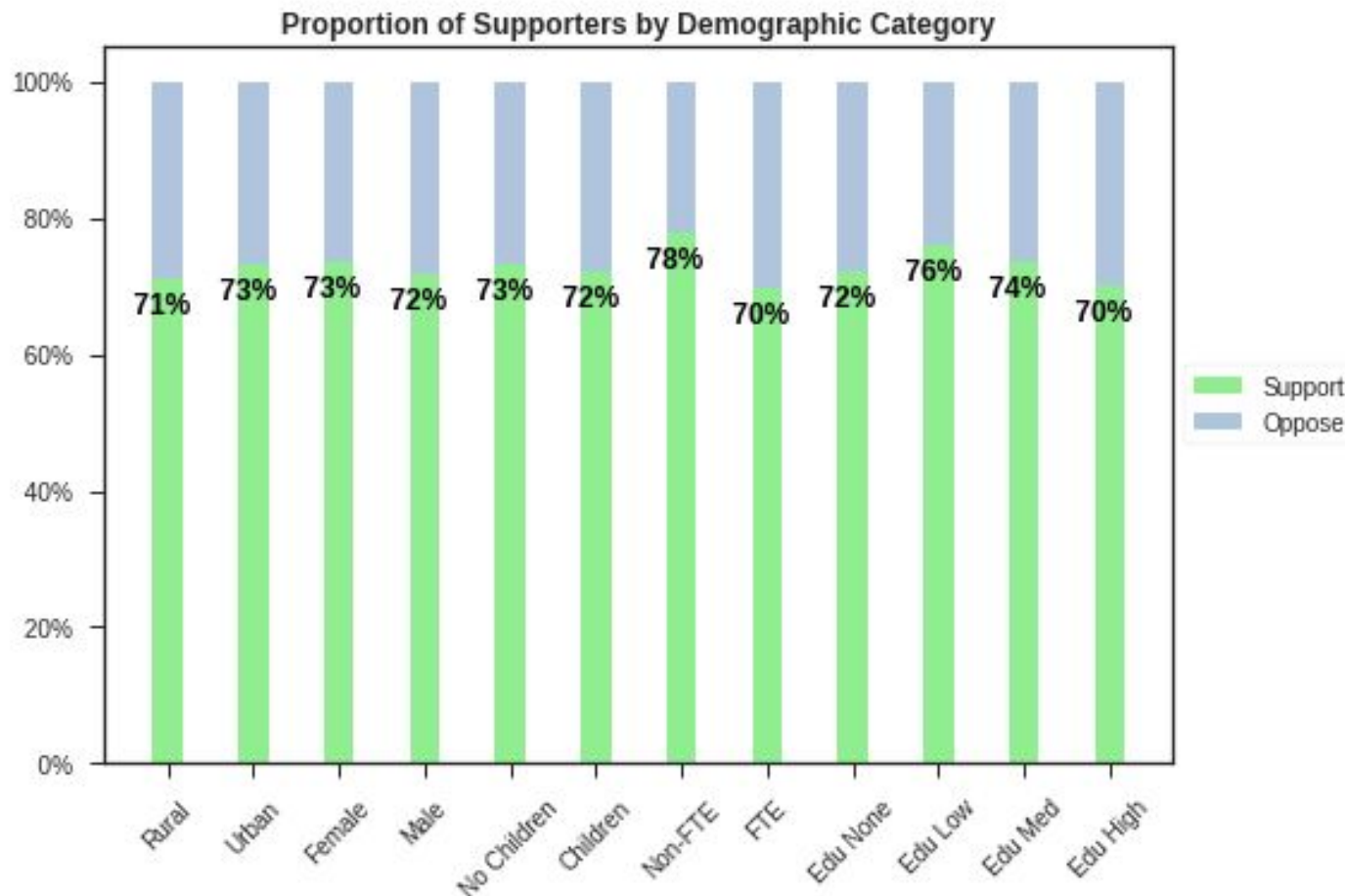
Only Slightly Supported

- **H3:** People with children more favorable

Not Significantly Supported

H2 and H3

Data shows age, full-time employment, and education level are the most impactful demographic factors:



Goal: Understand Attitudes

- Survey contains two beliefs questions that allow multiple selection:
 - Select beliefs in support of BI
 - Select beliefs against BI
- I created 14 indicator variables for the responses, along with two other self-ranking features.

Goal: Understand Attitudes

- I identified the most divisive belief statements with scikit-learn's Feature Selection methods, using the `f_classif` selection function for categorical data.
- **Top Four:**
 1. (O) Don't agree with any statements in support of BI
 2. (O) Against principle of merit/reward
 3. (S) More equality of opportunity
 4. (S) Encourages independence

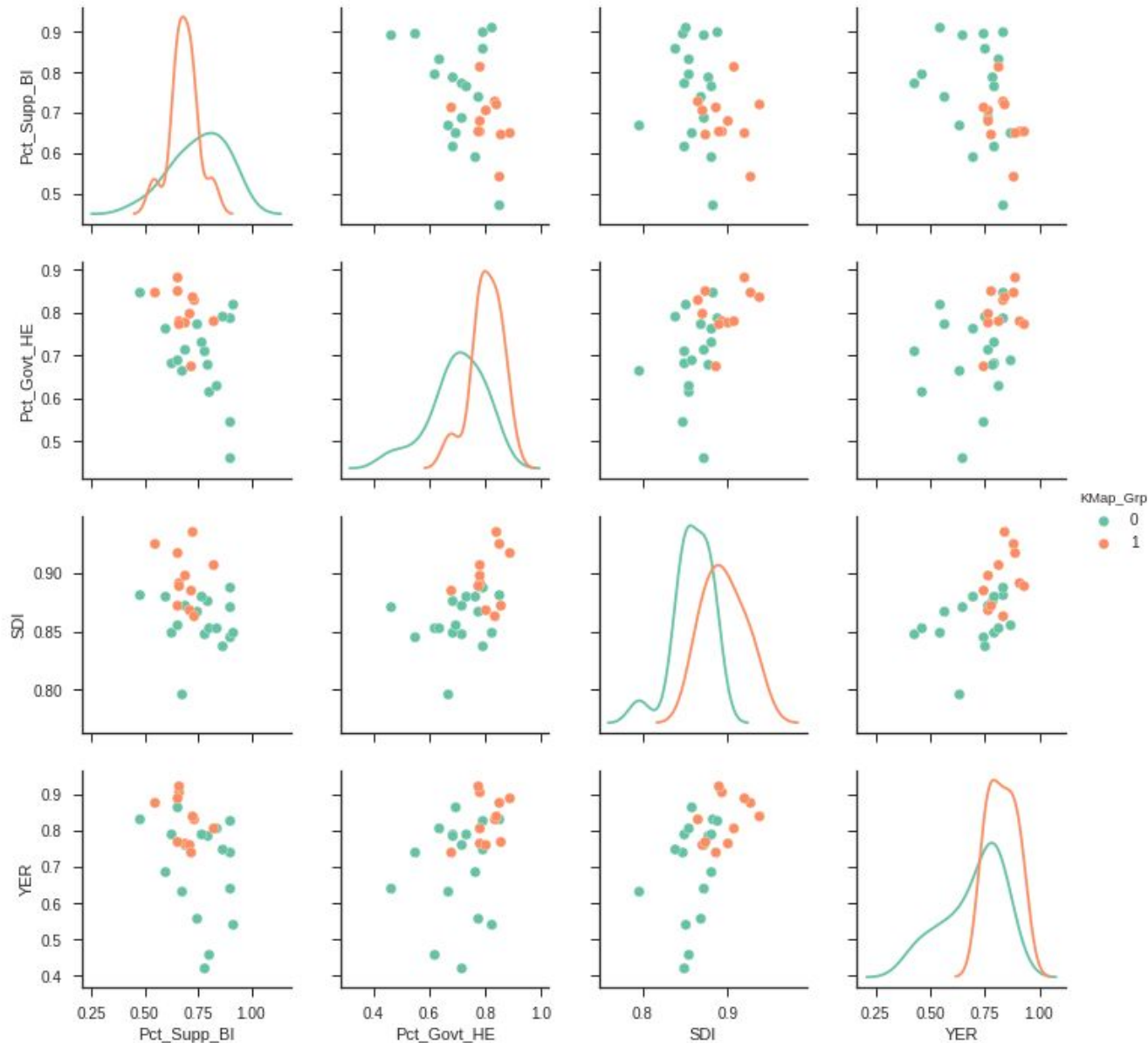
Goal: Social Metrics by Country

- Calculated population weights, found proportion of support for BI at country level
- Combined with data sources:
 - **IHME GHDx**: Pop. Est, Health Expenditures, Socio-Demographic Index (wealth, education, TFR)
 - **World Happiness Report**
 - **World Bank Youth Unemployment Rates**

Goal: Social Metrics by Country

- Scaled metrics to $(0,1)$ representative of (low,high) for social quality
- Used K-means with $k=2$ to group countries by similar features
- Pair plot of countries with features (next slide):
 - Prop. that Support BI
 - Prop. that Government pays total Health Expenditures
 - Socio-Demographic Index
 - Youth Employment Rate

Goal: Social Metrics by Country



Country Data Hypotheses

- **H4:** Healthier countries more favorable toward BI
- **H5:** Happier countries more favorable toward BI
- **H6:** Economically burdened countries less favorable toward BI

Country Data Hypotheses

- **H4:** Healthier countries more favorable toward BI

Not Supported: Gov't share, per GDP, and per capita

- **H5:** Happier countries more favorable toward BI

Not Supported: Happiness Score, SDI

- **H6:** Economically burdened countries less favorable toward BI

Not Supported: YER, and SDI

Final Thoughts

- Future ideas:
 - Time series when multiple years of data become avail.
 - Linking countries back to belief statements
- Limitations:
 - Data issues
 - Responses limited to choices offered
- Consequences of motivations/beliefs on policy
- Empathy