Using Social Media Advertising Data to Monitor Global Migration

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معهد قطر لبحوث الحوسبة
Qatar Computing Research Institute
جامعة حمد بن خليفة
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FACEBOOK ADVERTISING DATA

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Audience

Define who you want to see your ads. Learn more.

Locations

Qatar

(25.2014, 51.4473) + 2 km

Age 13 - 65+

Gender All | Men | Women

INCLUDE people who match at least ONE of the following

Behaviours > Ex-pats

Lived in India (formerly Expats – India)

Lived in Nepal (formerly Ex-pats – Nepal)

Add demographics, interests or behaviours | Suggestions | Browse

Detailed targeting

and MUST ALSO match at least ONE of the following

Behaviours > Mobile Device User > All Mobile Devices by Operating System

Facebook access (mobile): Android devices

Add demographics, interests or behaviours | Suggestions | Browse

Audience size

Your audience selection is broad. This requires a large budget.

Potential reach: 42,000 people

Estimated daily results

Reach

2.7K-17K

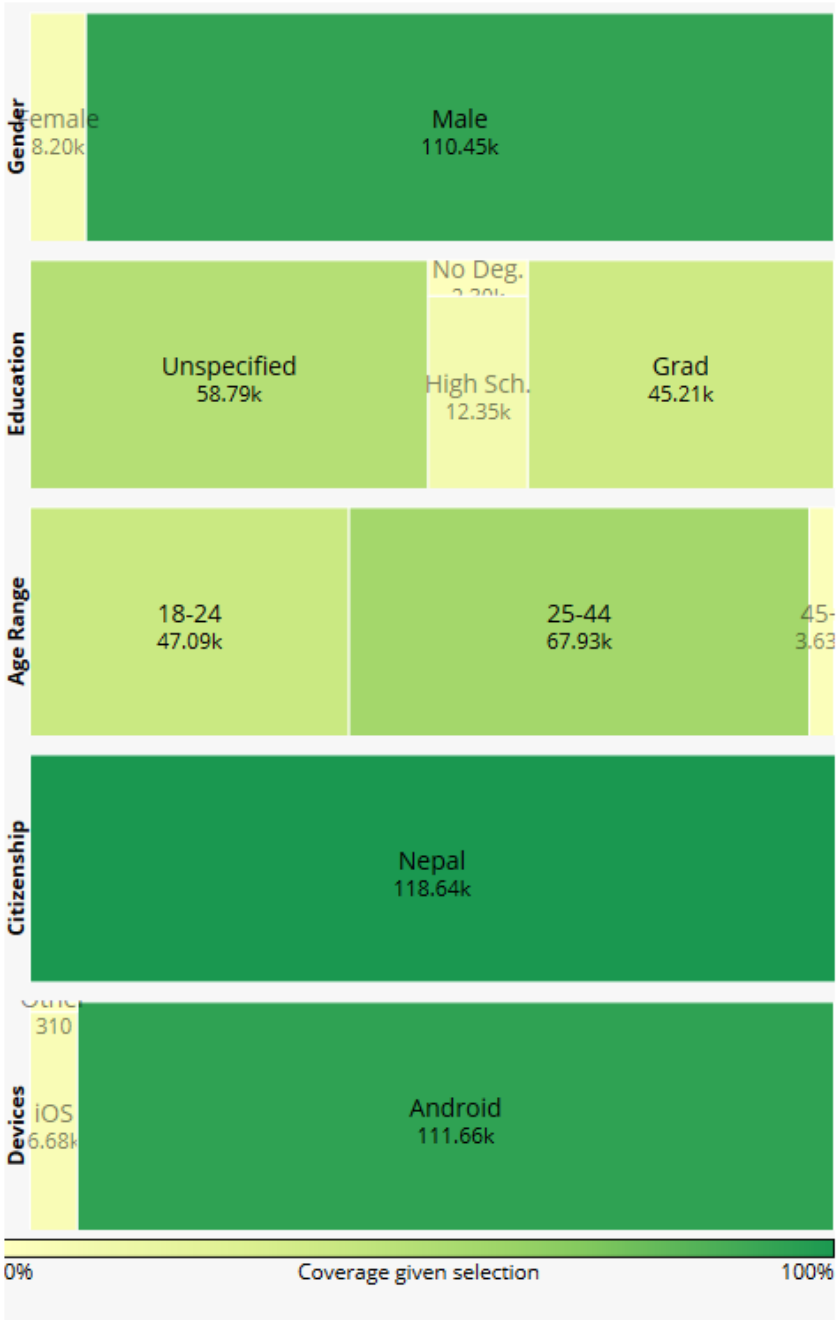
Post Engagement

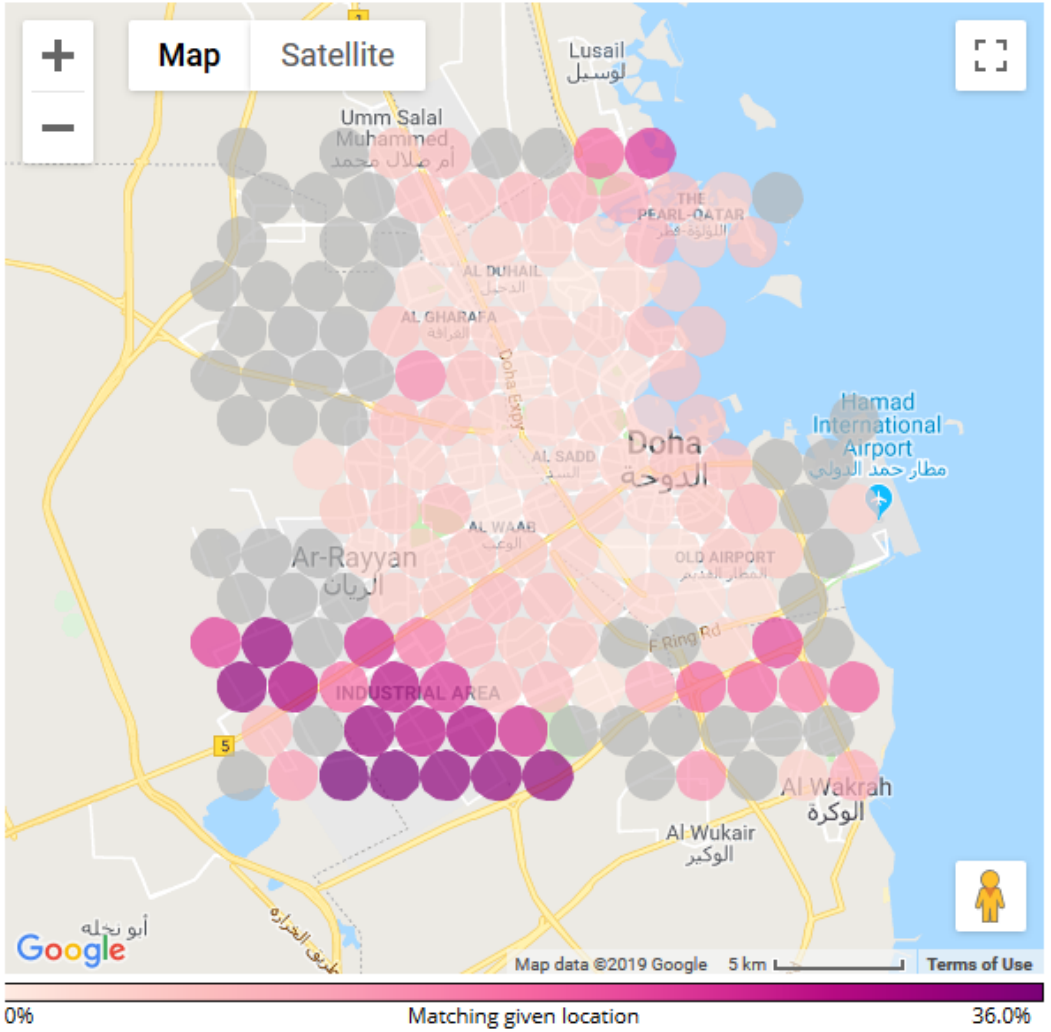
82-510

Removing Instagram and Audience Network may result in 45% fewer Post Engagement, based on your past campaign performance. We recommend choosing automatic placements for the best results.

The accuracy of estimates is based on factors such as past campaign data, the budget you've entered and market data. Numbers are provided to give you an idea of performance for your budget, but are only estimates and don't guarantee results.

Were these estimates helpful?





0% Matching given location 36.0%

All Locations | No Locations

Share what you see:

http://fb-doha.qcri.org

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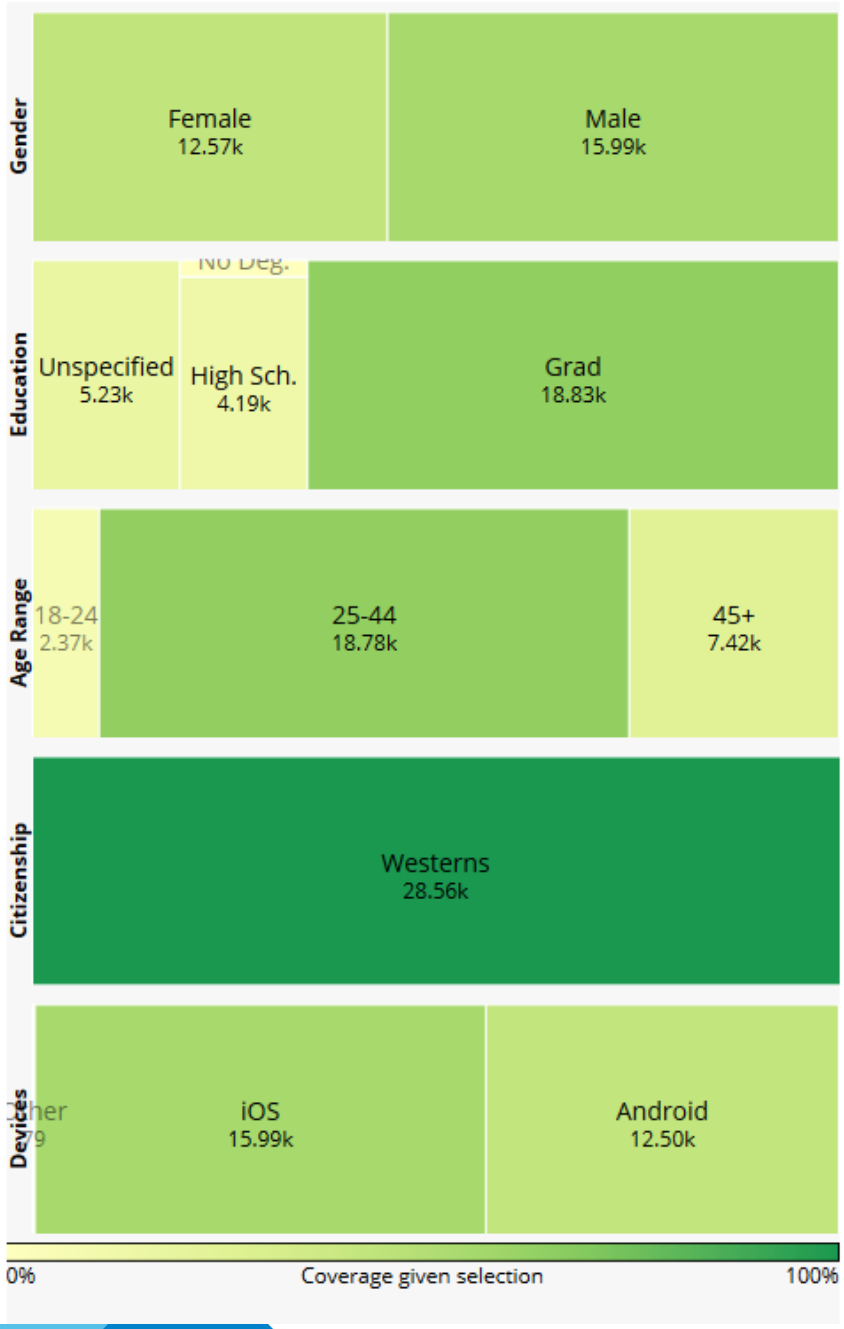

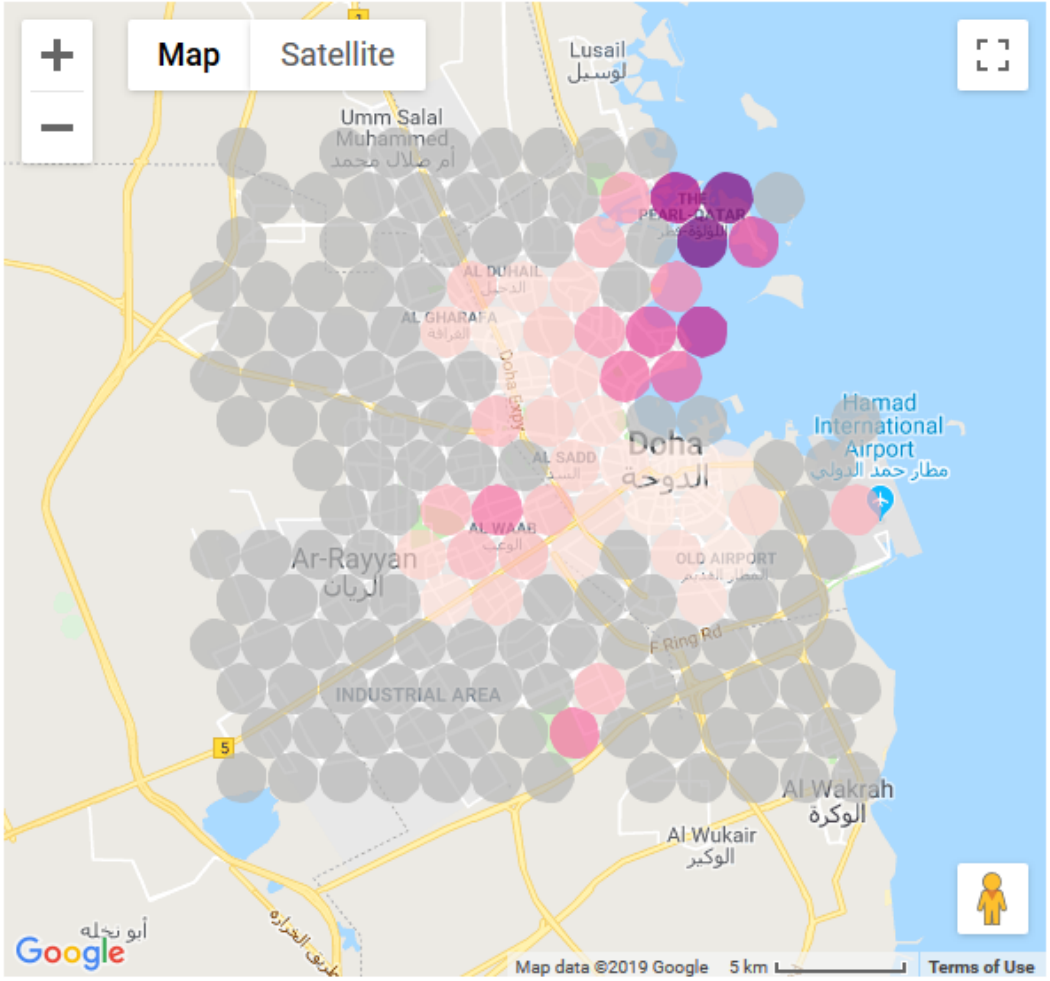

0% Matching given location 18.2%

All Locations | No Locations

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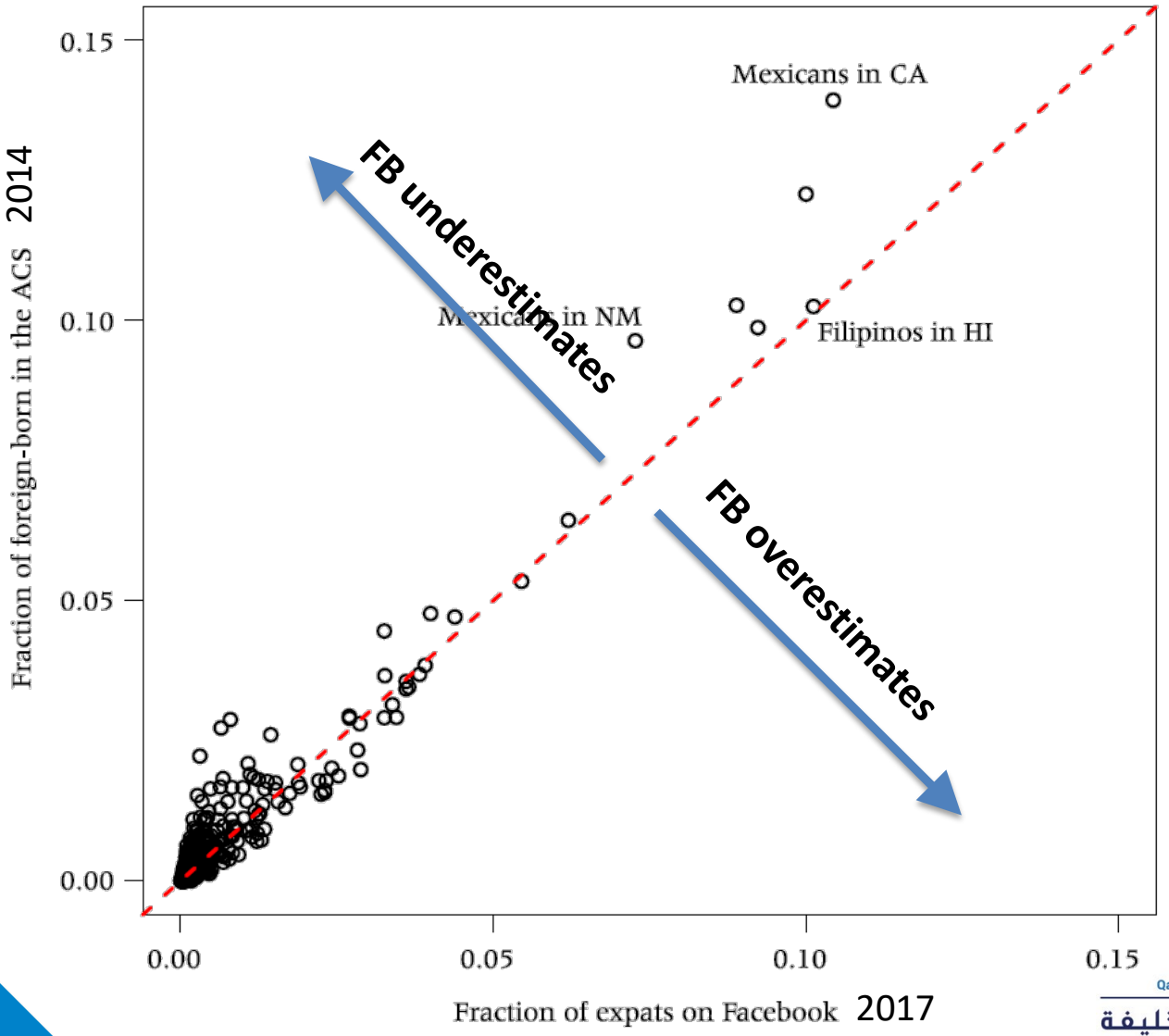
Expats Across US States



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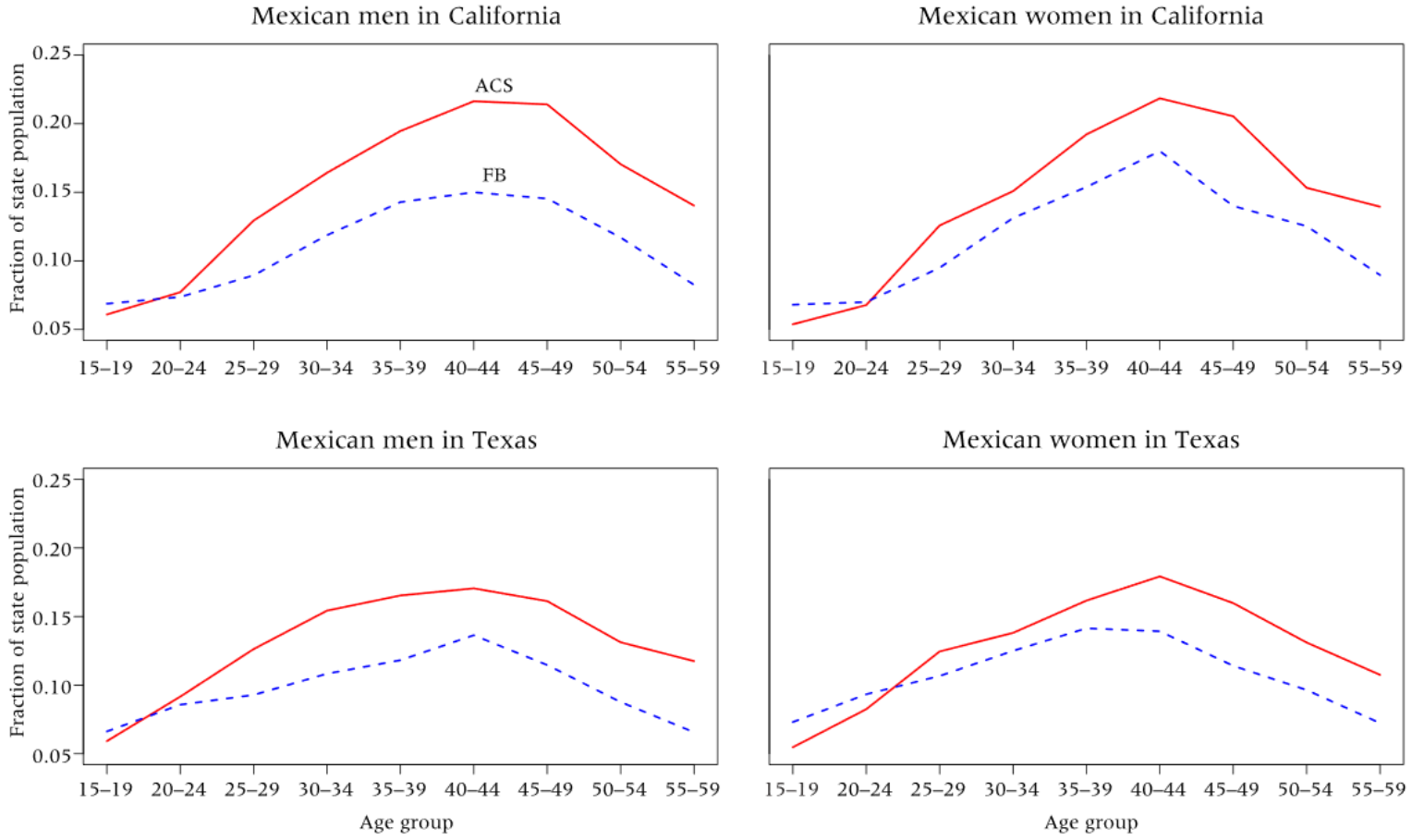
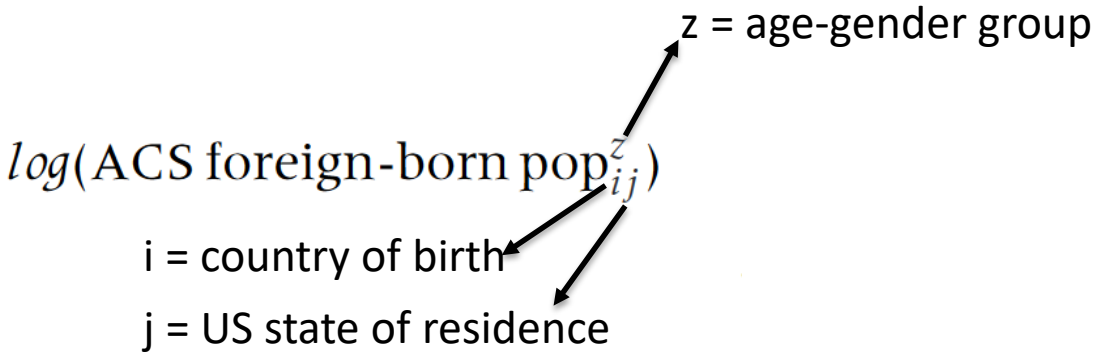
Age-Specific Selection Biases



SOURCES: American Community Survey (ACS 2014); Facebook Adverts Manager.

Bias Reduction via Model-Fitting

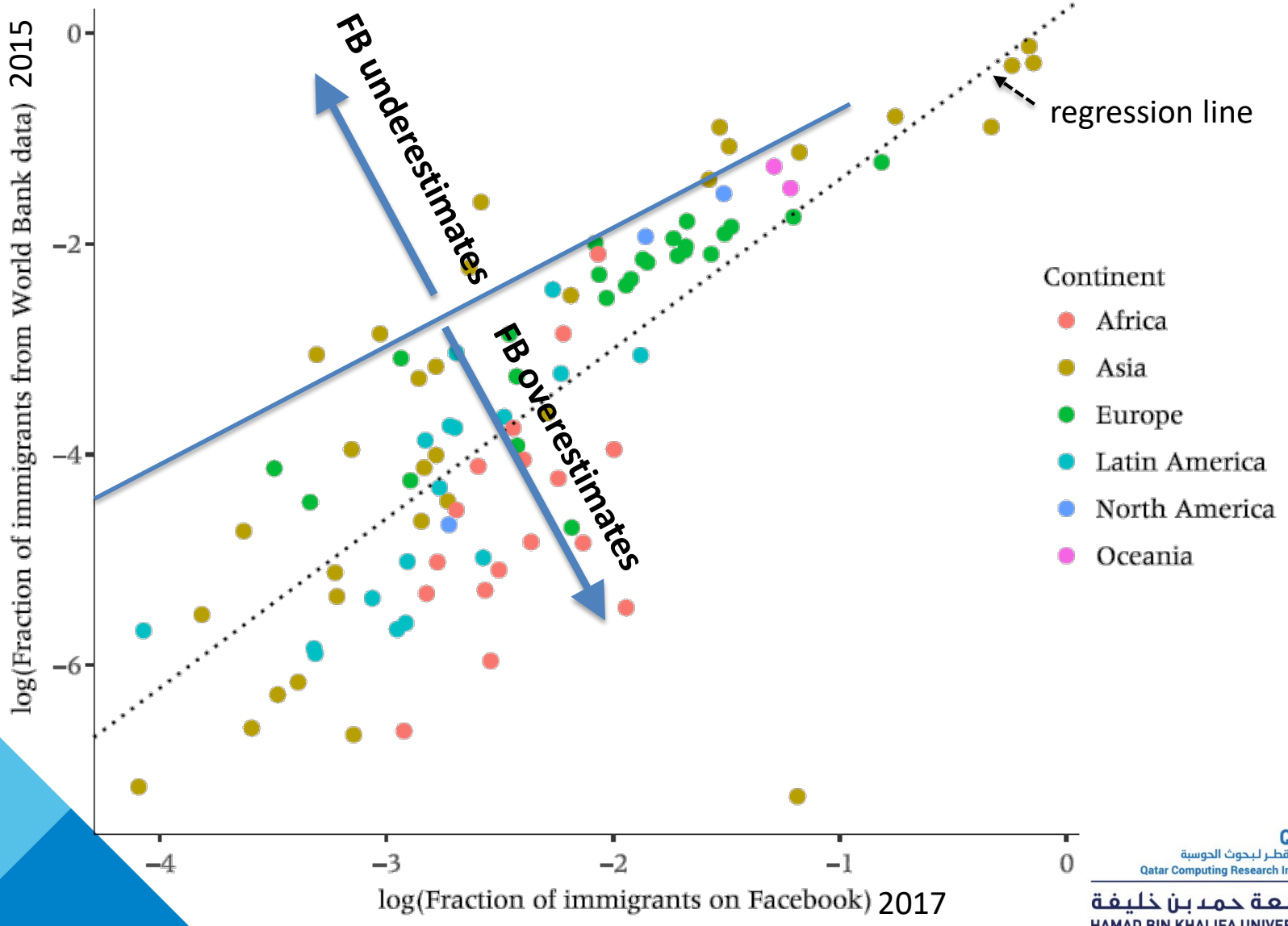


Mean out-of-sample absolute percentage error 37%, down from 56% without origin-age bias correction

Adjusted R^2 = .70

Does not use GDP, language, internet penetration, …

Expats Across Countries



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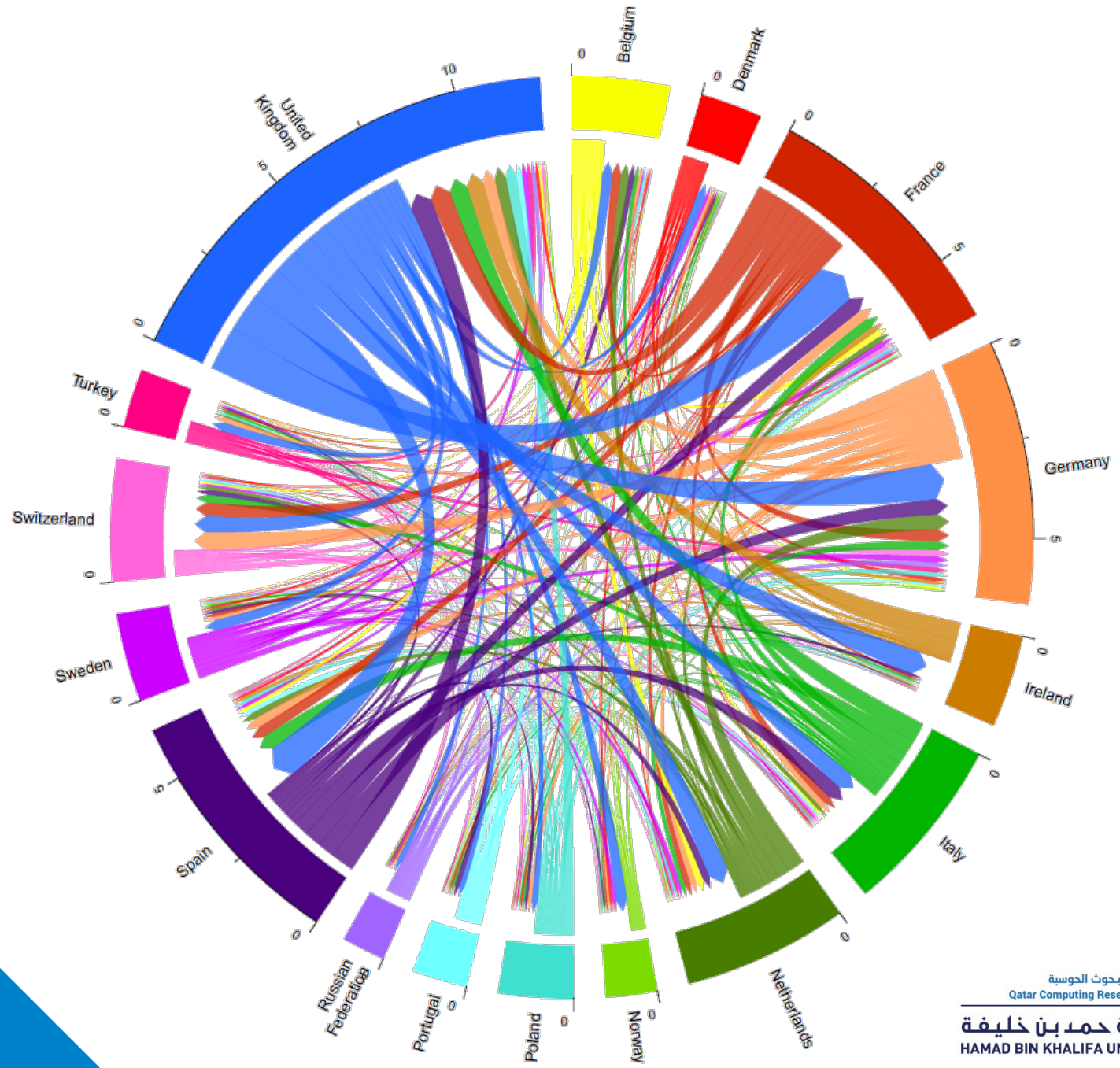
https://tinyurl.com/FB-Georgians-abroad

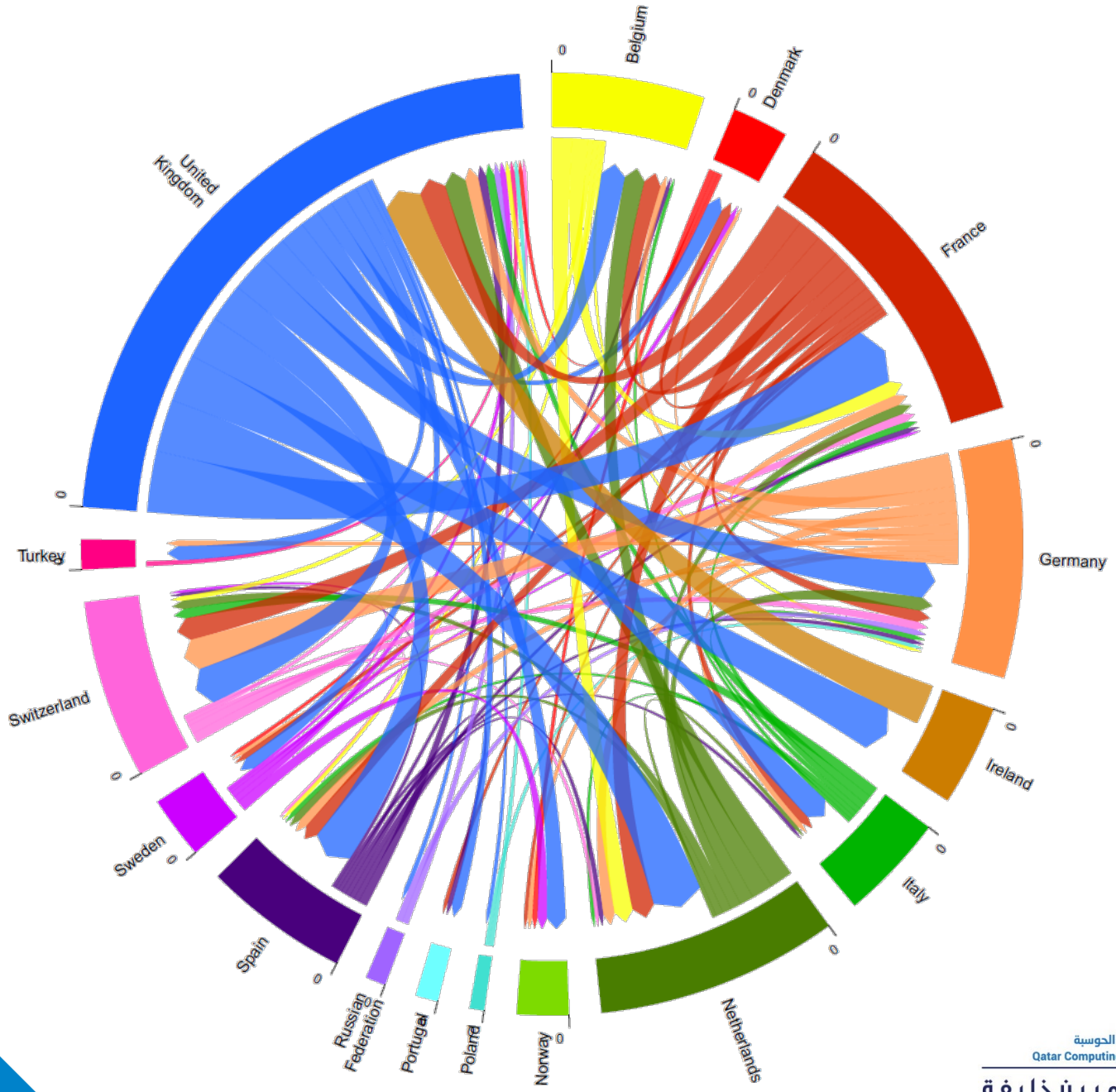
LINKEDIN ADVERTISING DATA

Studied in X, Lives in Y

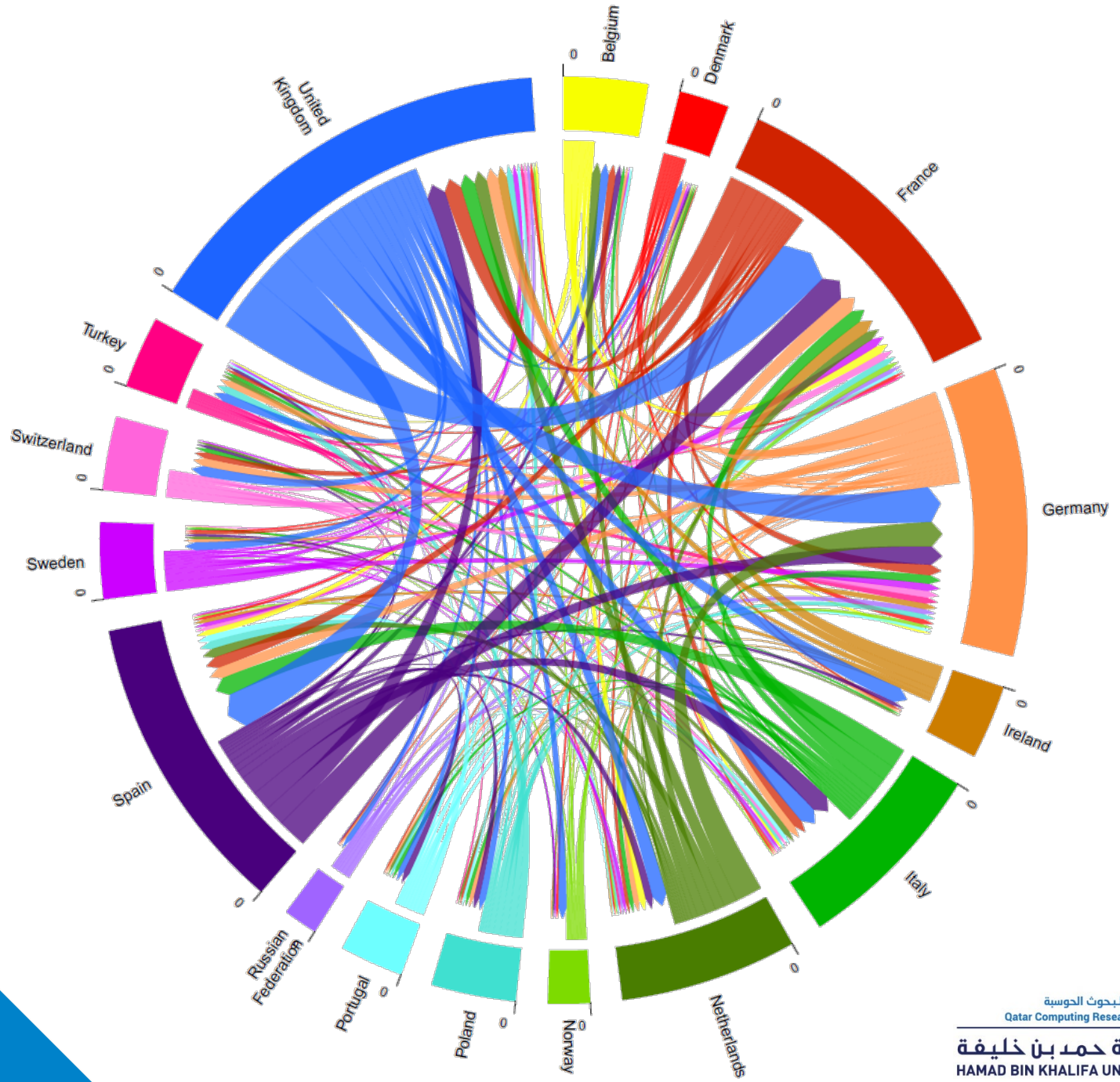
- Compile a list of all universities for European countries
- Query number of LinkedIn users who studied in country X who now live in country Y
- Disaggregate by gender, age, industry, …



55+


Belgium
Denmark
France
Germany
Ireland
Italy
Netherlands
Norway
Poland
Portugal
Russian Federation
Spain
Sweden
Switzerland
Turkey
United Kingdom

18-24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Norway
Poland
Portugal
Russian Federation
Spain
Sweden
Switzerland
Turkey
United Kingdom

Advertising Audience Estimates

+ Global reach with over 2 billion users
+ FB, LinkedIn, Google, Snapchat, IG, ...
+ Real-time estimates
+ Uses anonymous and aggregate data
+ Good for relative comparisons (densities/trends)
+ Proxies for education and income
+ Non-traditional attributes such as interests

Advertising Audience Estimates

- Black box on how attributes are inferred
- Needs modeling for bias correction
- Hard to obtain absolute numbers
- Usage patterns change over time
- Black box changes over time
- Only includes people who are online

Useful to augment, not replace, traditional data sources.
Comes with uncertainty – beware point estimates!

Other Data Sources

- Yahoo data with geo-located IP addresses
  - 10-100's of millions of users – but hard to get
- Google+ and "places lived"
  - Cute, but no longer around
- Geo-tagged tweets
  - More biased but more fine-grained

Thanks!