

Spatial Evolution of OpenStreetMap Dataset in Turkey



© [OpenStreetMap](#) contributors

Mohammed Zia

Introduction



OpenStreetMap (OSM)



2004 -

Objective: Map Everything

Introduction

Last Night's Stats



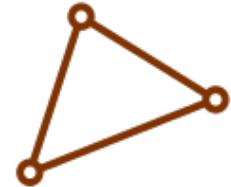
9 billion
nodes



0.4 billion
ways



4.5 million
relations



3.1 million
users

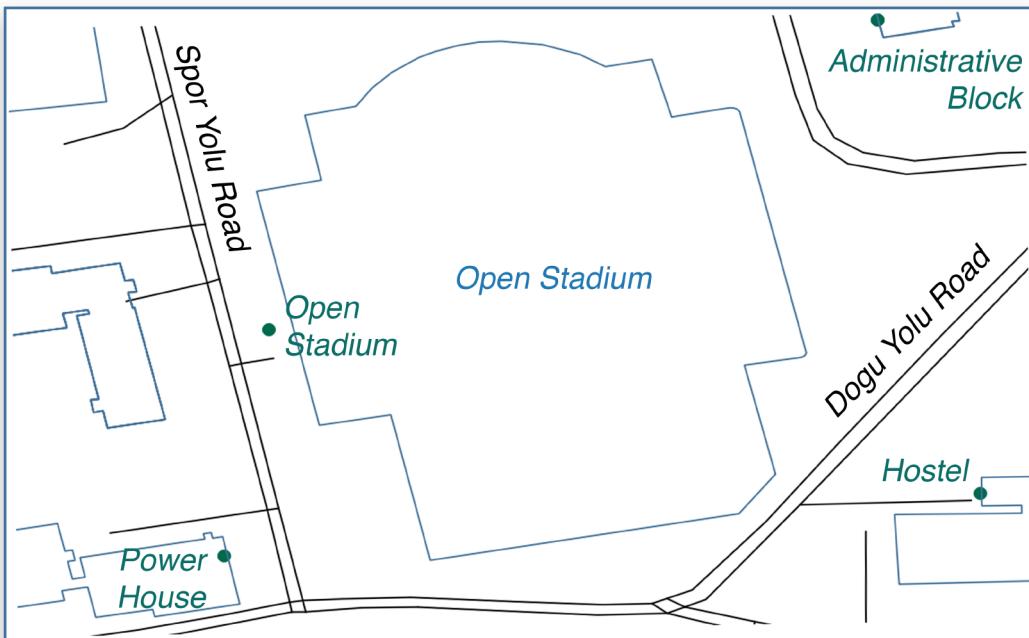


Introduction

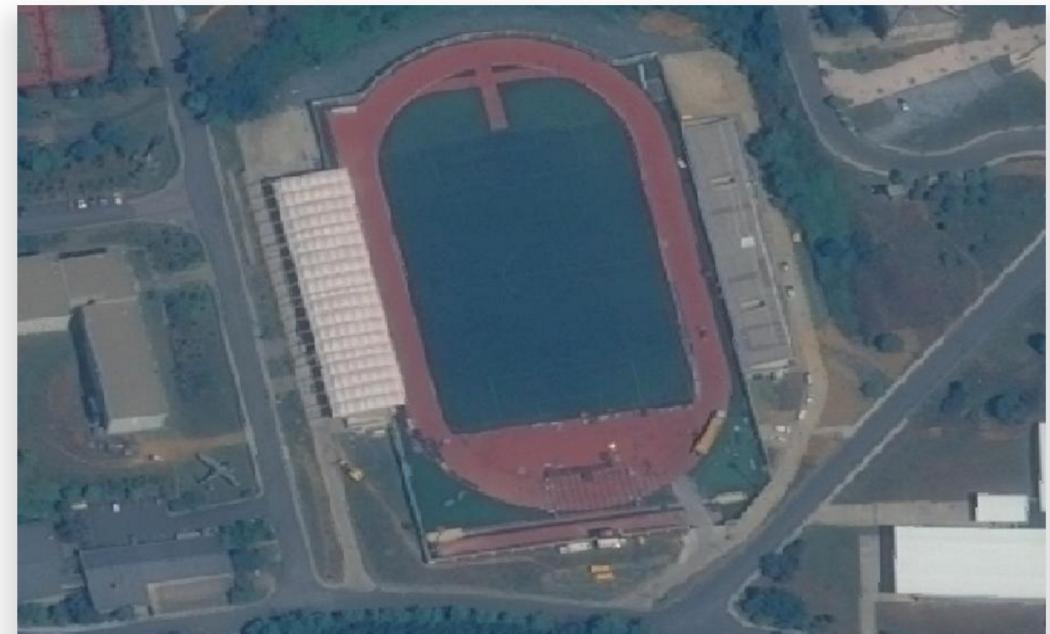
Data Formats



Vector



Raster

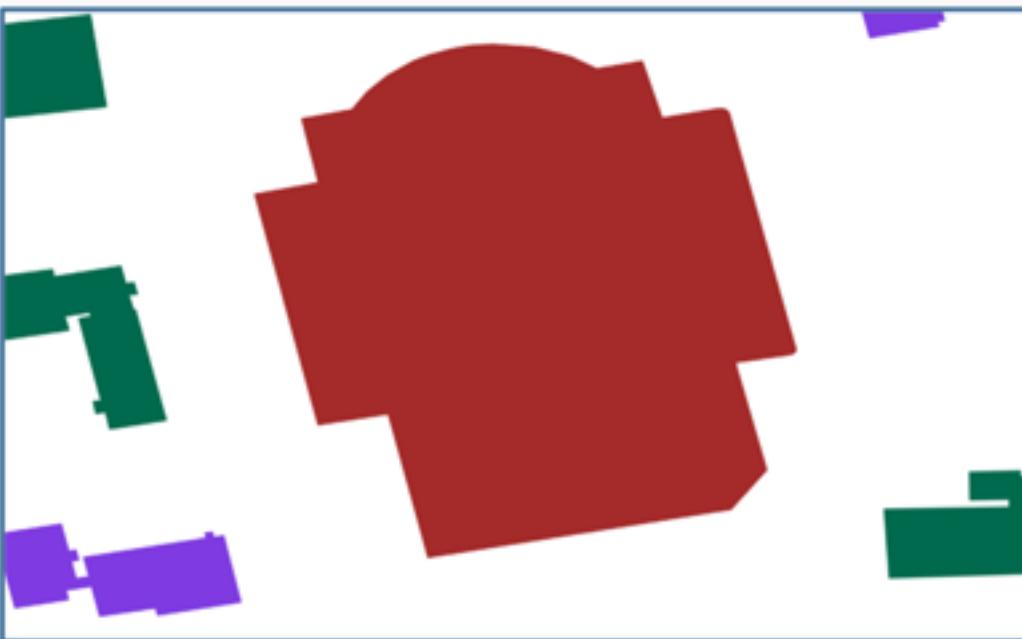


Introduction

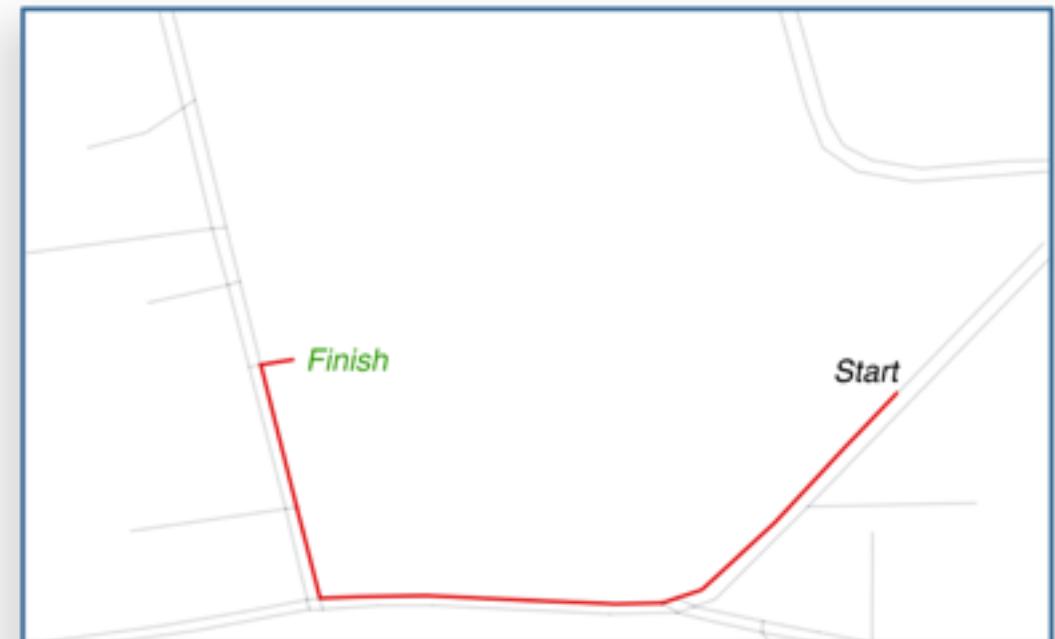
Applications



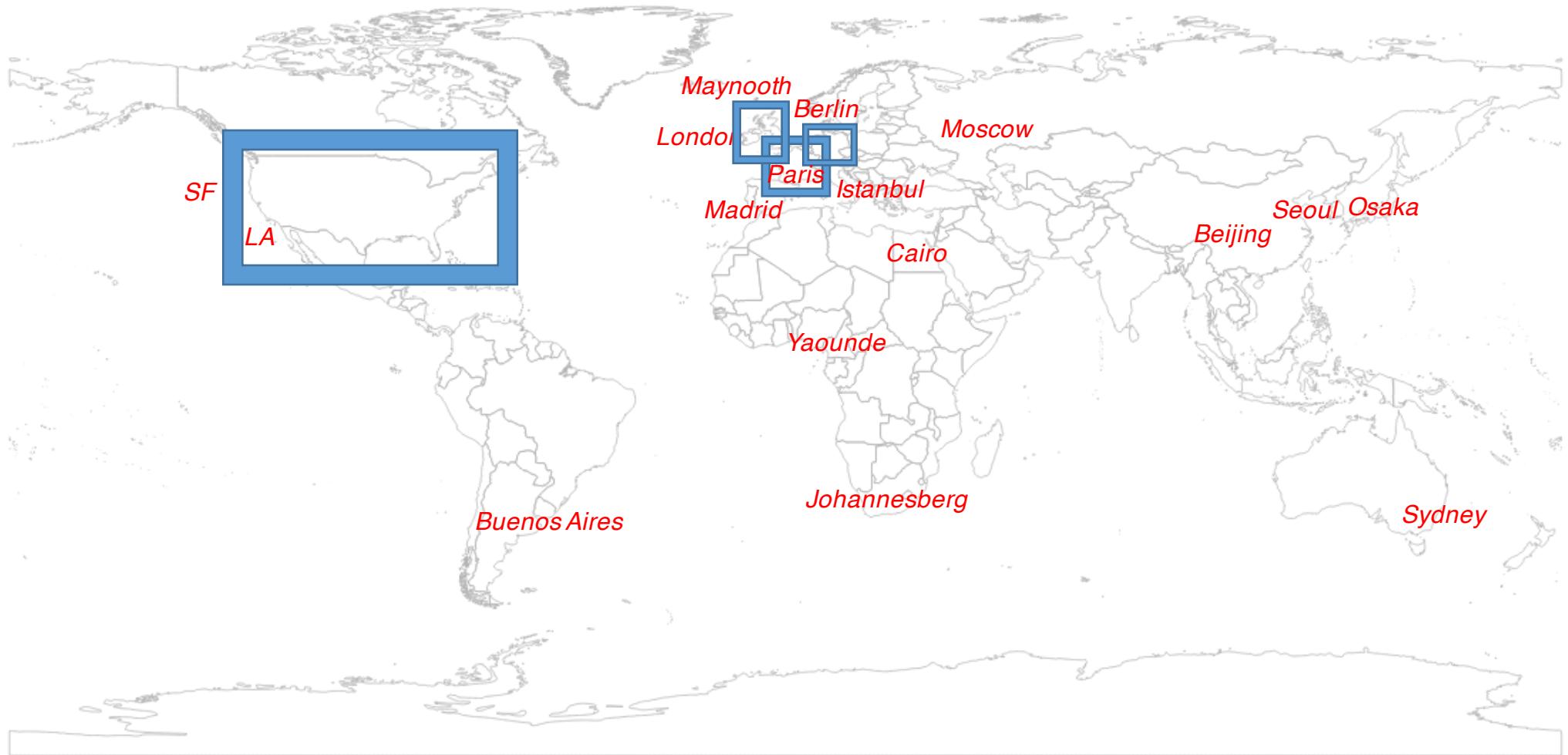
Thematic Mapping



Vehicle Routing



OSM Statistical Analysis



Why Statistical Analysis?

→ Mapping Behavior @ Regional Level.



→ Local Restrictions.



→ Where More Efforts Needed?



→ Mappers' Psychology.



→ Data Vandalism.



→ Helps Future Planning.



→ And Many More

Why Turkey?

→ ✗ Scientific Literature. 

→ Rich Dataset. 

→ Better Understand. 

→ Relation With *Human-Based Parameters*? 



Education Level



Population Density



Human Development Index



Internet Availability

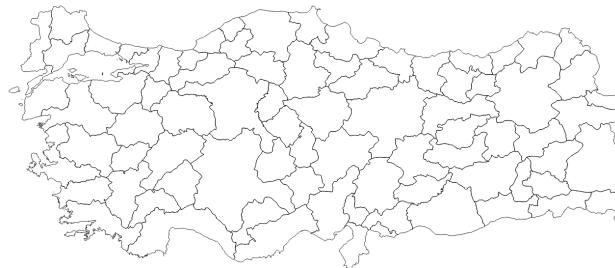


Tourism Activity

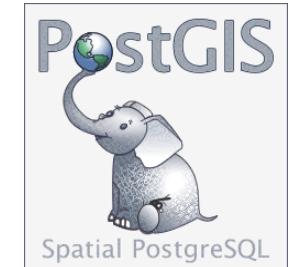
How?



Data Download



Provincial Segments



Stored



Human-Based Parameters
Data Source

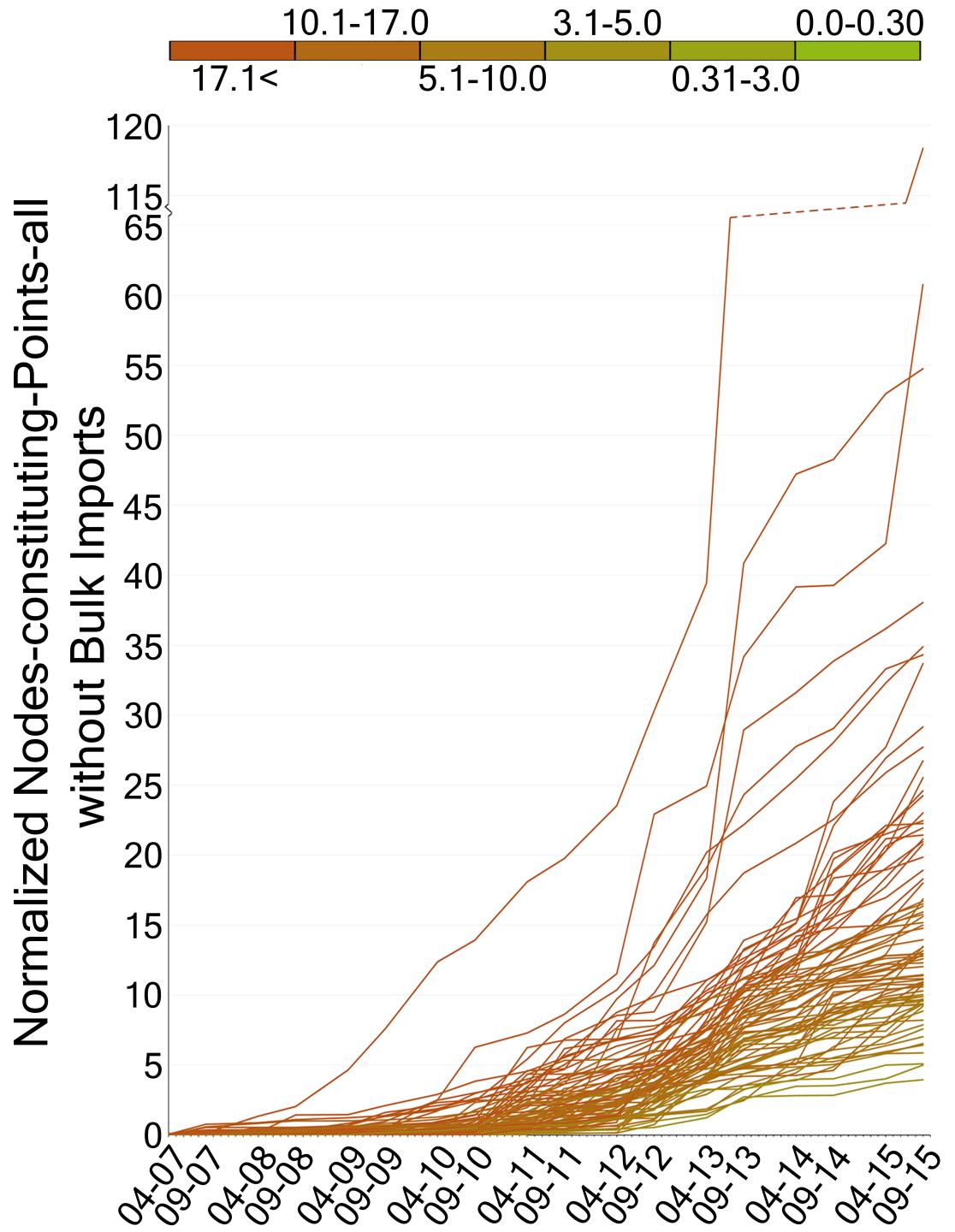


Visualization

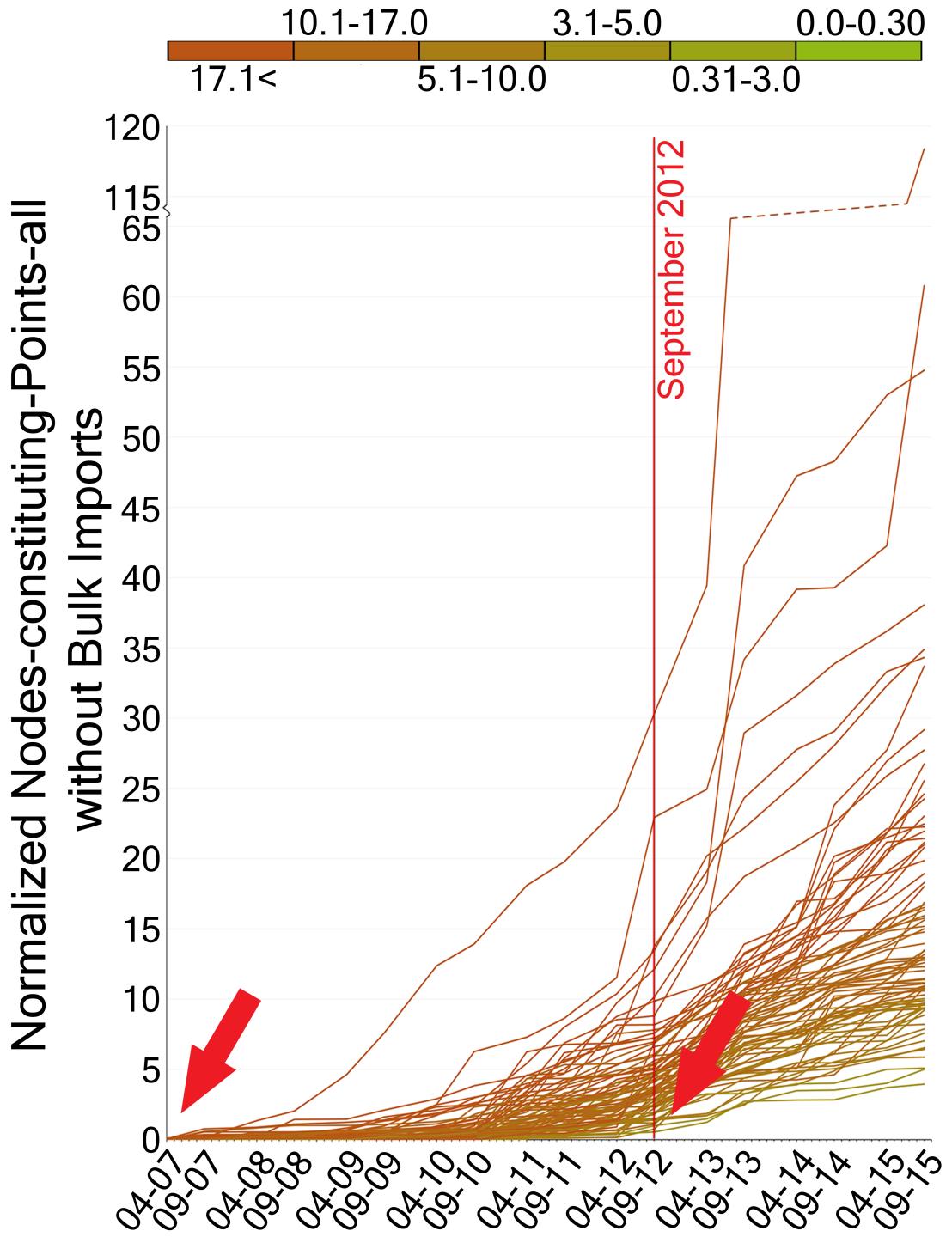


SQL Processing

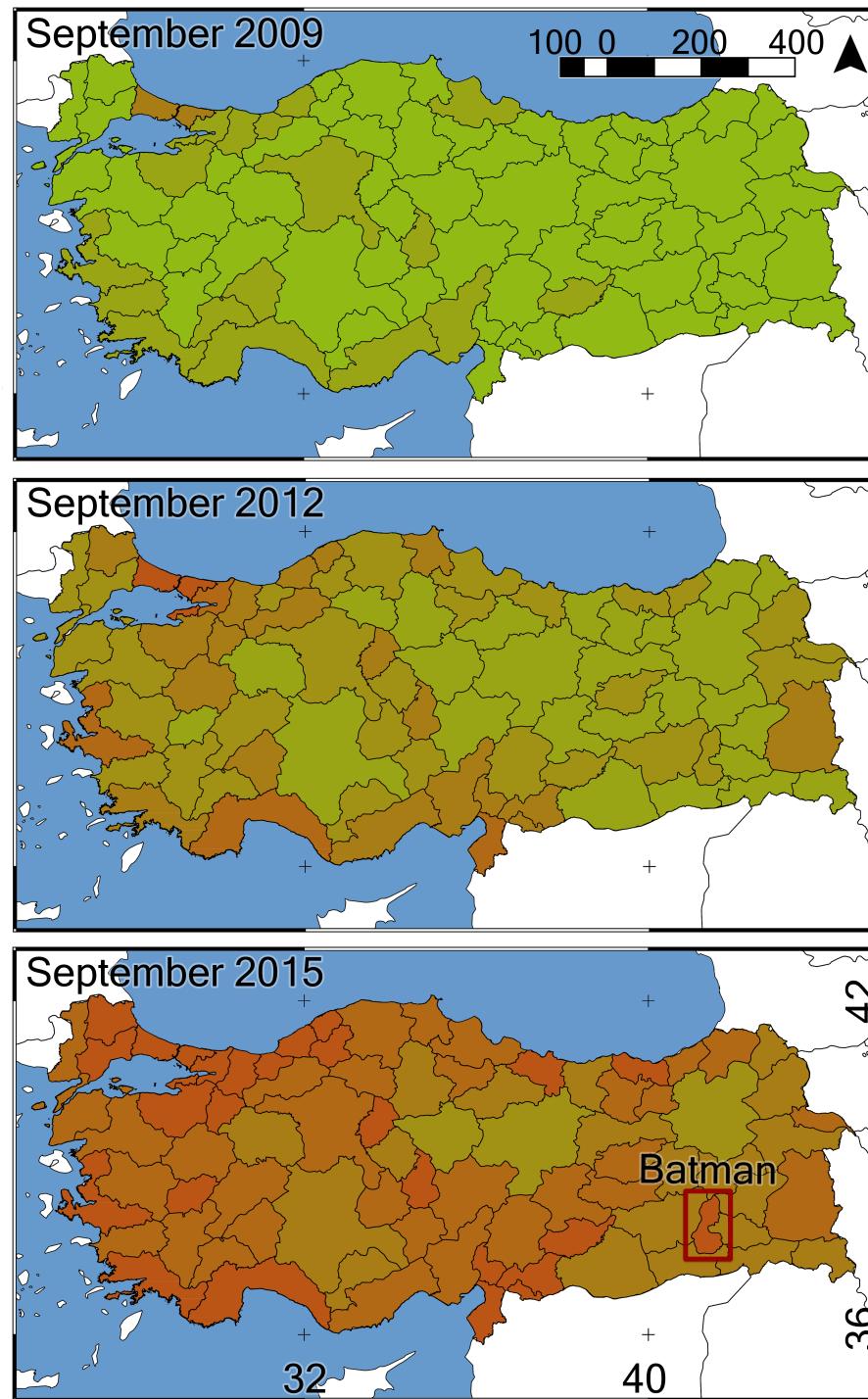
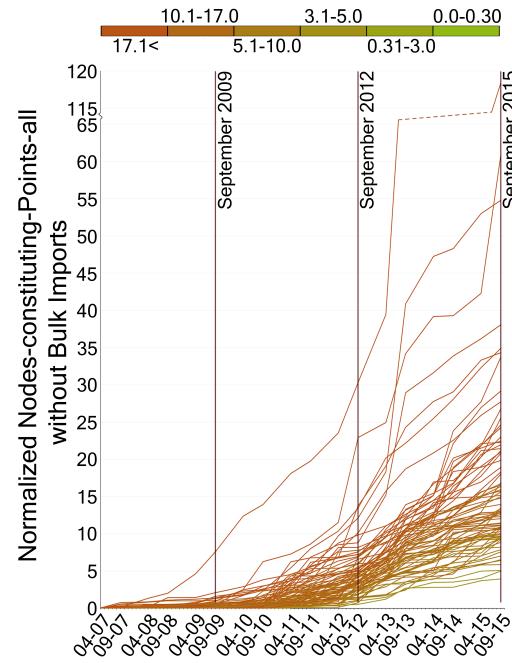
Results



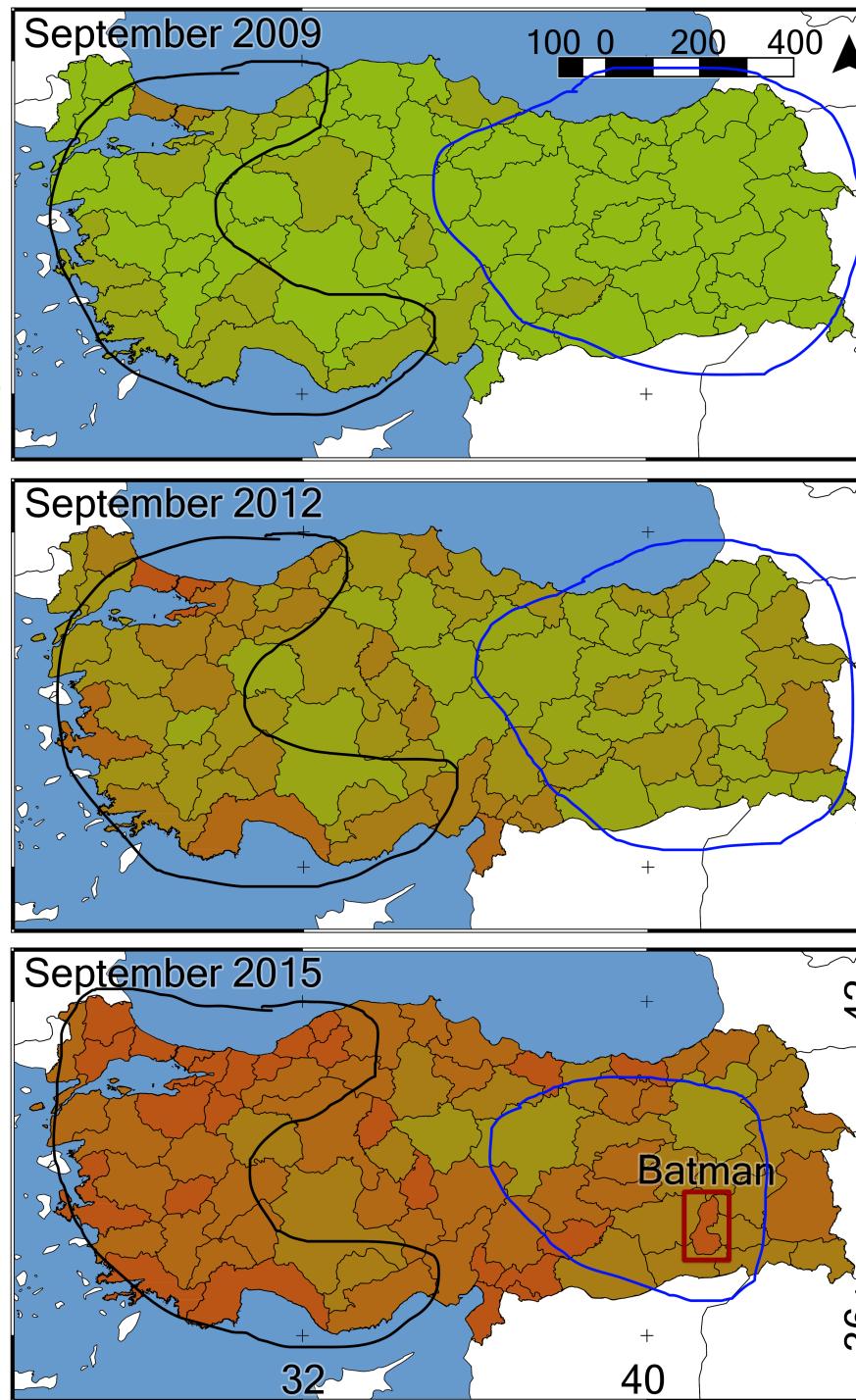
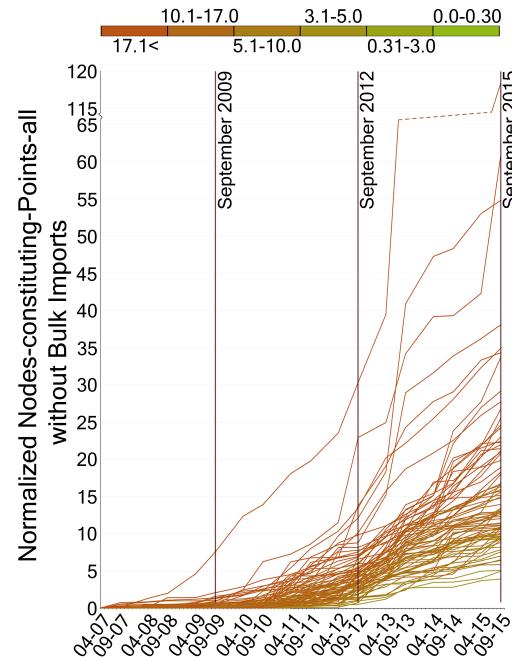
Results



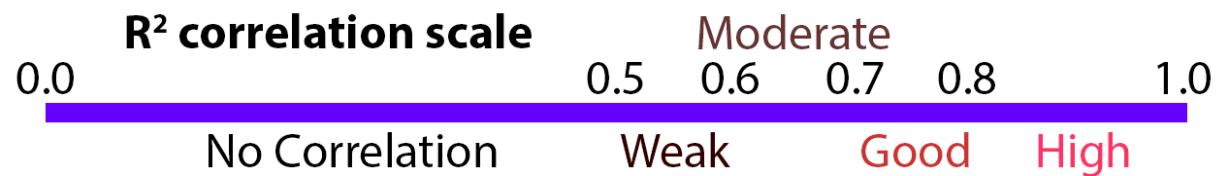
Results



Results

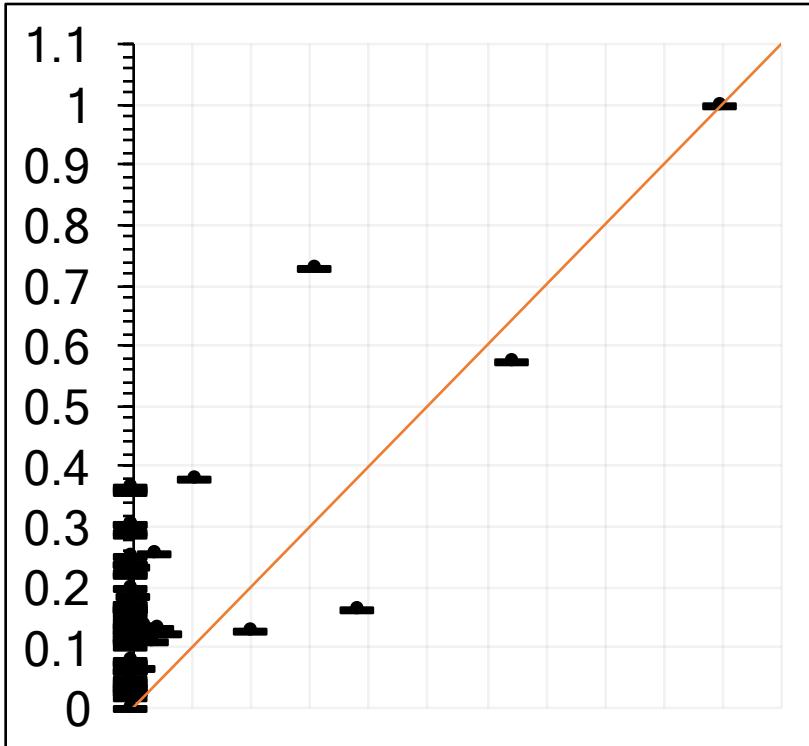


Results

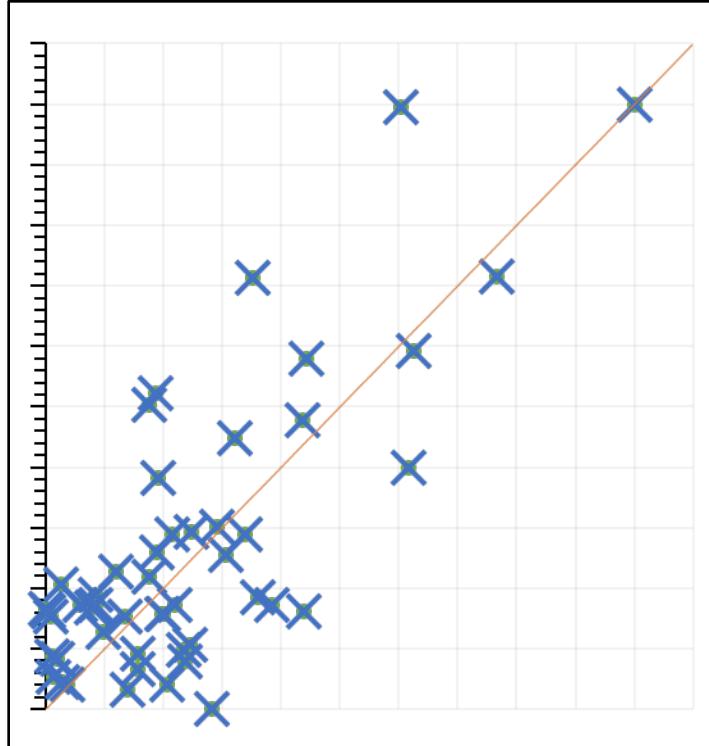


Normalized Population Density
per km² per province

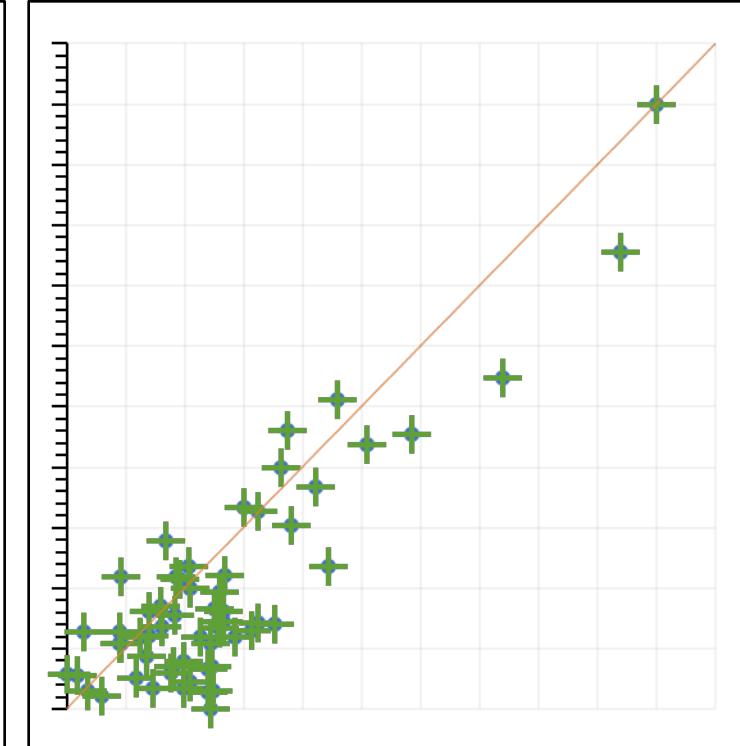
Sep08 - No Correlation



Sep 11 – R²(0.60)

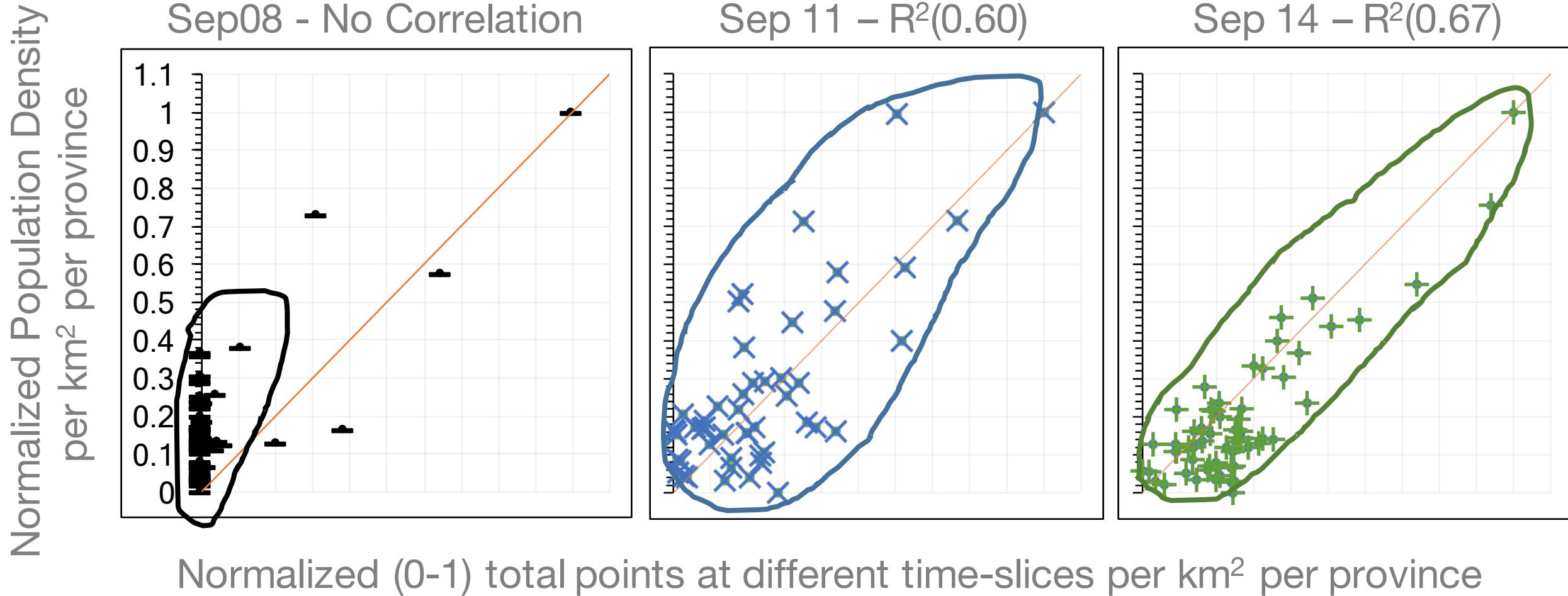


Sep 14 – R²(0.67)



Normalized (0-1) total points at different time-slices per km² per province

Results



Conclusion

- Spatial Biasedness Within The Country
- Population Density > Educational Level > HDI > Internet Availability ≈ Tourism

Happy Mapping!

Any question?

Find me: linkedin.com/in/zia33
mohammed.zia33@gmail.com
Zia- (Download This Talk From GitHub)

