



FAMINE & FOOD CRISIS FORECASTING CENTER

HACKATHON 2:YEMEN

Team Presentations, Day 3

Faminists

Economics of Yemeni Food Consumption

Date Slider

(All) ▼

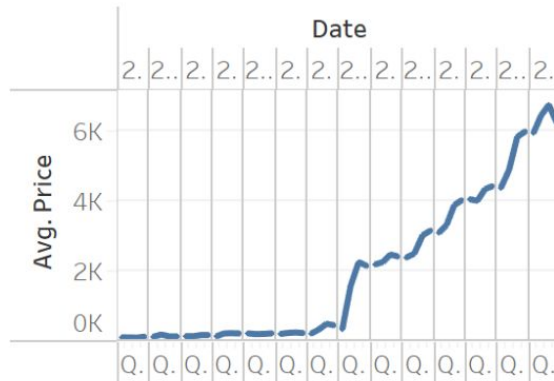
Commodity Type

(All) ▼

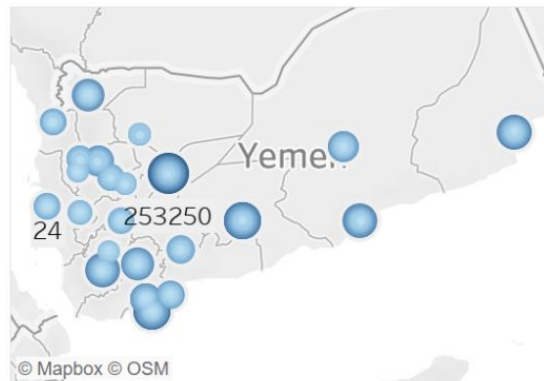
Gov Name

- ☒ (All)
- ☒ Abyan
- ☒ Ad Dali'
- ☒ Aden
- ☒ Al Bayda
- ☒ Al Hodeidah
- ☒ Al Jawf
- ☒ Al Maharah
- ☒ Al Mahwit
- ☒ Amran
- ☒ Dhamar
- ☒ Hadramawt
- ☒ Hajjah
- ☒ Ibb
- ☒ Lahj
- ☒ Ma'rib
- ☒ Raymah
- ☒ Sa'dah
- ☒ Sana'a
- ☒ Sana'a City
- ☒ Shabwah
- ☒ Socotra
- ☒ Ta'iz

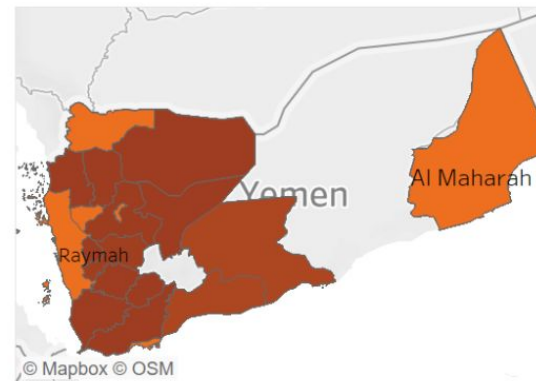
Price



Price



Food Consumption Score



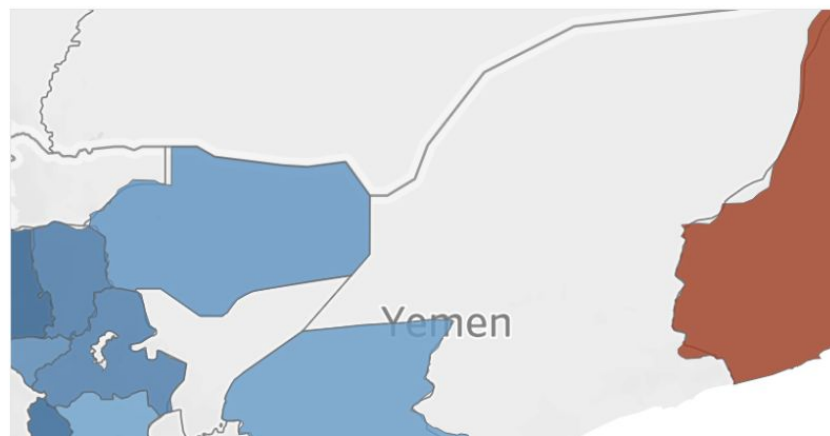
Price1



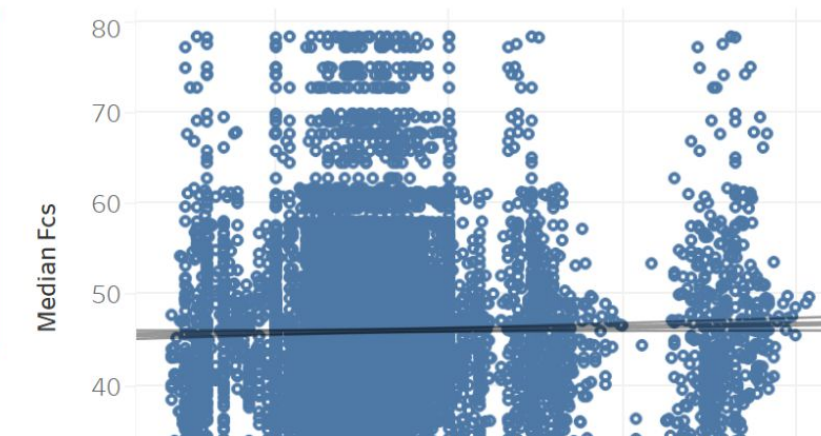
Median Fcs



FCS Responsiveness



FCS x Commodity Price

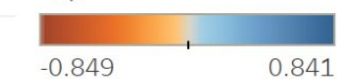


P value

0.0008 0.5648



Slope

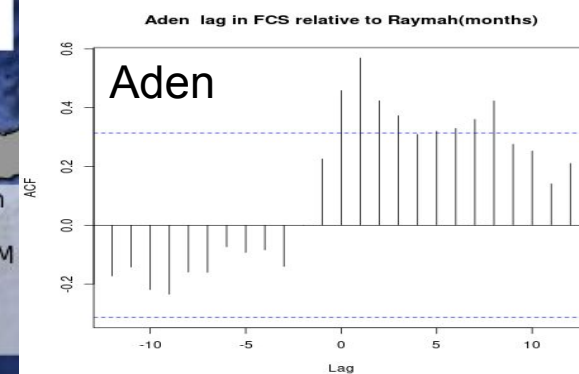
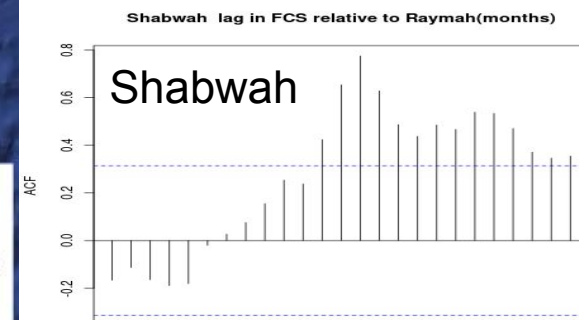
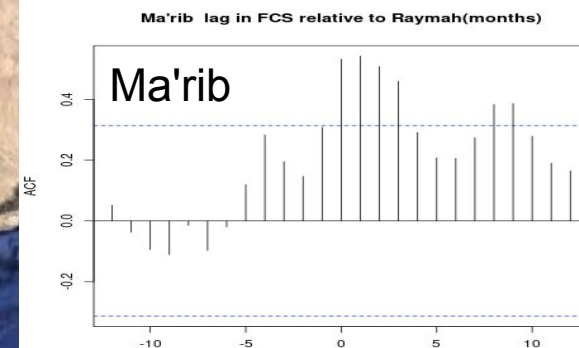
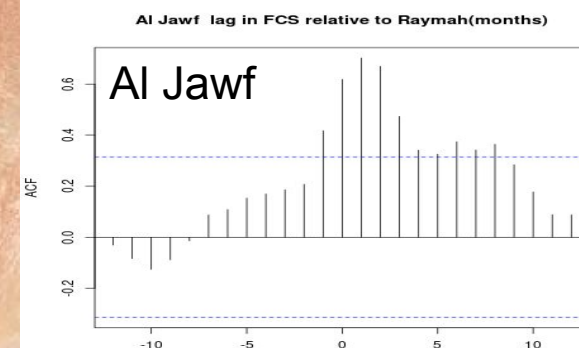
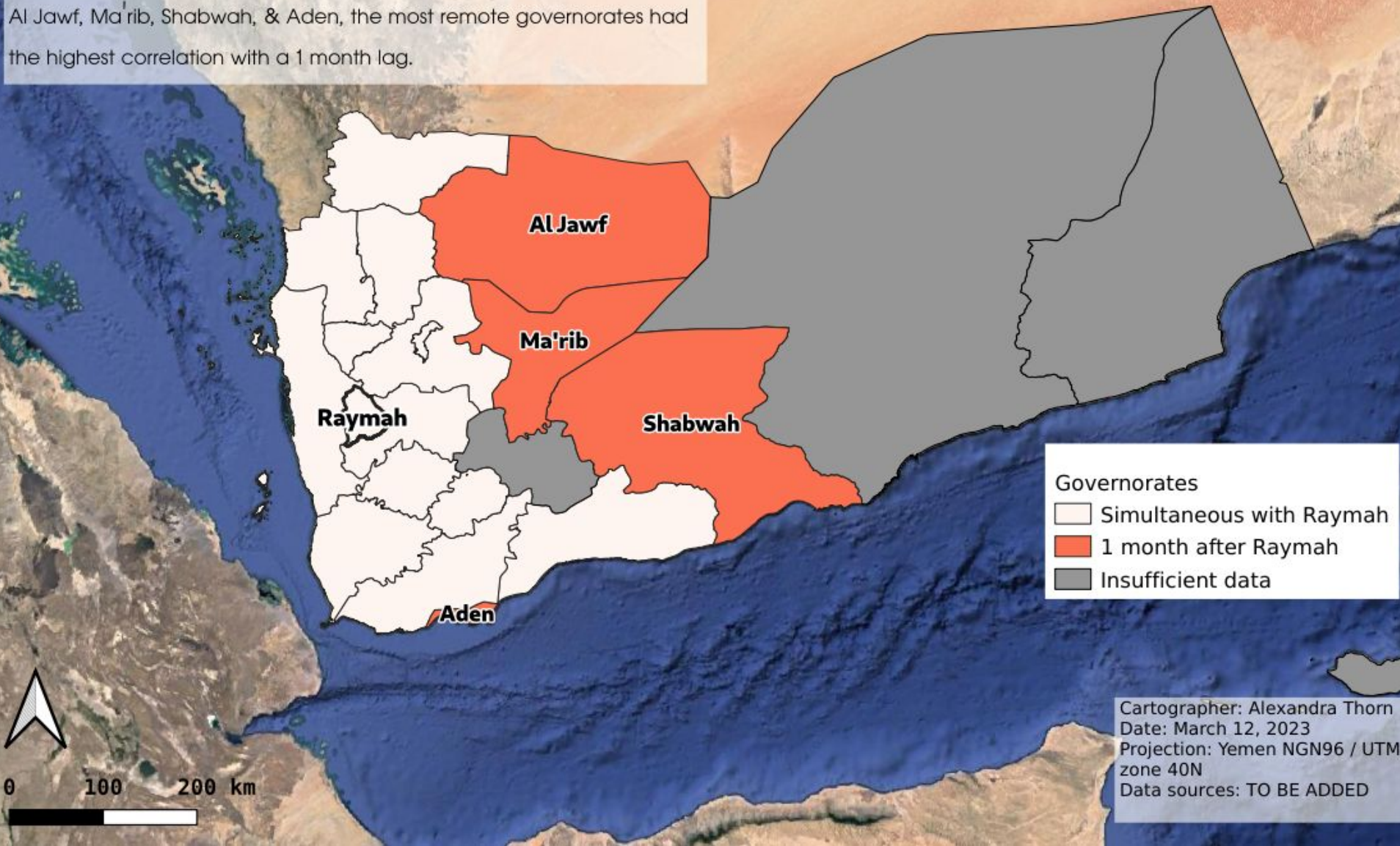


Lag in Food Consumption Score

Food consumption score for Raymah reached lowest levels of any governorate.

Most governorates had the highest correlation with Raymah at no lag.

Al Jawf, Ma'rib, Shabwah, & Aden, the most remote governorates had the highest correlation with a 1 month lag.



Cartographer: Alexandra Thorn
Date: March 12, 2023
Projection: Yemen NGN96 / UTM
zone 40N
Data sources: TO BE ADDED

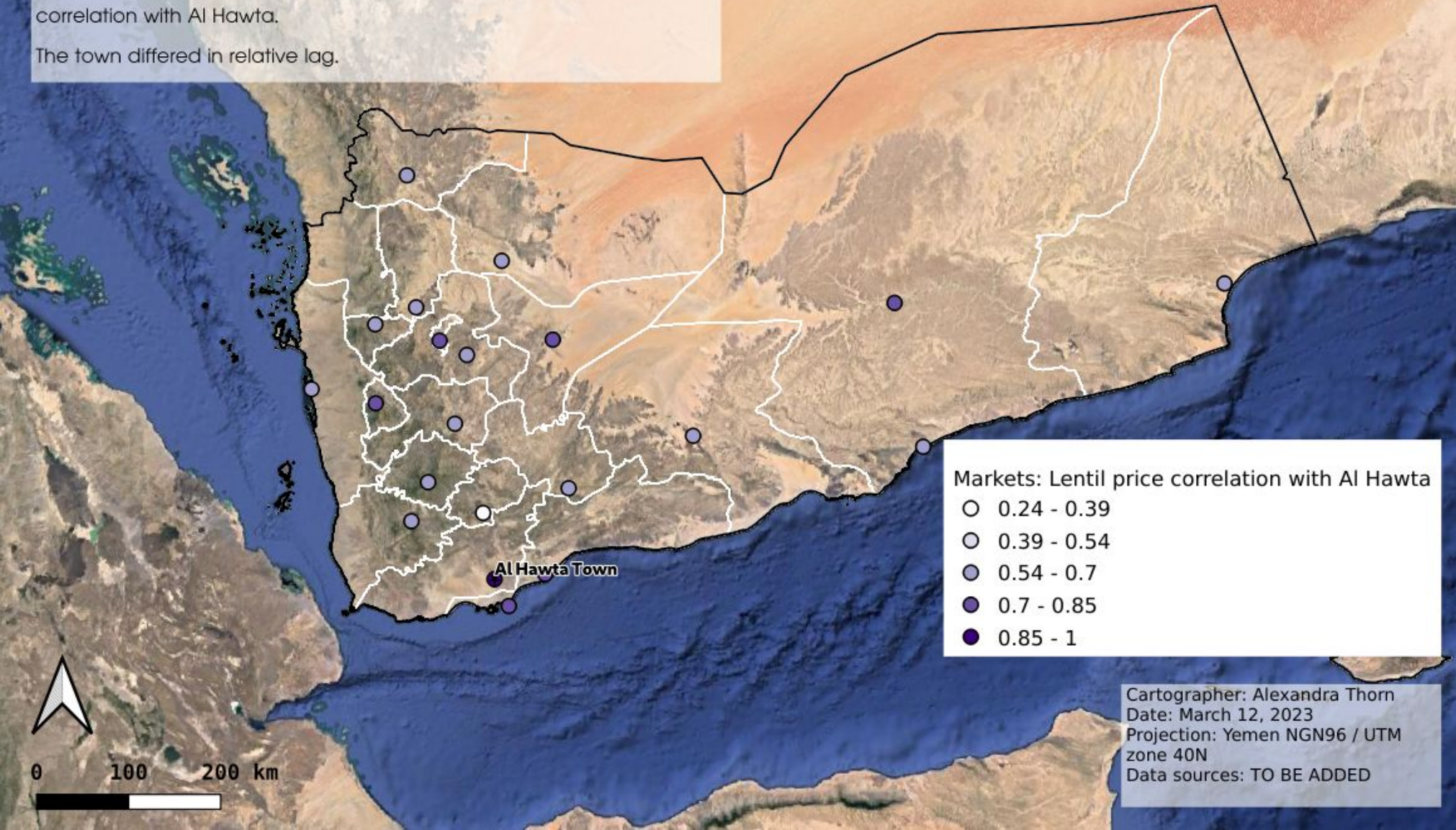
Lag in Food Consumption Score

For wheat, no clear spatial pattern in food prices correlations or lags.

Al Hawta Town had highest price for wheat.

Aden, Zungubar, Al Jabeen, Sana'a, Marib, and Sayoun had strongest correlation with Al Hawta.

The town differed in relative lag.



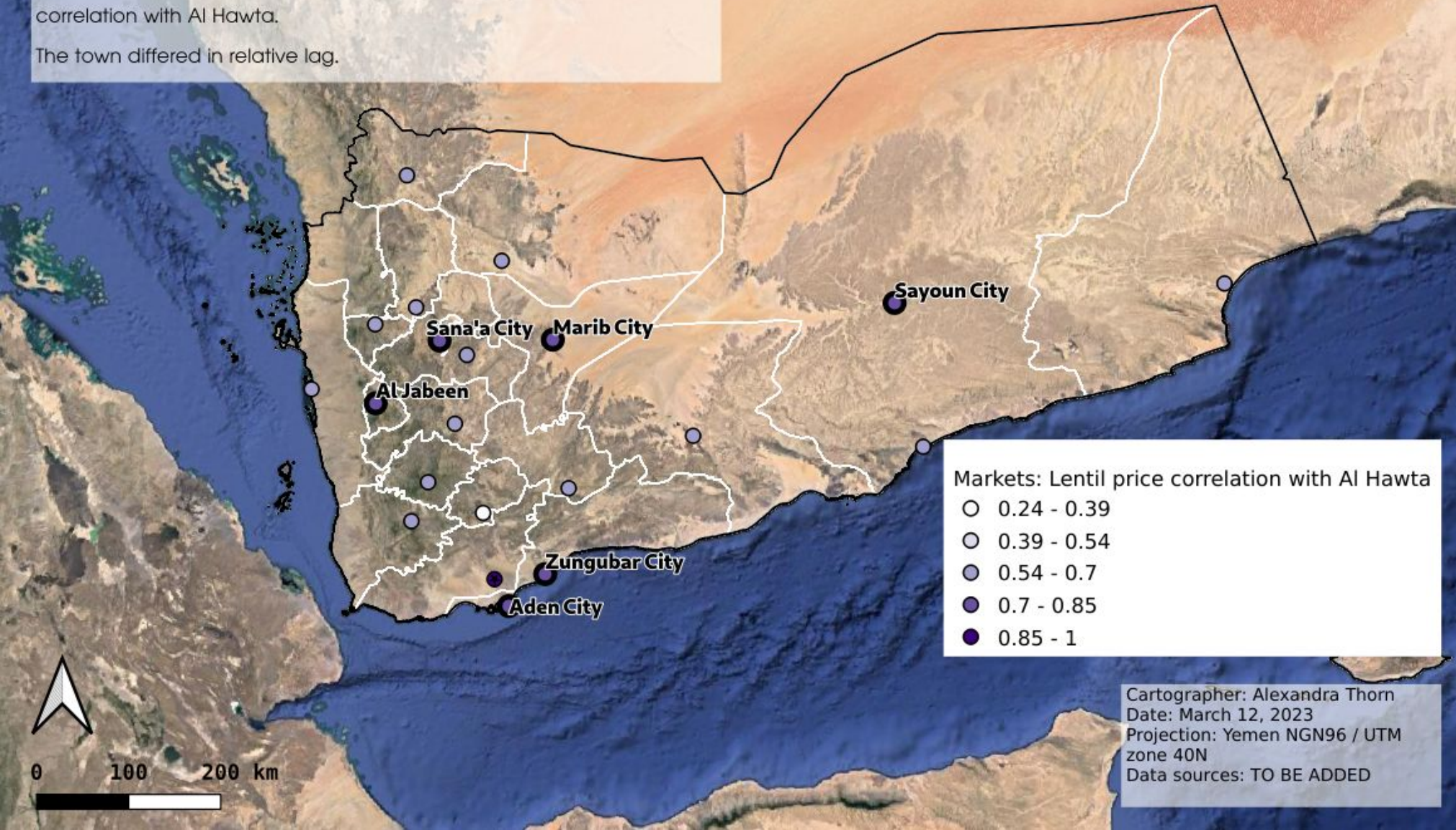
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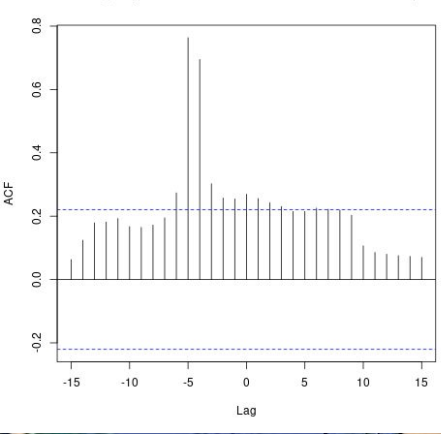
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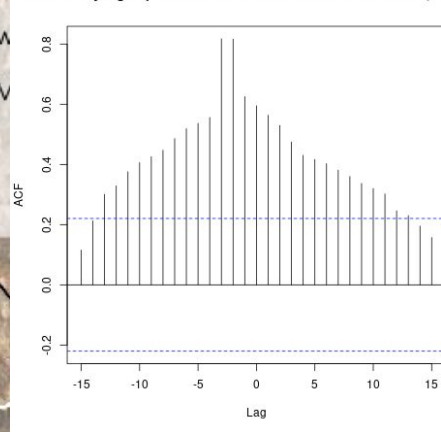
Lag in Food Consumption Score

For wheat, no clear spatial pattern in food consumption score was observed. Al Hawta Town had highest price for wheat, followed by Al Jabeen, Marib, Sana'a, and Sayoun City.

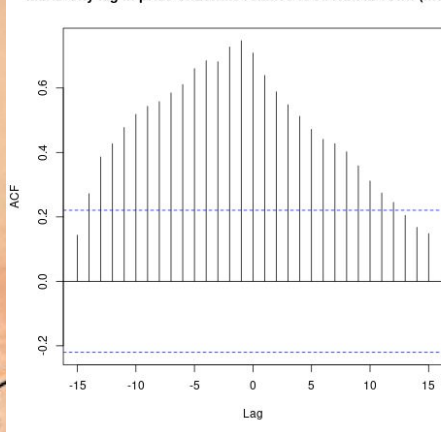
Al Jabeen lag in price of Lentils relative to Al Hawta Town (months)



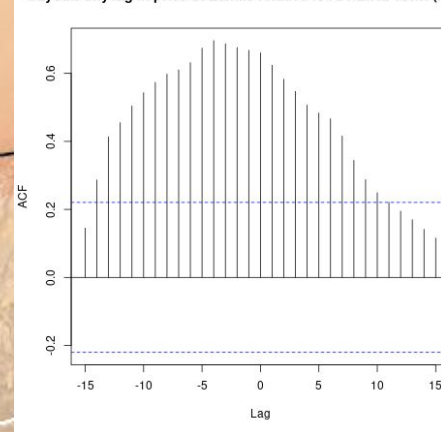
Sana'a City lag in price of Lentils relative to Al Hawta Town (months)



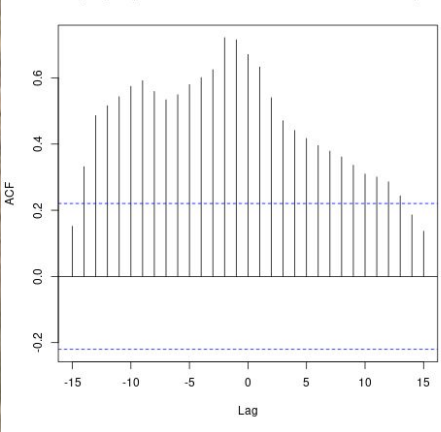
Marib City lag in price of Lentils relative to Al Hawta Town (months)



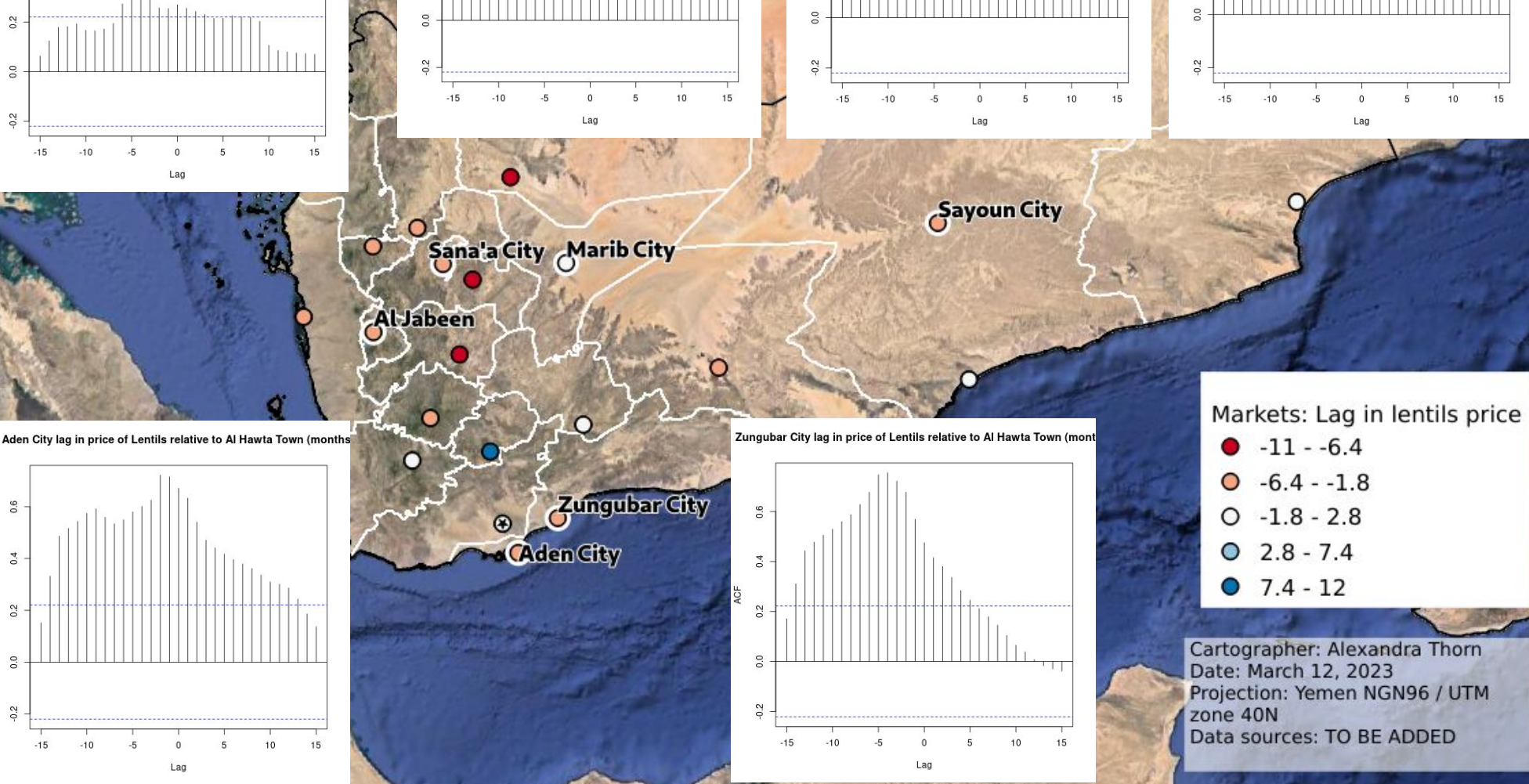
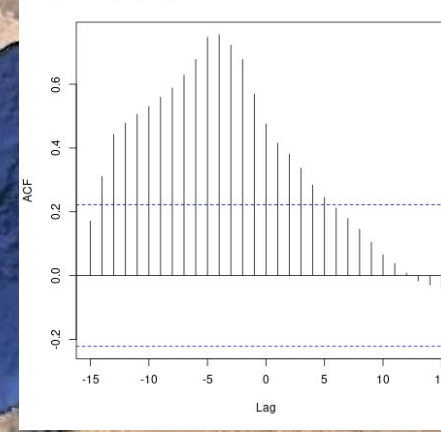
Sayoun City lag in price of Lentils relative to Al Hawta Town (months)



Aden City lag in price of Lentils relative to Al Hawta Town (months)



Zungubar City lag in price of Lentils relative to Al Hawta Town (months)



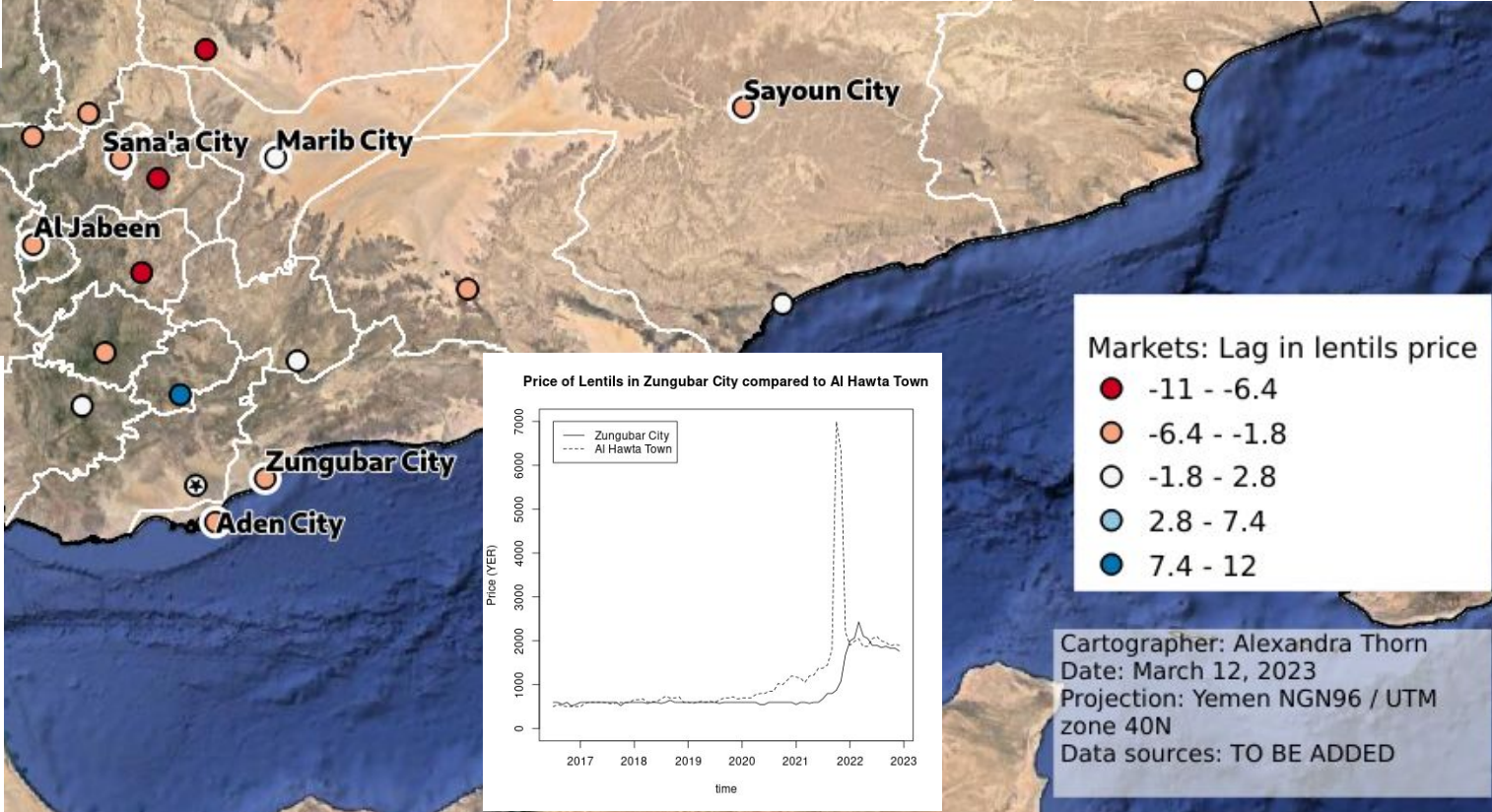
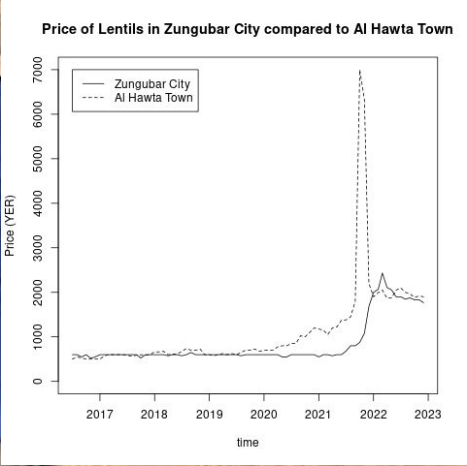
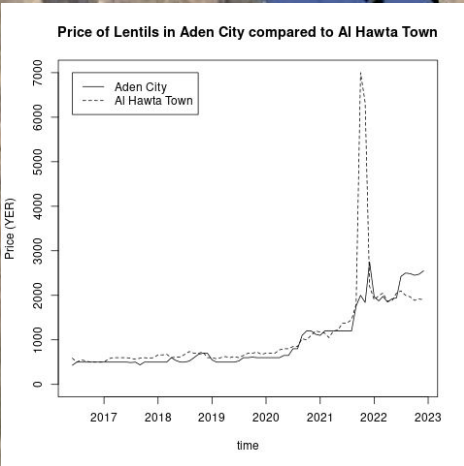
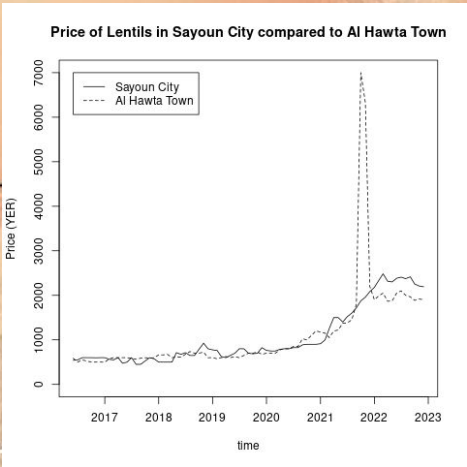
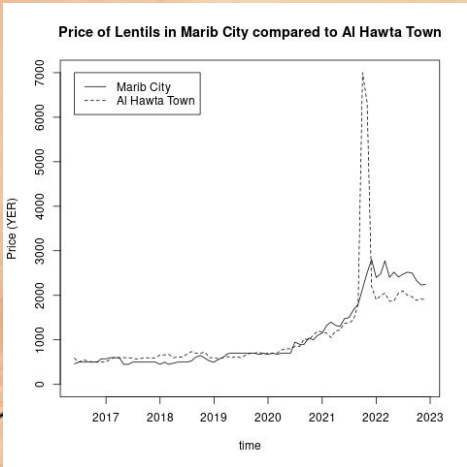
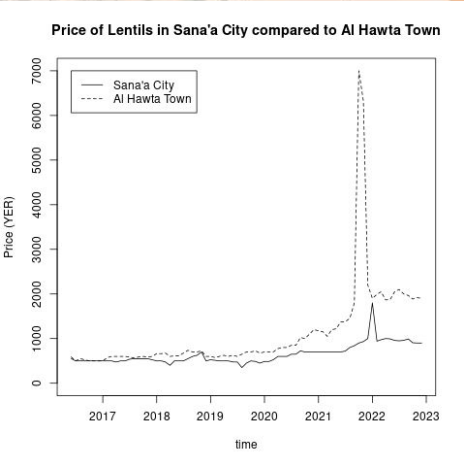
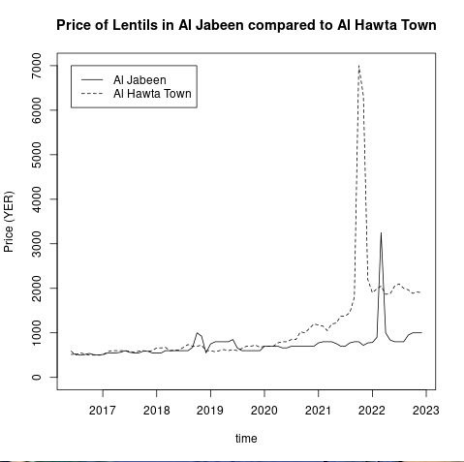
Markets: Lag in lentils price

- Red circle: -11 - -6.4
- Orange circle: -6.4 - -1.8
- White circle: -1.8 - 2.8
- Light blue circle: 2.8 - 7.4
- Dark blue circle: 7.4 - 12

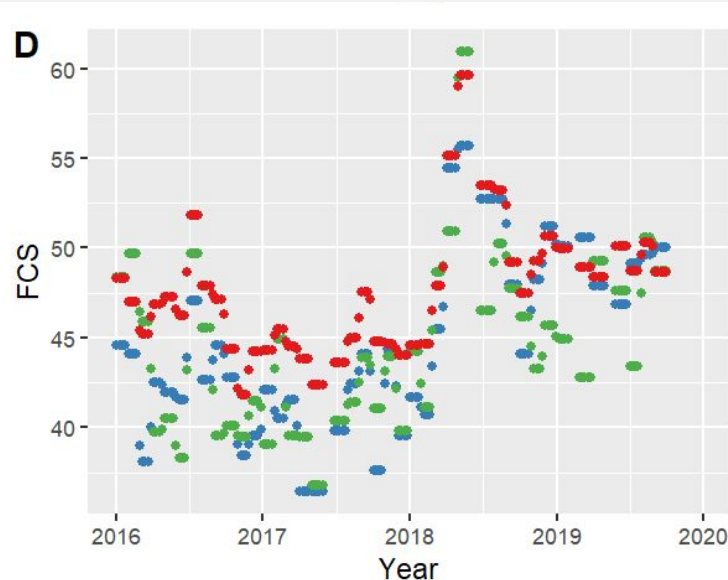
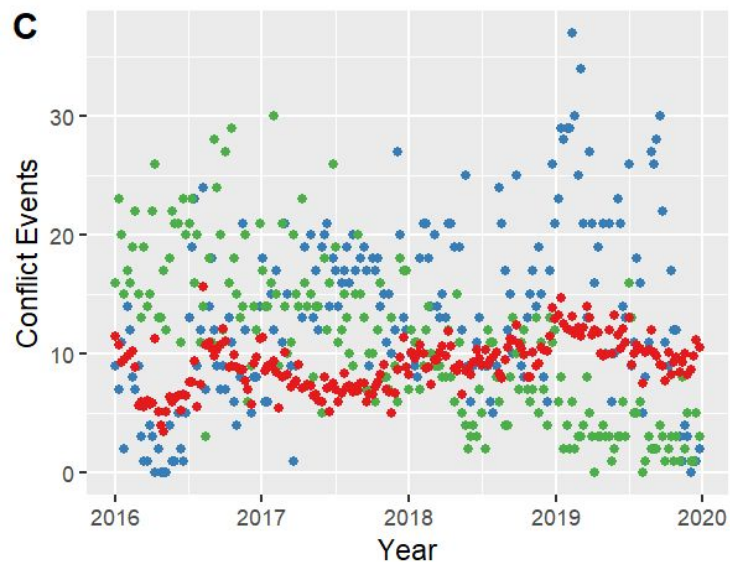
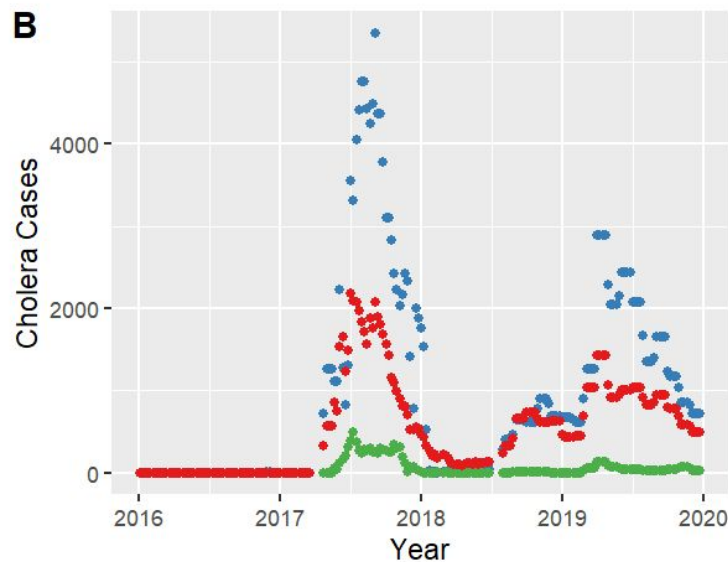
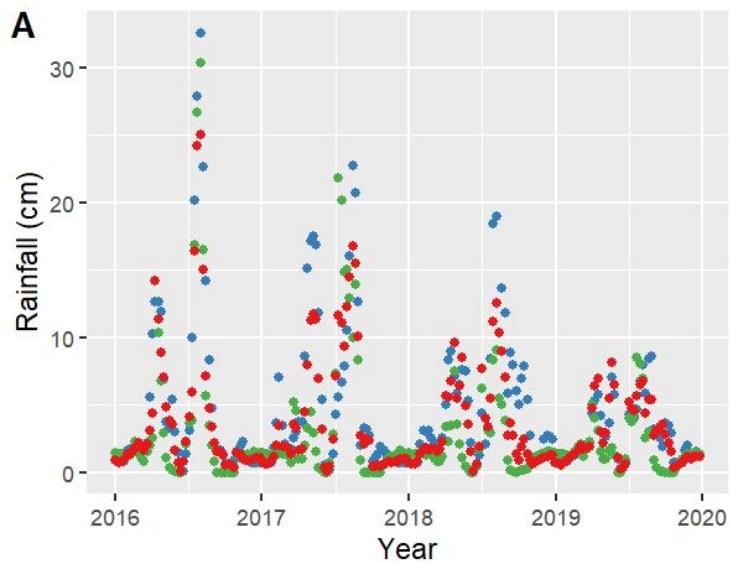
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Lag in Food Consumption Score

For wheat, no clear spatial pattern in f
Al Hawta Town had highest price for w



Golden Girls



What were the factors that led to worsening situations in Marib and Hajjah governorates (IPC 4)?

- Rainfall → flooding?
- Conflict?
- Cholera?

Rice Team



Famine Fighters

Research Question: What is the correlational relationship between **changes in food insecurity risks and food insecurity** over time? How responsive is food insecurity to changes to food insecurity risks, and what is the magnitude of these changes?

Policy and Programming Implications: If we can understand how food insecurity risks will affect needs, humanitarian intervention can begin responding to increased risks—before the suffering occurs.

Case Study: Yemen, 2018 - 2021 (monthly)

Hypothesized Independent Variables

- Terms-of-Trade (wages/price of wheat)
- Rainfall anomalies (mean of that month) (% of long-term average)
- Number of conflict events
- Number of conflict fatalities

Hypothesized Dependent Variables

- Food Consumption Score
- Reduced Coping Strategies Index

Famine Fighters



Longstanding limitations in Yemen's agricultural economy has historically resulted in low production and high import dependency, particularly for basic food items such as wheat, rice, and sugar.



1994: Civil War between pro-union northern and separatist southern forces Yemeni states results in the reunification of Yemen. Widespread infrastructure damage ensues.



2004-2010: Low intensity Houthi rebellions leads to the Yemeni military 1.) launching "Operation Scorched Earth" in Saada and 2.) besieging the governorate of Shabwa to root out militants.



2011-2012: With 40% of the population already living below the poverty line or suffering from some form of malnutrition, the Yemeni Arab Spring erupts amidst record high bread prices.



2014: International proxy war erupts in October; Houthi's take control of Sanaa. The following month the rebels seize the vital port city of Hodeida and restrict imports.



2014: Offensives resulted in widespread, deliberate impacts on the food system and the economy generally, including the destruction of productive assets, essential services, economic activities, and agricultural production.

Famine Fighters



2014-2017: Saudi-led coalition launches air strikes against Houthi targets, deploys small ground forces, and imposes a naval blockade. The United States, France, and Turkey aid the coalition's efforts.



2016-2017: Cholera epidemic erupts, humanitarian agencies and watchdogs decry the Yemen crisis as one of the worst humanitarian emergencies in the world.



2016-Present: WFP cuts food aid to Yemen; cost of food increases as the humanitarian situation deteriorates; Riyadh ceasefire proposals, which includes reopening Hodeida seaport and Sanaa airport, rejected by Houthis on the grounds that lifting the blockade is a prerequisite before agreements.

CROSS-CUTTING THEMES

Challenges

- Roles - “Who should do what”
- One place to store data (Famine Data Archive)
- Synchronizing across spatio-temporal variation
- The struggles of joins and merges
- How to interpret a variable - context

Themes

- Data prep: lots of cleaning and thinking before visualizing
- Lag terms & thinking temporally
- Working across disciplines and methods
- Mini workshop series (Data Analysis, GIS data in Tableau)

We did it!

Next steps:

- Visual briefs
- Certificates! 2 out of 3
- Hackathon 3



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Team Presentations, Day 3



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Team Presentations, Day 3