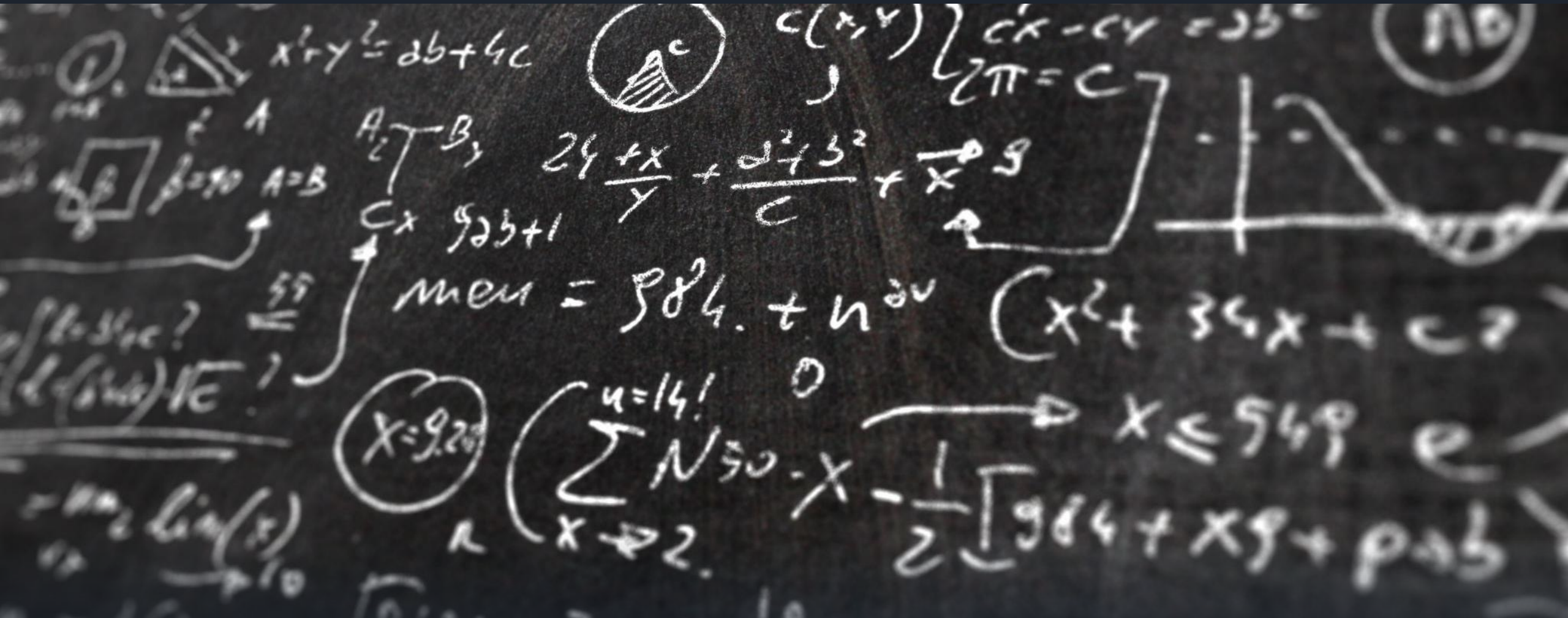


Epistemic Challenges of Cross-National Food Security Data

Jim Suits

George Mason University

April 14, 2023



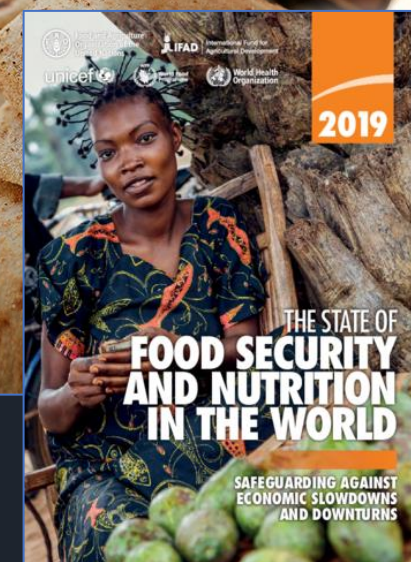
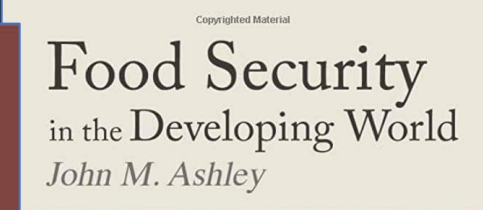
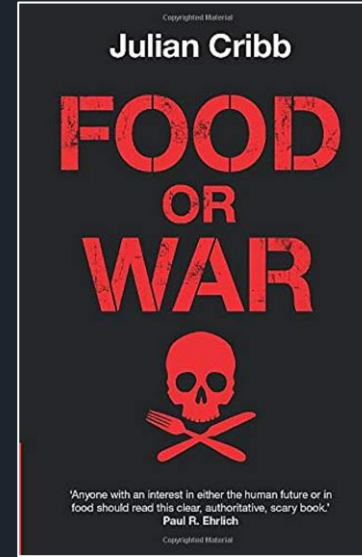
What Is Food Security?

“All People, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life.”

- Article 25 of the Universal Declaration of Human Rights
- Article 11 of the International Covenant on Economic, Social, and Cultural Rights
- Charter of the Food and Agriculture Organization
- In the US: Global Food Security Act of 2016

So... Who Cares?

- People are very concerned about food
- Increasing food insecurity → increased conflict
ref: National Intelligence Council (2015)
- 2007-08: Food price riots in 40+ countries
- The Arab Spring
- No clear “red line” – even if it were possible to define & measure one.



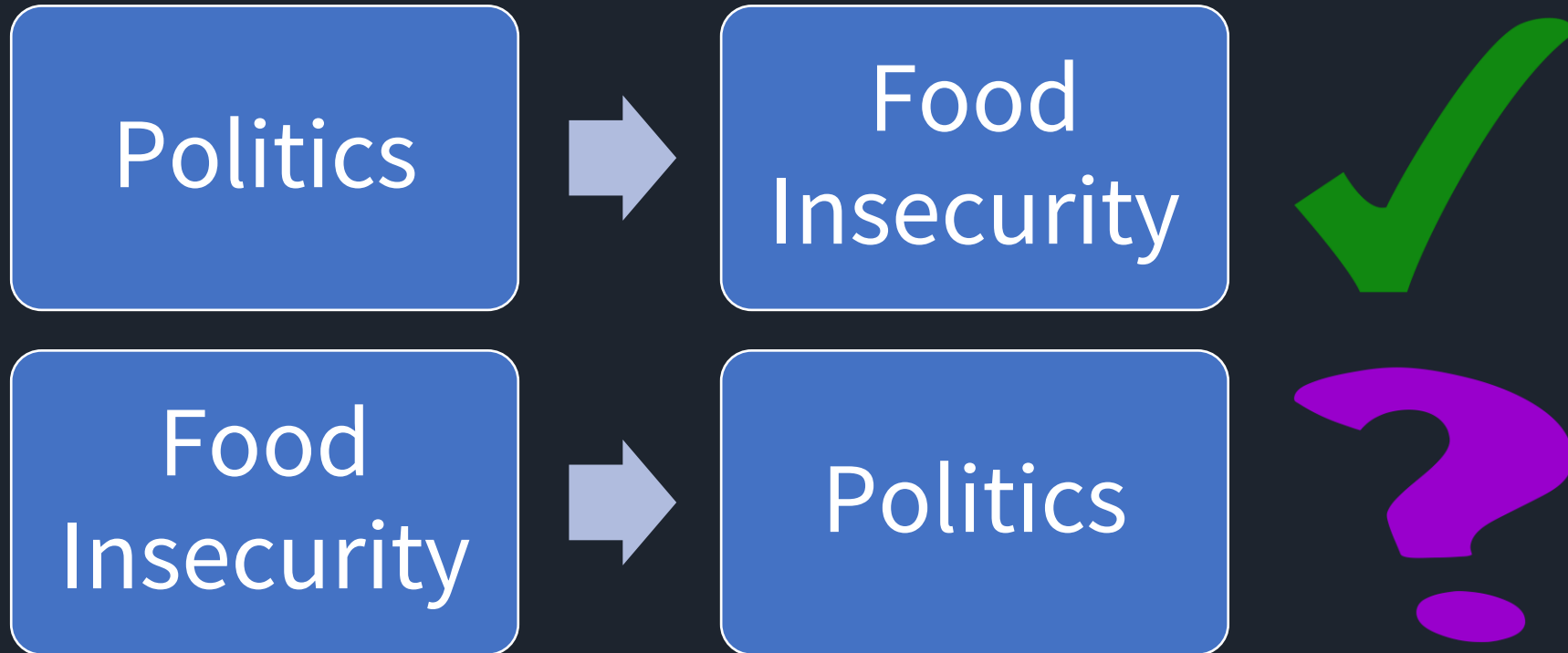
Politics Drives Food Insecurity

In the 21st Century, almost all global food insecurity is caused by willful human action

1. Deliberate (i.e. weaponization of food)
2. Willful enactment or continuation of bad policies (vast majority)
3. Lack of concern by authorities
4. Lack of capacity of authorities to respond/react

ref: De Wall (2018)

... but is the reverse true also?



What Is Food Security?

{People | Time}

×

{Physical Access | Social Access | Economic Access}

×

{Sufficient | Safe | Nutritious}

×

{Food Preferences | Dietary Needs}



Cross-National Data Inequities

“Official data” is subject to

- Skewed sampling
- Flawed methods
- Flawed collection
- Manipulation

International data

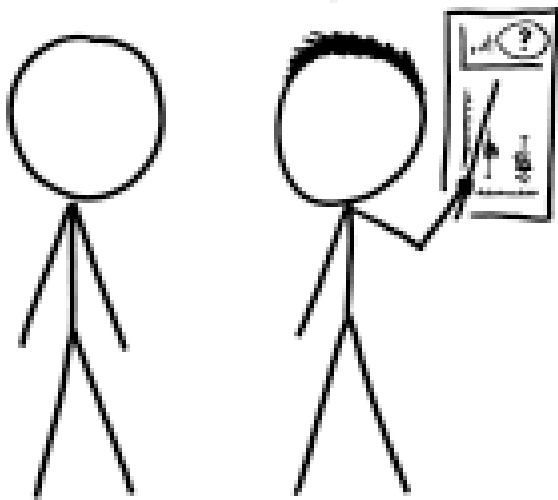
- Presents itself as objective
- Has many of the same problems
- Often copies, or is derived from, official data



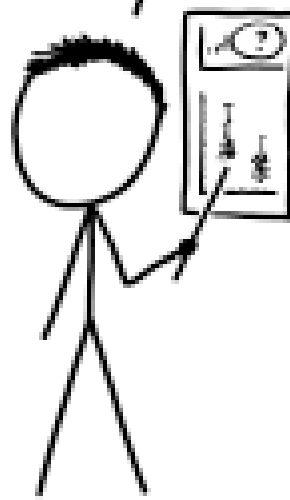
Measuring Food Security: An Empirical Challenge

- Hundreds of definitions proposed
 - No agreement on level of measurement
 - Scores of measurement schema
 - Difficulty of collecting data
 - Differentiating Chronic vs Acute
- Consequences:
- No agreement as to scope and severity of problems
 - No consensus where to target
 - No decision on targeting underlying causes vs immediate humanitarian needs

WE WANT TO STUDY
THIS VARIABLE, BUT
IT'S HARD TO OBSERVE.

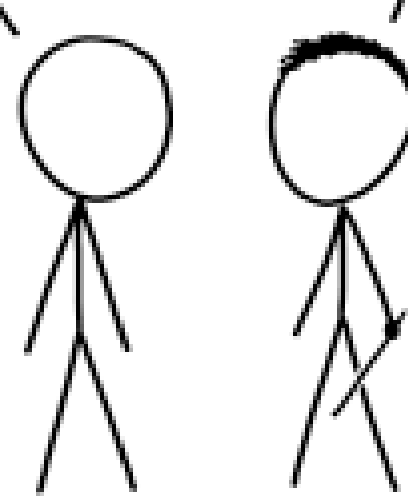


SO WE'RE
STUDYING
THIS PROXY
VARIABLE.



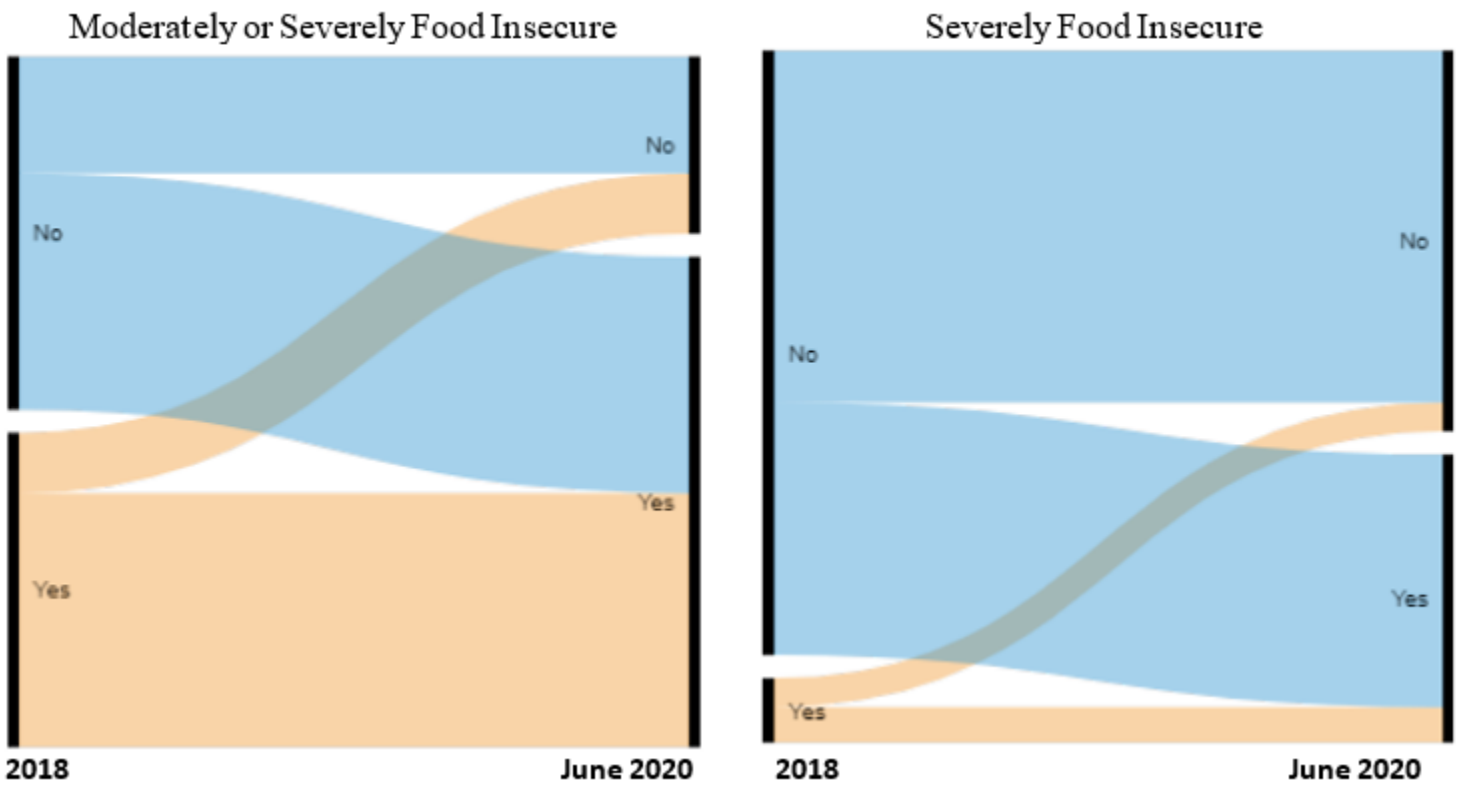
IS IT CORRELATED WITH
THE OTHER VARIABLE?

LOOK, WE DON'T
HAVE THE FUNDING
TO ANSWER EVERY
LITTLE QUESTION.



Impacts of Covid

Tracking Household Food Insecurity Over Time for Nigeria



Invasion of Ukraine

- Many countries heavily reliant on wheat from Russia and Ukraine... including many with pre-existing issues.
- No widespread food security issue in the conflict zone – but further afield, trouble could be brewing



Three Blind Mice

USDA/ERS

“All People, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life.”

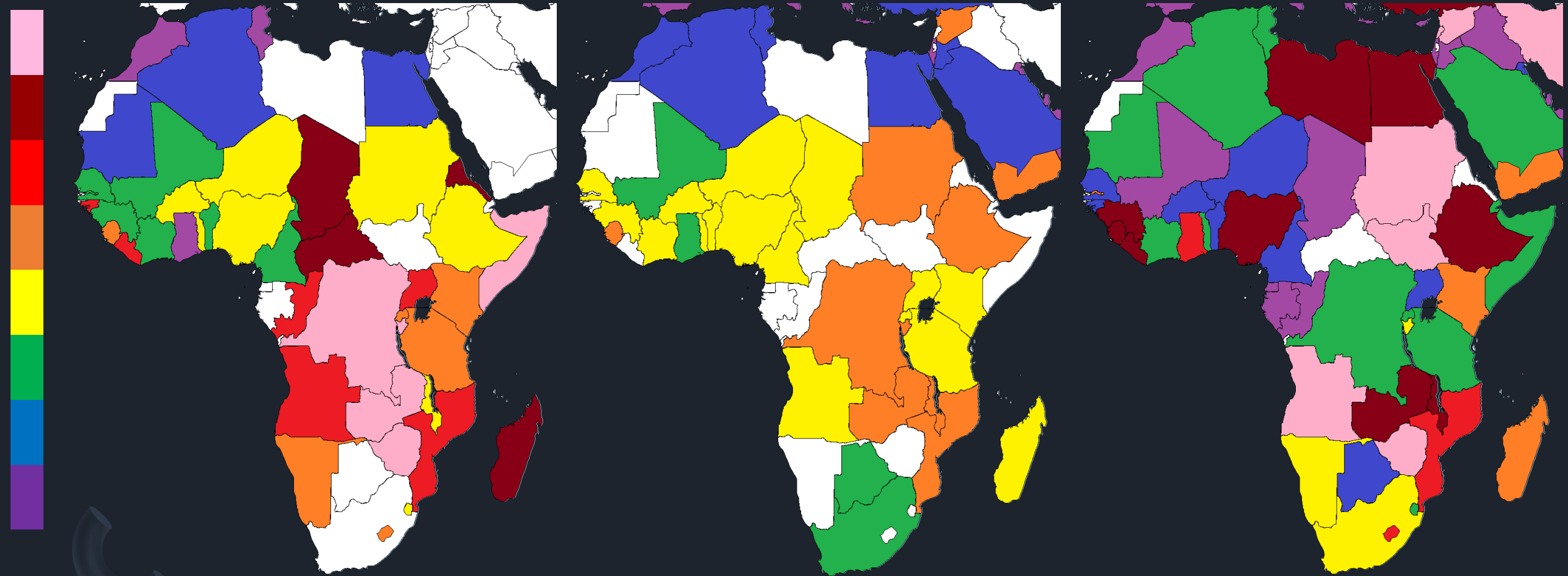
Economist

“All People, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life.”

FAO

“All People, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life.”

Different Measures, Different Findings



Showing “comparable” scores for 2021. Left: USDA/ERS | Center: Economist | Right: FAO

...even in Binary Normalization



Showing positive/negative change 2020-2021. Left: USDA/ERS | Center: Economist | Right: FAO

Conclusions

- Importance of understanding the *relevance* of the relationship between an observed proxy and how it fits in the larger model
- Proxies may be more visible to actors than the ostensible phenomena they represent
- Macrocosmic statistics are interesting, but will not motivate microcosmic behavior



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