Regional Economics/Population Dynamics

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What are the key questions or challenges?

- How do we (the MSD teams) connect to people that are already doing local modeling/analyses/decision-support?
- Why do people locate where they do and are there barriers to relocation when it is in their best interest to move?
- What are the drivers and dynamics of regional economic growth?

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  - Linkages/feedbacks between global and local important
  - Engaging stakeholders and other communities
  - Scale

What are the key questions or challenges?

- Why do people locate where they do and are there barriers to relocation when it is in their best interest to move?
  - Migration rates in the USA, which have been stable in the past, has fallen in recent years, but international migration still high
  - Why do people move? Why do people stay?
    - Wages and jobs biggest driver of moving
    - Incentives to stay are more complex (e.g., regulation, culture, etc.)

What are the key questions or challenges?

- What are the drivers and dynamics of regional economic growth?
  - What explains differences in regional growth historically? What might that mean for the future?
  - Why do companies move? Do companies move to people or people move to companies? How has this changed over time?

What capabilities do the MSD teams currently have to address these questions?

- Multi-sector modeling
- Dynamic economic modeling
- Linking economic and physical models
- Global-scale modeling (including producing boundary conditions for local scale models)
- State-level economic modeling
- Local-scale analyses (e.g., crop yield modeling, power system operation)
- Migration modeling (including coupling location choice statistical model to CGE)
- Context setting
- Human capital: Ability to work across disciplines

What new capabilities are needed?

- Integrating statistical analyses and insights into modeling tools
- Capturing feedbacks between local and global analyses
- Multi-stressor and multi-sector boundary conditions
- Representing institutions
- Representing maladaptation

How do we move forward?

- Need a better understanding of our existing capabilities
- Linkages to new communities
  - NEG models
  - Macro-labor/economics community
  - NBER
  - Michael Oppenheimer
  - Regional IAM community
  - Agglomeration literature
  - Stakeholders and regional activities managing systems
  - Economic geographers
  - Agent-based modelers
  - Urban economics