

Bridging the Divide: Aligning State and Federal Innovation Policies in the USA

Dr James Wood, Department of Politics & International Studies

A Biden innovation ‘revolution’?

- Federal government key pre-1980s, not so much now (Mazzucato)
 - Until Biden’s ‘revolution’
- VoC: Market-based institutional complementarities (Hall and Soskice)
- Federal government’s role is hidden (Block 2008)
 - Not always – key to political legitimation (Iversen and Soskice, 2019)
- Looking in the wrong place?
 - State governments key for the ‘entrepreneurial state’ (Eisinger, 1988)
 - Means and motivation

Research Questions

1. Is Biden's Federal innovation policy a 'revolution'?
2. Do state governments play key roles in driving innovation-led growth?
 - Maine
 - Michigan
 - Significant variations in state government R&D investment

The Federal Entrepreneurial State and Regional Development

Obama: Manufacturing USA

- Challenged dominance of finance
- ‘Presidential Strategy for American Innovation’ (2011)
- Network of advanced manufacturing institutes
 - Modelled on *Fraunhofer* Institutes
 - Mission-oriented (RAMI Act 2014)
 - US economic competitiveness
 - Reskilling local workforces
 - Funding continued by congress under Trump and Biden

Manufacturing USA Network



Trump: AI & Quantum Information Institutes

- AI and QIS national priorities (OSTP 2019)
- 25 National Artificial Intelligence Research Institutes (\$4m p.a.)
 - Partner with universities and tech firms (Google/Amazon)
 - Science and tech applications
- 13 National Quantum Information Science Research Centers (\$25m)
 - Commercialisation and training programmes
- Regional growth a key focus for both

National Artificial Intelligence Research Institutes



Maine's Entrepreneurial State

Maine's Rural Economy



Strategic Development Plans (1998-2024)

- Innovation-led growth (AI, bio-tech, renewables, AM)
- Department of Economic and Community Development
 - Maine Innovation Advisory Board (2007)
 - University tech transfer (Northeastern U. Roux Institute)
- Workforce reskilling programs
- Infrastructure development
 - Broadband (95% coverage)
 - Housing (\$285m in building incentives for 3,931 units since 2019)

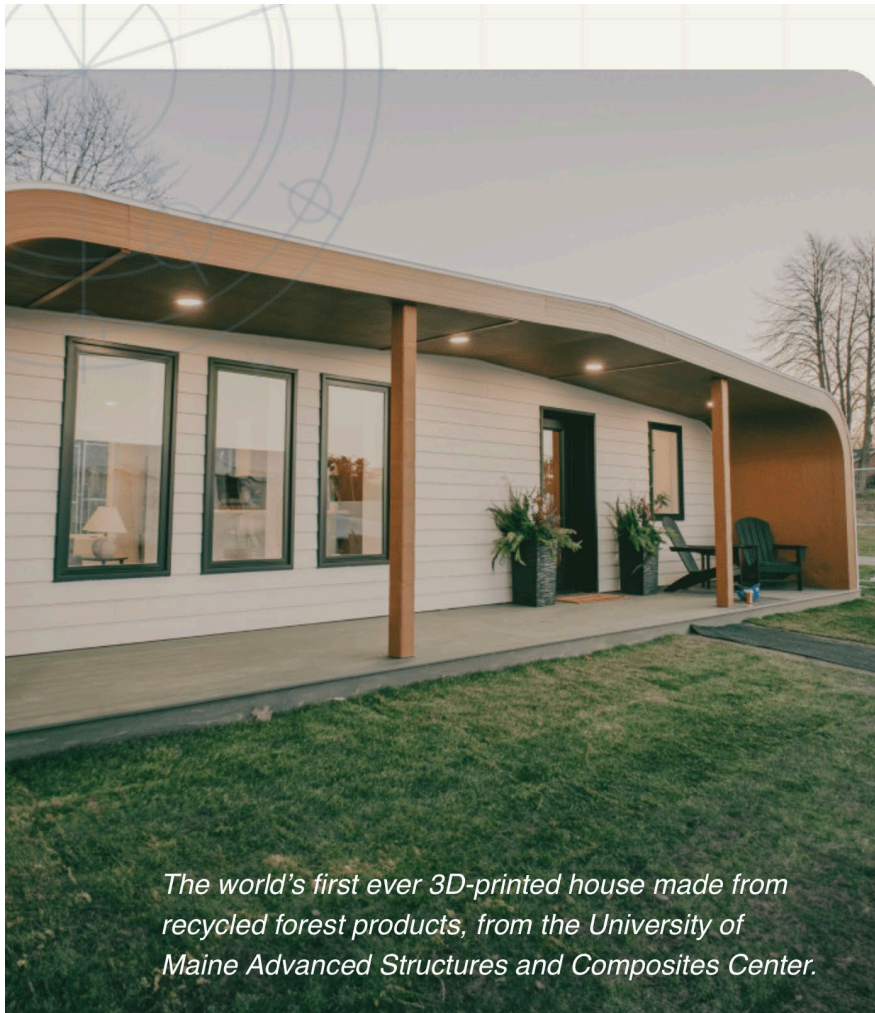
Maine Technology Institute

- Founded 1999
- Early-stage equity investments
 - Maine Technology Asset Fund (\$46m)
 - State as first investor, inspires confidence for match funding
- Advisory services
 - Maine Center for Entrepreneurial Development
 - Maine Accelerates Growth (MxG)

Maine's Forest Bioproducts Tech Hub

- Transforming forest resources
 - Biofuels, biochemicals, and advanced materials
- R&D, tech transfer, and workforce training
- Promotes regional development
 - Environmental sustainability
- State support: Maine's Forest Economy Growth Initiative
- Federal Support : EDA's Build to Scale Program
 - Grants for tech-based economic development

Maine's Forest Bioproducts Tech Hub



The world's first ever 3D-printed house made from recycled forest products, from the University of Maine Advanced Structures and Composites Center.

The future is wood

Decarbonizing and detoxifying consumer and industrial products is the next frontier in the fight against climate change. Wood derivatives are the most promising climate solutions to displace fossil fuel-based materials in many manufactured goods, with significant market opportunities in displacing petroleum-based conventional building products, plastic packaging, and harmful synthetic additives.

Michigan's Entrepreneurial State

Detroit's Economic Decline



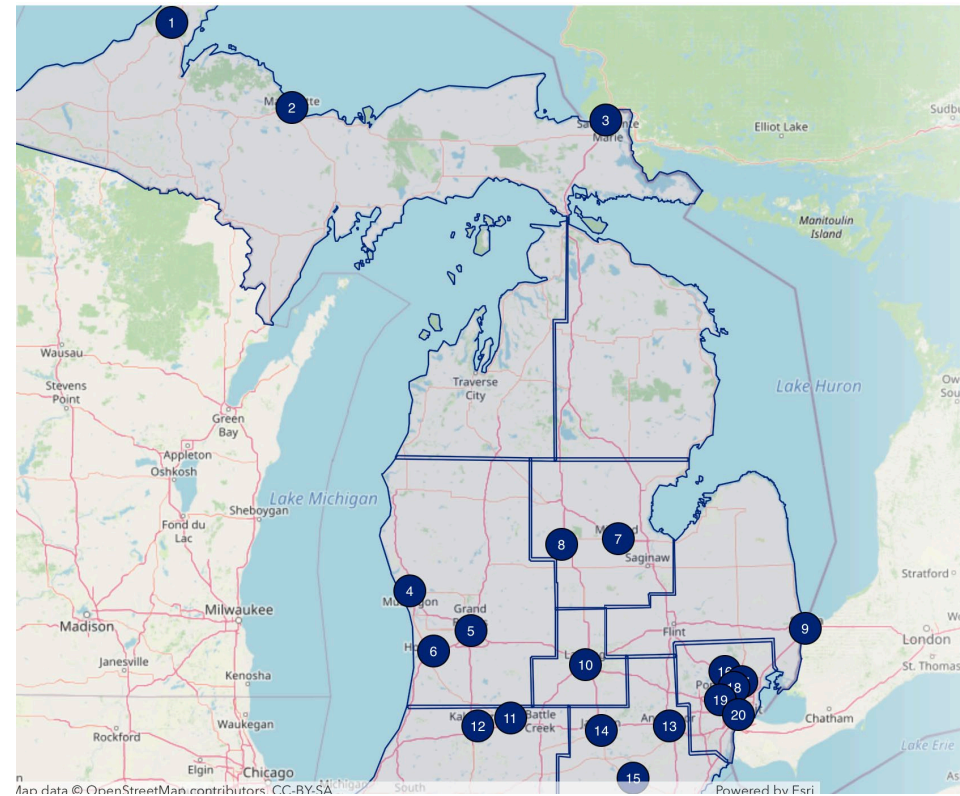
Michigan Economic Development Corporation

- Consultancy services
 - Michigan Small Business Development Center (SBDC) Tech Team
 - BBC Entrepreneurial Training and Consulting
 - Michigan Women Forward
- Pure Michigan Business Connect
 - Supply chain connection
- Michigan Translational Research and Commercialization (MTRAC)
 - 5 innovation hubs (advanced computing, Wayne State University)

MEDC Funding

- Equity investments
 - Michigan Innovate Capital Fund Program (\$20m)
 - \$5m to non-profits supplying pre-seed funding
- Michigan Rise Pre-Seed Fund (\$7m)
- Small Business Venture Capital Program (\$75m)
 - Federal State Small Business Credit Initiative
- The Michigan Economic Opportunity Fund (\$10m)
 - Microbusiness finance (\$50k)

SmartZones – Michigan's Tech Hubs



- Geo-clusters
- Accelerators
- Consultancy
- Patent & commercialisation
- ED 2024-2

Restoring the 'Motor City'

- MI Future Mobility Plan
 - Autonomous and electric vehicle leadership
- Detroit Regional Partnership's Global Epicenter of Mobility (GEM)
 - \$52m Federal Build Back Better Regional Challenge
- \$6.5bn from 'Big 3' – Ford, GM and Stellantis
- Lightweight Innovations for Tomorrow (LIFT) institute

Conclusion

So What?

- Federal level – active role of the government key since 2008
 - Biden: more evolution than revolution
- State level - largely overlooked
 - Consultancy and initial funding
 - University tech transfer support
 - Michigan and Maine support context-specific innovation-led growth
- VoC: Can the US be considered an LME?