



State
Entrepreneurial
Ecosystems:
How Public
Policy Can Drive
Innovation

State Entrepreneurial Ecosystems: How Public Policy Can Drive Innovation

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Major Questions Addressed in Report

- Why should we care about innovation? Can public policy actually help induce greater innovation and economic growth?
- What are Michigan's strengths and weaknesses in terms of cultivating economic innovation and how does public support for relevant programs compare to other states?
- What funding options and strategies are available to Michigan if policymakers want to increase support of innovation and entrepreneurship programming?

Why Should We Care About Economic Innovation?

Why Care About Innovation?

- Economic theory tells us that long-run economic growth and rising living standards are tied to economic innovation – new products and processes that make workers more productive
- But economists also suggest that innovation may be constrained without help from public policy
 - New technologies can be adapted/copied/learned from by competitor firms (“knowledge spillovers”), so less profit for innovative firm
 - Small, young startup firms bringing a new technology to market face higher capital costs because of information constraints

Does Public Policy Actually Help?

Empirical studies show various policy interventions have yielded positive outcomes in terms of encouraging R&D, improving the prospects of young innovative firms, and achieving long-run impacts on productivity and patenting.

- R&D tax credits
- Direct federal R&D appropriations
- Small Business Innovation Research (SBIR) program
- Accelerators and incubators
- Publicly-funded venture capital programs (key: when they are a moderate source of support relative to other private sources)

Where Does Michigan Stand in Terms of Innovation?

Is Michigan an Innovation State?

2022 Milken Institute

#17

10	R&D Inputs
13	Tech/Science Workforce
19	Human Capital Investment
26	Tech Concentration & Dynamism
36	Risk Capital/Entrepreneurial Infrastr


2020 State New Economy

#17

5	Innovation Capacity
17	Globalization
21	Digital Economy
25	Knowledge Jobs
38	Economic Dynamism

- Michigan ranks above average in two recognized state-level Innovation indexes
- Michigan's strengths relate to R&D capacity and workforce skills
- But key relative weaknesses relate to innovation ecosystem

Is Michigan an Innovation State?

	 Michigan	 Indiana	 Virginia	 Illinois	 Minnesota	 Ohio	 Wisconsin	
Selection Justification	Baseline	Maturity	Similar GDP	Regional Competitor	Regional Competitor	Regional Competitor	Regional Competitor	
University-based innovation	Higher Education R&D Expenditures ¹	\$13.6B	\$7.7B	\$8.4B	\$12.9B	\$5.0B	\$11.8B	\$7.9B
	Higher Education R&D Expenditures, Public Institutions ¹	\$13.3B	\$6.6B	\$8.3B	\$5.7B	\$5.0B	\$9.0B	\$6.5B
	Higher Education R&D Expenditures in Science and Engineering Fields ¹	\$12.8B	\$6.9B	\$7.7B	\$12.2B	\$4.8B	\$11.2B	\$7.3B
	Amount (in \$M's) of Research Expenditures per University Invention Disclosure ²	\$3.2M U. Michigan, Ann Arbor	\$1.8M Purdue U., West Lafayette	\$2.4M U. Virginia, Charlottesville	\$2.7M U. Illinois, Urbana-Champaign	\$2.5M U. Minnesota, Tw in Cities	\$2.3M Ohio State U.	\$3.2M U. Wisconsin-Madison
	Amount (in \$M's) of Research Expenditures per Start-Up Formation ²	\$78.9M U. Michigan, Ann Arbor	\$29.4M Purdue U., West Lafayette	\$89.6M U. Virginia, Charlottesville	\$101.5M U. Illinois, Urbana-Champaign	\$57.9M U. Minnesota, Tw in Cities	\$72.4M Ohio State U.	\$131.4M U. Wisconsin-Madison

Michigan's E&I programs receive a significant investment from its **public universities**, whereas Illinois depends more heavily on its **private institutions**, as do several other of Michigan's peers.

Though Michigan's universities make significant investments in the E&I space in partnership with MSF, the **ROI on these investments seems to be lower** than that of peer states. The University of Michigan seems to be **spending more** to bring products to market than some of its peers.

KEY: Lagging
25% Quartile On path
50% Quartile Emerging leader
75% Quartile Best in class
100% Quartile

Sources: [1] National Center for Science and Engineering Statistics, Higher Education R&D Survey; FY2016-2020 [2] AUTM Licensing Activity Survey, AUTM Statistics Access for Tech Transfer (STATT); Values are reflective of largest public university per state. Public university size is based on scale of cumulative research expenditures from 2016 to 2020.

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- An independent program evaluation of Michigan's I&E programs conducted for the MEDC had similar findings related to Michigan's position among competitor states.

Innovation and Entrepreneurship (I&E) Programs

- **Access to Capital Support** – early-stage financing to start-up companies in the process of bringing innovative new products and services to market
- **Business Support Programs** – technical support (e.g. legal and management consultations), networking and mentorship opportunities, product evaluation and validation, publicly-funded business incubators/accelerators.
- **University Research Commercialization** – assist potential start-up companies validate the market potential of new product ideas arising from university research

Financing Michigan's I&E Programs

21st Century Jobs Fund

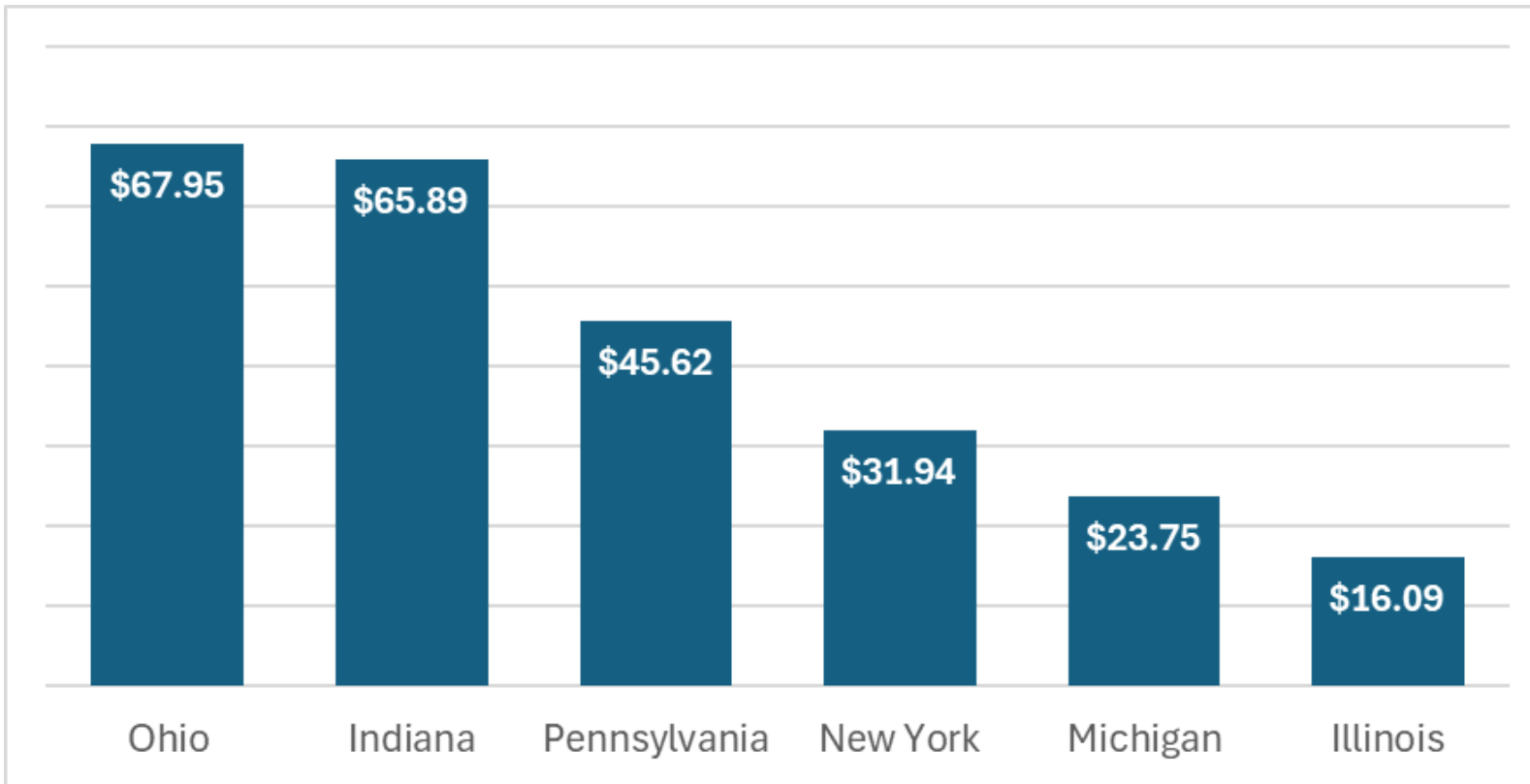
- Created in 2005, the 21st Century Jobs Fund is the primary funding source for the MEDC's I&E programming (and for much of its other business attraction programs)
- Current \$15.7 million appropriation is down from a high of \$28.5 million in FY2014

Entrepreneurship Eco-System Appropriations	
FY2020	\$16,400,000
FY2021	\$15,650,400
FY2022	\$15,650,000
FY2023	\$15,650,000
FY2024	\$15,650,000

I&E State Spending Effort Across States

State Spending Effort for I&E Programs

(State Spending per \$1 million in state GDP)



State spending effort:

- State appropriations for I&E programs
- Average annual dollar commitments from off-budget program funded by bond or other special revenue.

Michigan ranks fifth among these states in I&E spending effort relative to the size of its economy.

Business Support Providers – Case Study Comparison

- **Michigan** – the state commits around **\$4.7 million per year** to support SBDC-delivered Tech Team, Business Accelerator Fund and SBIR/STTR matching grants as well as grants to the state's network of regional incubators
- **Ohio** – Ohio's five regional Entrepreneurial Service Providers receive annual support of **\$32.9 million per year** under their current contracts
- **Pennsylvania** – Total combined budgets for the state's Ben Franklin Technology Partners have averaged around **\$32 million per year** combining both annual state appropriations and reinvested program earnings
- **Indiana** – Elevate Ventures operates under a state contract that provides **\$6.5 million in annual support** for its coordination services to Indiana's I&E programs.

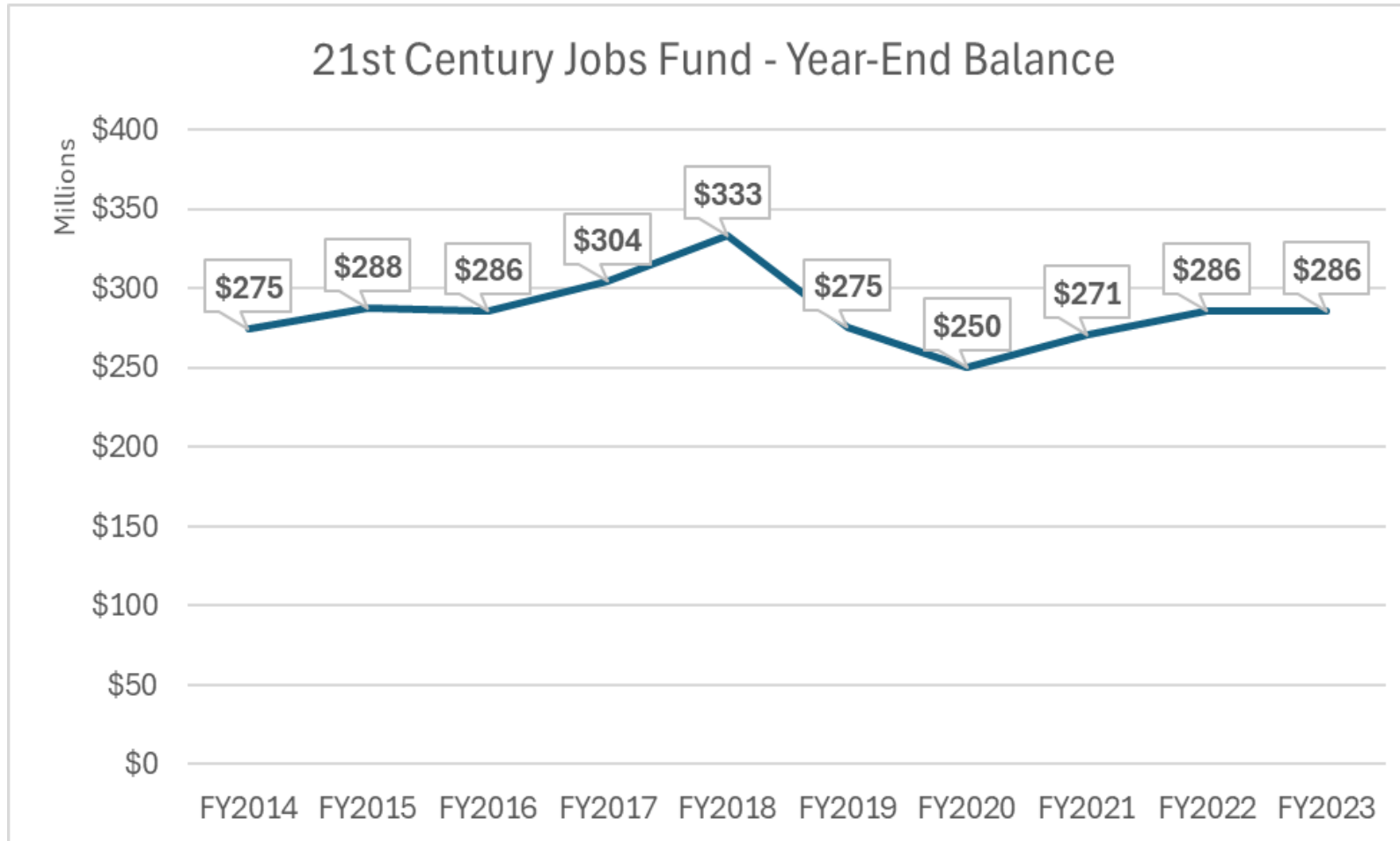
Fiscal Roadmap: Funding Options for Michigan

Fiscal Roadmap: Revenue Options for Michigan

Bonding for One-Time Revenue

- General obligation bonds: requires legislative and voter approval
 - Ohio Third Frontier initiative: state generates \$1.2 billion to kickstart I&E programs in 2005 and 2010
 - Michigan precedent: Clean Michigan Initiative (\$675 million in 1998)
- Revenue bonds: legislative approval needed
 - Michigan precedent: 21st Century Jobs Fund was initially capitalized with \$400 million in revenue from securitization of Michigan tobacco settlement proceeds

21st Century Jobs Fund

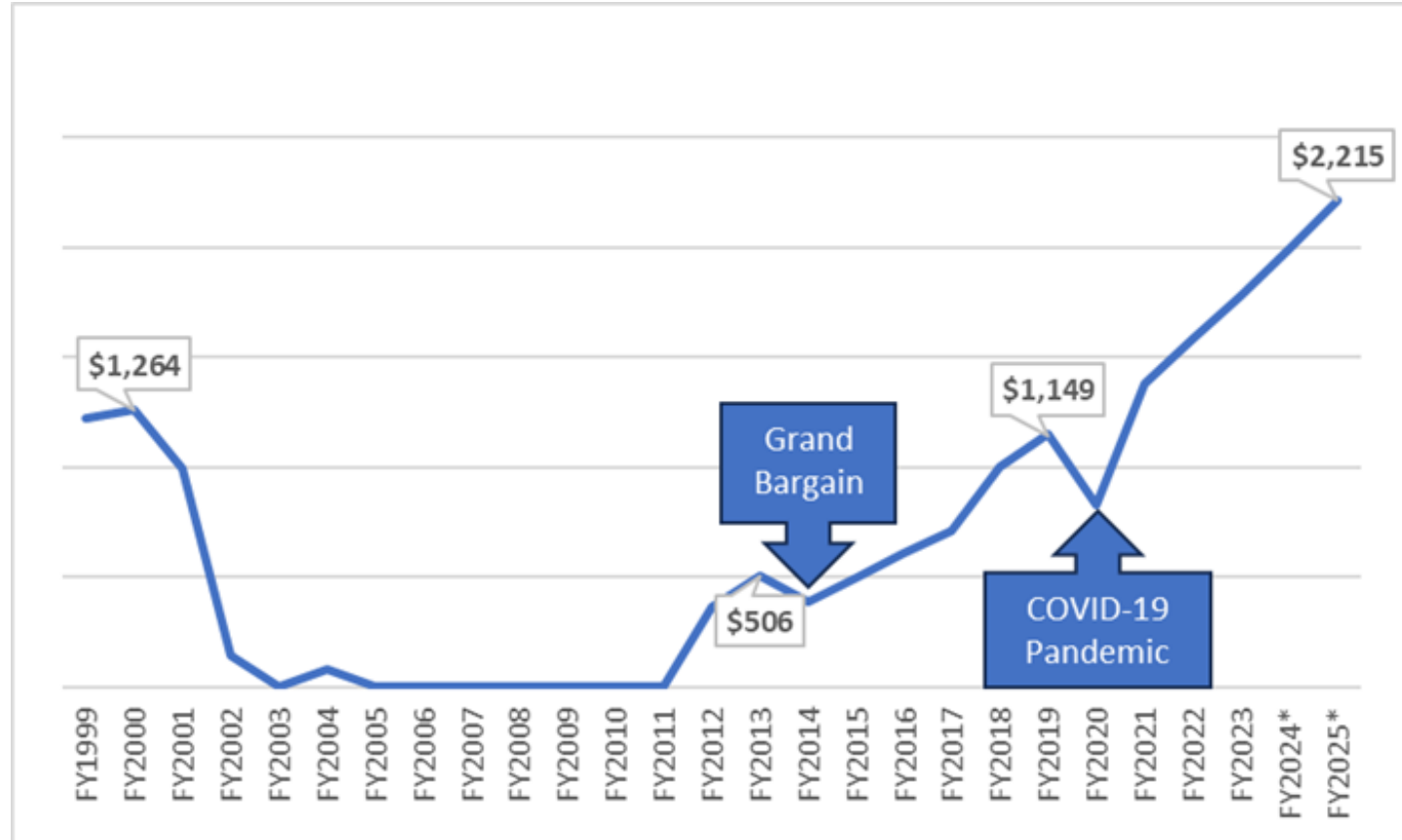


- The 21st Century Jobs Fund has maintained a year-end balance of at least \$250M in each of the last ten years
- That balance is available for appropriation by the legislature for economic development-related programming

Grand Bargain and Michigan's Rainy-Day Fund

Budget Stabilization Fund Balance History, FY1999 to FY2025

(in millions)



- State contributed \$195M to the Grand Bargain agreement to help Detroit arise from bankruptcy
- State law requires "repayment" of **\$17.5M annually** from tobacco settlement proceeds over 21 years
- But BSF has already grown by \$1.7 billion; more than 4-times the pledged Grand Bargain payback
- Grand Bargain repayments are now largely symbolic

Fiscal Roadmap: Revenue Options for Michigan

Tribal Gaming Revenue from Online Gaming and Sports Betting

- 10 percent of tax revenue generated from tribal casinos goes to the Michigan Strategic Fund
- MSF revenue from tribal gaming is up by \$17-18 million per year as a result

Corporate Income Tax Earmarks

- Tax reforms enacted in 2023 included the temporary redirection of \$550M of Corporate Income Tax revenue (SOAR Fund and placemaking programs)
- That revenue moves back to the General Fund under current law
- House and Senate are still deliberating about maintaining the redirection (and how to use the funding)

On the Horizon: Michigan Innovation Fund

- One-time \$60 million appropriation for a new Michigan Innovation Fund (MIF) to support I&E-related programming included in FY2025 budget
- Pending legislation (currently pending House floor action) authorizes transfer of available proceeds from the Venture Michigan Fund to the new MIF
 - \$105 million would be transferred in 2024
 - Potentially more in future years if VMF continues to realize earnings
- That legislation will also set parameters on how Innovation Fund dollars are allocated. Current bills pending on the House floor allocates funding for:
 - Nonprofit or university-based venture funds
 - Nonprofit agencies for start-up services that support the creation and growth of Michigan startup companies and support the growth of the state's venture capital talent pool

Key Takeaways from the Research

- Economic innovation is critical to long-run economic growth and rising living standards
- Public policy interventions can help drive more innovation and help overcome marketplace challenges that can hinder it
- Michigan invests less than its neighbors in I&E programs that aim to improve the state's entrepreneurial ecosystem.
- Report identifies revenue options to increase both one-time and ongoing support for I&E programs in Michigan.

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