



Venture Capital

- Overview of Venture Capital
- 3 Phases of Venture Capital Investing
- State Government Initiatives
- Key Challenges and Best Practices
- Angel Investing
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- Solar/Clean Tech VC Investing



Overview of Venture Capital

- Emerged after WWII to supply equity to early stage and technology-based businesses
- Large economic development impact: financing new technologies & industries, high-growth firms
- Private partnerships invest funds from financial institutions, pension funds, corporations, wealthy individuals, & endowments
- Some financial institutions and corporations set-up their own funds
- 1998: 500+ VC funds had \$50 billion in capital & invested \$13 billion.
- 2000: VC exploded with internet boom to 635 funds that raised over \$90 billion in one year!
- 2015: VC funds raised \$28.1 billion & made 4,561 investments at \$60.1 billion—a 9% drop in funds raised and 18% increase in investments from 2014

Raising Investment Capital

- VC funds need long-term capital in far larger amounts than RLFs:
 - VC funds typically have a 10-12 year life
 - Capital covers management costs, lack of cash flow in early years, and follow-on investments.
- Pension funds are key investor; fueled 240% increase in the median VC partnership during 1990s
- Median fund was \$200 million in 2005 vs. \$63 million in 1995 but has been dropping.
 - 2015: 235 funds raised average of \$120 million
- Investors use incentives that tie compensation to returns and covenants in partnership agreements to influence managers



Capital Sources for MI VC Funds

"Popular Sources of Capital for the 36 Venture Firms in Michigan" (page 25) from [Michigan Venture Capital 2016 Annual Research Report](#). Michigan Venture Capital Association, 2016 have been removed due to copyright restrictions.

Funding Public-Purpose VC

- Capital for public purpose VC funds:
 - State general obligation bonds & appropriations
 - Dedicated revenues
 - Federal loans and grants
 - Public pension funds
 - Tax incentives for private investors
- Organization and capital sources are related:
 - Ltd partnerships attract private and pension investors, but preclude reinvestment of gains
 - Quasi-public corp. allows reinvestment of gains and more accountability for government funds
- Link to broader econ. development strategy
 - Industries with state & regional presence
 - Business development & technology initiatives

Venture Capital Investing

- Key features of VC investing:
 - Extensive pre-investment due diligence
 - Staging of investments
 - Active monitoring of firms
 - Syndicating investments among funds
- Funds screen a large number of firms to make a few investments
 - 1 or 2 out of every 100 are funded.
- Active monitoring favors investing near VC office; syndications allow outside investment
 - *Need both local capacity and strong ties to national VC network*
 - *77% of MI VC investments in 2015 from out of state VC firms*

Venture Capital Investing

- Growth in fund size shifted VC investing from early stage companies to larger transactions and later stage firms
 - Average VC investment grew from \$3.2 million in early 1980s to \$11 million in late 1990s; drop to \$6 - 7 million in 2010s; at \$13 million in 2015
 - 2015: 1.8% of invested dollars were in seed stage and 34% in early stage enterprises
- Investments are highly concentrated:
 - 80% of 2015 investment \$ in CA, MA, NY, TX
 - 79% of 2016 Q2 investments in software, biotech, IT services, media/entertainment firms
 - 80% of MI VC \$ in biotech/health and IT
 - “Herding” by VC firms in which they over invest in a few hot industries and ignore others with strong growth prospects

Exiting Investments

- Convert illiquid investments to cash; realize returns
- Four ways to exit equity investments:
 - Initial public stock offering (IPO)--most profitable exit
 - Acquisition of firm by another company
 - Buyback of stock by firm
 - Royalty or other debt-like payments
- A small number of investments generate super returns and account for most profits
 - 25% to 35% investments fail; most provide very modest returns
- Exiting strategies & returns linked to IPO market
 - VC investments follow industries with strong potential for completing an IPO
 - Role for public purpose VC funds in supporting growth sectors & technologies overlooked by public stock markets and VC industry

Venture Capital Supply Gaps

- Smaller investments
 - \$2 million to \$5 million
 - Angel investors are addressing < \$2 million
- Seed and start-up stage enterprises
- Less glamorous industries out of favor with IPO market
- Firms in regions without local venture capital managers
- Promising regional industries not favored by private VC industry

State Government Venture Capital Initiatives

- 45+ states have promoted VC via 3 approaches
 - Public venture capital funds
 - Investing state dollars in privately managed funds
 - Tax incentives for private investment in privately managed funds
- Most states direct capital to private funds
- Many initiatives are linked to demand side policies for technology commercialization and small business development.
- Programs build local venture capital capacity and demonstrate a market to attract larger flows of VC dollars
- Recent growth in state programs to foster angel investment

State Government Venture Capital Initiatives

- Best practices from state experience:
 - State officials should set goals and monitor performance; not make & manage investments
 - Public & private VC funds need skilled professional managers, compensation to attract them, and sound investing processes.
 - Public funds need to operate outside state civil service system
 - Strong focus on financial returns for political & financial viability, attracting private co-investors
 - Marketing and development services are needed to generate sufficient deal flow

VC Management Challenges and Best Practices

- Investment strategy: must be linked to capacity to generate high-growth firms
 - Service area/industries with many potential investments
 - “Demand-side” initiatives to cultivate growth businesses
 - Support “infrastructure” of advisors, angels and skilled workforce
- Building skilled local VC management capacity
 - Compensation to attract skilled managers
 - Contracting with **local** private firms is preferred option
 - Strong public/community oversight of managers
 - Cultivate credibility and relationships with national VCs
- Raise Appropriate Recurring Capital Sources
 - Minimum fund: \$5 to \$10 million financed with equity
 - Pension funds & financial institutions are key sources

Detroit Venture Initiatives

- How is the Detroit region building its venture development and investment system?
 - Who is spearheading the work?
 - What are they funding and investing in?
 - How are they seeking to generate entrepreneurs and high growth firms?
 - What is the financing part of the system?
 - Who are key organizations and programs?
- Observations and impressions?
- Relationship to our projects?



Detroit Innovate Fund

- “Civic” VC fund supported by NEI and MEDC, affiliate of Invest Detroit
- \$12.5 million under management
- 73 investments
- First Step Fund—seed fund (\$15 to 100,000)
- Detroit Innovate Fund-early state growth fund (\$100 to 500,000)
- Venture development assistance

VC Investments by State

State	2015		2010 to 2015	
	Deals	Amount \$ Millions	Deals	Amount \$ Millions
Massachusetts	426	5,713,623,700	2,393	22,309,857,500
Michigan	54	328,400,000	298	1,145,458,800
Minnesota	30	371,688,400	209	1,671,585,700
Illinois	96	1,119,035,600	546	4,681,025,400
Ohio	71	262,718,900	407	1,694,174,300
US	4,380	58,811,188,300	24,599	220,360,811,700

Michigan 2016 VC Report

- 2015: 25 funds w/\$2.2 billion in capital; invested \$328 million in 54 firms
- 2001: 7 funds w/\$530 million in capital; invested \$155 million in 22 firms
- 36 VC firms have an office in MI
- 141 venture backed companies

"Amount Invested by Michigan Venture Capital Firms (By Sector)", "Number of Startups Receiving Capital from Michigan Venture Capital Firms (by Sector)" (page 17) from [Michigan Venture Capital 2016 Annual Research Report](#). Michigan Venture Capital Association, 2016 have been removed due to copyright restrictions.



Summary from CSU 2012 Report: Detroit Region with 25 VC funds

- Many state, regional and Detroit initiatives
 - Demand side incubators, accelerators, services
 - State VC funds, growing regional angel, VC capacity
- 7 pre-seed/angel funds in the Detroit region: 1 in Wayne County; 1 serving multiple counties
- 10 early-stage/venture capital firms in Oakland and Wayne counties: 3 in Wayne County, and 1 with offices in both counties
- 8 late-stage venture capital firms in the Detroit region, 6 in Oakland and 2 in Wayne County
- Wayne County growth in investment (3 of deals): \$700,000(2) in 2007 to \$39.5 million(31) in 2011

Angel Investment

- Equity investors in early stage firms
- Fill gap with VC shift to large investments & later stage firms
- Wealthy accredited investors; often past successful entrepreneurs; invest \$10-100K
 - Use SEC equity investment exemptions
 - MI: 9 angel groups invested \$16 million in 2015
- Estimated \$22.9 billion in equity to 67,000 ventures in 2012; \$341,800 average round
 - Total investment comparable to Venture Capital
- Growth in informal networks and formalized angel funds (e.g., RAIN Funds in rural areas)
- Linked to regional drivers of new enterprises ¹⁸

Promoting Angel Investment

- A growing area of state ED activity
- Education and technical assistance on angel investing
- Government/foundation support for state/regional angel networks
- On-line platforms to match investors and entrepreneurs
- Tax incentives for angel investments
 - Tax credits for individual angel investments
 - Tax credits for investments in formal funds
- Demand side efforts to grow firms and pipeline of “angel ready” investments

MN Angel Investment Tax Credit

- 25% refundable personal tax credit for equity investment in “qualified small businesses”
 - \$34.2 million in credits used over 3 years
- \$138.6 million invested in 196 firms
 - \$71.7 million (52%) attributed to the tax credit
 - 98 annual direct jobs from attributable investment
- 90% invested in MSP region; only 3% to women and minority owned enterprises
 - Resulted from mix of demand and supply side factors
- Ten year estimated annual impacts
 - 215 direct jobs and 420 non-direct jobs
 - Net fiscal cost: .71 in new state revenue for \$1 credit

Community Development Venture Capital

- Recent *private* venture capital investing for economic & social goals: “double or triple bottom line”
- Kentucky Highlands Investment Corp. created to simulate economic development in rural Kentucky, is the earliest CDVC fund.
 - KHIC manages 3 funds with ~ \$50 million in capital
- 71 funds with \$2 billion in capital in 2008
- Average fund was \$28 million vs. \$6 m in 1998
- Serve more diverse industries and firms stages than conventional VC
- Investors are government, foundations, financial institutions

CDVC vs. Conventional VC

- Lower return goals than VC (10% to 15%)
- Smaller investments (\$300,000 to \$3 million)
- More emphasis on early stage firms
- Serve more diverse range of industries
- Banks have been the primary investor
- More focus on financial returns, bigger funds, and investments in larger companies for CDVCs in their 2nd and 3rd generation funds
- Growing emphasis on expanding & documenting social returns
- Exit strategies and their long-term impact are uncertain
 - Will IPOs and mergers alter social benefits?
 - Firms tied to place by brand or model are best bet

CDVC Examples

- Pacific Community Ventures
 - California CDVC focused on economic development in low-income communities
 - Combines business technical assistance, financing and employee asset-building
 - Employee profit sharing, IDAs, fin. literacy
- CEI Community Ventures, Inc.
 - CDVC subsidiary of statewide CDC/CDFI
 - Employment agreements and placement services for hiring low-income workers
 - Most jobs (90%) with health insurance

Venture Capital and “Cleantech”

- Tenfold growth in VC investment in green technology over past ten years
- From \$458 million in 2001 to over \$5 billion in 2010; dropped to \$3.3 billion in 2012
- Clean tech grew from 1% of VC investments to 15% in 2011 and 12% in 2012
- VC-backed firms had a growing share of patents from 2001 to 2010
- Contrasting views of VC role
 - Ill-suited to industry given likely slow adoption, high capital costs and limited exit options
 - Key to fueling private investment, innovation & adoption



Clean Tech Investment Sectors

Figure 6 from "[MoneyTree Q1 2012 US Cleantech venture funding](#)." PricewaterhouseCoopers. May 2012 has been removed due to copyright restrictions.

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