



Economic Competitiveness Benchmarking

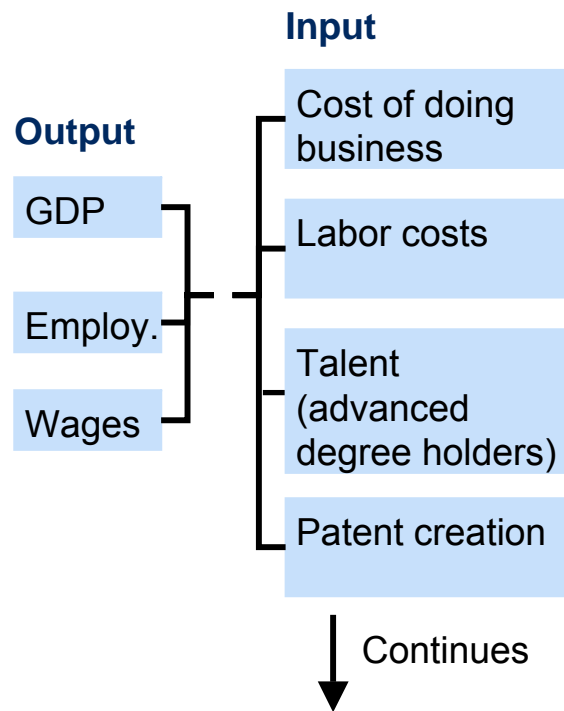
Board Retreat Handout

CONFIDENTIAL
August 19th, 2009

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Methodology: Input and output time series metrics benchmarked against relevant peers, building upon 2008 effort

Benchmarks were disaggregated in an input-output method



Changes in input and output metrics compared across states

Peers were selected based on objective (e.g., compare TN, OH for traditional industry; MA, TX for new economy)

Traditional industry peers, e.g.,

- | | |
|----------------|---------|
| Ohio | Indiana |
| Illinois | Alabama |
| Tennessee | Georgia |
| North Carolina | |

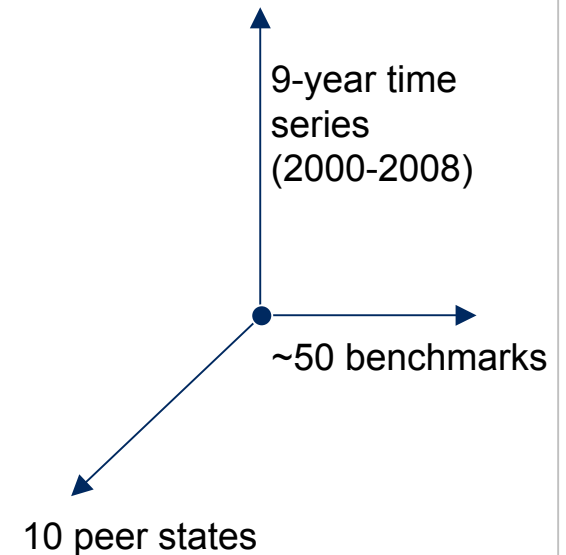
New economy peers, e.g.,

- | | |
|----------------|----------|
| California | Texas |
| Mass. | Illinois |
| North Carolina | |

Peers chosen considering manufacturing, knowledge and talent competitors, etc.

A 9-year (2000-2008+) time-series helped discern which input benchmark drove outputs

Time-series cube



Estimate correlation between input metric changes and resulting in an output change

Key findings of 2009 benchmark report

- **Michigan's economic performance has eroded significantly, with GDP growth over past 18 months (-7.6%) and June 2009 unemployment (15.2%) last among all 50 US states**
 - Fundamental challenges observed from SE Michigan perspective in 2008 benchmarking report are consistent with those observed at the State of Michigan level in 2009 benchmarking report
- **Michigan's Business Climate fundamentals are uncompetitive**, although underlying strengths exist
 - Michigan's **cost of doing business is 4% above the national average, driven by corporate taxes and labor cost which are ranked 48th and 43rd in the nation, respectively**
 - However, a **strong flow of college students** (24% more than North Carolina in per capita terms), **and a high concentration of engineers (#1 among all states)** provide assets for business attraction and expansion
- Michigan's **Innovation & Entrepreneurial Environment has not yielded results comparable to leading states, although bright spots exist**
 - **Venture capital investment trails key new economy benchmark states substantially (15-19x vs. California and Massachusetts on per-capita basis)**
 - Michigan is efficient in converting patents from University research dollars, but lags behind top new economy benchmark states significantly in quantity of university patents generated (2.5x vs. Massachusetts)
- Michigan's quality of life maintains strong fundamentals, but has a very poor perception
 - **Michigan is at or above average in cost of living, healthcare and education**
 - In addition, the city of Detroit scores well in available arts, culture and recreation activities
 - **However, Michigan's (led by Detroit) crime rate and quality of life ratings are well behind comparable states' leading cities**

Michigan ranks 50th in the nation in GDP growth; downward trend has accelerated in past 18 months

Michigan's GDP was nearly flat from 2000-2007, declining 7.6% from beginning of 2008 to June 2009

State	2000-2007 GDP CAGR percent	2008- 2009(Q2) GDP growth percent	08-09(Q2) Rank
MI	-0.1	-7.6	50
OH	0.7	-3.6	40
IN	1.3	-4.2	41
GA	2.0	-2.7	36
TN	2.7	-2.2	30
AL	2.7	-2.2	31
IL	1.6	-2.4	33
NC	2.8	-2.6	34
CA	2.7	-1.7	27
MA	1.7	-1.0	19
TX	3.4	-0.4	13
Top 10 ¹	3.2	-1.2	

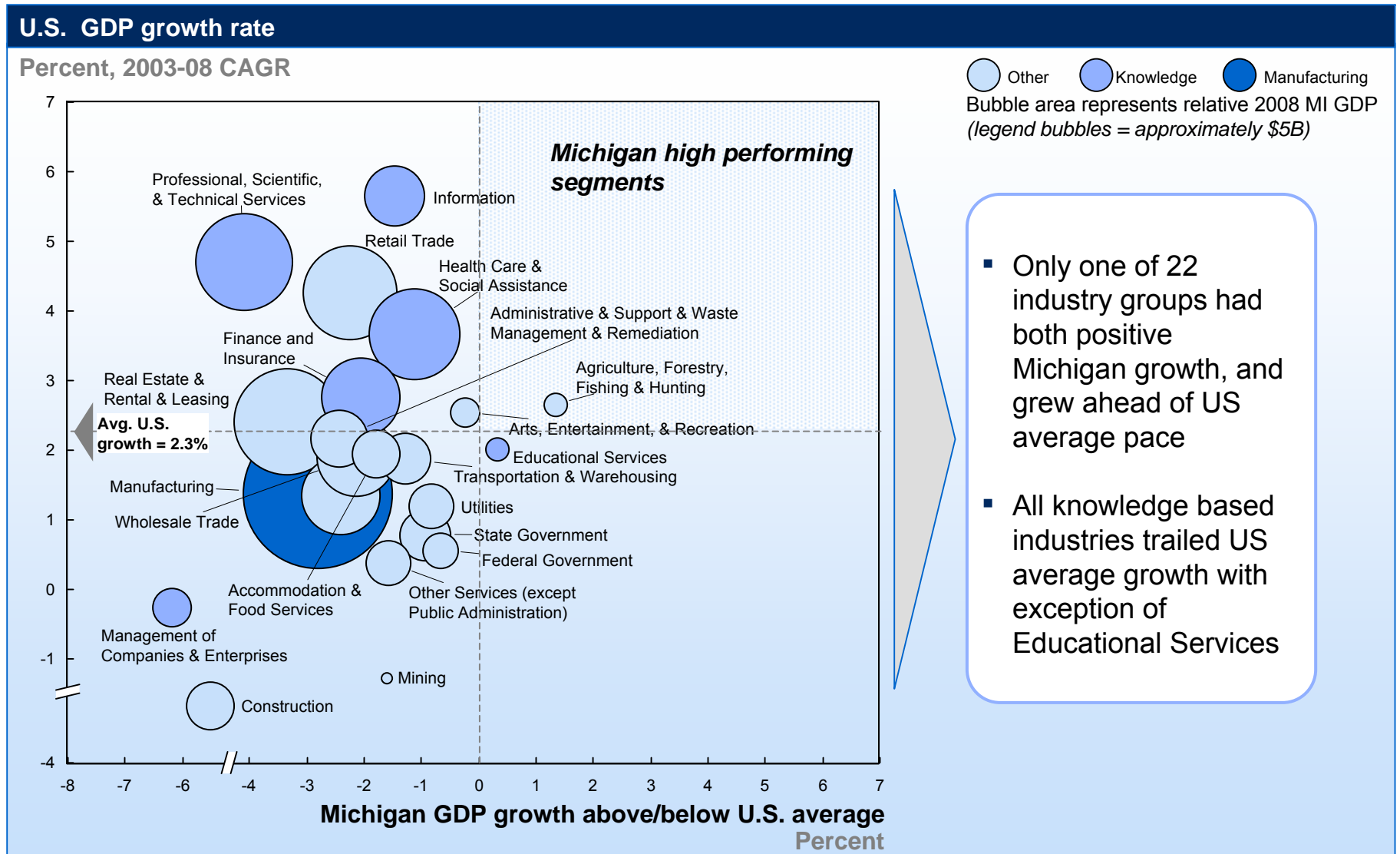
- Michigan's GDP is \$382 Billion as of June 2009²
- Since 2000, if Michigan's economy had grown at the average rate of the Top 10 states, Michigan would produce \$118B (31%) more²
- The difference translates to \$12,000 more per Michigan citizen²

¹ Top 10 states in per capita GDP growth, 00-08: ND, OR, SD, NY, VT, IA, MT, WY, NE, MD

² In June 2009 dollars

SOURCE: Bureau of Labor Statistics; Bureau of Economic Analysis; Moody's Economy.com

GDP under-performance is consistent across sectors, with only 2 of 22 sectors outpacing US growth since 2000¹



Michigan ranks 50th in the nation in unemployment; only sectors to add jobs since 2007 are government, education and healthcare & services

Michigan's unemployment rate is the highest among all states by significant margin

State	Unemployment rate June 09, percent	June 09 Rank
MI	15.2	50
OH	11.1	44
IN	10.7	25
GA	7.4	47
TN	10.8	17
AL	10.1	36
IL	10.3	28
NC	11.0	40
CA	11.6	38
MA	8.6	42
TX	7.5	37
Top 10¹	6.8	N/A

Durable goods manufacturing contributed 35% of job loss; state government, healthcare & services only sectors with job growth

MI job loss by sector January 2007- June 2009 Thousands of non-farm jobs	Percent of total empl't June 2009
January 07 jobs	4,283
Auto	102 3
Other Durable	63 6
Construction	47 3
Admin. & Waste	44 6
Retail Trade	36 12
Prof. & Scient.	30 6
Other declining	145 45
Education	5 2
State gov't	6 5
HC & Svcs	18 14
June 09 jobs	3,846

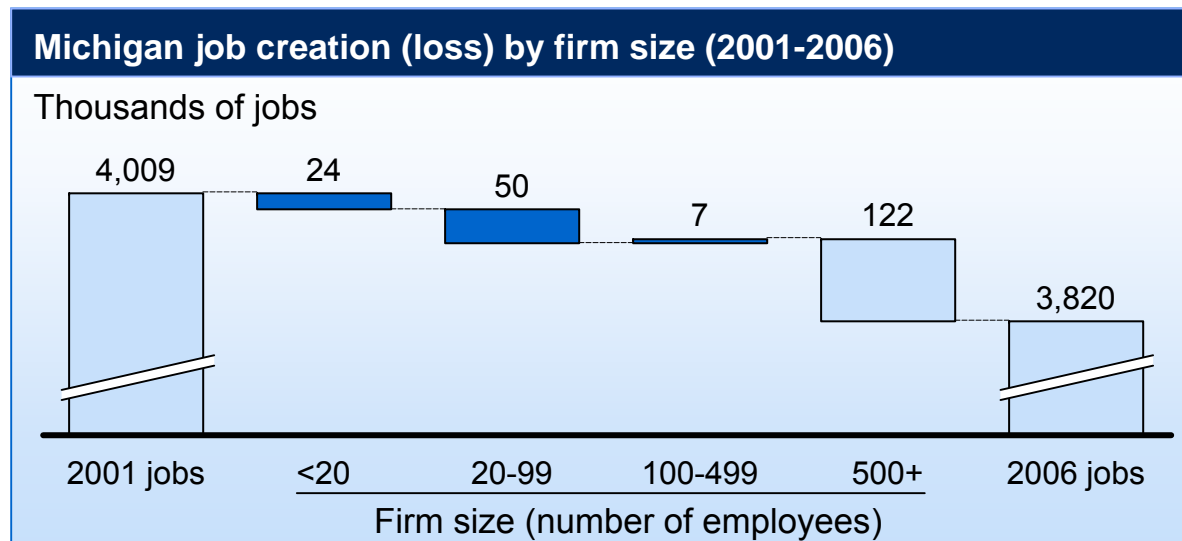
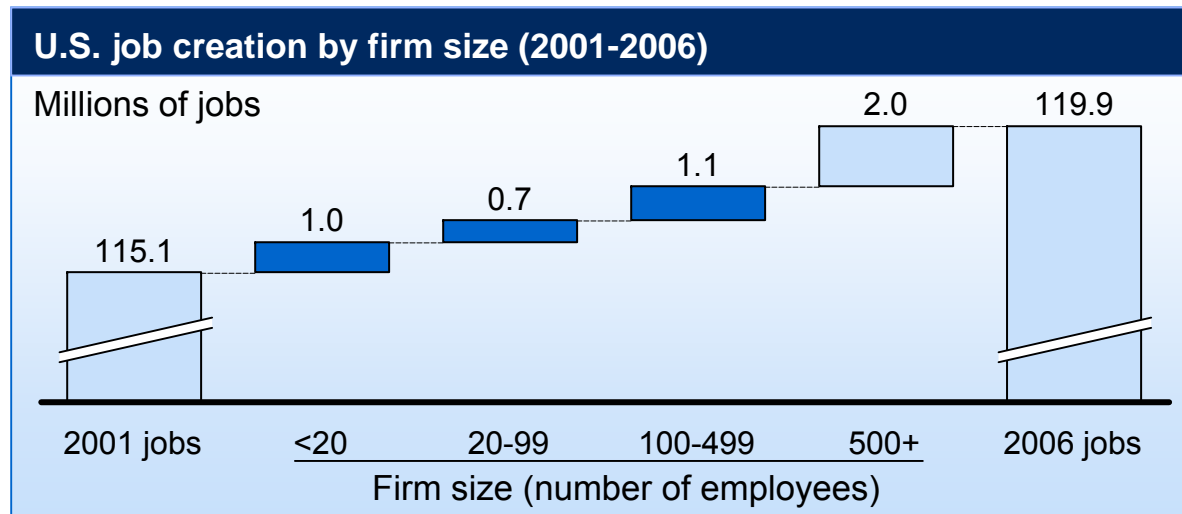
- 715,000 people in Michigan are unemployed
- If Michigan were Top 10¹, 395,000 more people would be working

Includes Nondurables (23k), Wholesale trade (22k), Loc. govt. (17k), Food svc. (17k), Fin.svc.(16k), etc

Sectors with job growth

1 Top 10 states in per capita GDP growth, 00-08: ND, OR, SD, NY, VT, IA, MT, WY, NE, MD
SOURCE: Bureau of Labor Statistics; Bureau of Economic Analysis; Moody's Economy.com

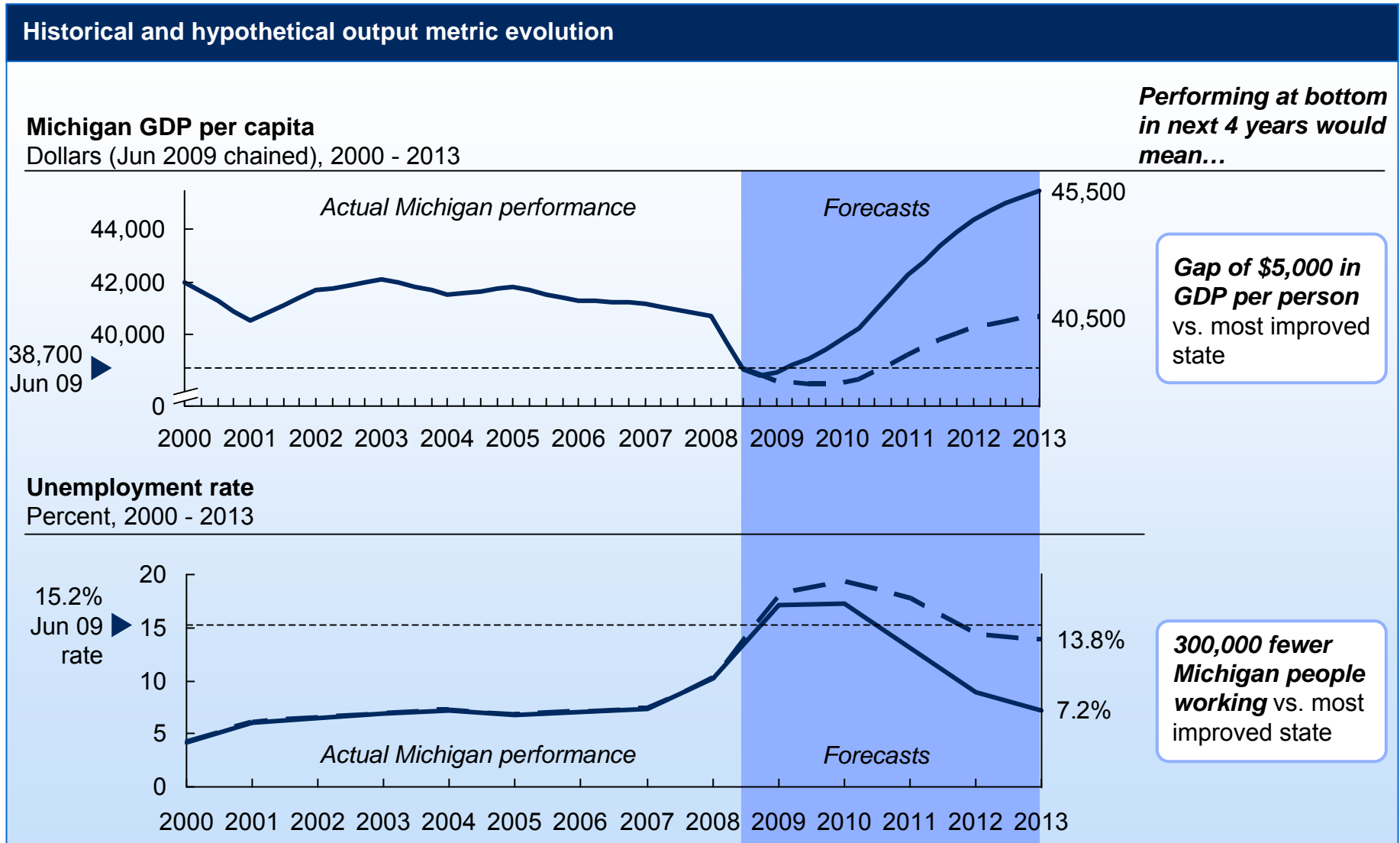
60% of US jobs came from companies with < 500 employees; 40% of Michigan job loss was from small and medium businesses



- Michigan mid-size businesses (100-500 employees) were only sectors with net job creation from 2001 - 2006

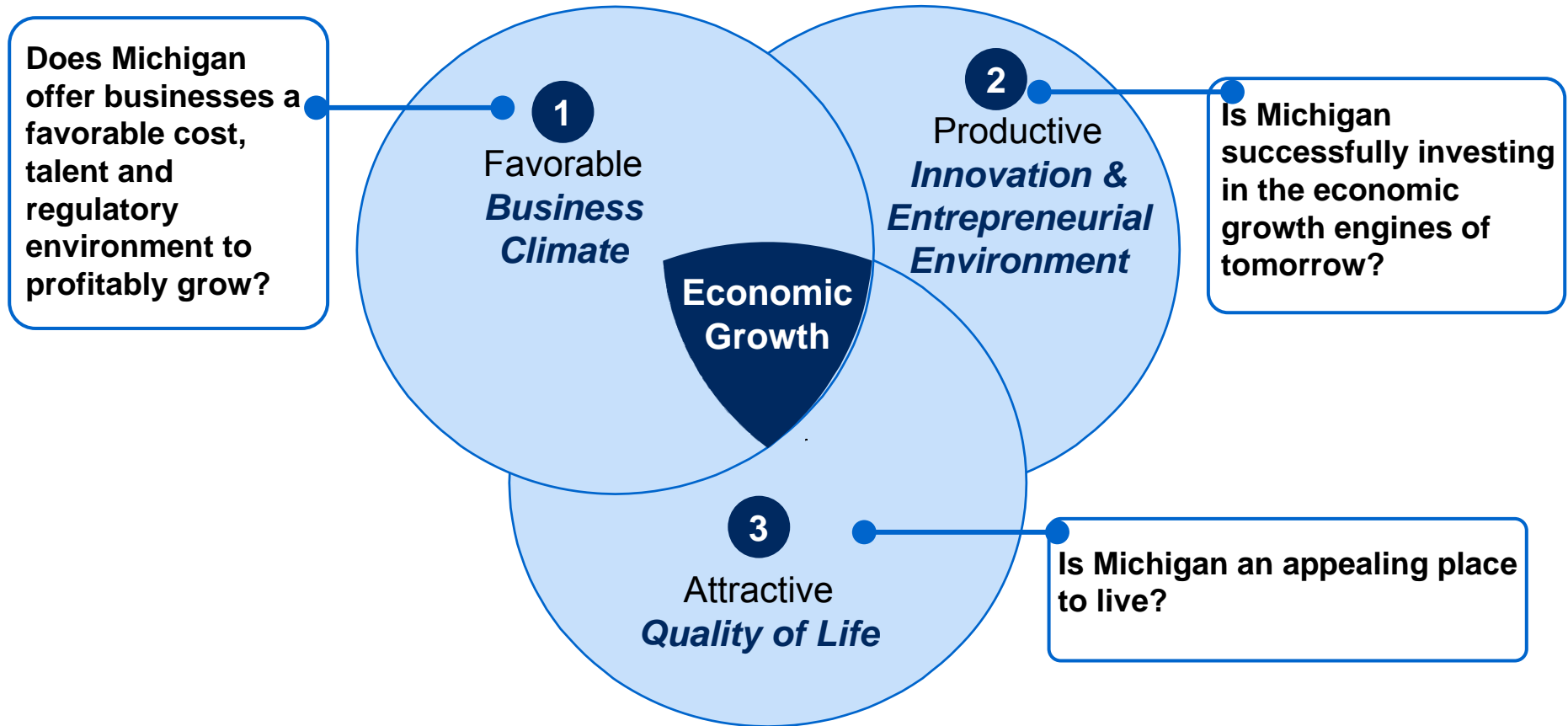
Michigan's path forward will have significant economic implications for its citizens

— Best¹
 - - Worst¹



¹ Best (worst) represents state improvement from June 2009 levels, as forecasted by Moody's
 SOURCE: Bureau of Labor Statistics; Bureau of Economic Analysis; Moody's Economy.com

Input benchmarks are organized around three key components of sustainable economic growth



Michigan is below average on most key site selection criteria

- Top quartile
- 2nd quartile
- 3rd quartile
- Bottom quartile

Site Consultant & Company Survey – “When evaluating sites, which factors are either very important or important¹.”
Percent of Respondents

Transportation, financial & labor factors (10 of 25 most important factors)		Michigan performance on key filtering metrics		Quartile
		Ranking out of 50 states (1=best)		
State & local incentives	96.1	State & local incentives ²	25	●
Highway accessibility	95.8	Commute time	29	●
Availability of skilled labor	94.9	% of population 25+ yrs w/ a bachelor's degree or higher	34	●
Energy availability & costs	90.7	Electricity cost	30	●
		Natural gas cost	28	●
Tax exemptions	89.9	Number and amount of tax exemptions ²	25	●
Occupancy & construction costs	87.1	Property tax ranking	25	●
Corporate tax rate	86.8	Corporate tax ranking	48	●
Proximity to major markets	86.3	Proximity to major markets ²	25	●
Availability of land	85.6	Availability of land ²	39	●
Labor costs	82.8	Labor wages	43	●

1 The survey question asked respondents to either rate the factor as (1) very important (2) important (3) minor consideration (4) of no importance

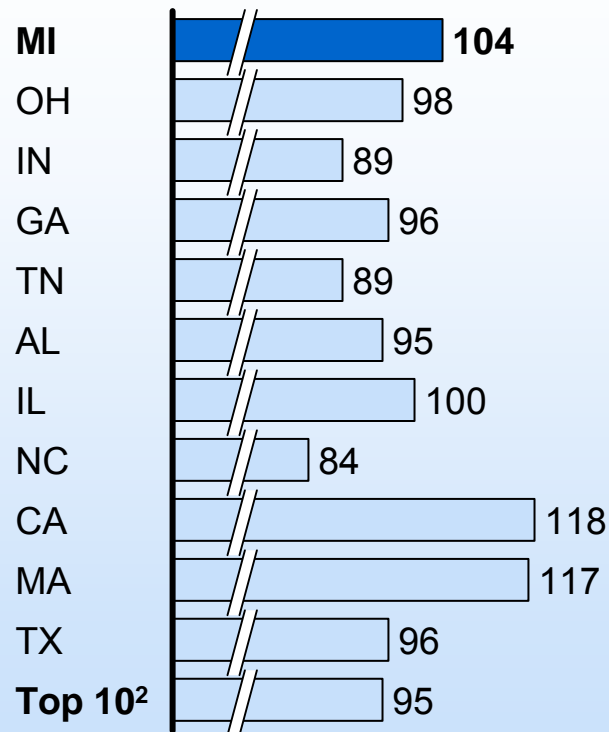
2 No formal ranking. Represents middle (ranking = 25) or bottom (ranking = 39) quartile based on site consultant interviews

SOURCE: Area Development annual company and site selection survey (2008); BLS; ACCRA; NCES; Tax Foundation; Census; NSF; Site consultant interviews

Michigan's cost of doing business creates disadvantage vs. traditional industry peers, and decision maker perceptions of Michigan are poor

Michigan has a significant cost disadvantage compared with traditional industry states

Cost of doing business index¹, 2006, US average = 100



... and senior executives and site consultants view Michigan's business climate near bottom of all states

CEO state rankings for jobs and business growth 2009

- 46. Massachusetts
- 47. New Jersey
- 48. Michigan**
- 49. New York
- 50. California

Site consultant and executive state rankings for 'perceived' business climate favorability 2009

- 46. Massachusetts
- 47. New Jersey
- 48. Michigan**
- 49. New York
- 50. California

*"Michigan and California literally need to do a 180 if they are ever to become competitive again... they are absolute regulatory and tax disasters" **CEO***

¹ Consists of 75% labor costs, 15% energy, 10% state/local taxes

² Top 10 states in per capita GDP growth, 00-08: ND, OR, SD, NY, VT, IA, MT, WY, NE, MD

SOURCE: North American Business Cost Review 2006, Moody's Economy.com; Chief Executive Magazine; Site Selection magazine

Cost of doing business is high relative to traditional industry peers

A Michigan's corporate tax climate remains among the bottom 5 states			B Michigan's electricity and gas prices rank in bottom half of states				C Unit labor cost in Michigan has improved slightly, but remains in bottom 10 among all states			
Corporate tax climate rank 1=best rank			Energy industrial price rank 1=lowest price				Unit labor cost rank 1=lowest cost			
State	2009 rank	2008 rank	State	Electricity		Natural gas		State	2007 rank	2006 rank
				2009	2008	2009	2008			
MI	48	49	MI	30	31	28	35	MI	43	46
OH	33	36	OH	27	24	48	39	OH	19	18
IN	23	22	IN	18	14	21	24	IN	6	6
GA	8	9	GA	24	30	37	29	GA	28	30
TN	12	13	TN	31	22	29	22	TN	7	8
AL	21	21	AL	21	23	25	18	AL	27	25
IL	28	28	IL	35	33	20	23	IL	42	45
NC	26	25	NC	17	15	41	31	NC	1	2

Tax environment creates disadvantage for businesses, particularly medium and large businesses paying corporate taxes

Michigan's corporate and unemployment tax climates are in bottom five states in the country

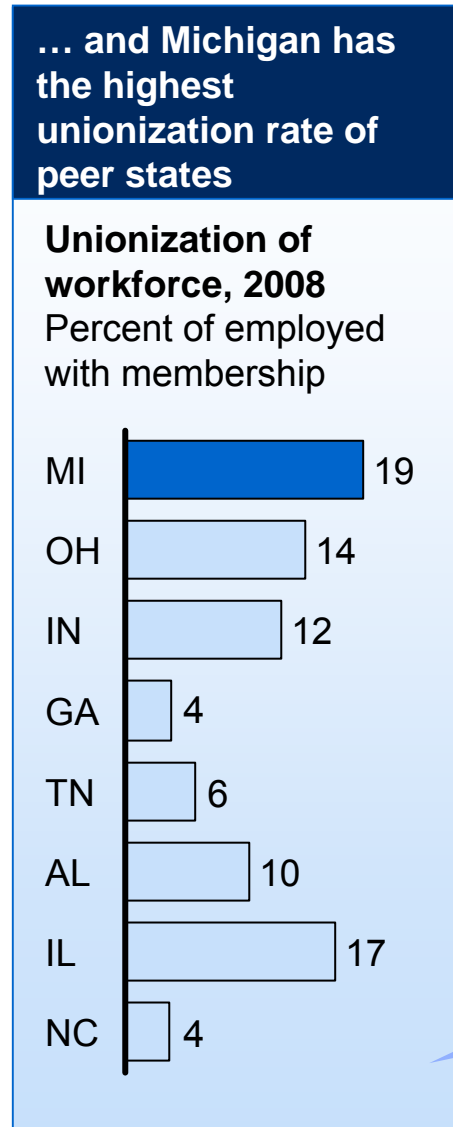
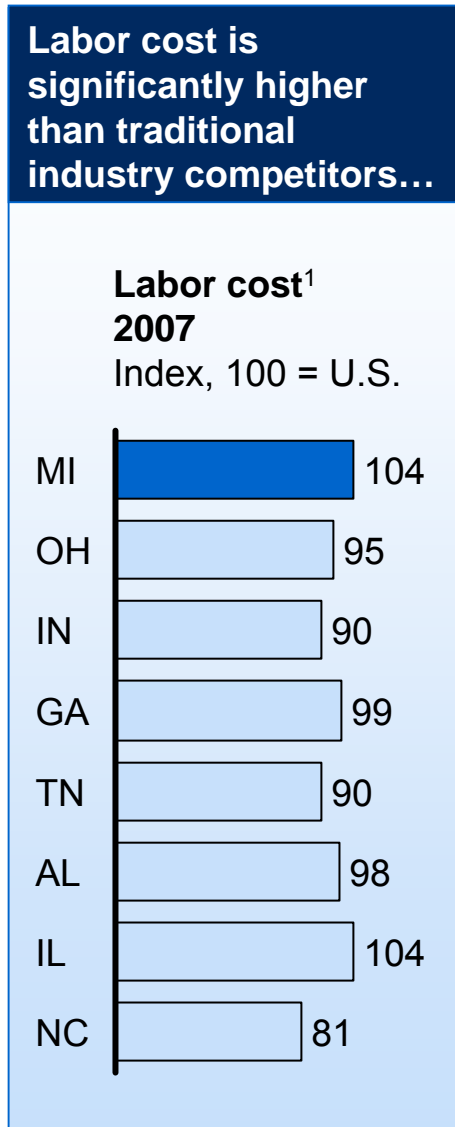
Components of business tax climate

2009 state rankings, 1=best rank

	Corporate tax	Property tax	Unemp. ins. tax	Sales tax	Personal income tax
MI	48	25	46	11	15
OH	33	46	15	36	47
IN	23	7	13	19	11
GA	8	36	20	16	30
TN	12	38	32	48	8
AL	21	13	14	33	17
IL	28	41	43	39	10
NC	26	37	6	38	37
CA	45	15	16	43	49
MA	47	44	49	9	16
TX	42	30	9	28	7

- **Michigan's corporate tax climate among worst in country**
- **Businesses which pay tax through individuals (e.g. sole proprietorships) have more favorable environment**

Per unit labor cost is high relative to traditional industry peers



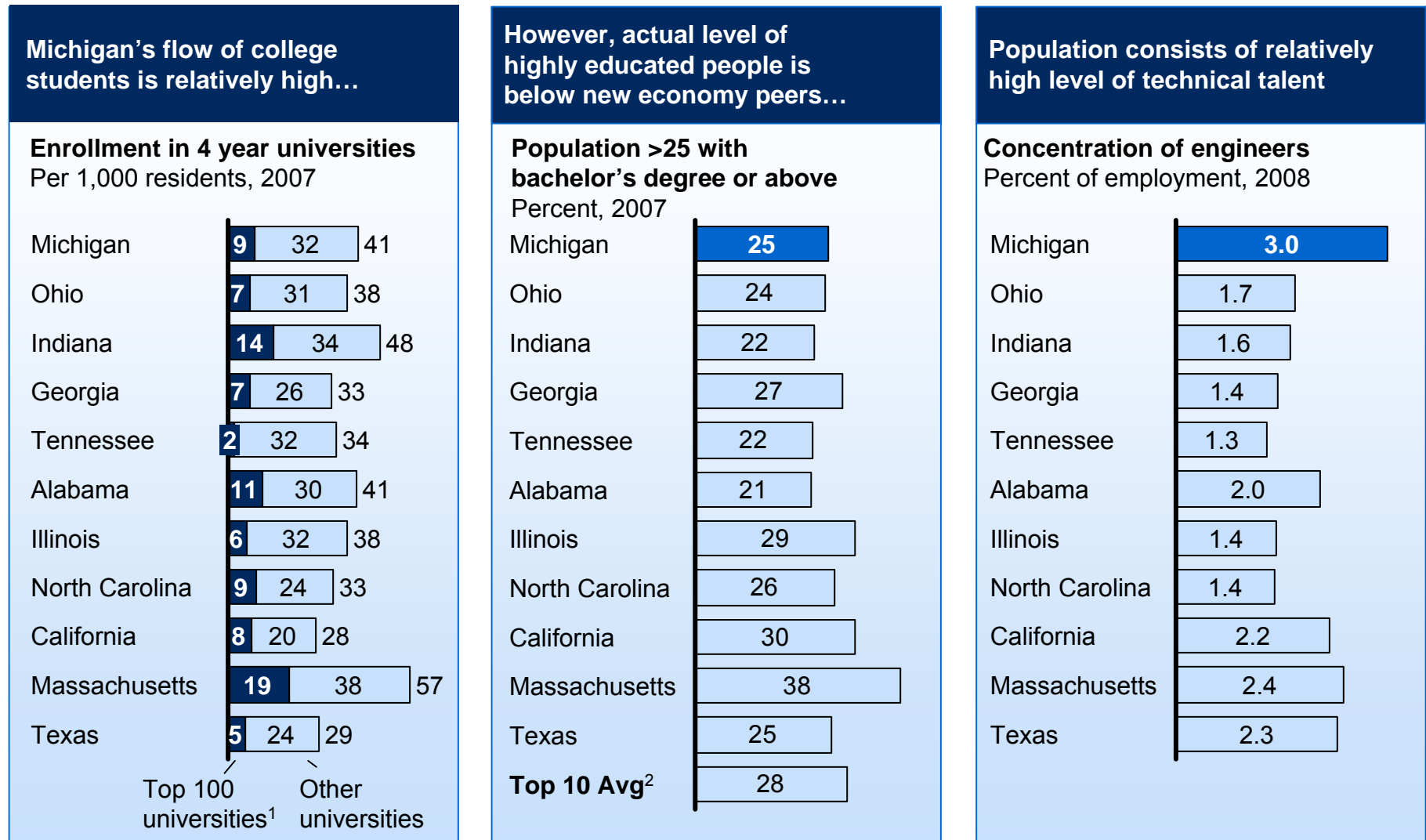
- Michigan has significantly higher labor unit cost than peer manufacturing states
- Unionization and “union stigma” drive negative perceptions of labor costs: many people believe cost to be higher than in reality

“Because of negative union perceptions, companies perceive labor costs higher than they are. Still, labor costs are 10-15% higher than for competing states”
Site consultant

¹ Labor cost is calculated as labor compensation per dollar of output. Labor compensation is measured as wages and salaries per employee while output is calculated as gross output per employee

SOURCE: Economy.com; American Community Survey; U.S. Census; Bureau of Labor Statistics; North American Business Cost Review, 2006; site consultant interviews

College enrollment in Michigan is strong, but actual level of graduates in population trails new economy peers



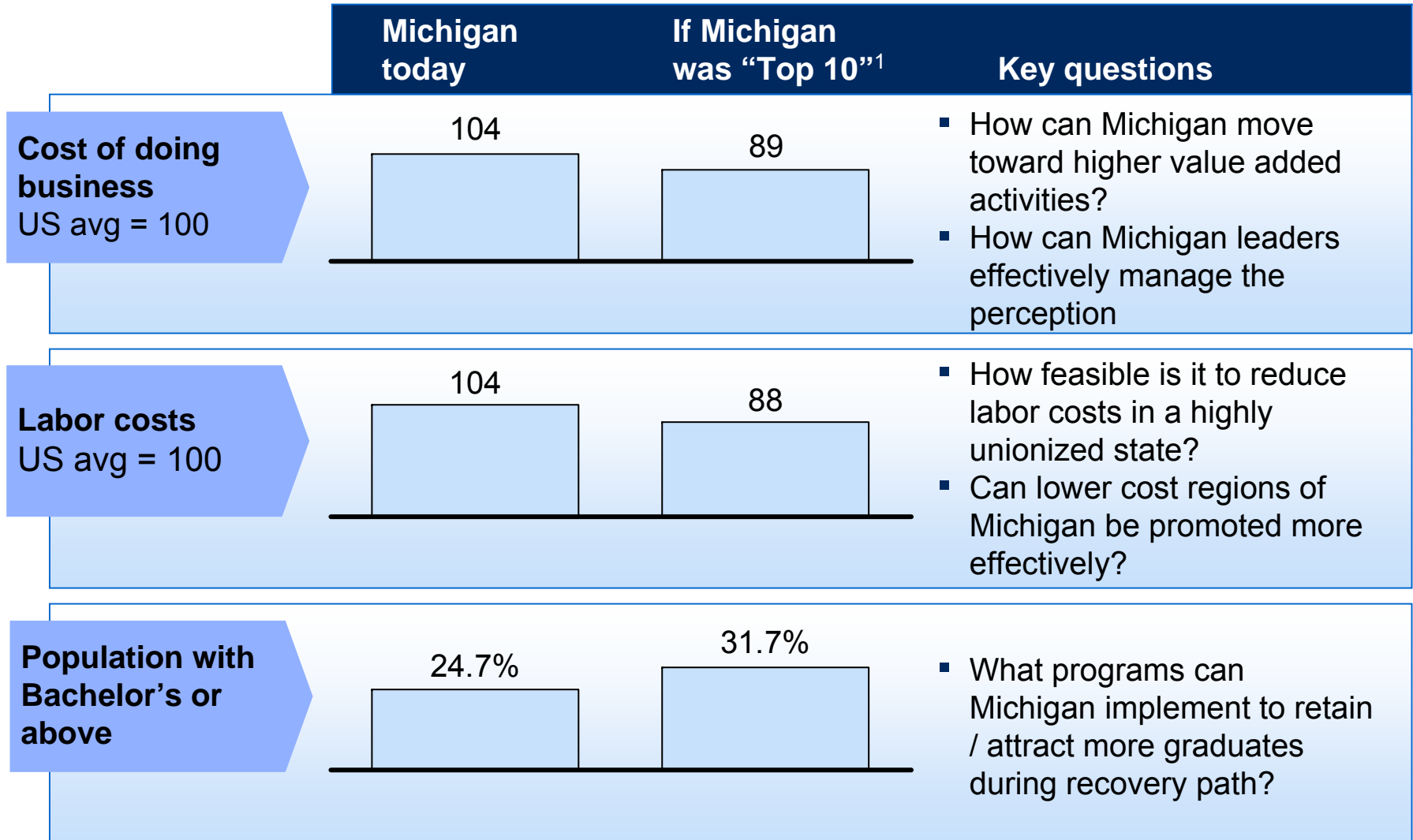
1 Universities that are Top 100 universities as defined by U.S. News & World Report

2 Average of the top 10 states in GDP per capita growth in 2000-2008 excluding HI (i.e., ND, OR, SD, NY, VT, IA, MT, WY, NE, MD)

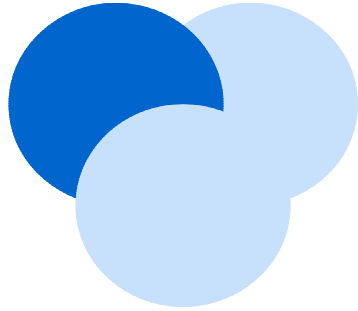
SOURCE: University websites; Bureau of Labor Statistics; American Community Survey, US Census

Improved cost and talent position would significantly impact Michigan's competitiveness

ESTIMATES



Summary: Michigan's *Business Climate* is hindered by a high cost of doing business, but rates favourably on many talent metrics



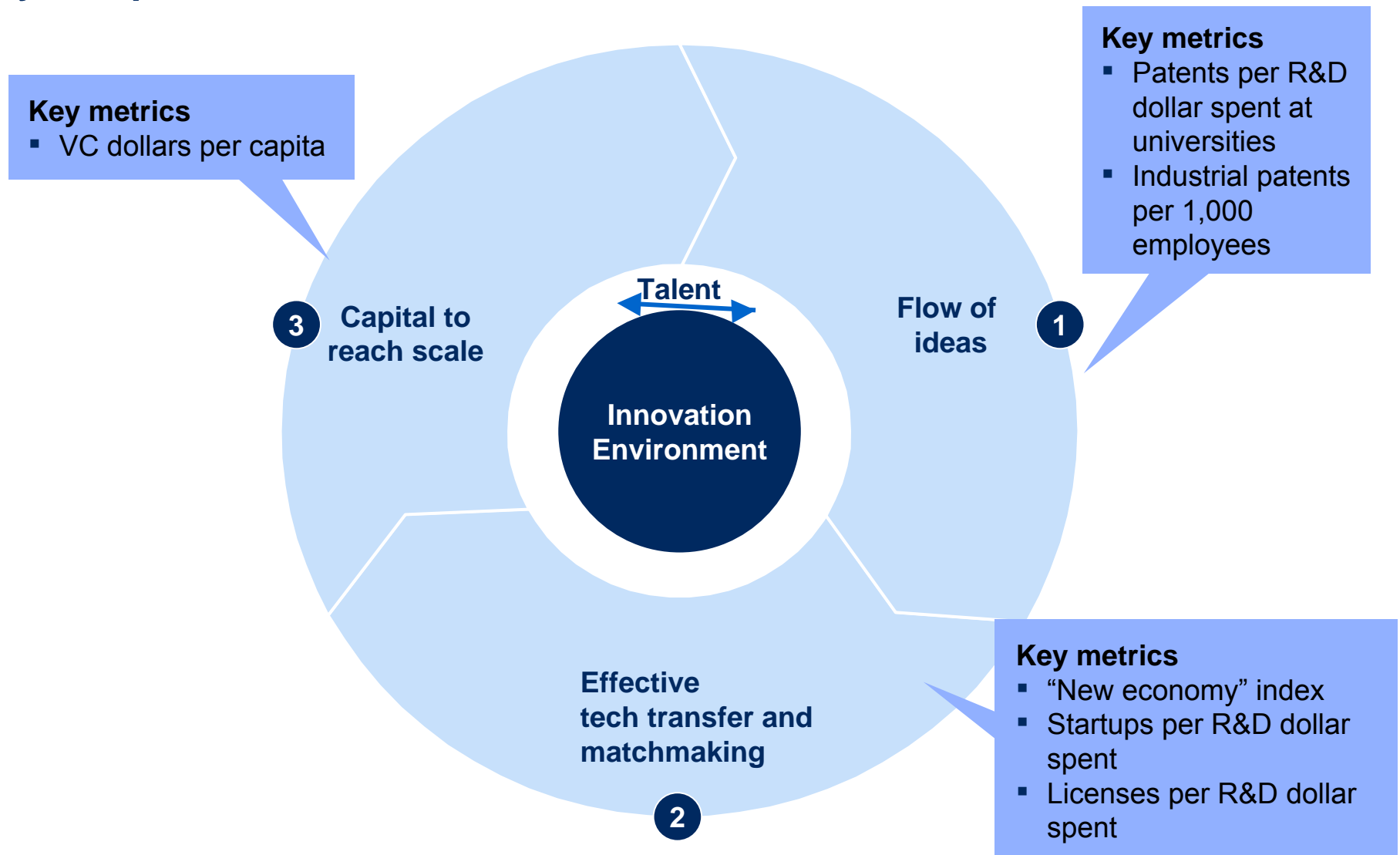
Business climate

Does Michigan offer businesses a favorable cost, talent and regulatory environment to profitably grow?

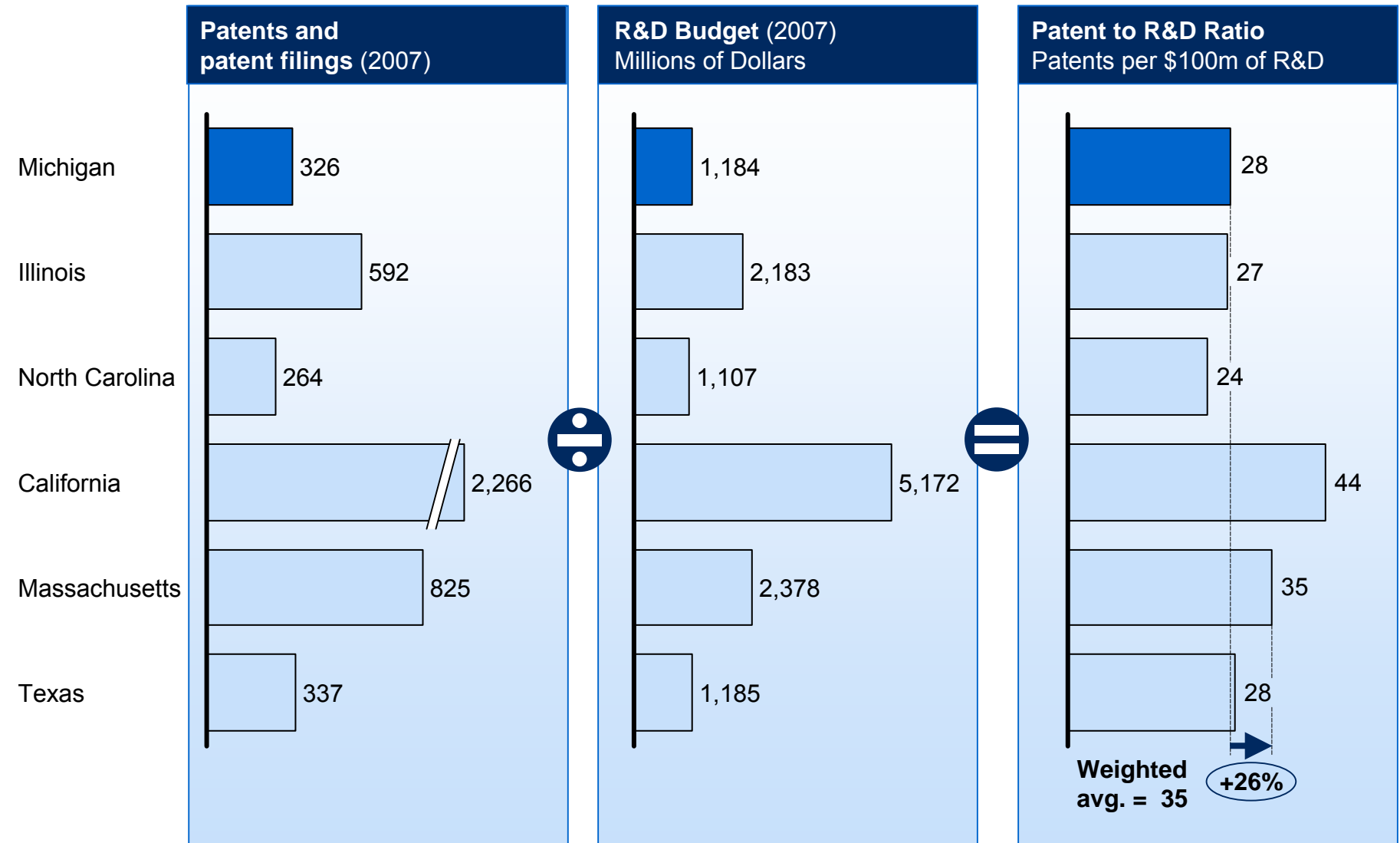
Key benchmarking findings

- Cost of doing business, driven by labor and tax rates, is 4% above the national average and 10-17% above most traditional industry benchmarks
- Michigan is ranked poorly (bottom 3 in nation) by executives and site selection decision makers in perception of business climate
- Michigan ranks 48th in corporate tax environment and 46th in property taxes
- Michigan has a flow of college graduates that is comparable with other knowledge-driven states, but the actual level of graduates trails competitors
- Michigan's portion of engineers in the workforce is the highest among all benchmark states

A thriving Michigan *Innovation & Entrepreneurial Environment* requires 3 key components

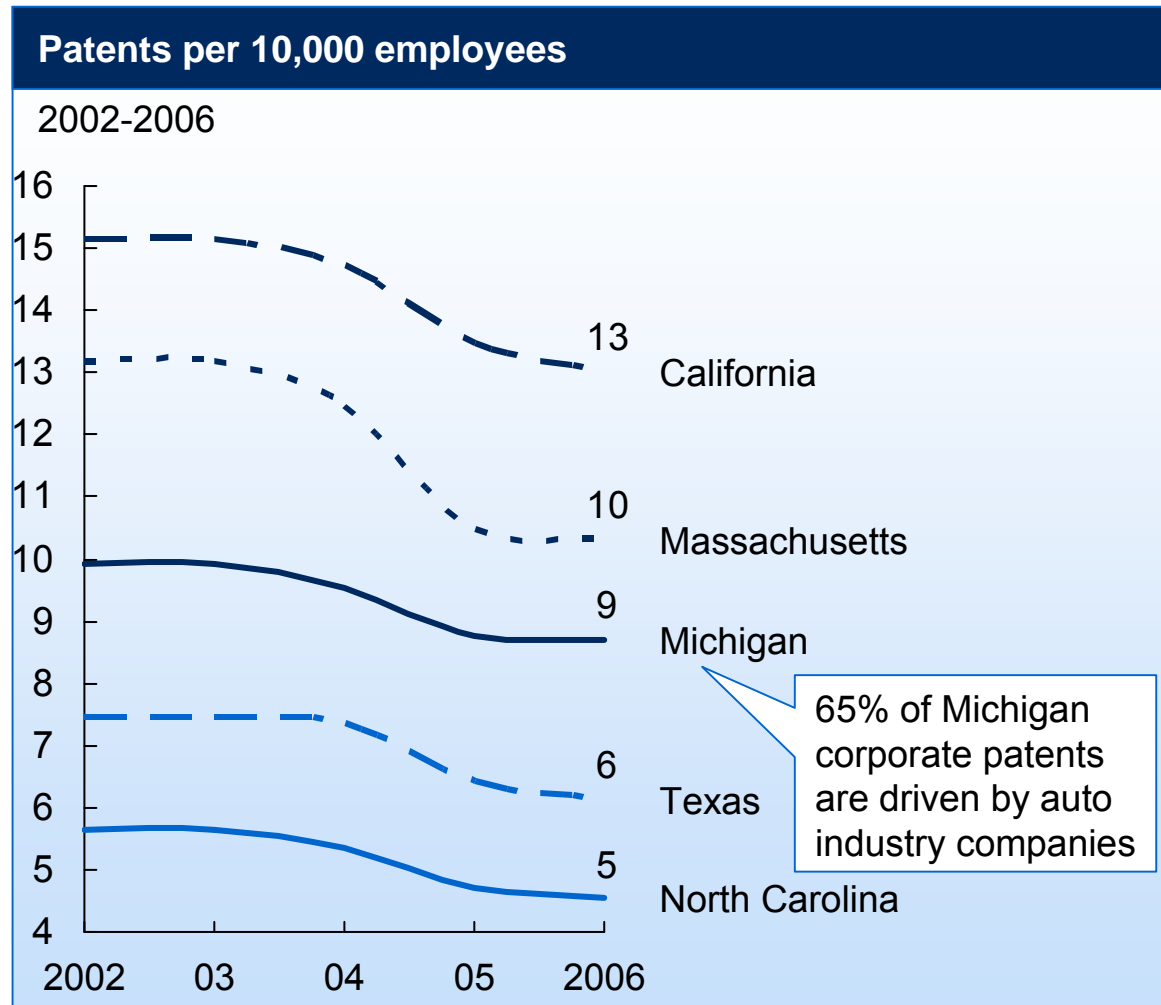


Michigan universities have slightly below average patent output based on R&D spending relative to selected peers



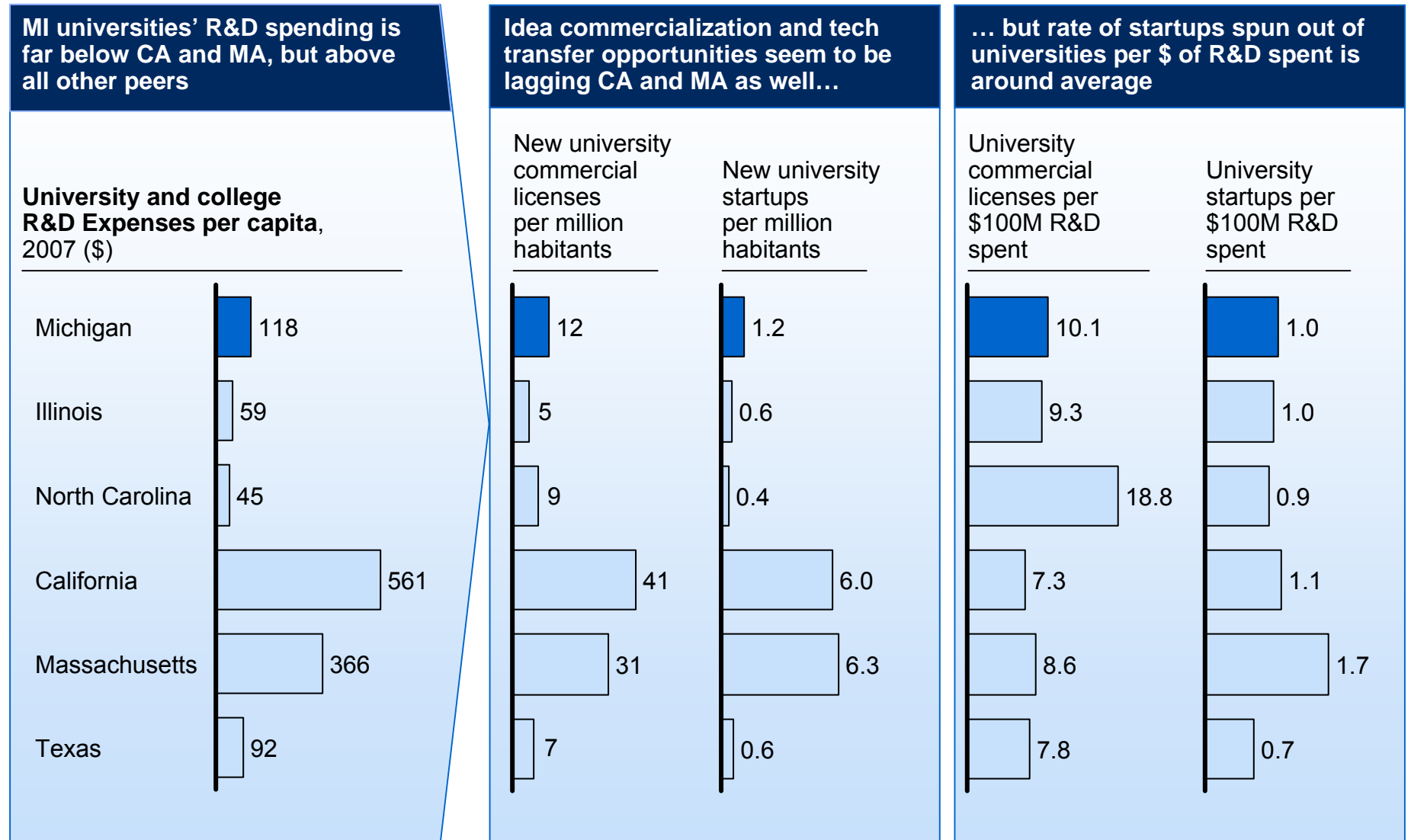
NOTE: Includes only Top 100 universities and colleges as defined by U.S. News & World Report
 SOURCE: AUTM University Licensing Survey (2007); McKinsey analysis

Michigan is performing fairly well in industrial innovation when compared to peers, but the innovation rate is slowing



- Michigan is ranked 10th overall for number of patents per employee
- Rate of patents per employee is deteriorating across all states, and trend has continued through recession

Michigan universities and colleges lag CA and MA in R&D spend & idea commercialization, but activity rate per dollar is in line with peers



NOTE: Includes only Top 100 universities and colleges as defined by U.S. News & World Report
 SOURCE: AUTM University Licensing Survey (2007); U.S. News; McKinsey analysis

Michigan shows some areas of strength in enabling entrepreneurship, but results have not yet materialized

Michigan's overall rank is 17 out of 50

The Information Technology & Innovation Foundation - State New Economy Rankings (2009)¹
Rank out of 50 (1 = best)

	Rank out of 50 1 = best			Rank out of 50 1 = best
E-Government	1		Broadband telecommunications	26
Industry investment in R&D	2		Migration of US knowledge workers	26
Heath IT	5		Internet domain names	28
Immigration of knowledge workers	8		Workforce education	28
Job churning	10		Export focus of manuf. & services	29
Foreign direct investment	11		Online population	30
Managerial, prof., tech. jobs	13		Entrepreneurial activity	30
Inventor patents	17		High-wage traded services	31
Total patents	17		"Gazelle Jobs"	31
High-tech jobs	17		Non-industry investment in R&D	32
Alternative energy use	18		Fastest growing firms	32
Online agriculture	19		IPOs	32
Scientists & engineers	20		Technology in schools	33
IT professionals	22		Venture capital	38
Manufacturing value-added	26			

Michigan's strengths are around creating the right environment to spur hi-tech knowledge work...

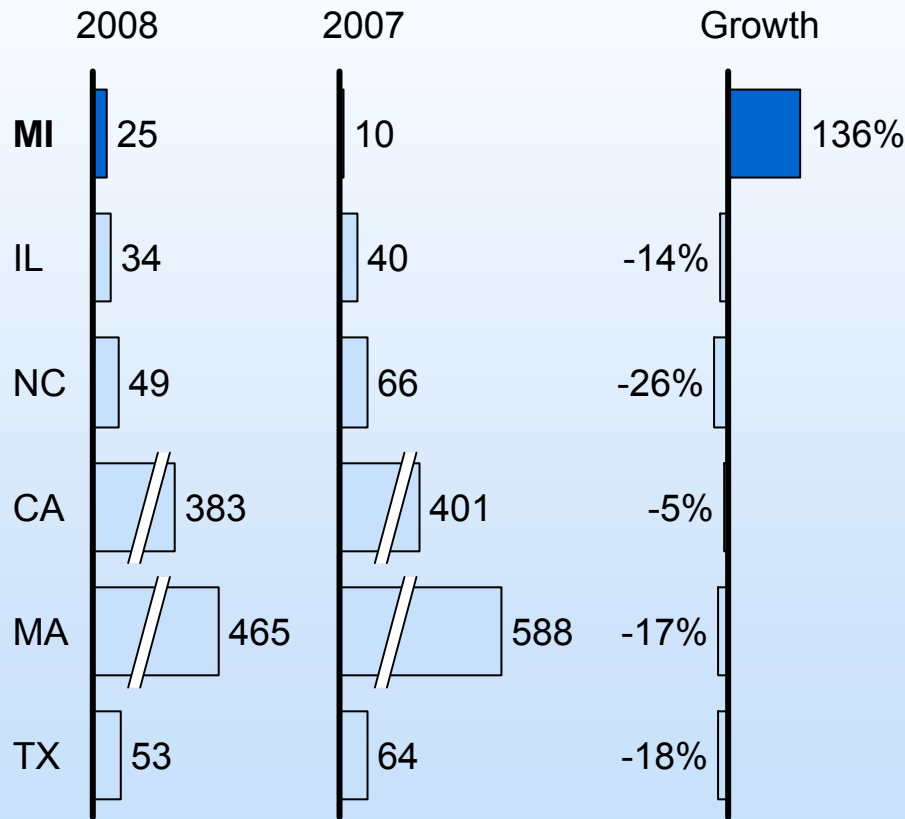
... However, the friendly environment has not yet translated into entrepreneurial activity

¹ Purpose of index is to measure the economic *structure* of states. Unlike some reports, which measure state economic performance or state economic policies, this report focuses more narrowly on a simple question: To what degree does the structure of state economies match the ideal structure of the New Economy?
SOURCE: The Information Technology & Innovation Foundation – State New Economy Scores (2009)

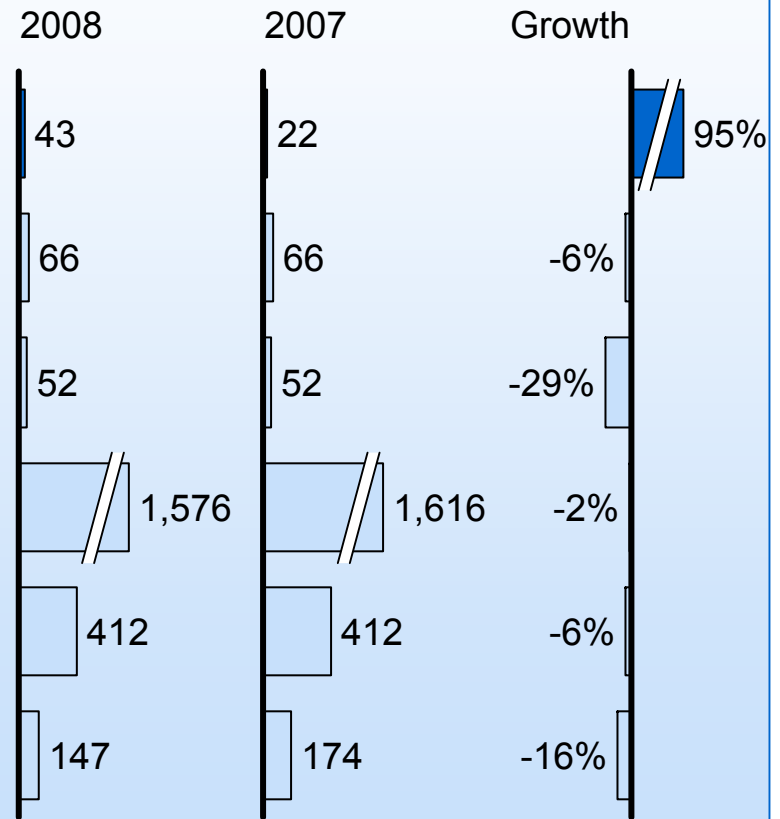
Limited availability of venture capital impedes ability of growth firms to reach scale & Michigan’s ability to attract / retain entrepreneurs

Michigan’s VC investment per capita jumped 135% in 2008 (driven by one \$160 million deal) but remains the lowest among peers and only a fraction of innovation hubs such as CA or MA

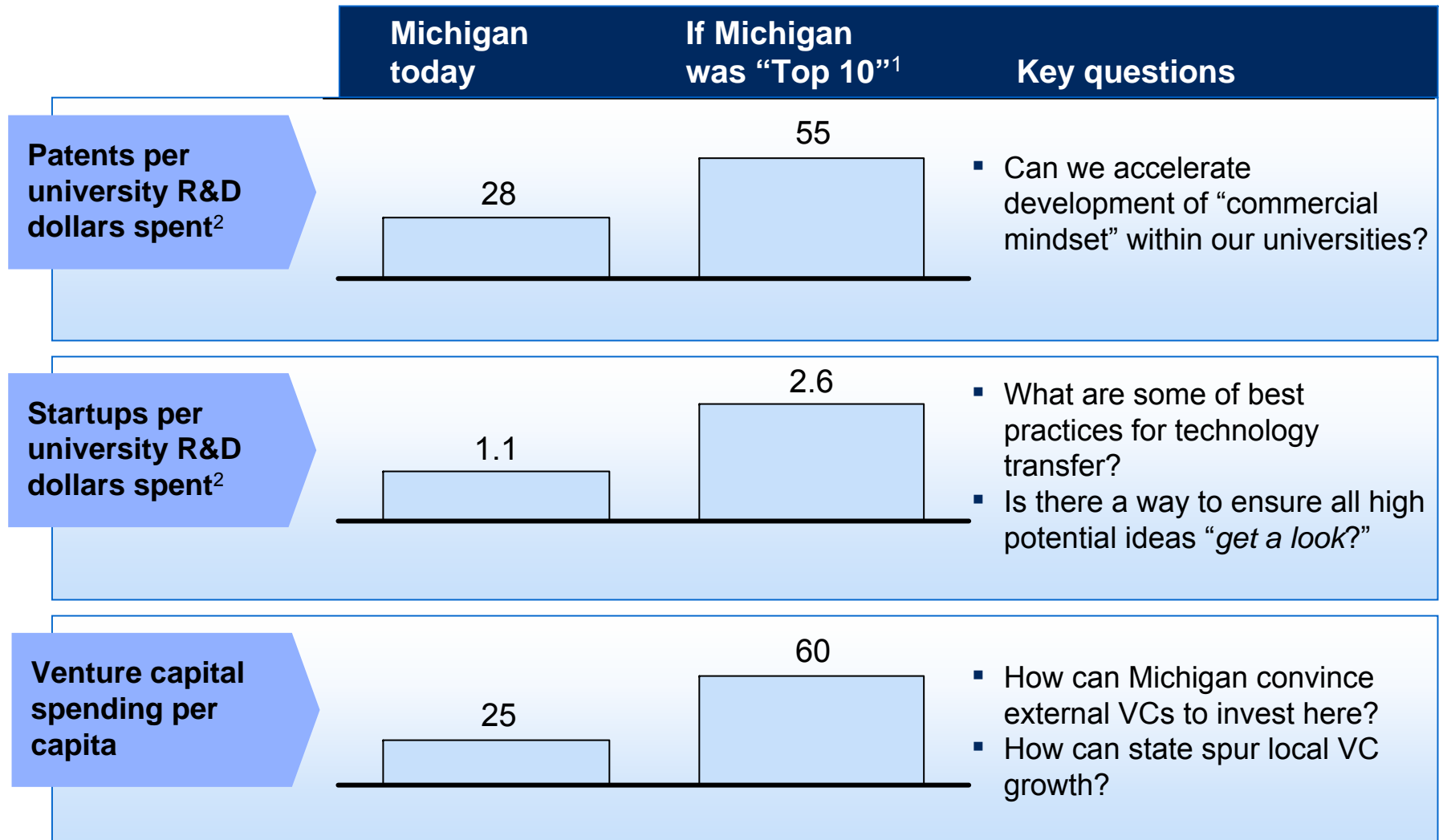
Venture capital investments per capita
Dollars per capita



Total venture capital deals per state
of deals



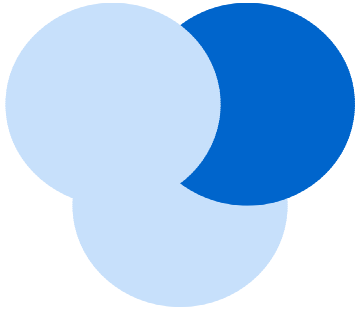
Moving to innovation & entrepreneurial environment leadership would entail significant increases in IP generated and venture capital investment



1 Aspiration to be a Top 10 state

2 For Michigan U of M and MSU are considered and compared to other universities with more than \$100M spent on R&D in 2007

Summary: Michigan's *Innovation Environment* lacks adequate capital, but institutions generate and commercialize IP relatively efficiently



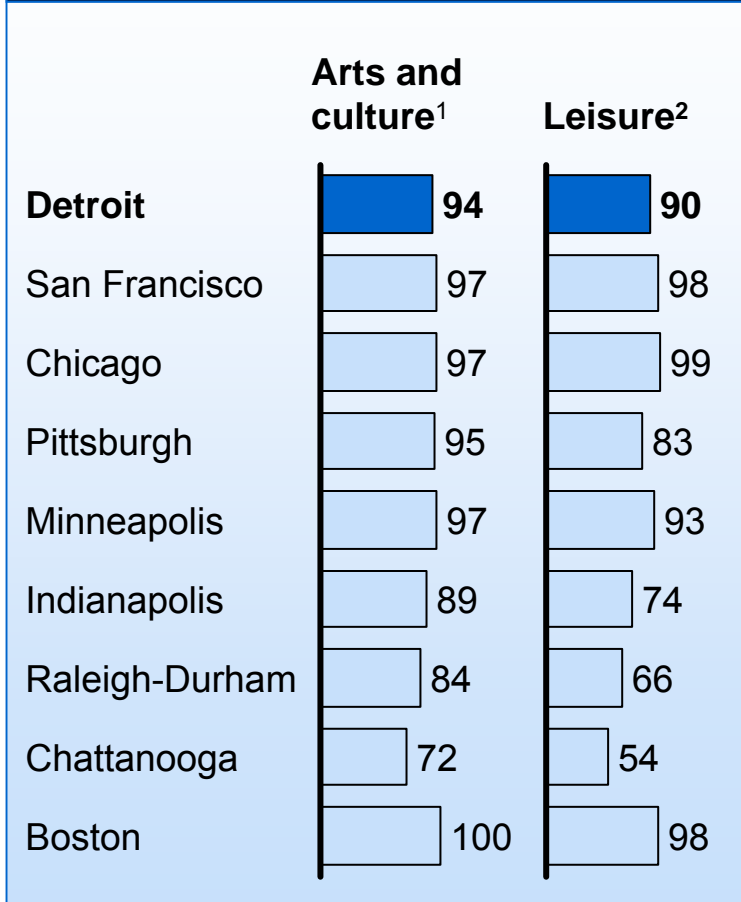
Innovation environment
Is Michigan successfully investing in the economic growth engines of tomorrow?

Key benchmarking findings

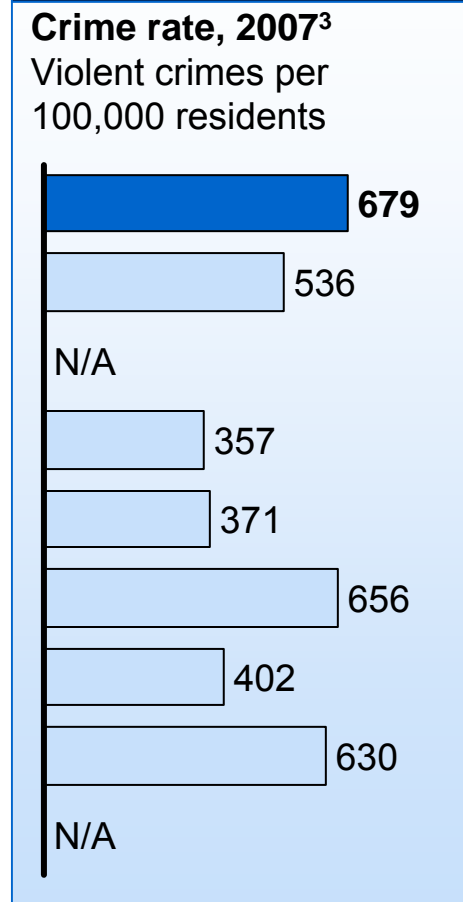
- Michigan lags behind new economy leading states like CA and MA in patents generated, but is comparable with other benchmarks like NC & TX
- Michigan universities are effective in converting intellectual property into start-up businesses, although sheer volume of new companies spun from universities trails new economy leaders
- Michigan ranks well in several “New Economy” indicators like eGovernment, but actual entrepreneurial activity has not yet materialized at scale
- Although increasing, Michigan trails new economy leaders significantly in per capita venture capital investment

Although Detroit's cultural and leisure offering is comparable to top cities, crime rates and quality of life damage attractiveness

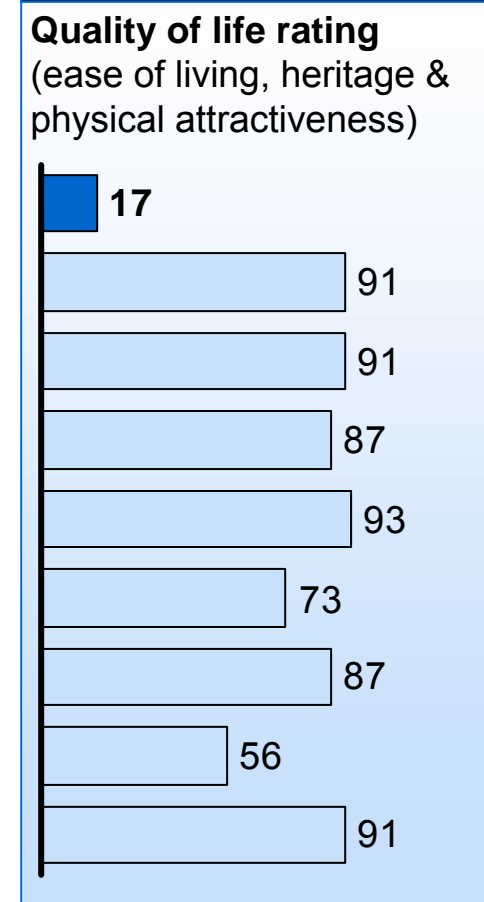
Detroit's scores in arts, culture and leisure in ranges of top US cities



Detroit's crime rate is high relative to most cities



Detroit's quality of life rates very poor



1 Score based on weighted scores of museum ratings, professional performing arts (e.g., classical music and theater) ratings, and library facilities ratings

2 Score based on weighted availability of outdoor sports, amusements (zoos, aquariums, amusement parks), national parks and coastline, professional or college-level spectator sports, and shopping

3 The rate for Minneapolis is from 2006; Chicago is not included because the data is not at MSA level and, thus, difficult to compare

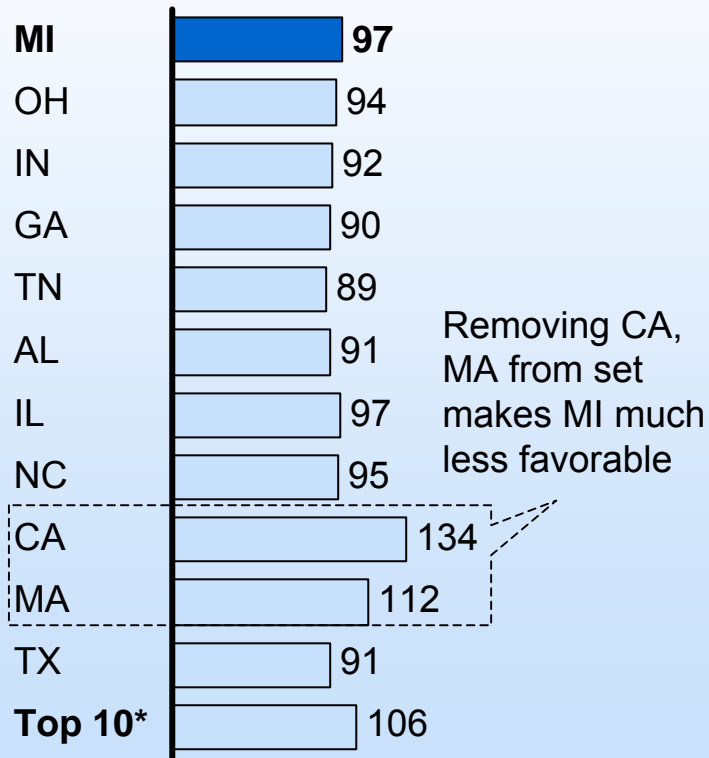
SOURCE: Cities Ranked and Rated, 2007; FBI Crime in the US 2007

Michigan cost of living is favorable, especially compared to the “new economy” competitors

The overall cost of living is above the traditional industry competitors but in line or below the “new economy” benchmark states

Cost of living index

100 = US average, 2009 (Q1)

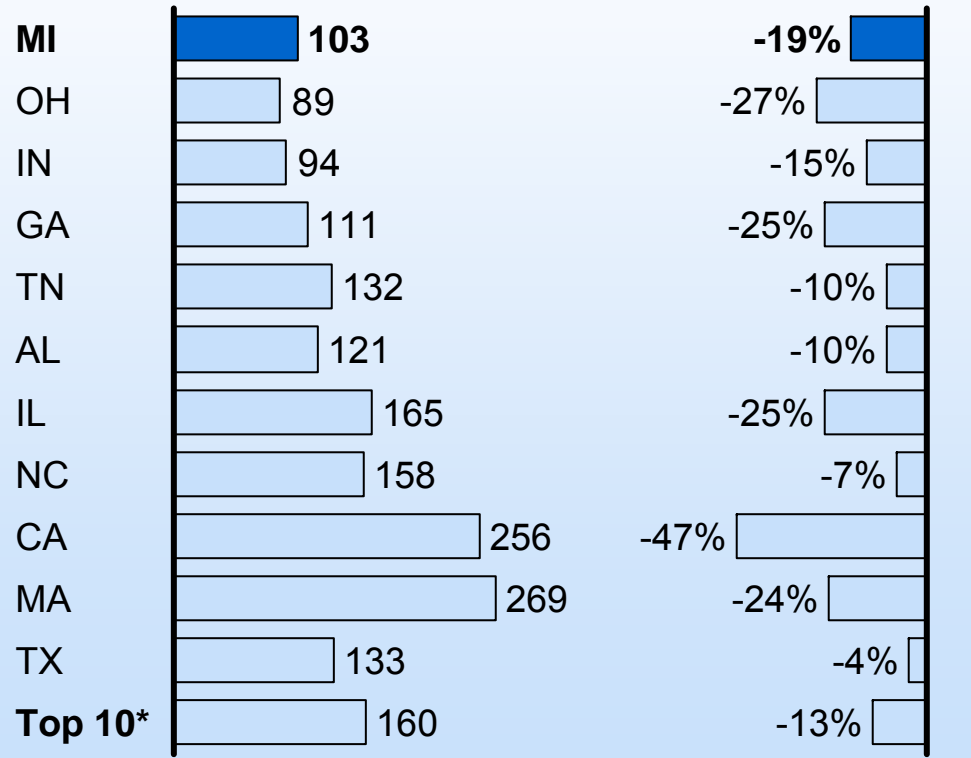


Housing prices are more affordable than in most competitor states and significantly cheaper than in the “new economy” competitors

Median existing home sales price

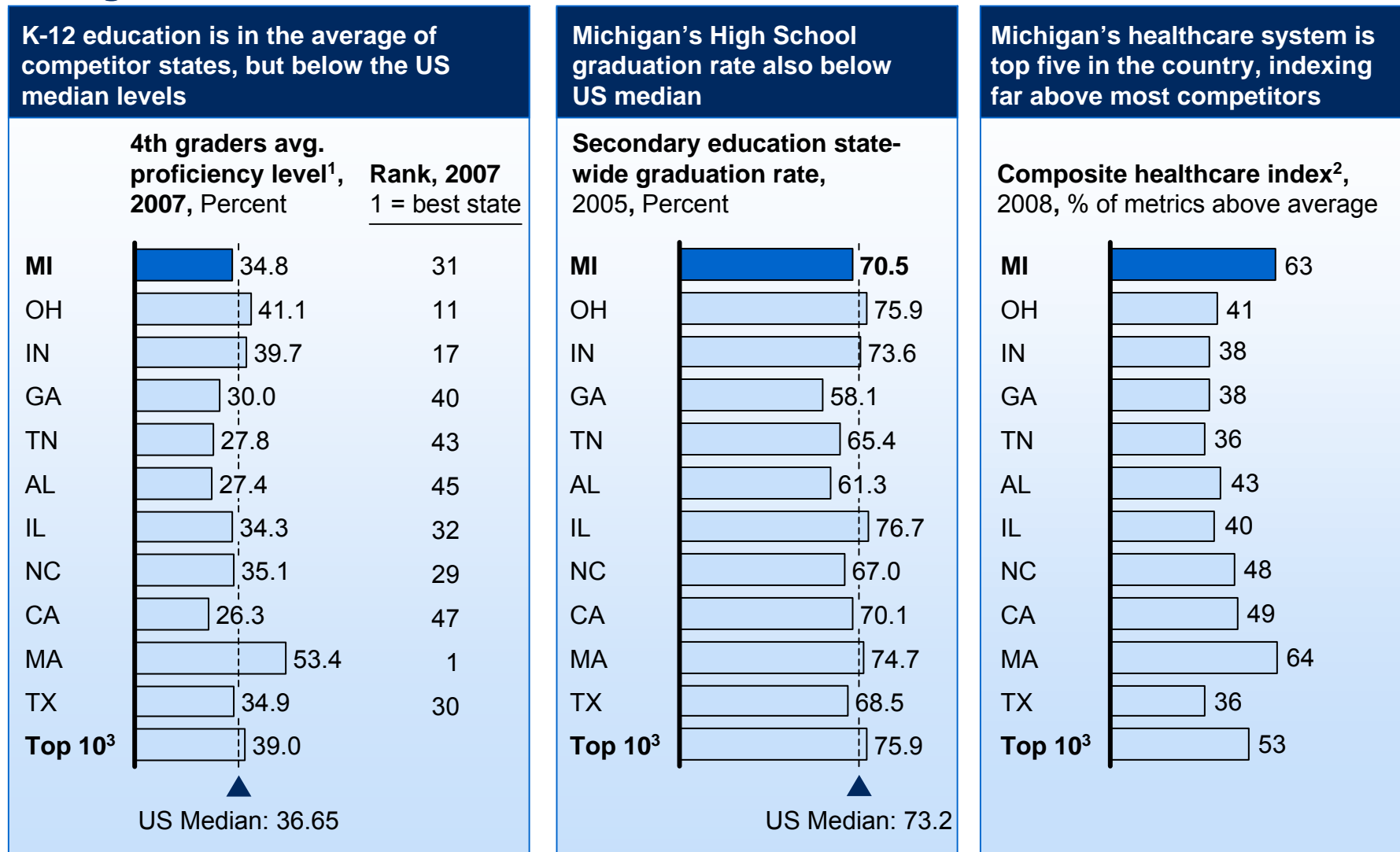
\$ Thousands, 2009 (Q1)

Percent change from 2007



* Average of the top 10 states in GDP per capita growth between 2000 and 2008 excluding HI (i.e., ND, OR, SD, NY, VT, IA, MT, WY, NE, MD)
 SOURCE: ACCRA; National Association of Realtors: Real Estate Outlook; Moody's Economy.com;

Michigan underperforms in education, but has healthcare system rating is among nations best



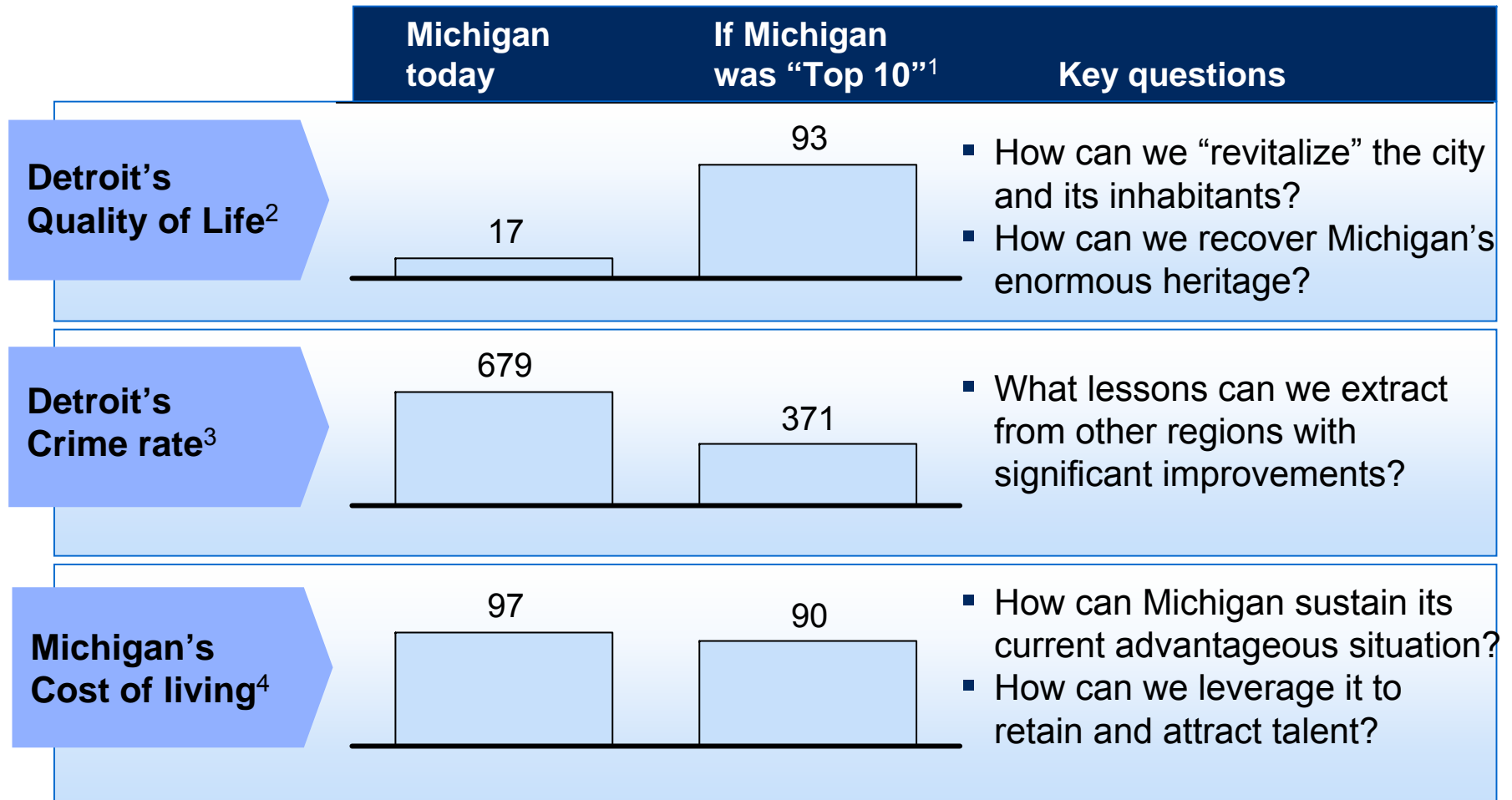
1 Defined as the average of 4th graders at or above proficiency in mathematics and in reading

2 Healthcare performance index is an aggregated calculation based on effectiveness of care for diseases, patient safety, timeliness, and patient centeredness. The rating is the percentage of metrics where the state score was above the US average

3 Average of the top 10 states in GDP per capita growth between 2000 and 2008 excluding HI (i.e., ND, OR, SD, NY, VT, IA, MT, WY, NE, MD)

3 – Quality of Life

Improving quality of life in Michigan and Detroit would have a significant impact on attracting and retaining talent



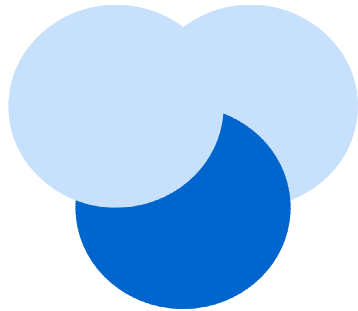
¹ For quality of life and crime rate, Detroit's aspiration is to attain the levels of Minneapolis, the top Midwest city in these metrics and a top ten nation-wide. For cost of living, the aspiration is to be a top 10 state

² Score based on ease of living, heritage, and physical attractiveness

³ Number of violent crimes per 100,000 residents

⁴ As a percent of US average

Summary: Michigan's Quality of Life is perceived to be very poor, but several key fundamentals stack up well with benchmark states



Quality of Life

Is Michigan an appealing place to live?

Key benchmarking findings

- Detroit has a very low perceived quality of life, driven by low scores on ‘ease of living’ and physical attractiveness
- Michigan (and Detroit) crime rates are worse than peer states and cities
- K-12 proficiency and high school graduation rates exceed most Southern traditional industry benchmarks, but trail neighboring states and new economy peers
- However, many quality of life fundamentals are strong, e.g.,
 - Michigan’s cost of living is 3% below the national average (although 5-8% above most traditional industry peers)
 - Detroit’s ratings on “Arts and Culture” and “Leisure” are on par with comparable cities
 - Michigan’s healthcare system rates favorably with all peers