

Economic Forecast for the State of Michigan

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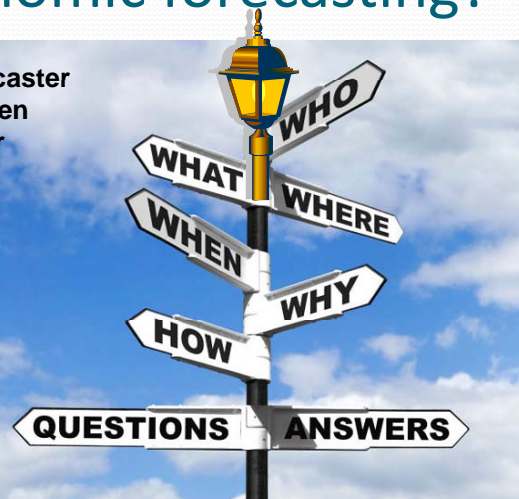


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MLGMA Summer Workshop

What is economic forecasting?

"An unsophisticated forecaster uses statistics as a drunken man uses lamp-posts - for support rather than for illumination."

--After Andrew Lang



Presentation Content

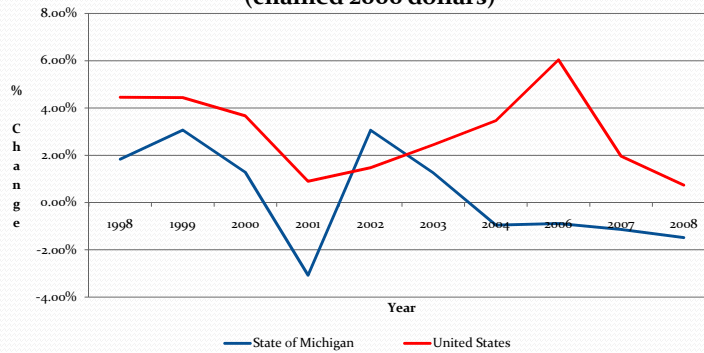
- What is “coupling” and “decoupling” in the context of regional economic comparisons?
- Change in Real GDP over Time
 - Michigan vs. United States
- Focus on Employment Forecasts and GDP Comparisons by North American Industry Classification System (NAICS) Codes
 - Michigan vs. United States
- What is next?

What is “Coupling” & “Decoupling”?

- When comparing two large economic systems, such as a nation and a state, we want to understand whether the smaller system expands or contracts as a result of the larger system expanding and contracting.
- Examples:
 - If Michigan grows or contracts in a particular industry as a result of expansion or contraction in the U.S. economy, they are said to be **coupled** in that industry.
 - If a Michigan industry grows while the same industry contracts at the national level, we likely have a competitive advantage in that industry, and are said to be **decoupled**.
 - Michigan is also decoupled from an industry in the opposite case, but Michigan would have a competitive **disadvantage**.

Change in Real GDP Over Time

Annual Percent Change in Real GDP, 1998-2008
(chained 2000 dollars)



Source: Bureau of Economic Analysis, U.S. Department of Commerce

Unemployment



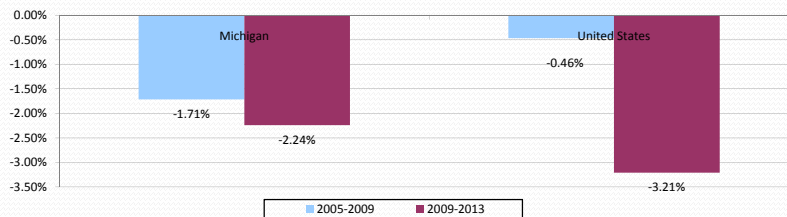
Unemployment

Even if Michigan began growing immediately at the rapid rate it did in the 1990s, it still would take until 2025 or 2030 before it replaced all the jobs that were lost this decade.

Beyond California: States in Fiscal Peril. Pew Center on the States. 2009.

Agriculture, Forestry, Fishing and Hunting Employment and GDP in Michigan and the U.S.

Percent Change in Agriculture, Forestry, Fishing and Hunting Employment for the U.S. and Michigan, 2005-2013 (Actual and Forecast).

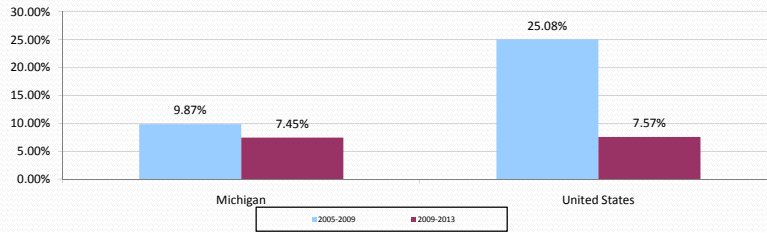


Source: BLS, 2009 and Economic Modeling Specialists, 2010

- Between 2005 and 2009, employment in the agriculture, forestry, fishing and hunting sector decreased at both the state and national levels, suggesting a negative industry coupling between the state and nation.
- Forecasted employment for the nation and state between 2009-2013 show further expected employment declines for each, again suggesting the negative coupling of state and national industry growth or decline.
- Real GDP in the agriculture, forestry, fishing and hunting sector is shown to be more volatile in annual percent change at the state level than the nation as a whole (BEA, 2010).

Mining Employment and GDP in Michigan and the U.S.

Percent Change in Mining Employment for the U.S. and Michigan, 2005-2013 (Actual and Forecast).

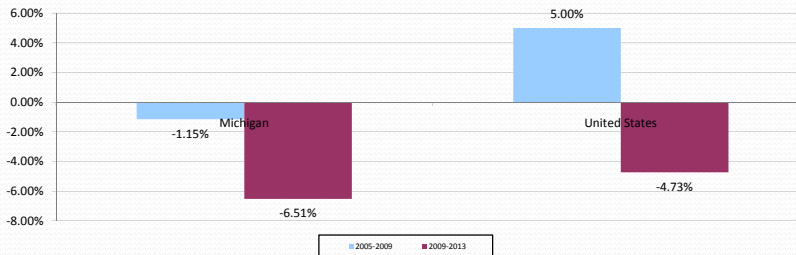


Source: BLS, 2009 and Economic Modeling Specialists, 2010

- Between 2005 and 2009, employment in the mining sector increased at both the state and national levels, suggesting an industry coupling between the state and nation.
- Forecasted employment for the nation and state between 2009-2013 show further expected employment increases for each, suggesting a positive coupling between nation and state.
- Real GDP in the mining sector is shown to be more volatile in annual percent change at the state level than the nation as a whole (BEA, 2010).

Utilities Employment and GDP in Michigan and the U.S.

Percent Change in Utilities Employment for the U.S. and Michigan, 2005-2013 (Actual and Forecast).

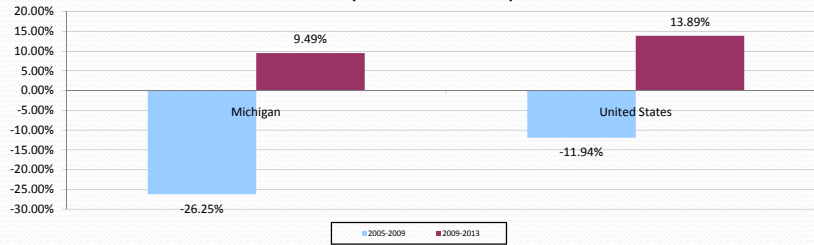


Source: BLS, 2009 and Economic Modeling Specialists, 2010

- Between 2005 and 2009, employment in the utilities sector decreased at the state level while increasing at the national levels, suggesting industry decoupling between the state and nation.
- Forecasted employment for the nation and state between 2009-2013 shows expected decreases in employment for the state and nation, suggesting future coupling in state and national industry decline in the utilities sector.
- Real GDP in the utilities sector at the state and national level have trended together for the most part over the past 10 years (BEA, 2010).

Construction Employment and GDP in Michigan and the U.S.

Percent Change in Construction Employment for the U.S. and Michigan, 2005-2013 (Actual and Forecast).

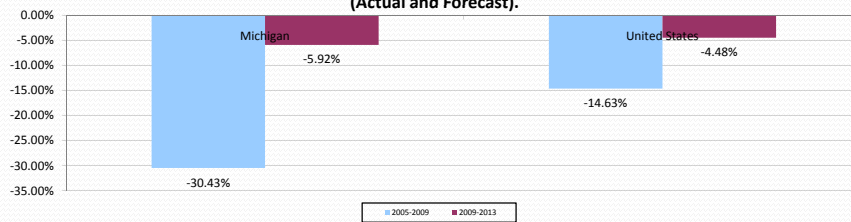


Source: BLS, 2009 and Economic Modeling Specialists, 2010

- Between 2005 and 2009, employment in the construction sector decreased at the state level and national level, suggesting a negative industry coupling between Michigan and the nation.
- Forecasted employment for the nation and state between 2009-2013 show expected industry revival, suggesting continued coupling, but in a positive form.
- Real GDP in the construction sector at the state and national level have trended negatively together for the most part over the past 10 years, yet the negative dips in the Michigan's economy are much deeper (BEA, 2010).

Manufacturing Employment and GDP in Michigan and the U.S.

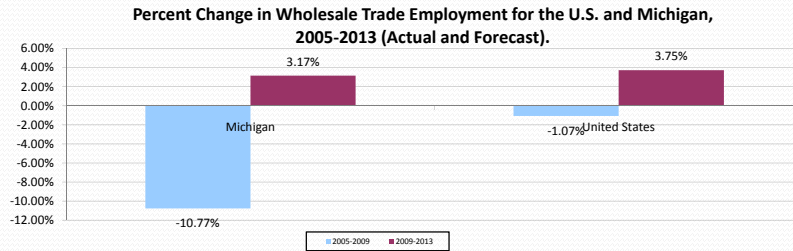
Percent Change in Manufacturing Employment for the U.S. and Michigan, 2005-2013 (Actual and Forecast).



Source: BLS, 2009 and Economic Modeling Specialists, 2010

- Between 2005 and 2009, employment in the manufacturing sector decreased at the state level and at the national level, with relative losses much higher in Michigan, suggesting an industry coupling for Michigan and the nation with heavier reliance on the industry from Michigan.
- Forecasted employment for the nation and state between 2009-2013 shows further job losses in Michigan and the U.S., with higher relative losses at the state level, suggesting continued coupling and the impacts of a greater reliance on this industry at the state level.
- Real GDP in the manufacturing sector at the state and national level have trended positively and negatively together for the most part over the past 10 years, yet the volatility for Michigan's economy tends to be much greater (BEA, 2010).

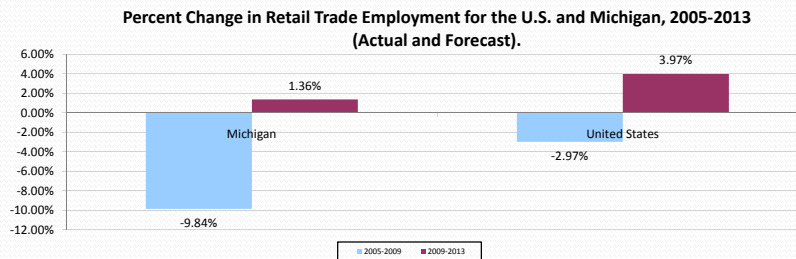
Wholesale Trade Employment and GDP in Michigan and the U.S.



Source: BLS, 2009 and Economic Modeling Specialists, 2010

- Between 2005 and 2009, employment in the wholesale trade sector decreased at the state and national levels, suggesting an industry coupling for Michigan and the nation.
- Forecasted employment for the state between 2009-2013 shows recovery in the wholesale trade sector, further suggesting the industry is coupled at the state and national levels.
- Real GDP in the wholesale trade sector at the state and national level have trended together very tightly over the past ten years. During this time, Michigan has tended to have harder hits and smaller gains on its GDP during times of contraction and expansion, respectively (BEA, 2010).

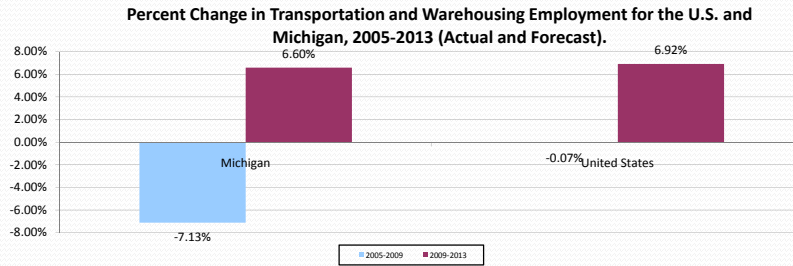
Retail Trade Employment and GDP in Michigan and the U.S.



Source: BLS, 2009 and Economic Modeling Specialists, 2010

- Between 2005 and 2009, employment in the retail trade sector decreased at the state and national level, suggesting an industry coupling for Michigan and the nation.
- Forecasted employment for the state between 2009-2013 shows job increases at the state and national levels, suggesting the industry is reviving and continues to be coupled.
- Real GDP in the retail trade sector at the state and national level have trended together very tightly over the past ten years. During this time, Michigan has tended to have harder hits and smaller gains on its GDP during times of contraction and expansion, respectively (BEA, 2010).

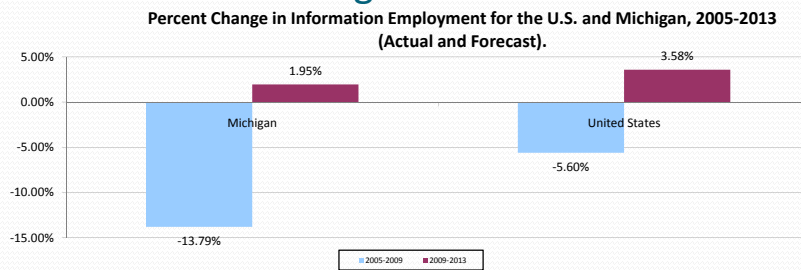
Transportation & Warehousing Employment and GDP in Michigan and the U.S.



Source: BLS, 2009 and Economic Modeling Specialists, 2010

- Between 2005 and 2009, employment in the transportation and warehousing sector decreased at the state level while staying relatively steady at the national level.
- Forecasted employment for the state and the nation between 2009-2013 show similar job growth rates, suggesting the industry is coupling between state and nation.
- Real GDP in the transportation and warehousing sector at the state and national level have trended together for the most part over the past ten years, further suggesting that the industries are coupled in growth and decline (BEA, 2010).

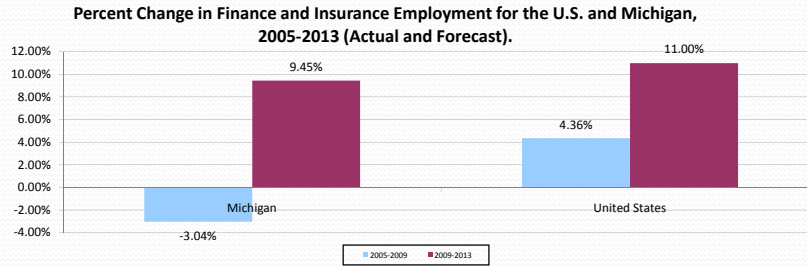
Information Employment and GDP in Michigan and the U.S.



Source: BLS, 2009 and Economic Modeling Specialists, 2010

- Between 2005 and 2009, employment in the information sector decreased at the state and national levels, suggesting industry coupling between state and nation.
- Forecasted employment for the state and the nation between 2009-2013 show similar job growth rates, further suggesting the information industry is coupled between state and nation.
- Real GDP in the information sector at the state and national level have trended together in steady growth for the most part over the past ten years, further suggesting that the industries are coupled (BEA, 2010).

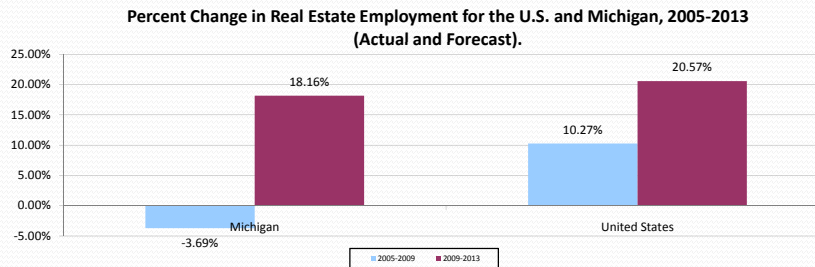
Finance and Insurance Employment and GDP in Michigan and the U.S.



Source: BLS, 2009 and Economic Modeling Specialists, 2010

- Between 2005 and 2009, employment in the finance and insurance sector decreased at the state level while increasing at the national level, suggesting industry decoupling between state and nation.
- Forecasted employment for the state and the nation between 2009-2013 show similar job growth rates, suggesting the finance and insurance industry is moving to industry coupling between state and nation.
- Real GDP in the finance and insurance sector at the state and national level have had many seemingly unrelated expansions and contractions throughout the past ten years, further suggesting that the industries are decoupled in periods of growth and decline (BEA, 2010).

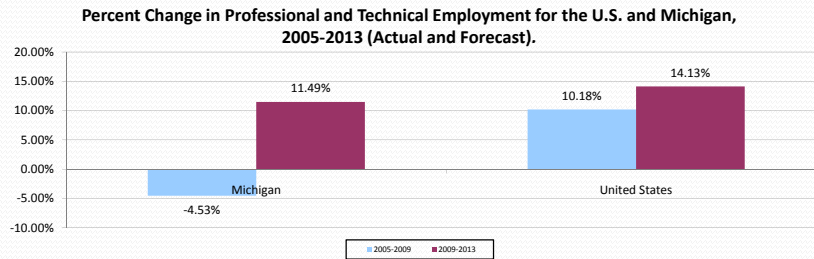
Real Estate Employment and GDP in Michigan and the U.S.



Source: BLS, 2009 and Economic Modeling Specialists, 2010

- Between 2005 and 2009, employment in the real estate sector decreased at the state level while increasing at the national level, suggesting industry decoupling between state and nation.
- Forecasted employment for the state and the nation between 2009-2013 show similar job growth rates, suggesting the real estate industry is moving to industry coupling between state and nation.
- Real GDP in the real estate sector at the state level has contracted over the past ten years while expanding for the majority of years at the national level, further suggesting that the industries are decoupled in periods of growth and decline (BEA, 2010).

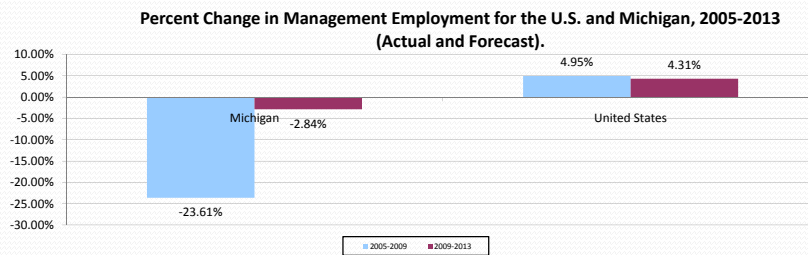
Professional and Technical Employment and GDP in Michigan and the U.S.



Source: BLS, 2009 and Economic Modeling Specialists, 2010

- Between 2005 and 2009, employment in the professional and technical sector decreased at the state level while increasing at the national level, suggesting industry decoupling between state and nation.
- Forecasted employment for the state and the nation between 2009-2013 show similar job growth rates, suggesting the professional and technical sector is moving to industry coupling between state and nation.
- Real GDP in the professional and technical sector at the state and national levels have trended together for the most part over the past ten years, with Michigan experiencing lower dips during times of industry contraction, further suggesting that the industries are coupled in periods of growth and decline (BEA, 2010).

Management Employment and GDP in Michigan and the U.S.

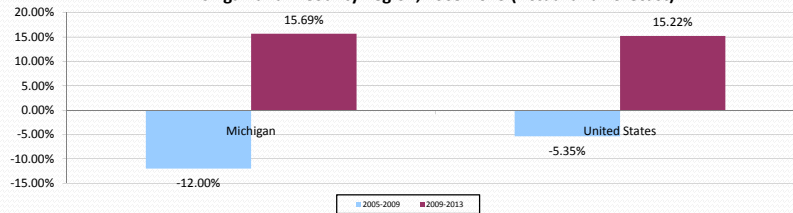


Source: BLS, 2009 and Economic Modeling Specialists, 2010

- Between 2005 and 2009, employment in the management sector decreased at the state level while increasing at the national level, suggesting industry decoupling between state and nation.
- Forecasted employment for the state and the nation between 2009-2013 show the state continuing to shed jobs while the nation continues to grow jobs, further suggesting that the management sector is decoupled between Michigan and the rest of the nation.
- Real GDP in the management sector at the state and national levels have moved in opposite directions for the majority of the past decade, as the nation picks up management jobs and Michigan sheds them (BEA, 2010).

Administrative and Waste Services Employment and GDP in Michigan and the U.S.

Percent Change in Administrative and Waste Services Employment for the U.S., Michigan and 4-County Region, 2005-2013 (Actual and Forecast).

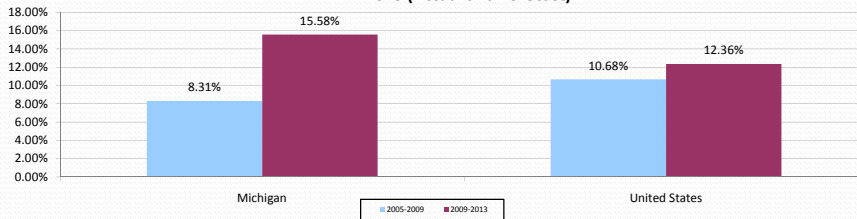


Source: BLS, 2009 and Economic Modeling Specialists, 2010

- Between 2005 and 2009, employment in the administrative and waste services sector decreased at the state and national levels, suggesting industry coupling between state and nation.
- Forecasted employment for the state and the nation between 2009-2013 show the state and nation growing jobs in this sector, further suggesting sector coupling between Michigan and the rest of the nation.
- Real GDP in the administrative and waste services sector at the state and national levels have trended together for the majority of the past decade, with Michigan experiencing deeper dips in times of industry contraction (BEA, 2010).

Educational Services Employment and GDP in Michigan and the U.S.

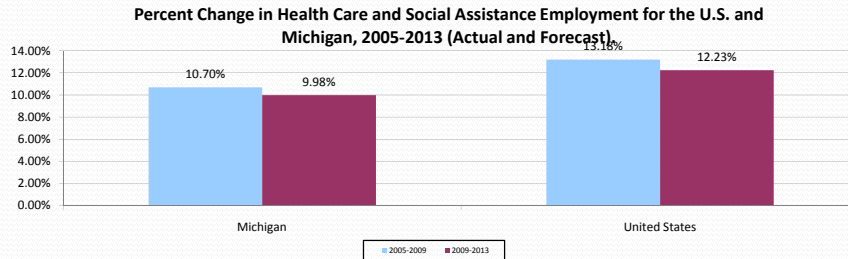
Percent Change in Educational Services Employment for the U.S. and Michigan, 2005-2013 (Actual and Forecast).



Source: BLS, 2009 and Economic Modeling Specialists, 2010

- Between 2005 and 2009, employment in the educational services sector increased at the state and national levels, suggesting industry coupling between state and nation.
- Forecasted employment for the state and the nation between 2009-2013 show the state and nation growing more jobs in this sector, further suggesting sector coupling between Michigan and the rest of the nation.
- Real GDP in the educational services sector at the state and national levels have trended together strongly for the majority of the past decade, suggesting again that that the state and nation are coupled (BEA, 2010).

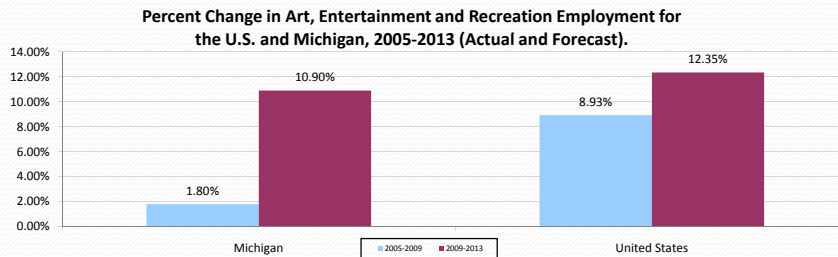
Health Care and Social Assistance Employment and GDP in Michigan and the U.S.



Source: BLS, 2009 and Economic Modeling Specialists, 2010

- Between 2005 and 2009, employment in the health care and social assistance sector increased at the state and national levels, suggesting industry coupling between state and nation.
- Forecasted employment for the state and the nation between 2009-2013 show the state and nation growing more jobs in this sector, further suggesting industry coupling between Michigan and the rest of the nation.
- Real GDP in the health care and social assistance sector at the state and national levels have trended together strongly for the majority of the past decade, further suggesting industry coupling (BEA, 2010).

Art, Entertainment and Recreation Employment and GDP in Michigan and the U.S.

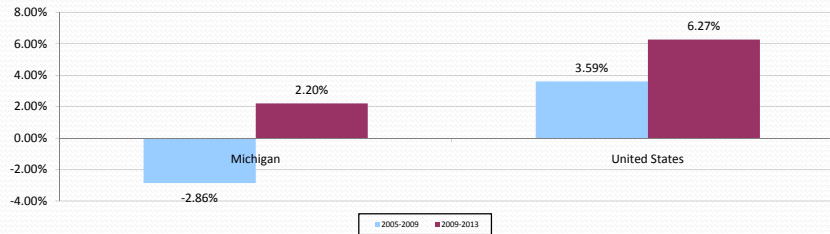


Source: BLS, 2009 and Economic Modeling Specialists, 2010

- Between 2005 and 2009, employment in the art, entertainment and recreation sector increased at the state and national levels, suggesting industry coupling between state and nation.
- Forecasted employment for the state and the nation between 2009-2013 show the state and nation growing more jobs in this sector, further suggesting industry coupling between Michigan and the rest of the nation.
- Real GDP in the art, entertainment and recreation sector at the state and national levels have trended together for the majority of the past decade, further suggesting industry coupling (BEA, 2010).

Accommodation and Food Services Employment and GDP in Michigan and the U.S.

Percent Change in Accommodation and Food Services Employment for the U.S. and Michigan, 2005-2013 (Actual and Forecast).

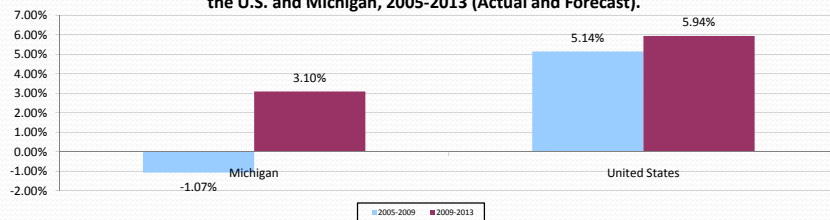


Source: BLS, 2009 and Economic Modeling Specialists, 2010

- Between 2005 and 2009, employment in the accommodation and food services sector decreased at the state level while increasing at the national level, suggesting decoupling between state and nation.
- Forecasted employment for the state and the nation between 2009-2013 show the state and nation growing more jobs in this sector, suggesting that the industry may be trending toward coupling between Michigan and the rest of the nation.
- Real GDP in the accommodation and food services sector at the state and national levels have trended together for the majority of the past decade yet seems to be diverging, suggesting potential future industry decoupling (BEA, 2010).

Other Services (excluding public administration) Employment and GDP in Michigan and the U.S.

Percent Change in Other Services (excluding public administration) Employment for the U.S. and Michigan, 2005-2013 (Actual and Forecast).

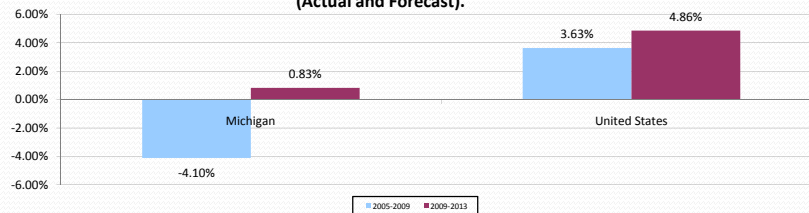


Source: BLS, 2009 and Economic Modeling Specialists, 2010

- Between 2005 and 2009, employment in the 'other services' sector decreased at the state level while increasing at the national level, suggesting decoupling between state and nation.
- Forecasted employment for the state and the nation between 2009-2013 show the state and nation growing more jobs in this sector, suggesting that the industry may be trending toward coupling between Michigan and the rest of the nation.
- Real GDP in the accommodation and food services sector at the state and national levels have trended together for the majority of the past decade, while Michigan's dips are lower than the rest of the nation's (BEA, 2010).

Government Employment and GDP in Michigan and the U.S.

Percent Change in Government Employment for the U.S. and Michigan, 2005-2013
(Actual and Forecast).



Source: BLS, 2009 and Economic Modeling Specialists, 2010

- Between 2005 and 2009, employment in the government sector decreased at the state level while increasing at the national level, suggesting decoupling between state and nation.
- Forecasted employment for the state and the nation between 2009-2013 show the state and nation growing more jobs in this sector, suggesting that the industry may be trending toward coupling between Michigan and the rest of the nation.
- Real GDP in the accommodation and food services sector at the state and national levels have trended tightly for the majority of the past decade, further suggesting coupling between state and nation (BEA, 2010).

What is next?

- Just a forecast...not a forgone conclusion!

**"He who lives by the crystal ball soon
learns to eat ground glass."**

--Edgar R. Fiedler in *The Three Rs of Economic Forecasting-Irrational,
Irrelevant and Irreverent* , June 1977.

What is Next?

- We cannot rely on the growth or health of the United State's economy to keep the State of Michigan economy prosperous or buoyant.
 - We have been in a one-state recession long before the "Great Recession," and are not recovering as other states currently are.

What is Next?

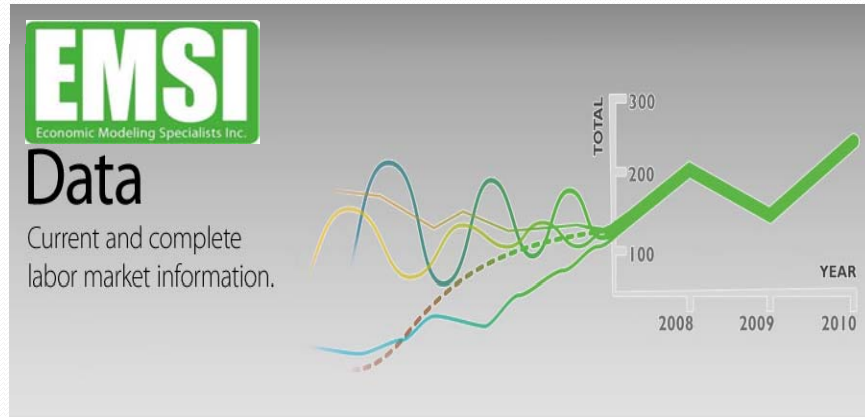
- Identify the assets that Michigan possesses that can be leveraged to give us a competitive advantage in this economy?
- Focusing on the principles and strategies of the New Economy.
- Embrace entrepreneurship at a business, social, and governmental level.

What's Next?

What most distinguishes successful areas from Michigan is their concentrations of talent, where talent is defined as a combination of knowledge, creativity and entrepreneurship.

Michigan's Transition to a Knowledge-Based Economy.
Glazer and Grimes. 2009.

Data analysis based on:



www.economicmodeling.com

Other forecast resources:

- Michigan Department of Treasury
Local Unit Fiscal Forecasting Estimator
www.michigan.gov/treasury/0,1607,7-121-1751_51556-203827--,00.html
- “Michigan’s Economic Future”
Dr. Charles Ballard, Michigan State University
<http://msupress.msu.edu/bookTemplate.php?bookID=3099>
- Research Seminar in Quantitative Economics (RSQE)
University of Michigan Ann Arbor, Michigan
www.rsqe.econ.lsa.umich.edu

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