

GREEN TECHNOLOGY

- Advanced Transportation Cluster Analysis
- Advanced Waste Management Cluster Analysis
- Energy Cluster Analysis
- Environmental Technology Cluster Analysis
- Fisheries and Freshwater Industries Cluster Analysis
- Food Innovation Cluster Analysis
- Forestry and Wood Products Cluster Analysis



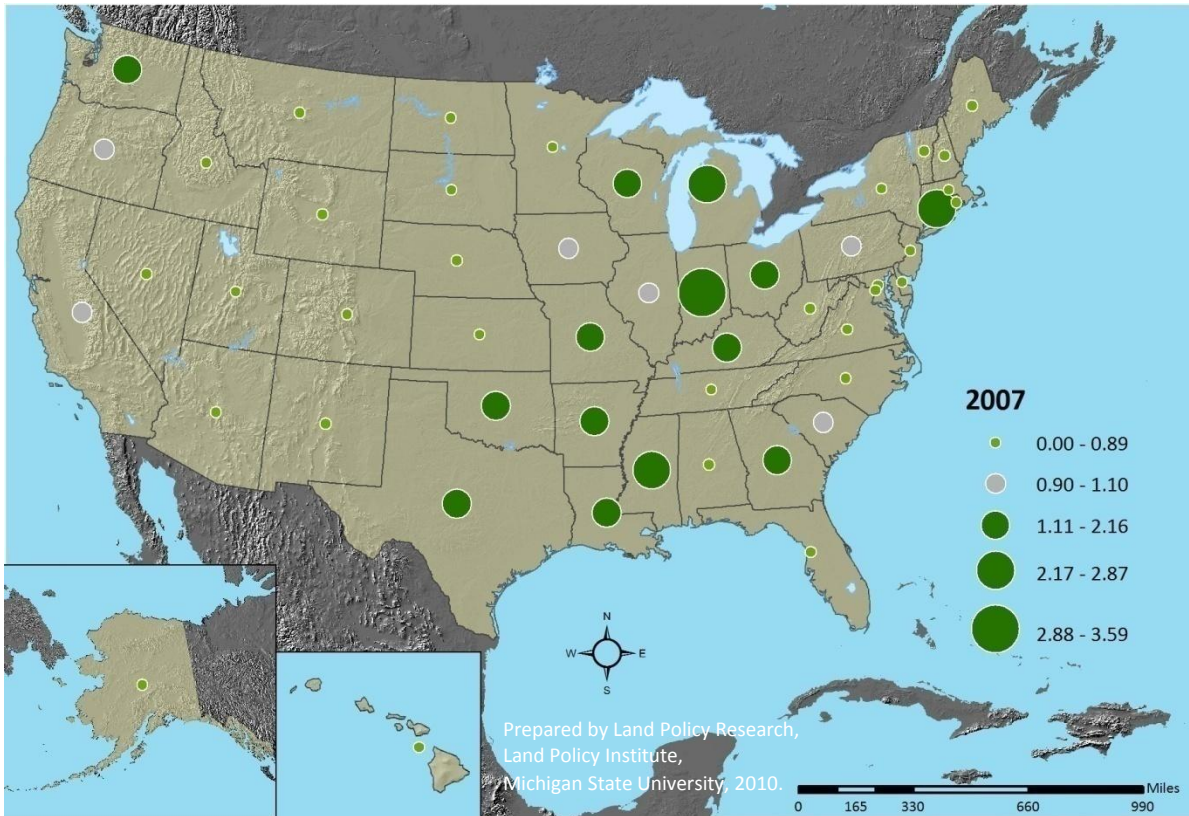
Advanced Transportation Cluster Analysis

This cluster includes those industries such as automotive, train and ship manufacturing as well as those engaged in high speed rail, energy storage and transfer etc. (for a complete specification see Appendix 1). The transportation sector has been the bedrock of Michigan's industrial economy for decades. While this cluster has suffered huge setbacks in recent years the promise in the New Economy is strong. Innovation in mass transit, alternate fuel and electric vehicles, advanced transportation energy storage are areas of high opportunity in the coming decades.

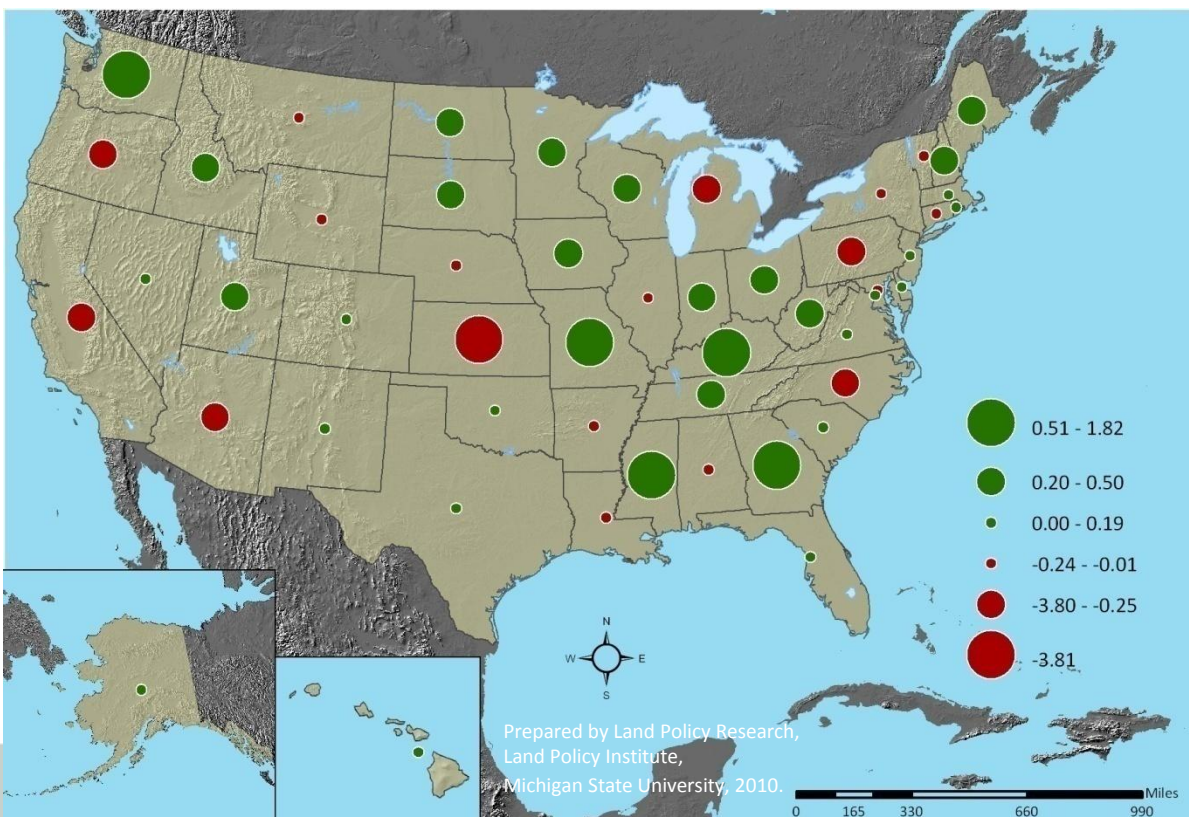


Advanced Transportation Manufacturing

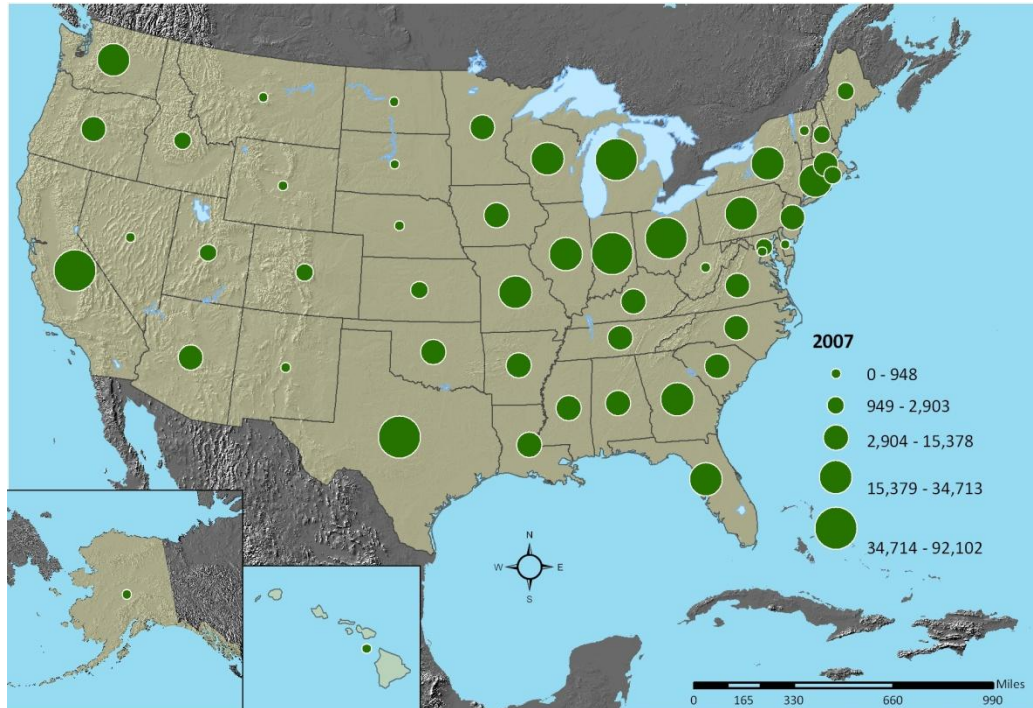
National Location Quotient



Change in Location Quotient 2003-2007

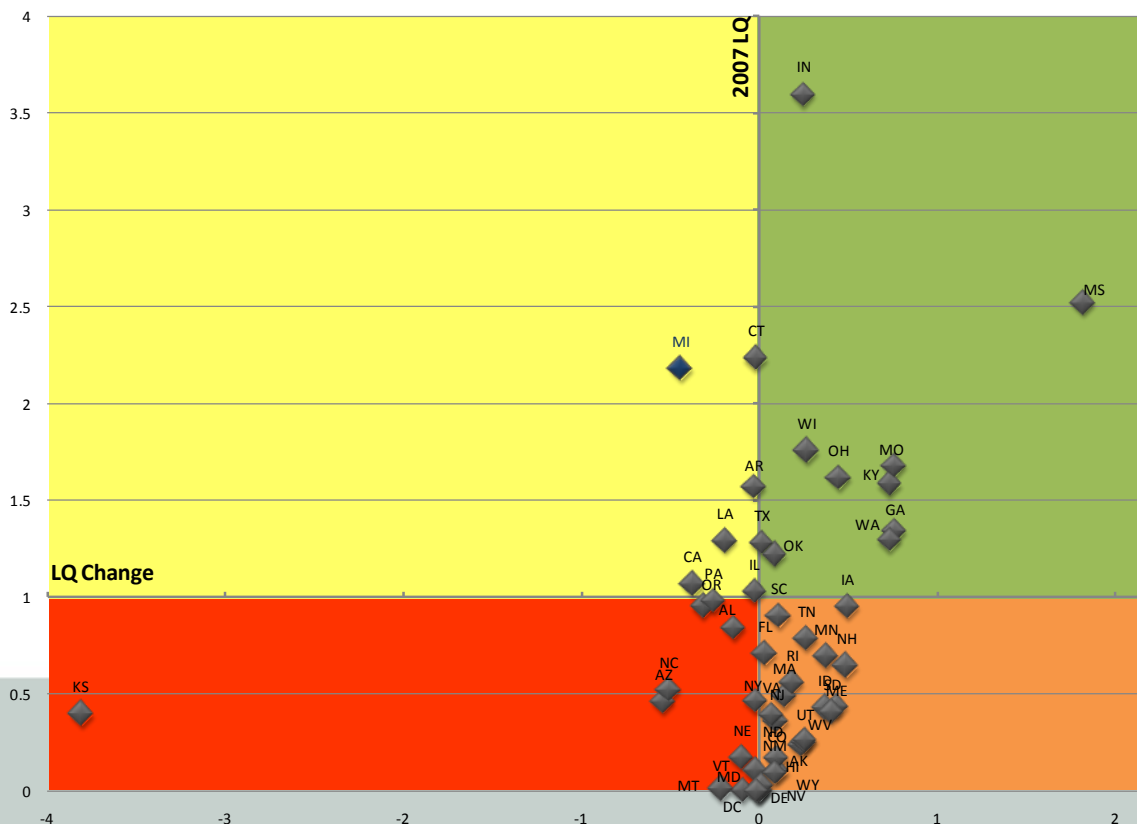


National Employment Distribution

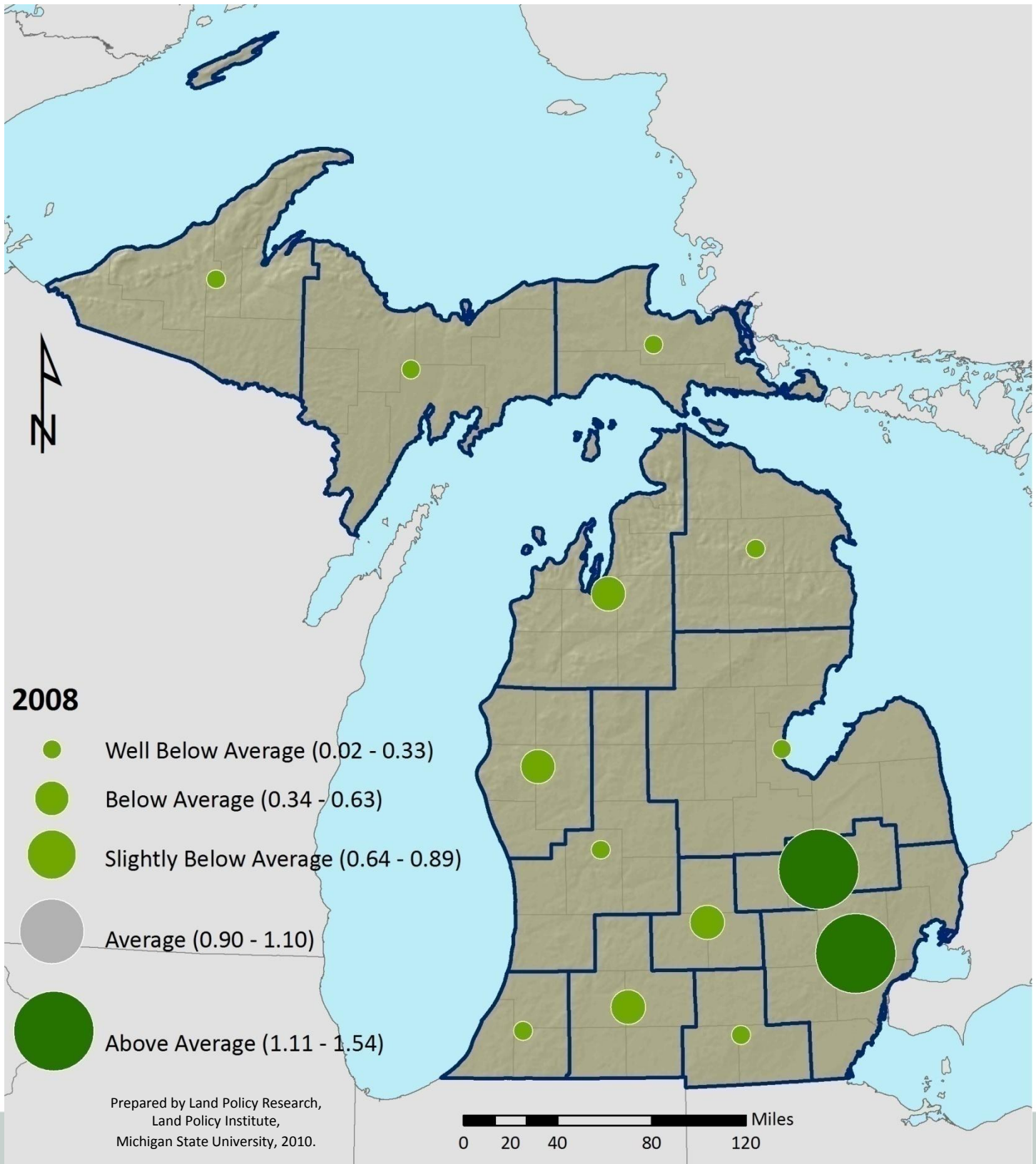


50 State Location Quotient Distribution

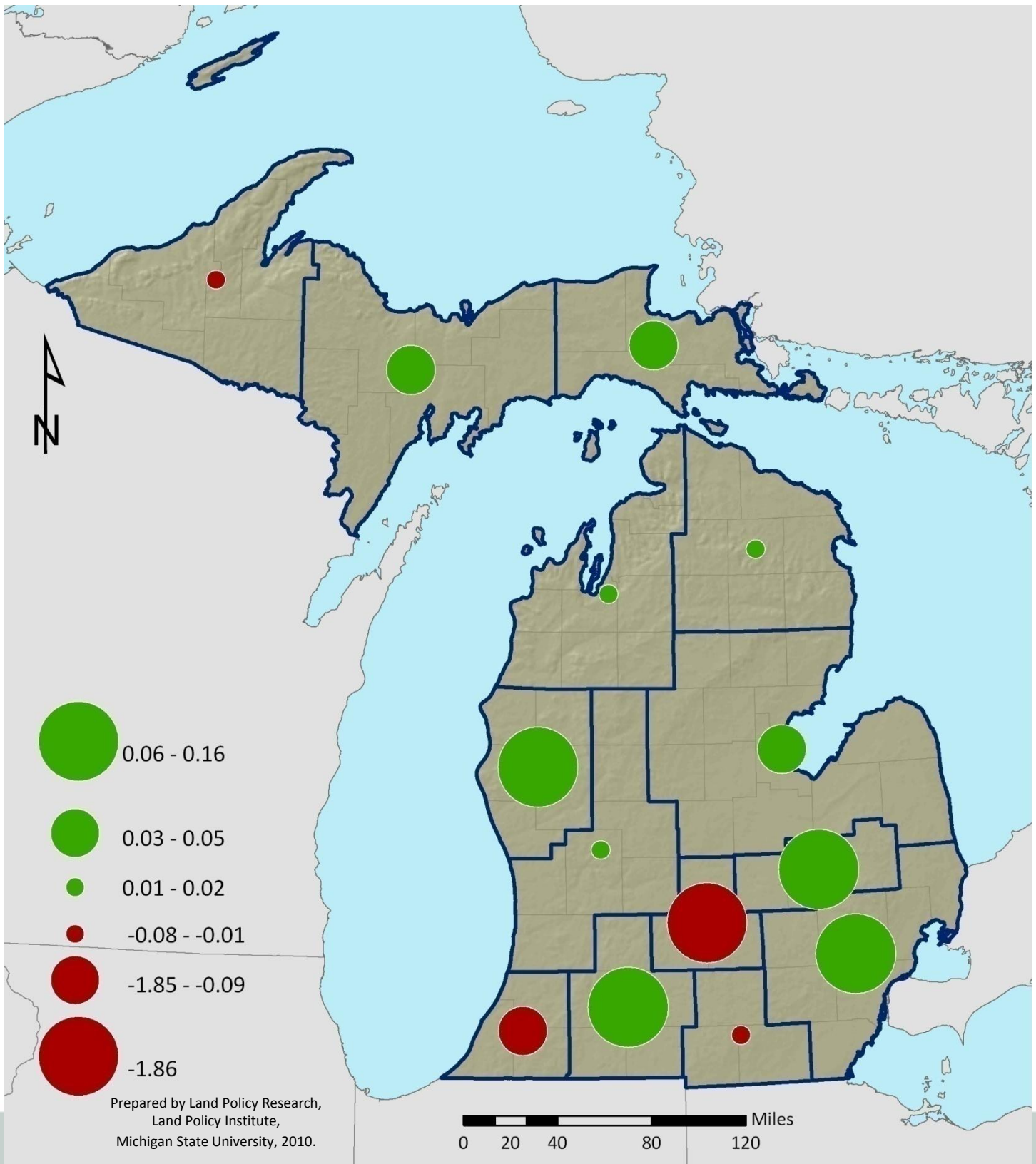
Advanced Transportation State LQ Chart



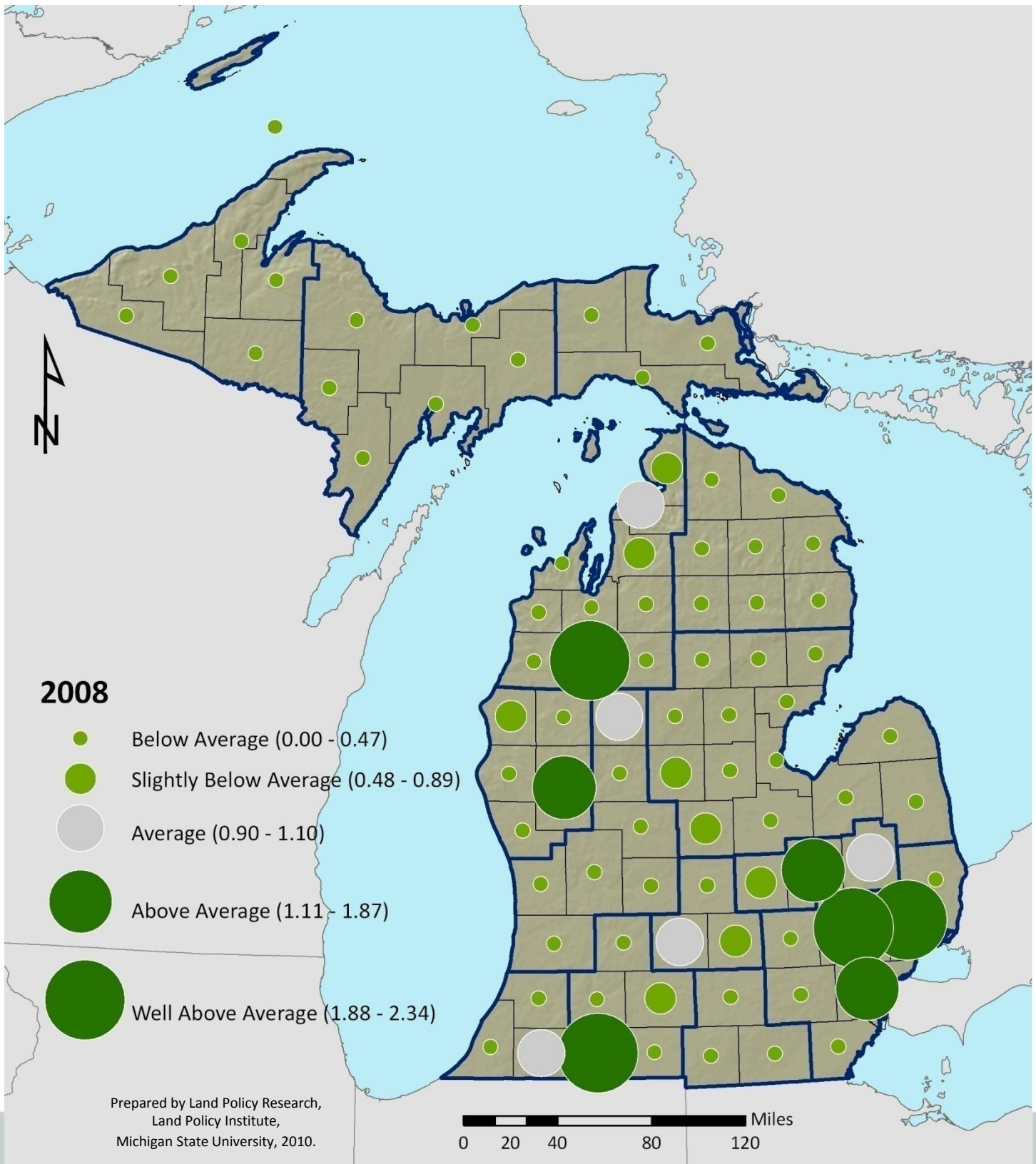
Regional Location Quotient Distribution



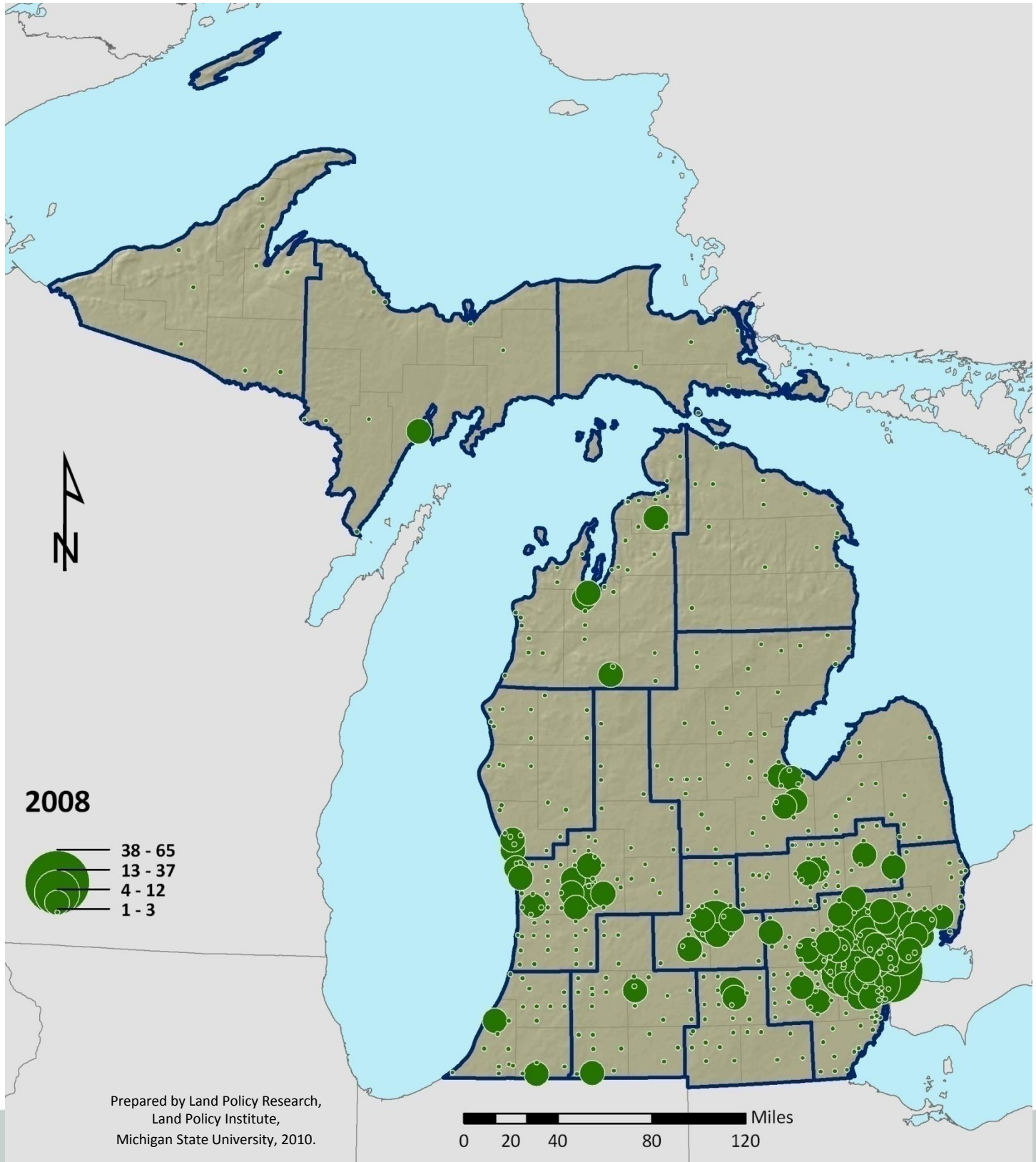
Change in Regional Location Quotient Distribution 2002-2008



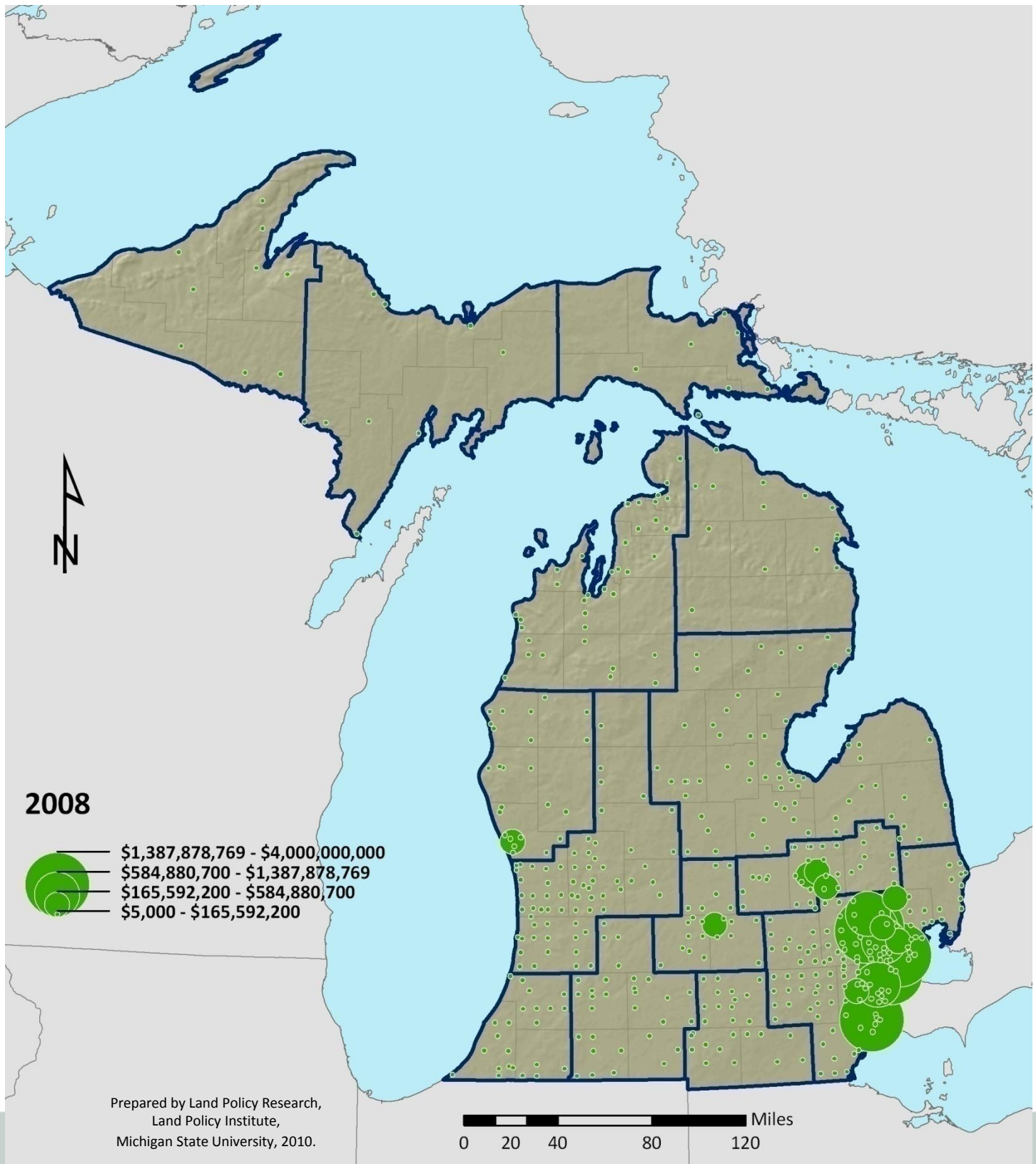
County Location Quotient Distribution



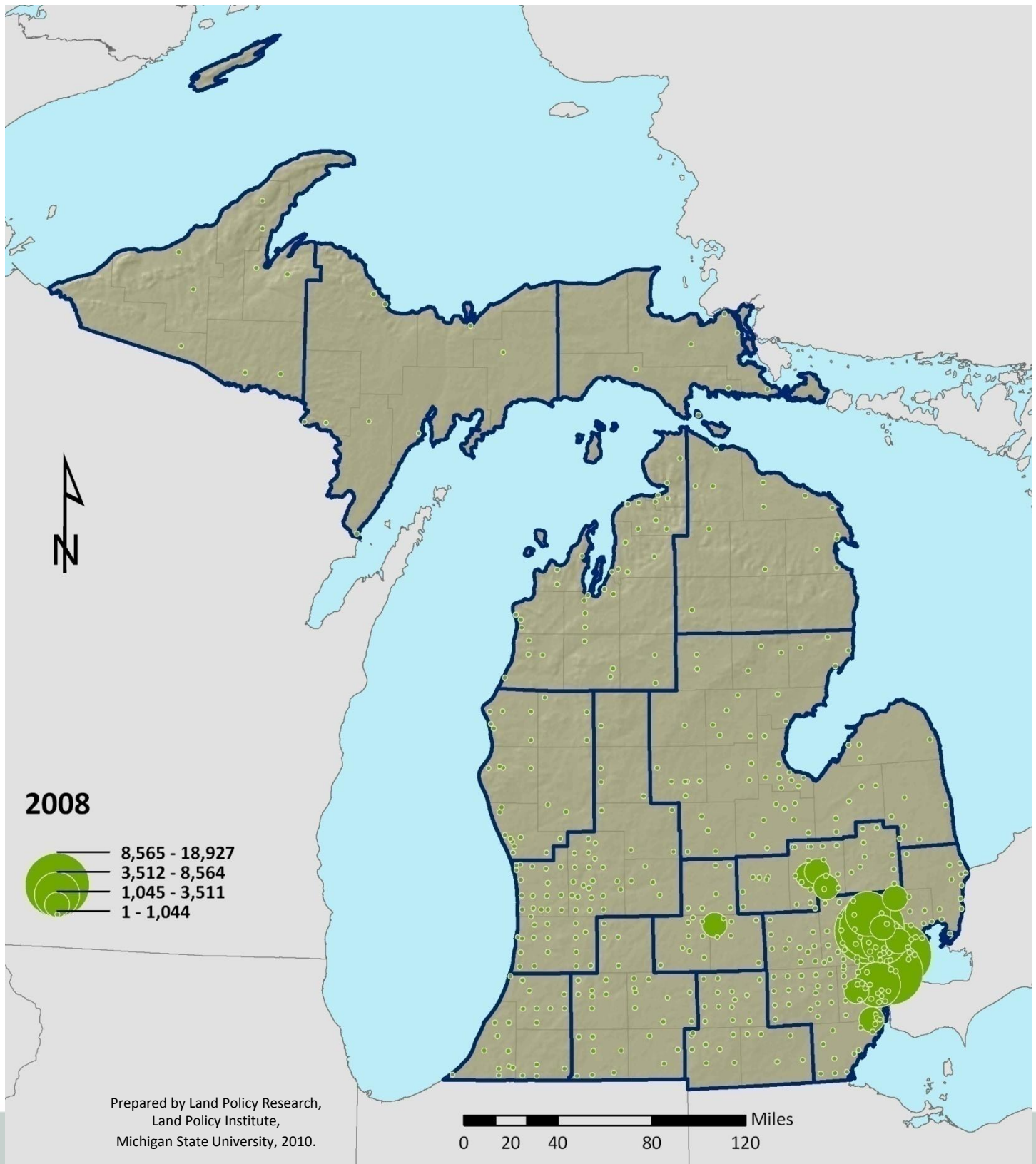
Establishments Statewide



Sales Statewide



Employment Statewide

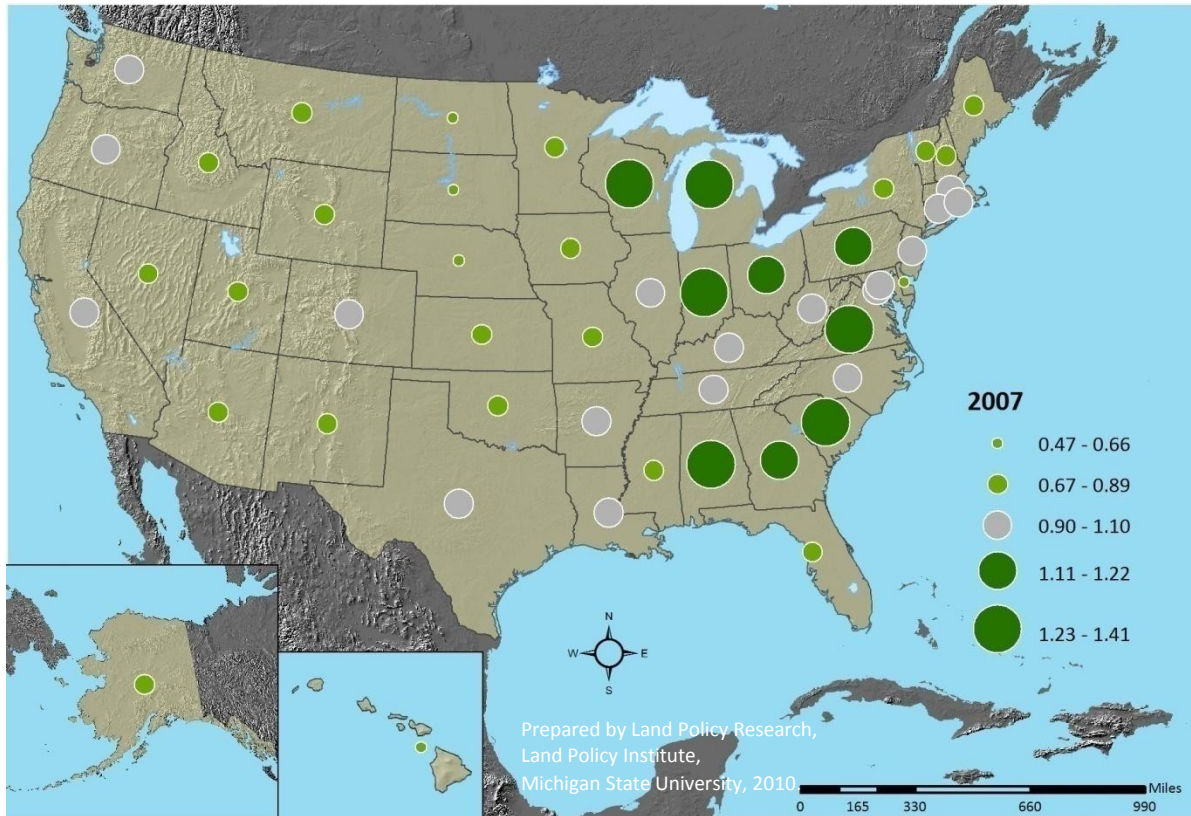


Advanced Waste Management Cluster Analysis

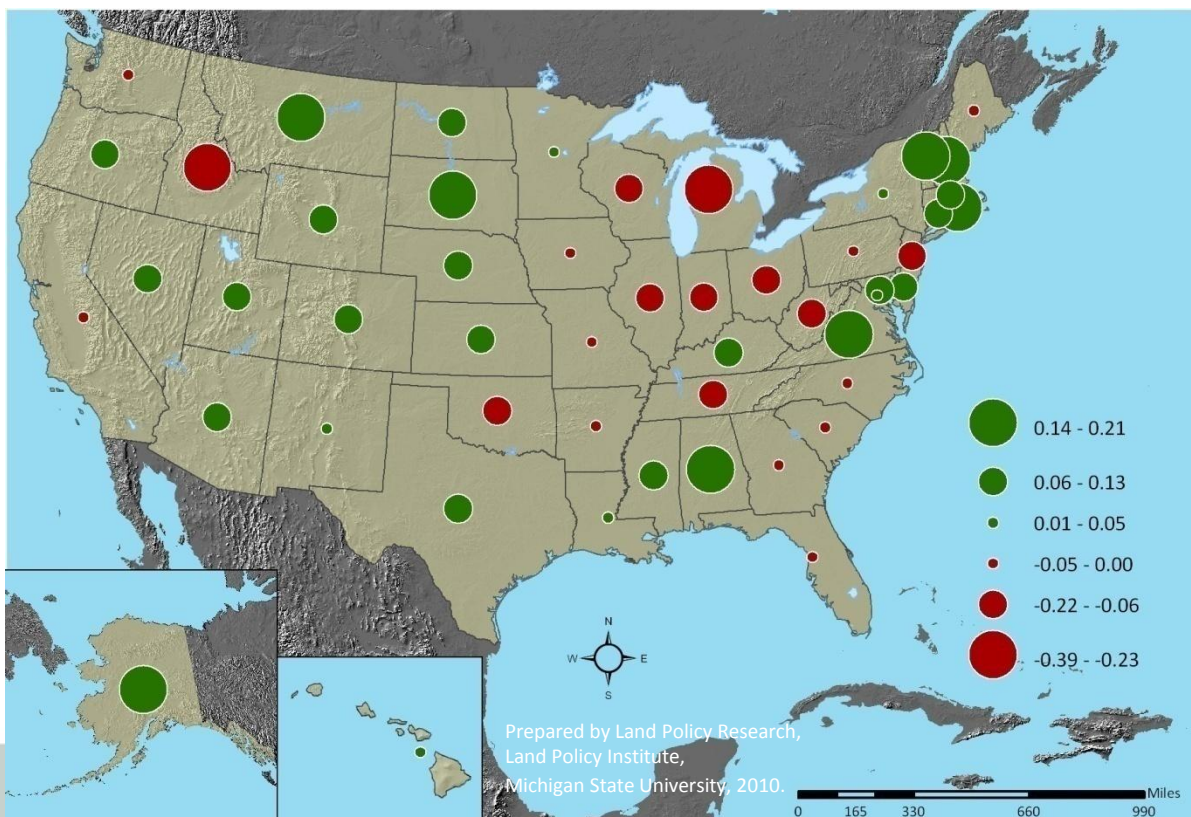
This cluster encompasses those industries that manage, dispose of, recycle and cleanup waste. This includes the industries that manufacture new raw materials from waste, waste to energy, landfill operations, and traditional waste management. In the New Economy this cluster may be more important and managing the waste stream and maximizing recycling are becoming both environmentally friendly as well as cost effective. The potential for technology and expertise export in this cluster is strong.



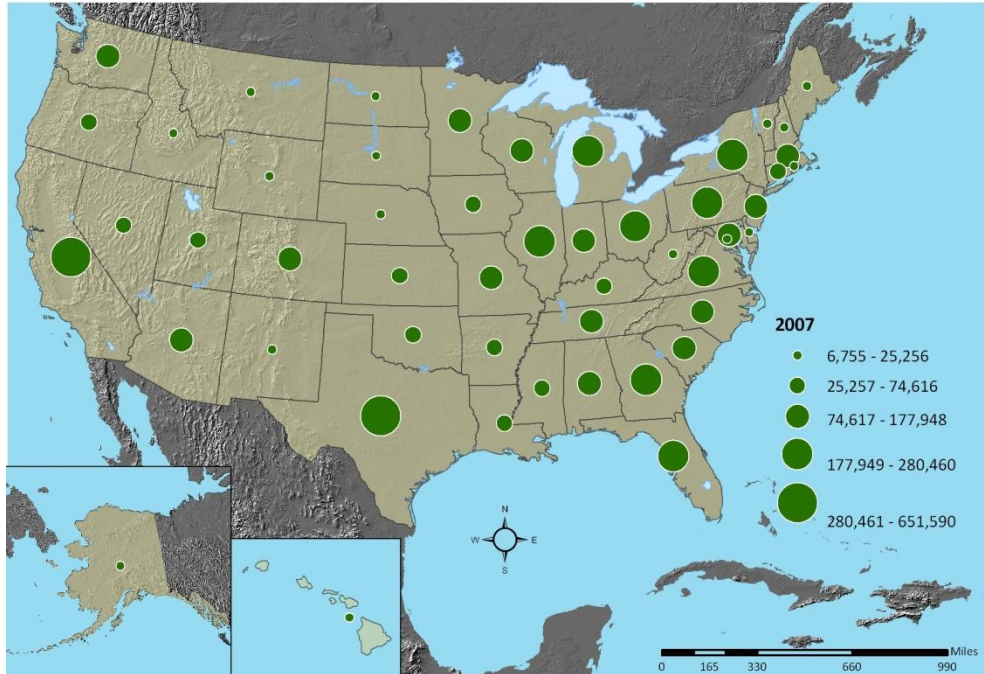
National Location Quotient



Change in Location Quotient 2003-2007

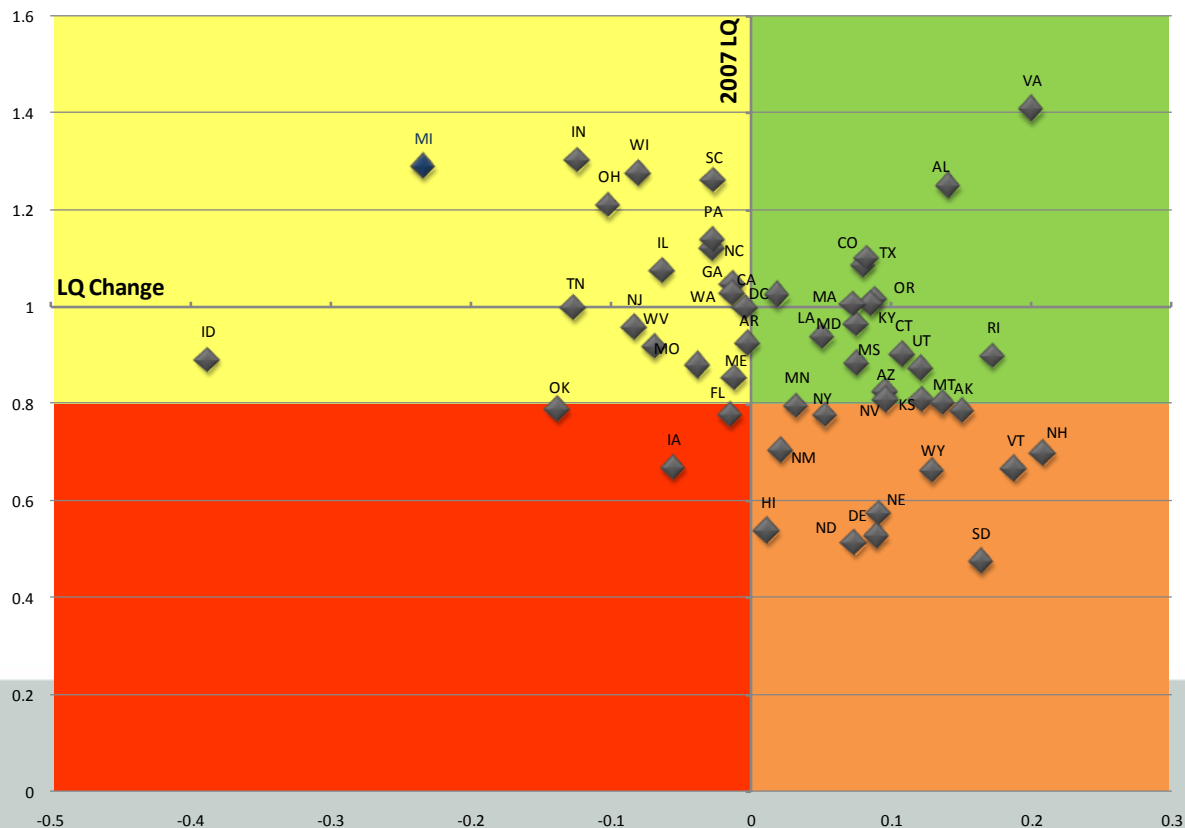


National Employment Distribution

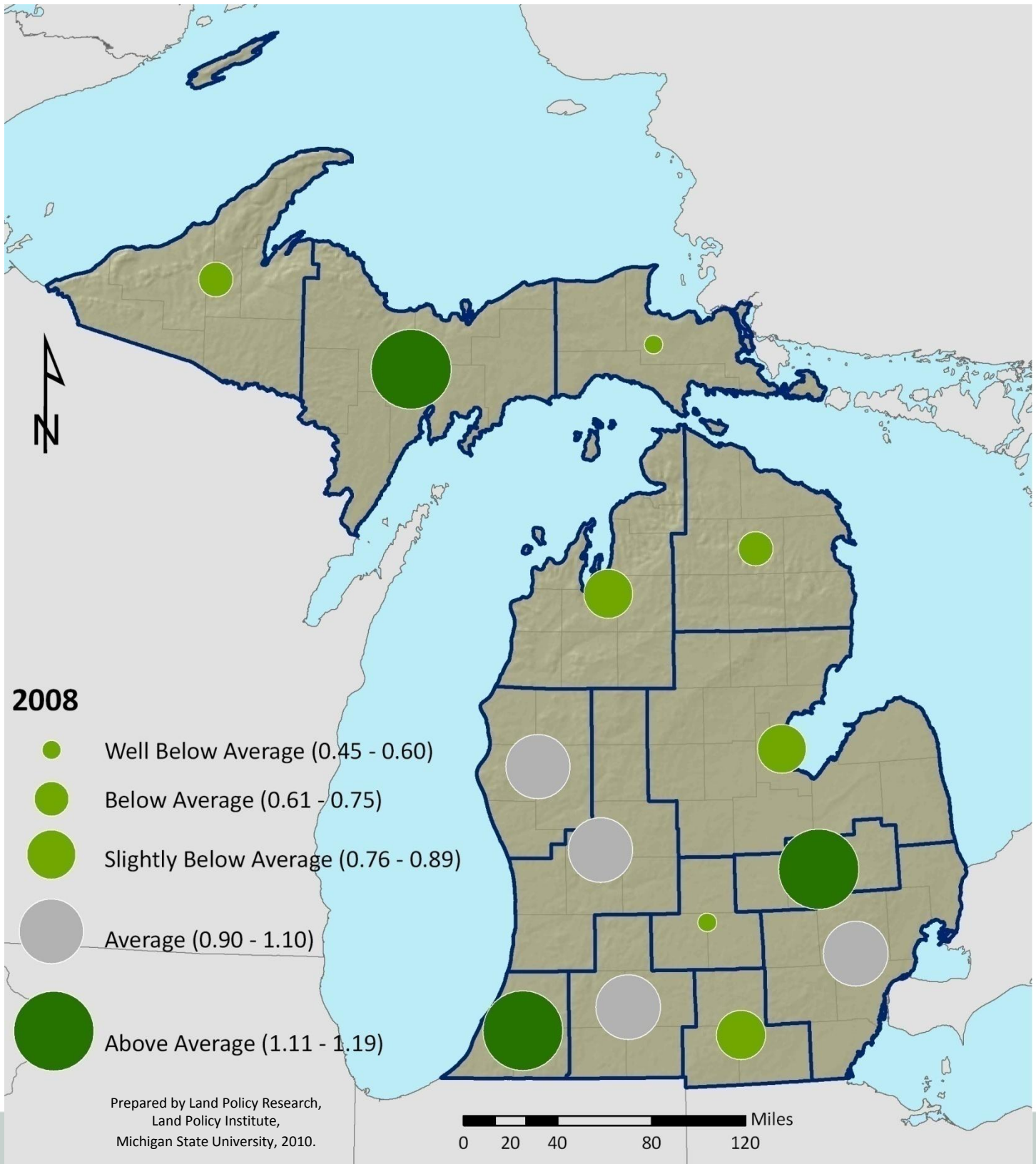


50 State Location Quotient Distribution

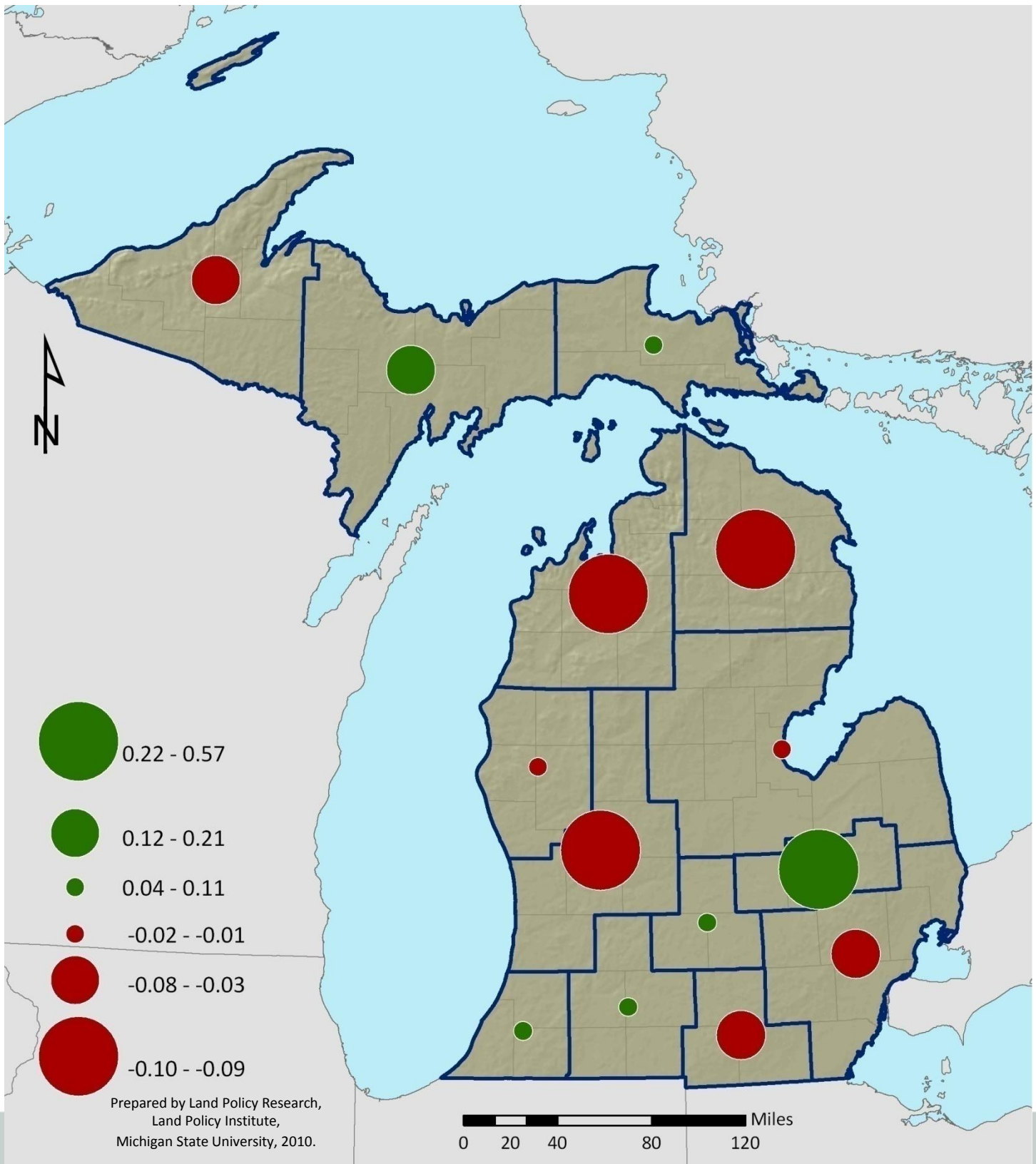
Advanced Waste Management State LQ Chart



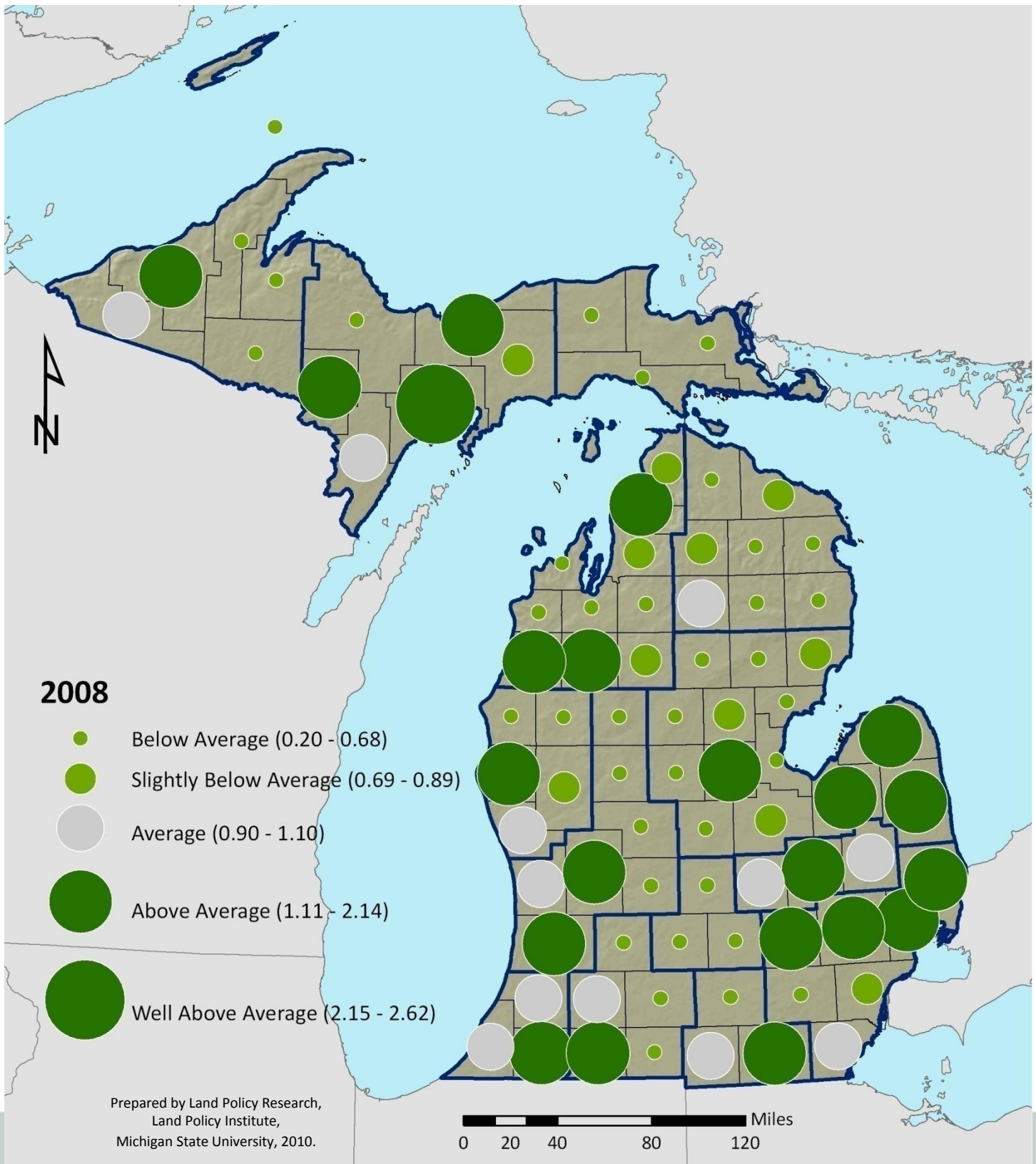
Regional Location Quotient Distribution



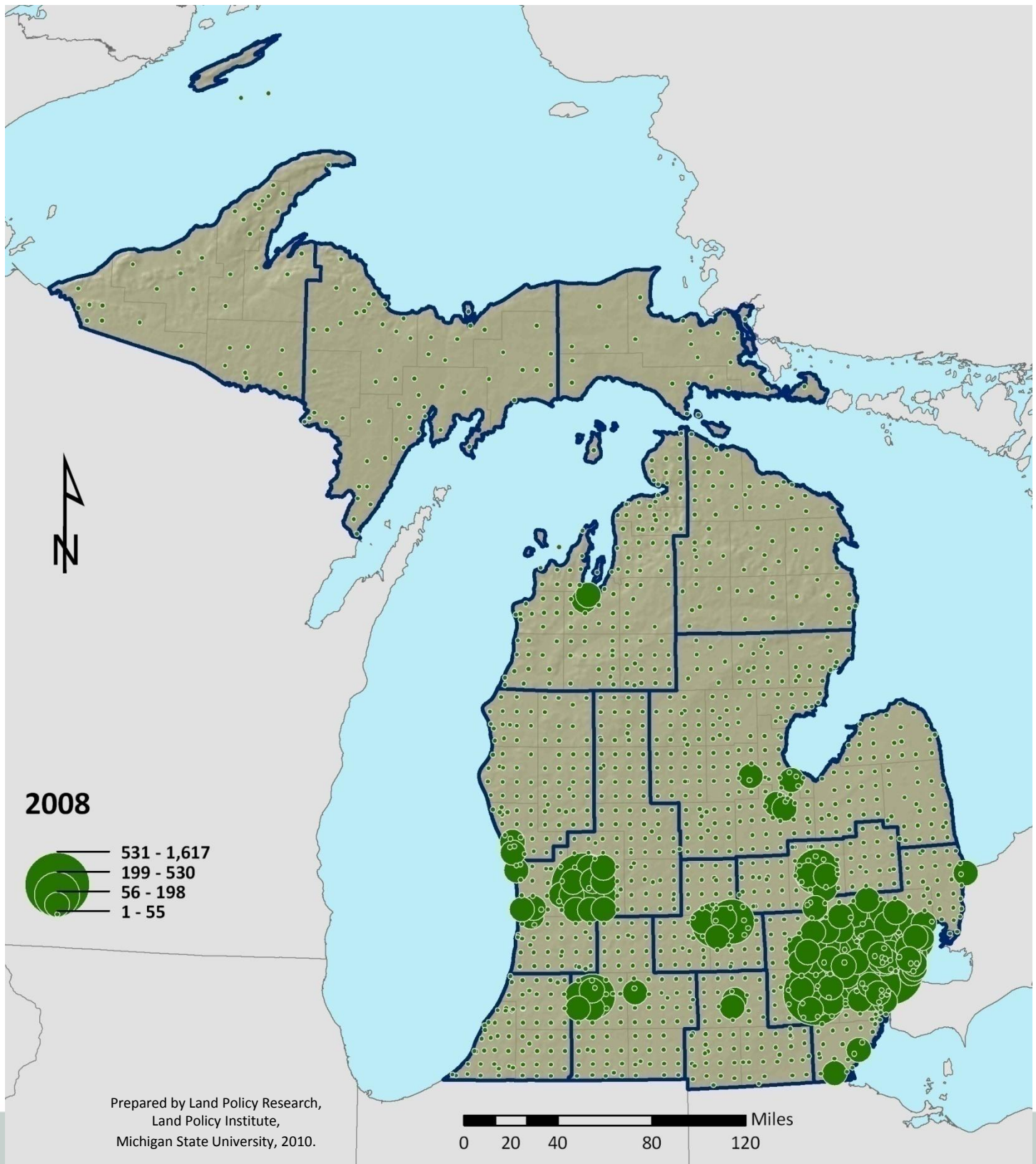
Change in Regional Location Quotient Distribution 2002-2008



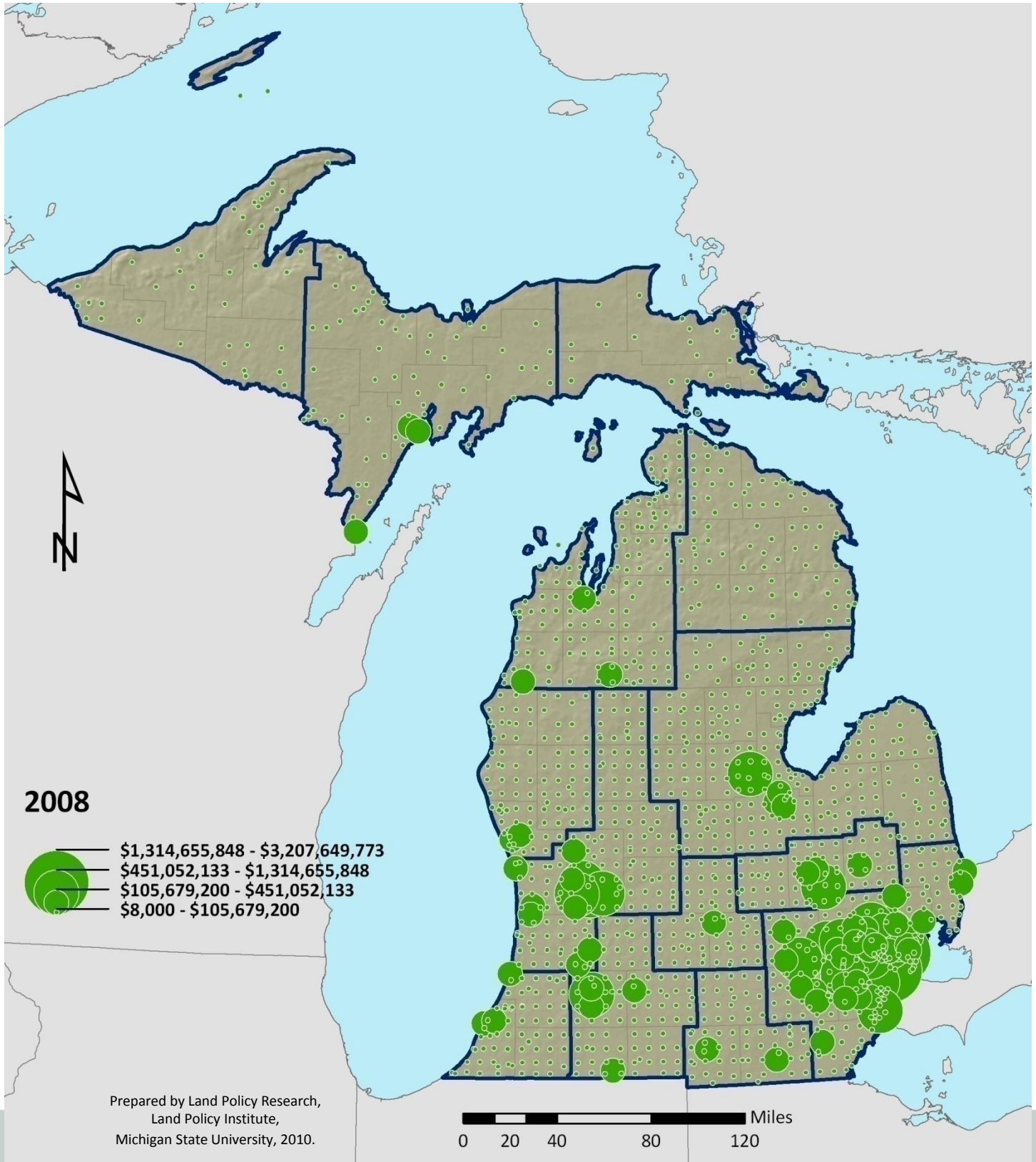
County Location Quotient Distribution



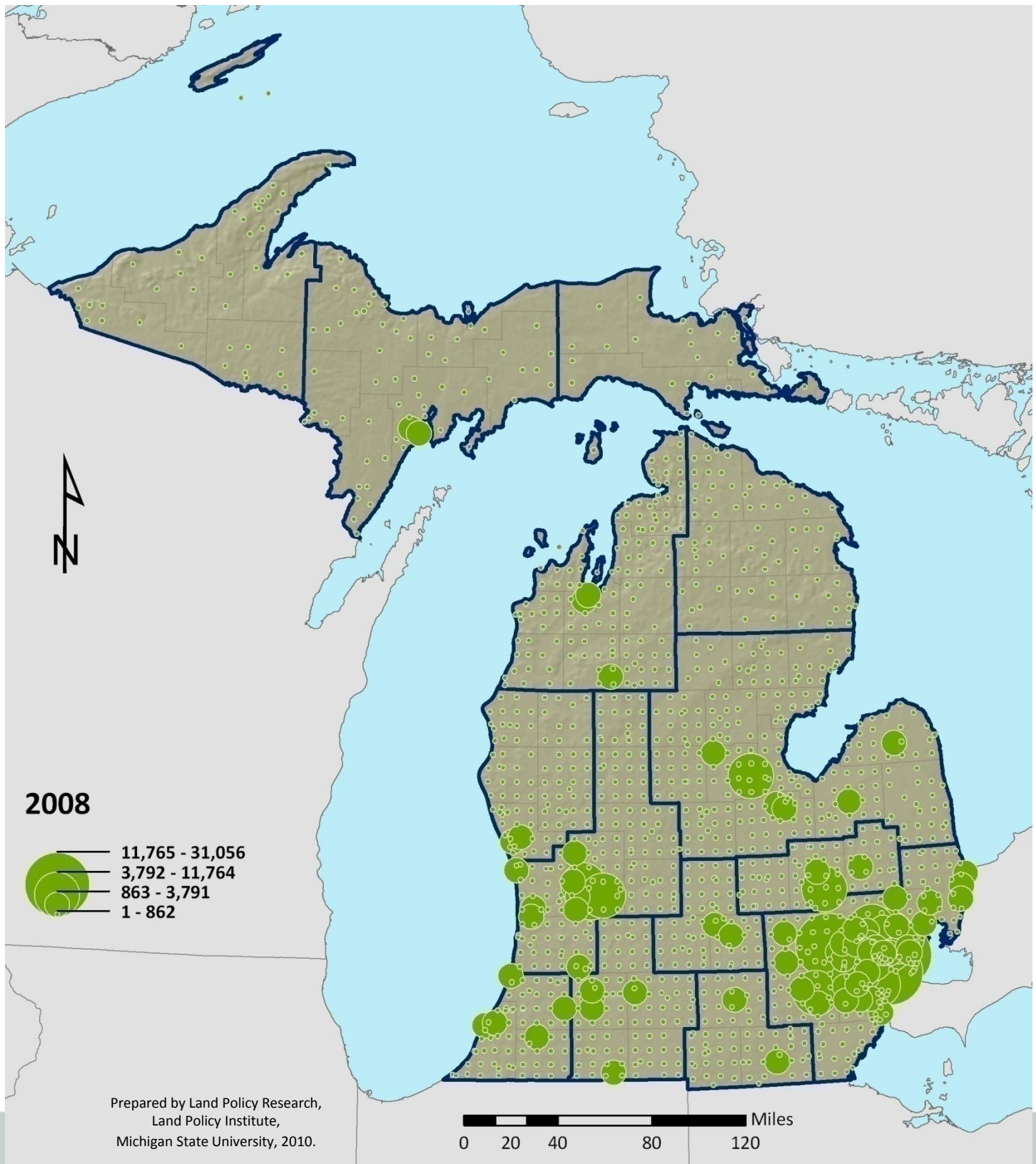
Establishments Statewide



Sales Statewide



Employment Statewide

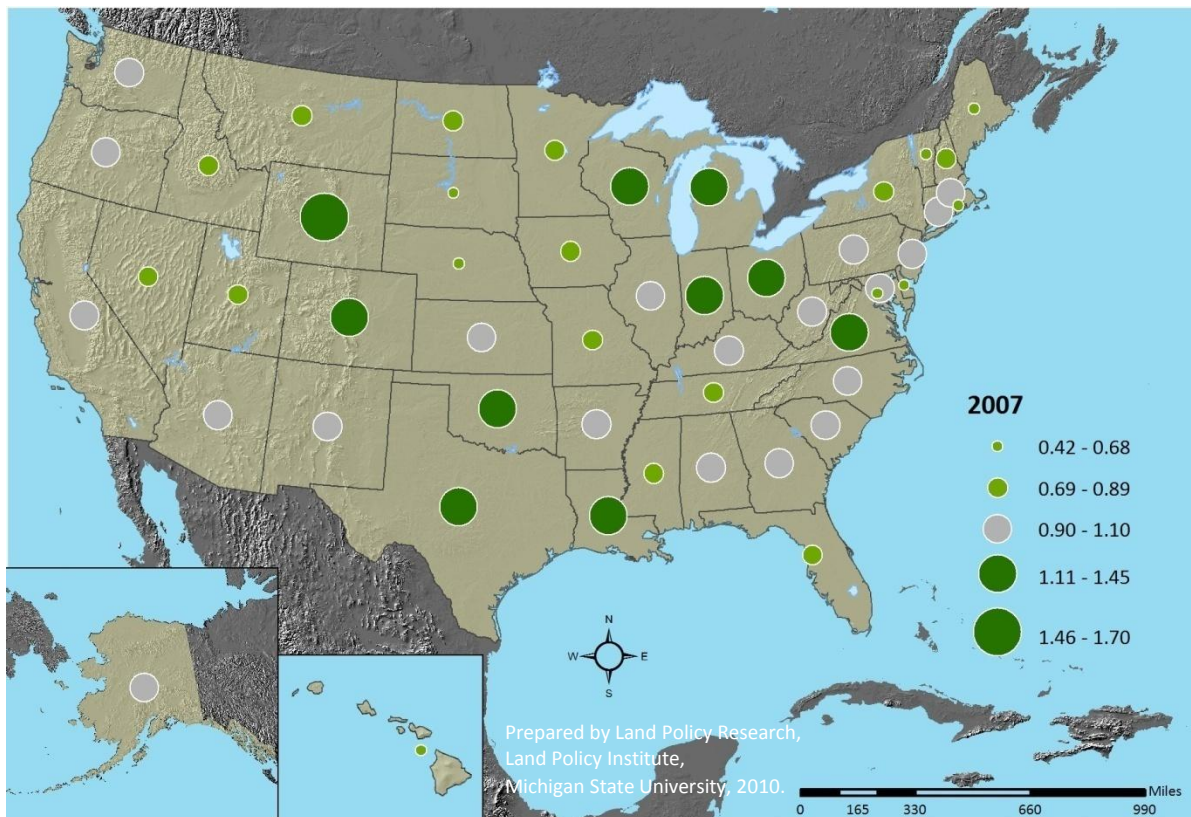


Energy Cluster Analysis

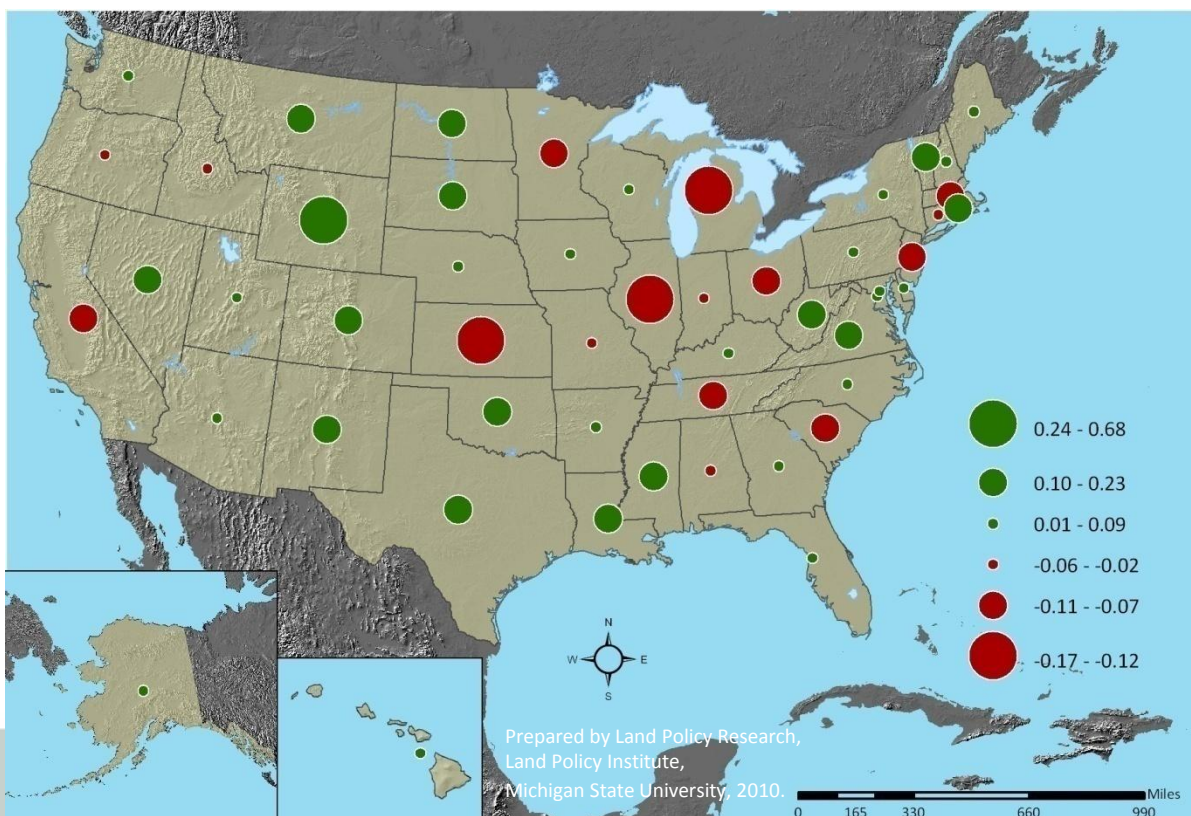
This super cluster includes industries such as utilities, electricity transmission, renewable energy, traditional energy, energy storage, component manufacturing etc. (for a complete specification see Appendix 1). The energy cluster as defined herein is quite broad and it will be broken out into its sub-clusters in a follow-on report. Energy security, carbon, national energy policy, and Michigan's traditional strengths are combining to create an unprecedented opportunity in the energy cluster.



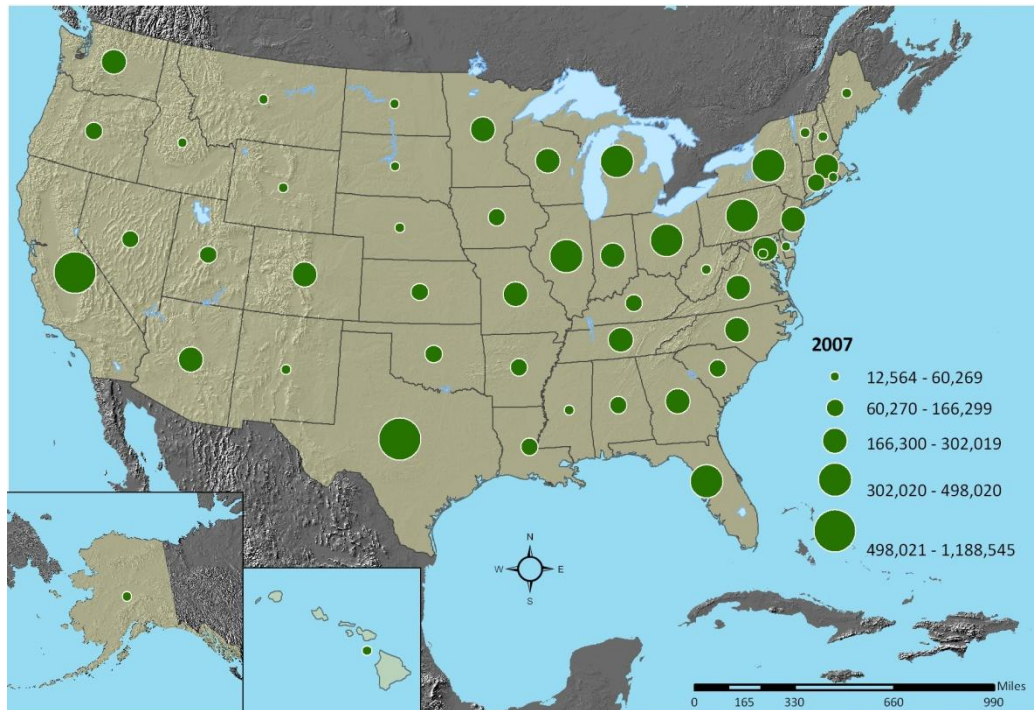
National Location Quotient



Change in Location Quotient 2003-2007

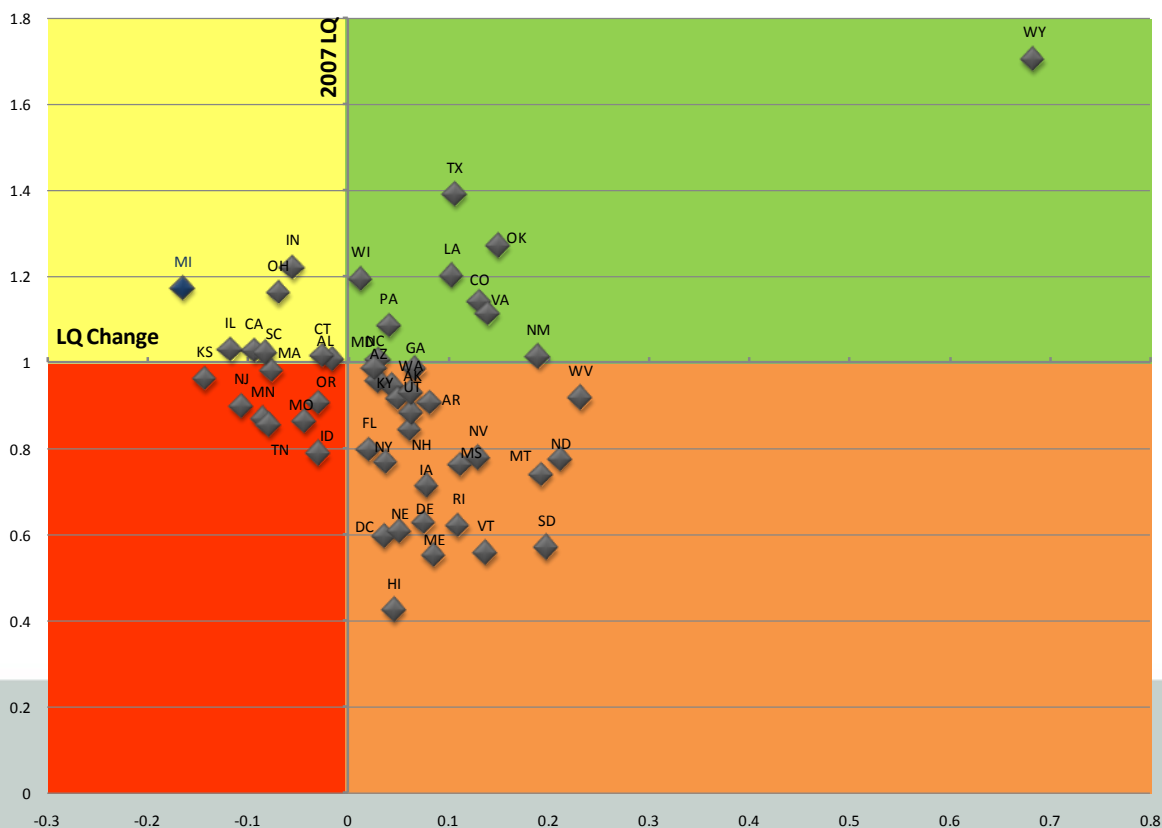


National Employment Distribution

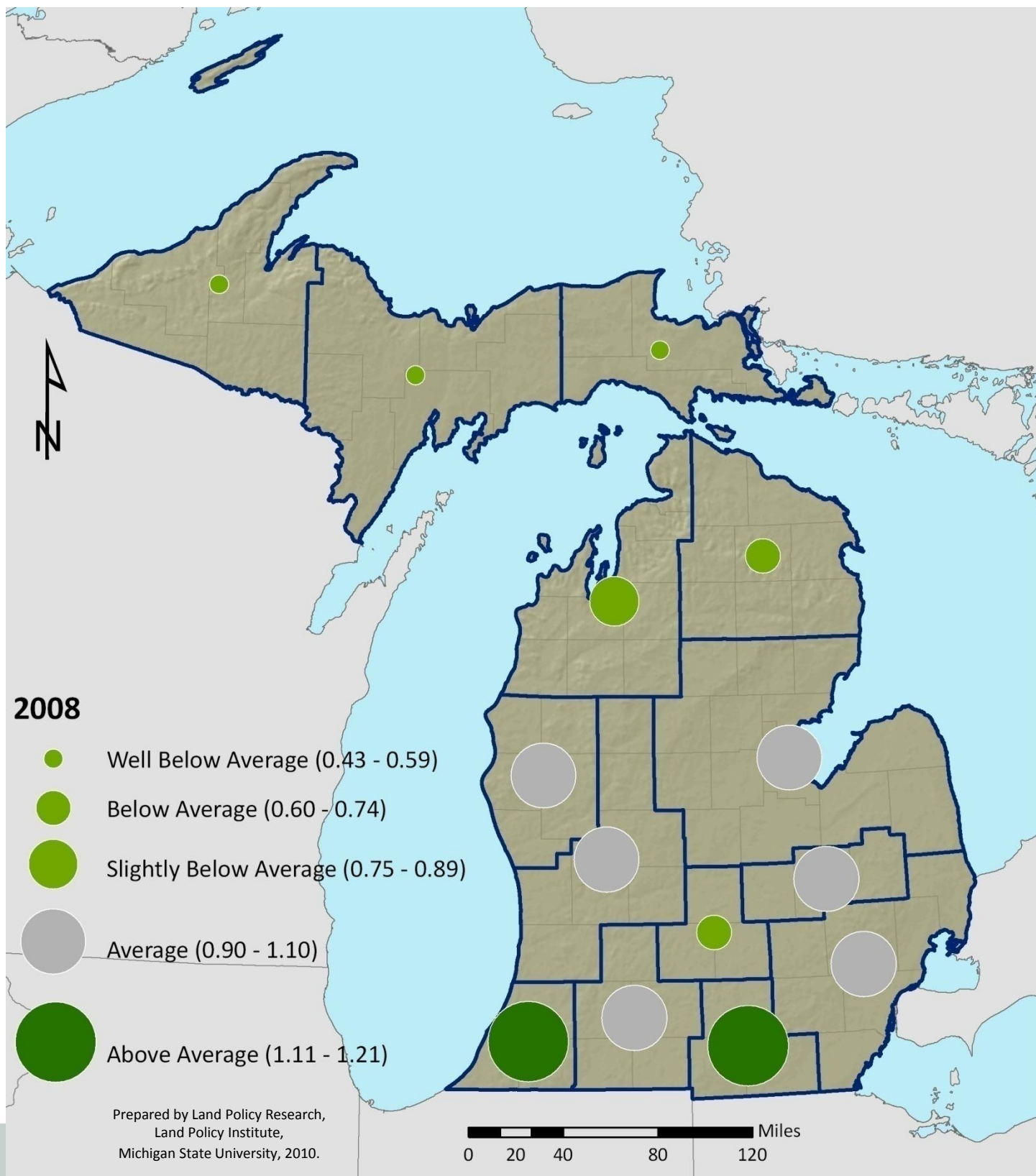


50 State Location Quotient Distribution

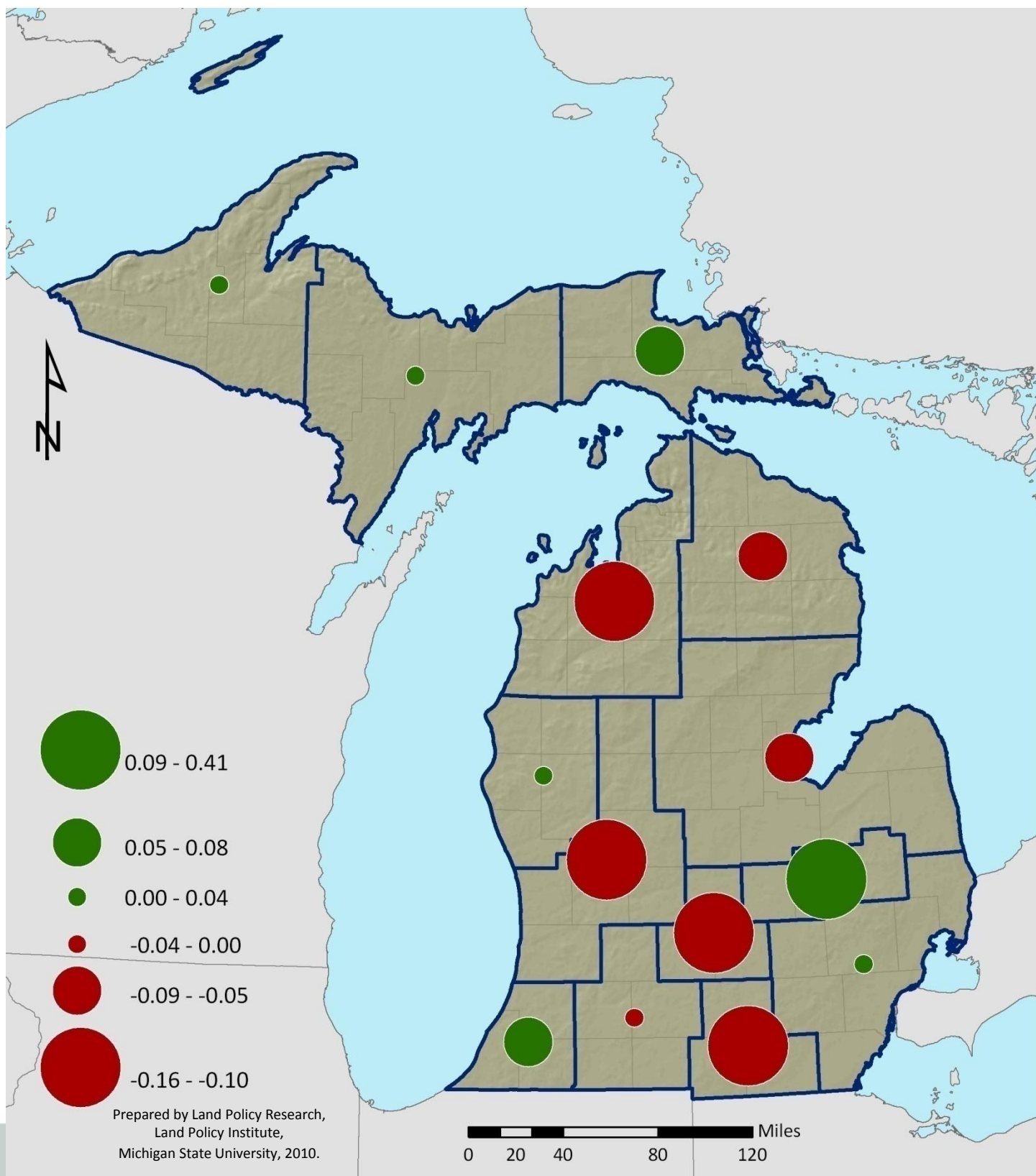
Energy State LQ Chart



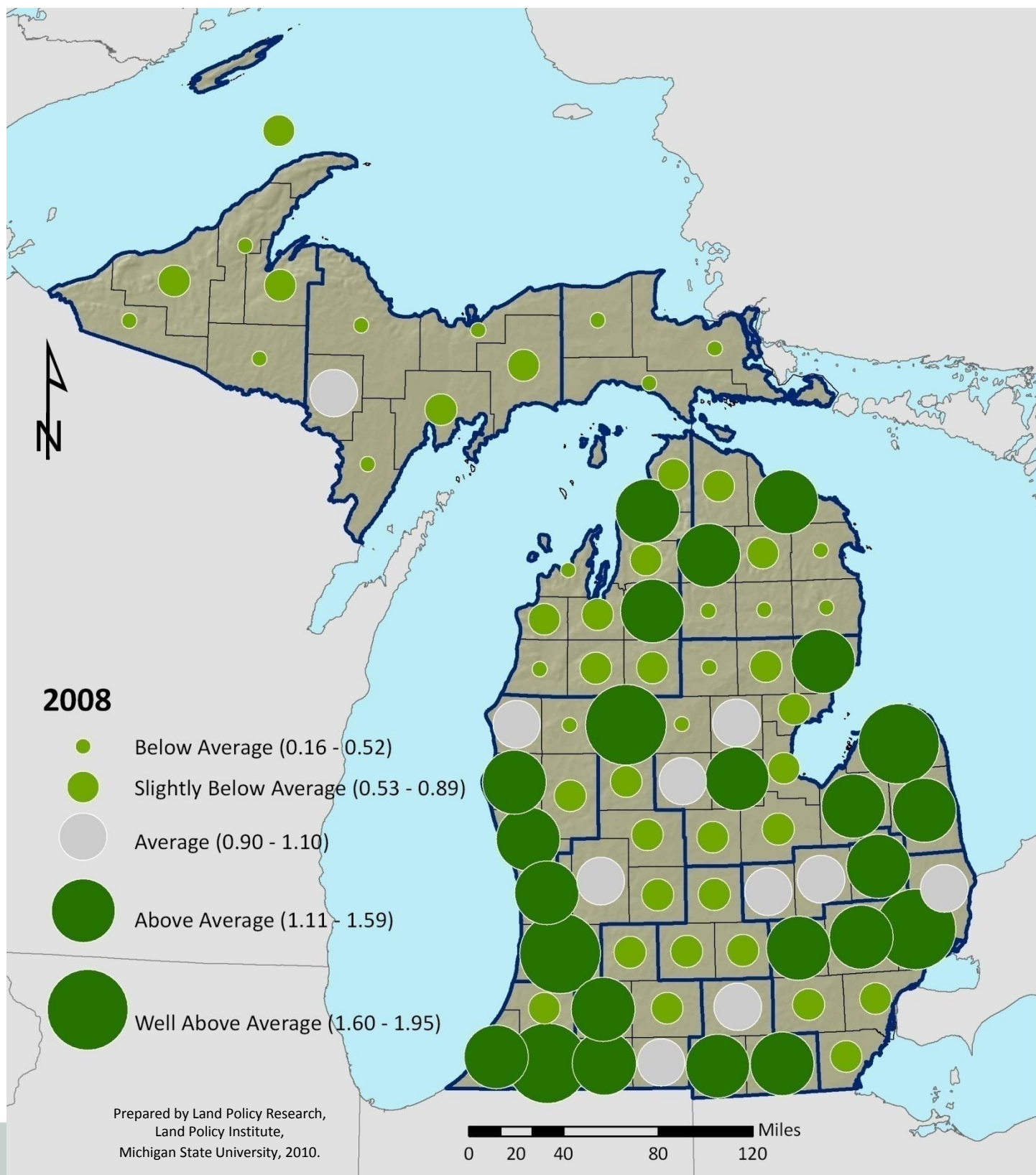
Regional Location Quotient Distribution



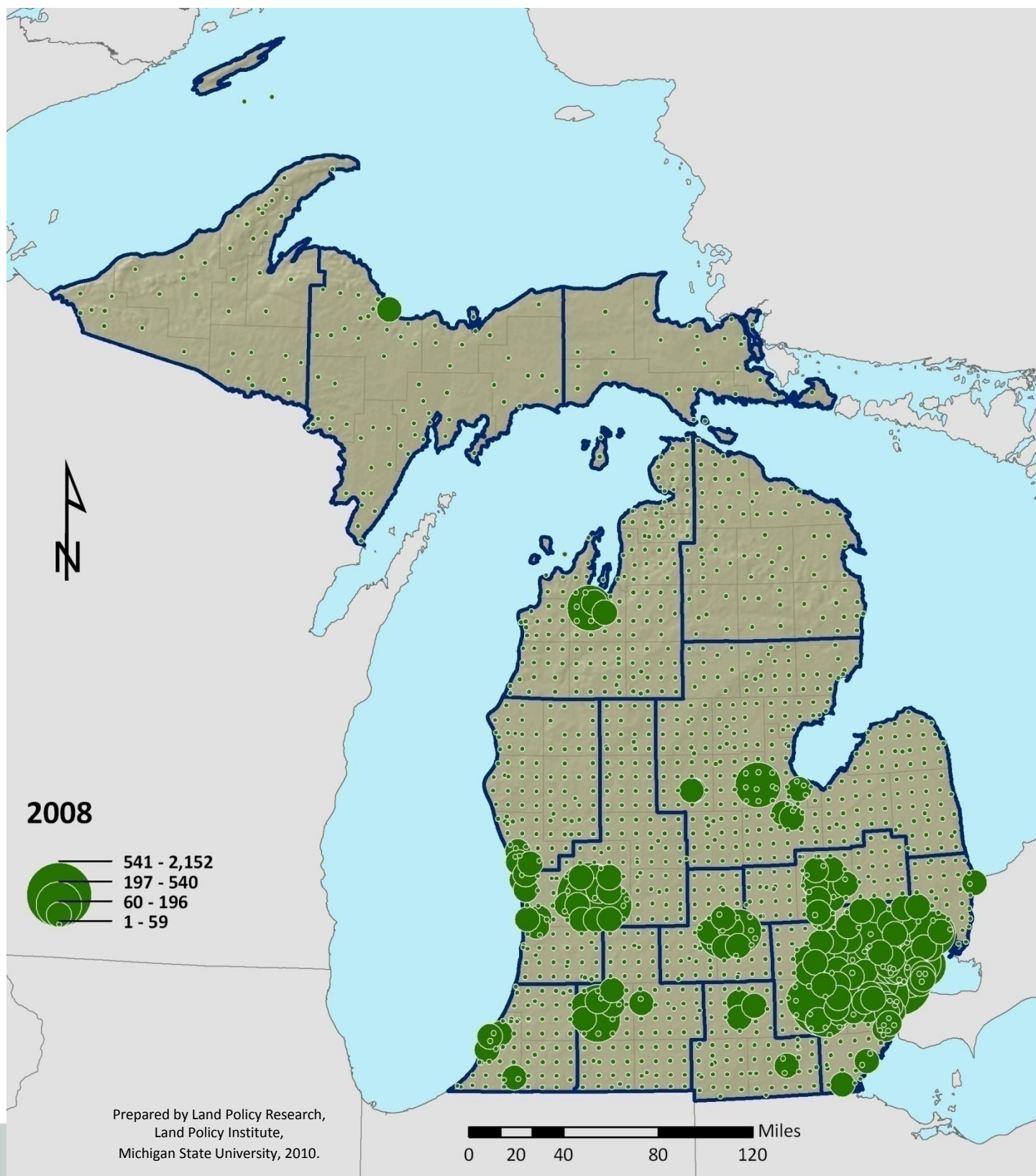
Change in Regional Location Quotient Distribution 2002-2008



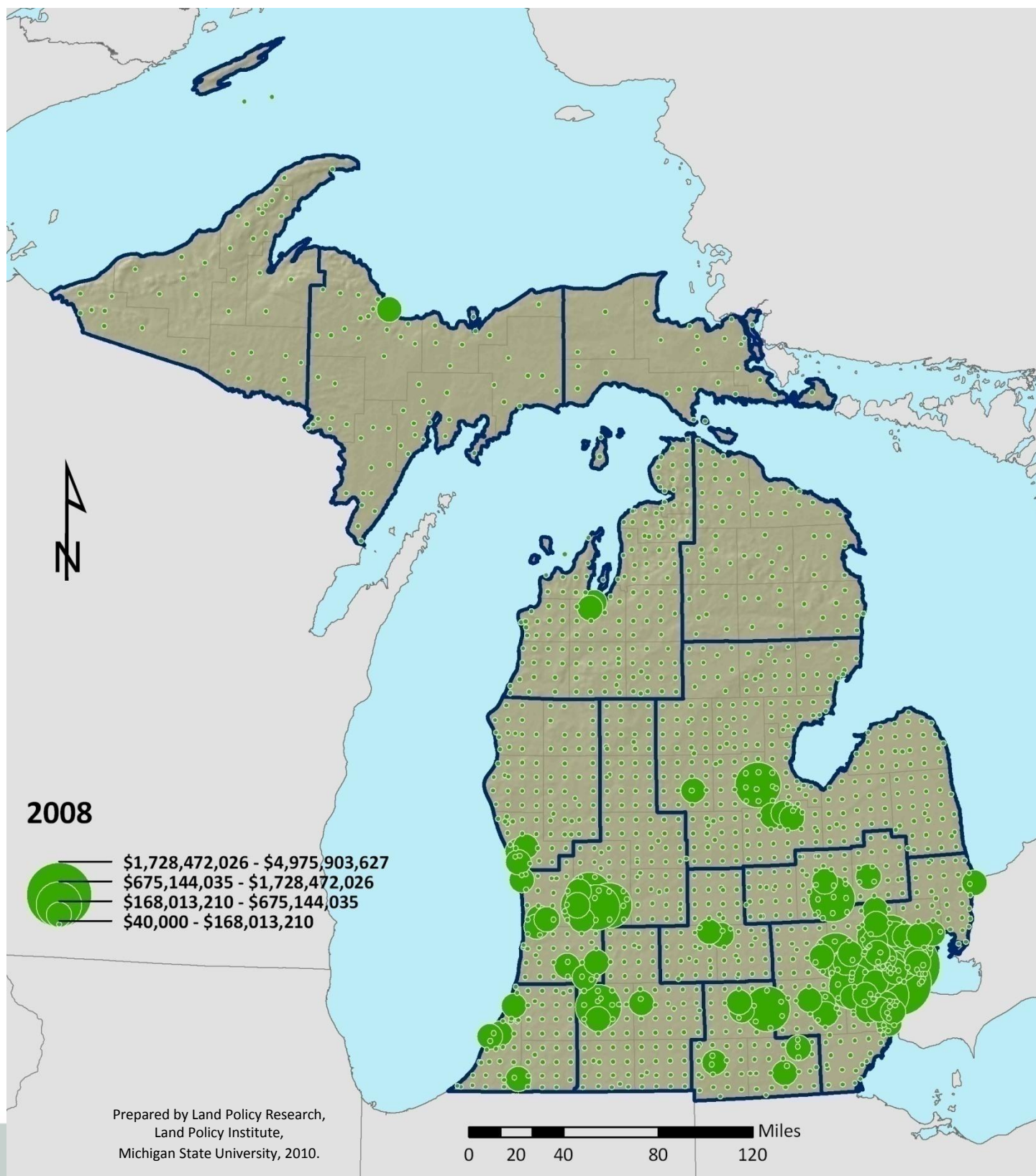
County Location Quotient Distribution



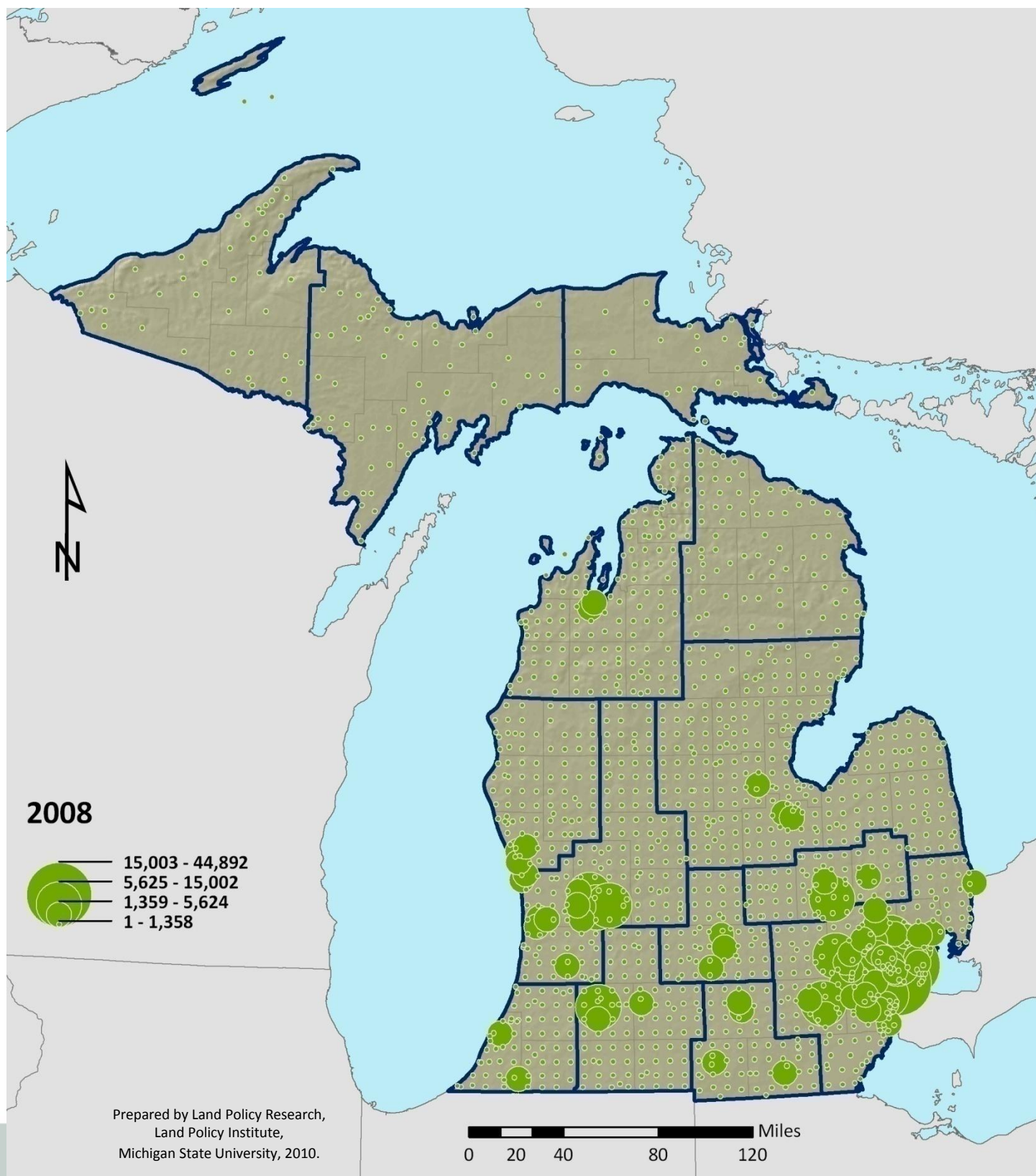
Establishments Statewide



Sales Statewide



Employment Statewide

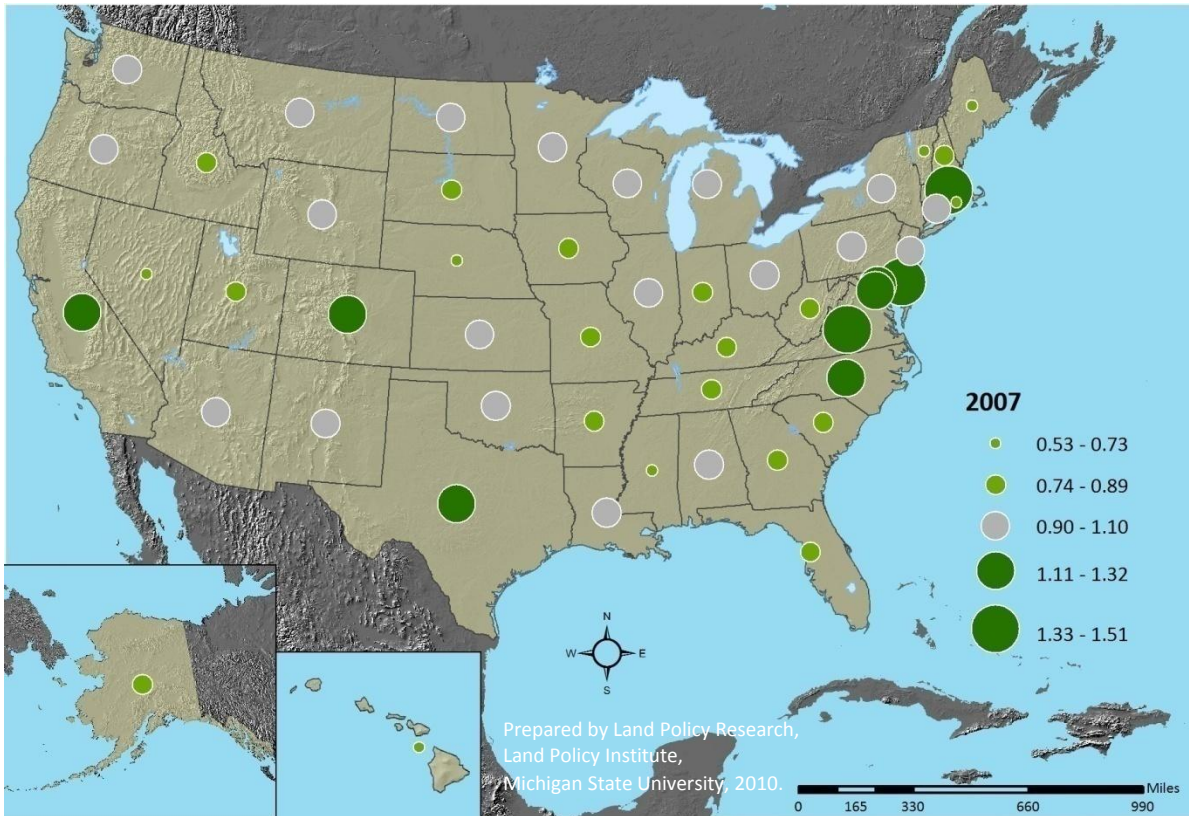


Environmental Technology Cluster Analysis

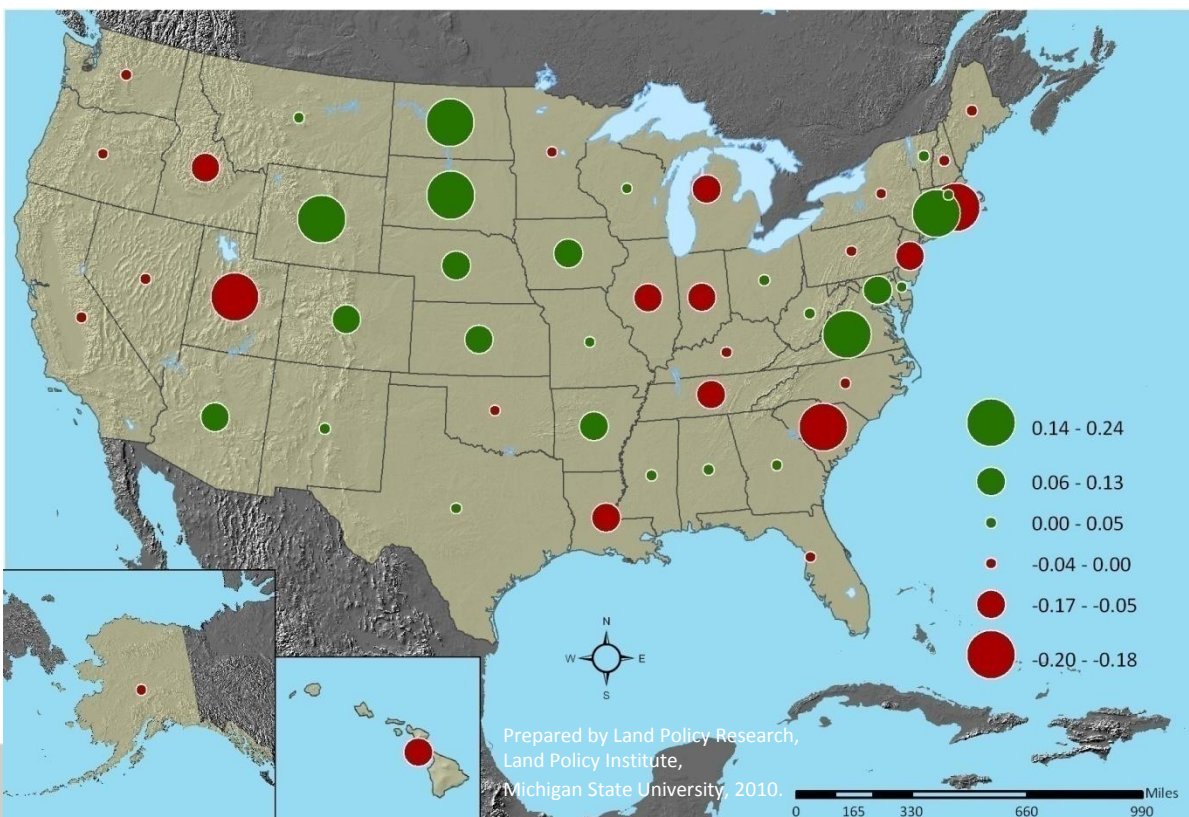
This super cluster includes industries such as wastewater management, drinking water treatment, environmental analysis, environmental technology manufacture and service, etc. (for a complete specification see Appendix 1). This sector was founded on Michigan's leadership in environmental regulation and implementation. Exporting this technology and expertise to developing nations is a growth opportunity.



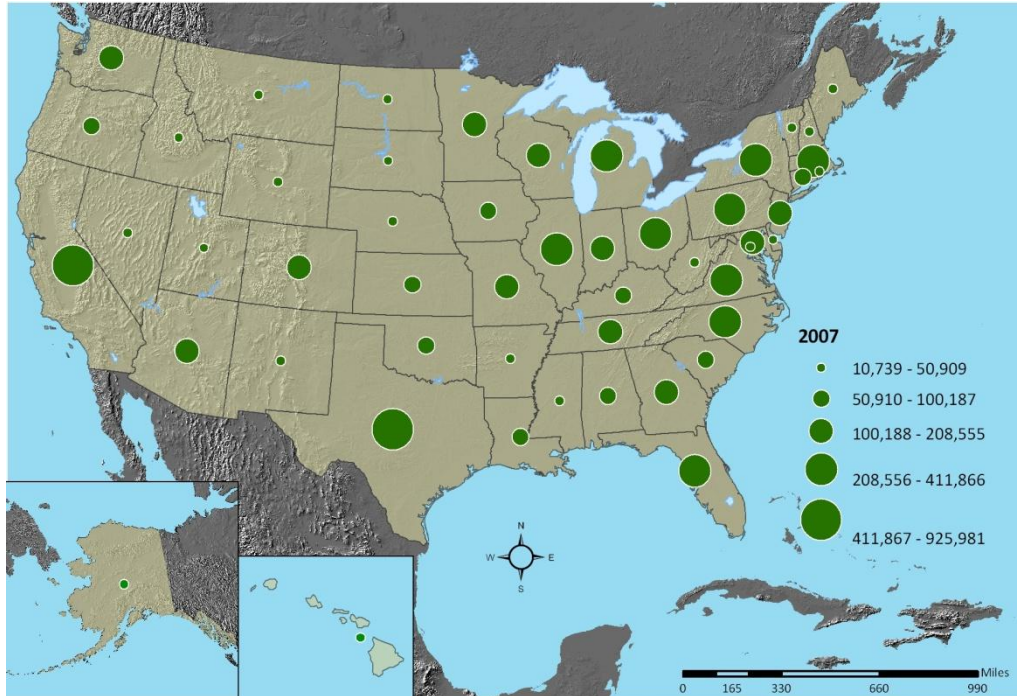
National Location Quotient



Change in Location Quotient 2003-2007

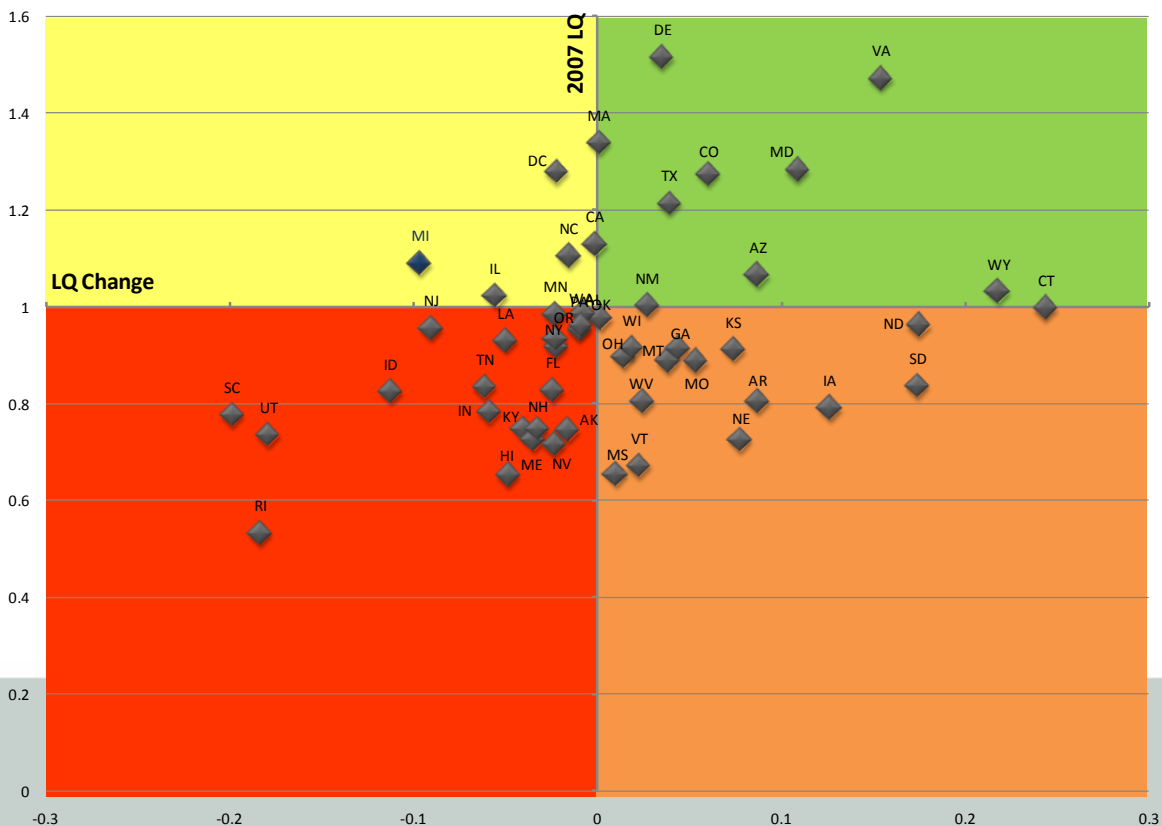


National Employment Distribution

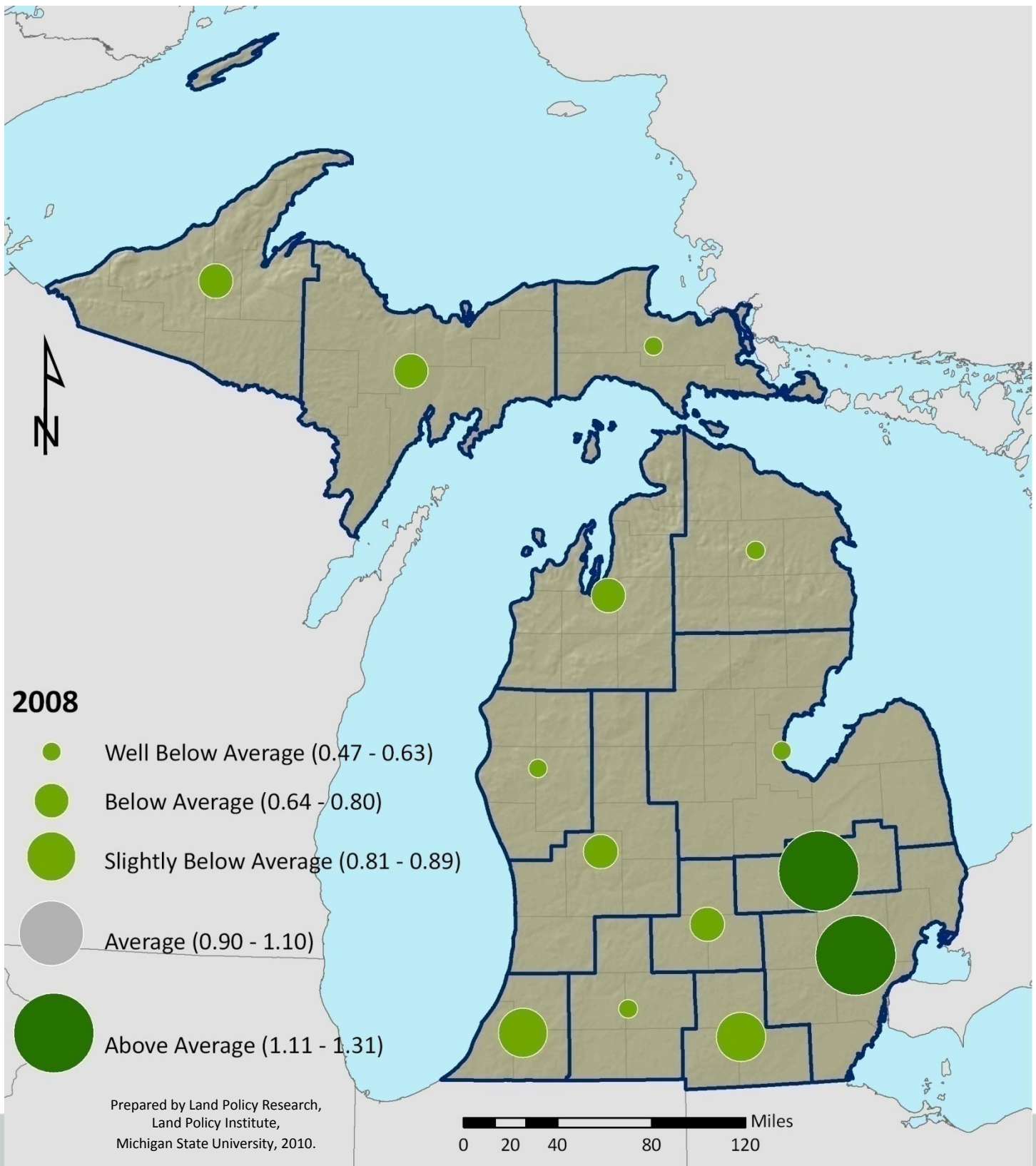


50 State Location Quotient Distribution

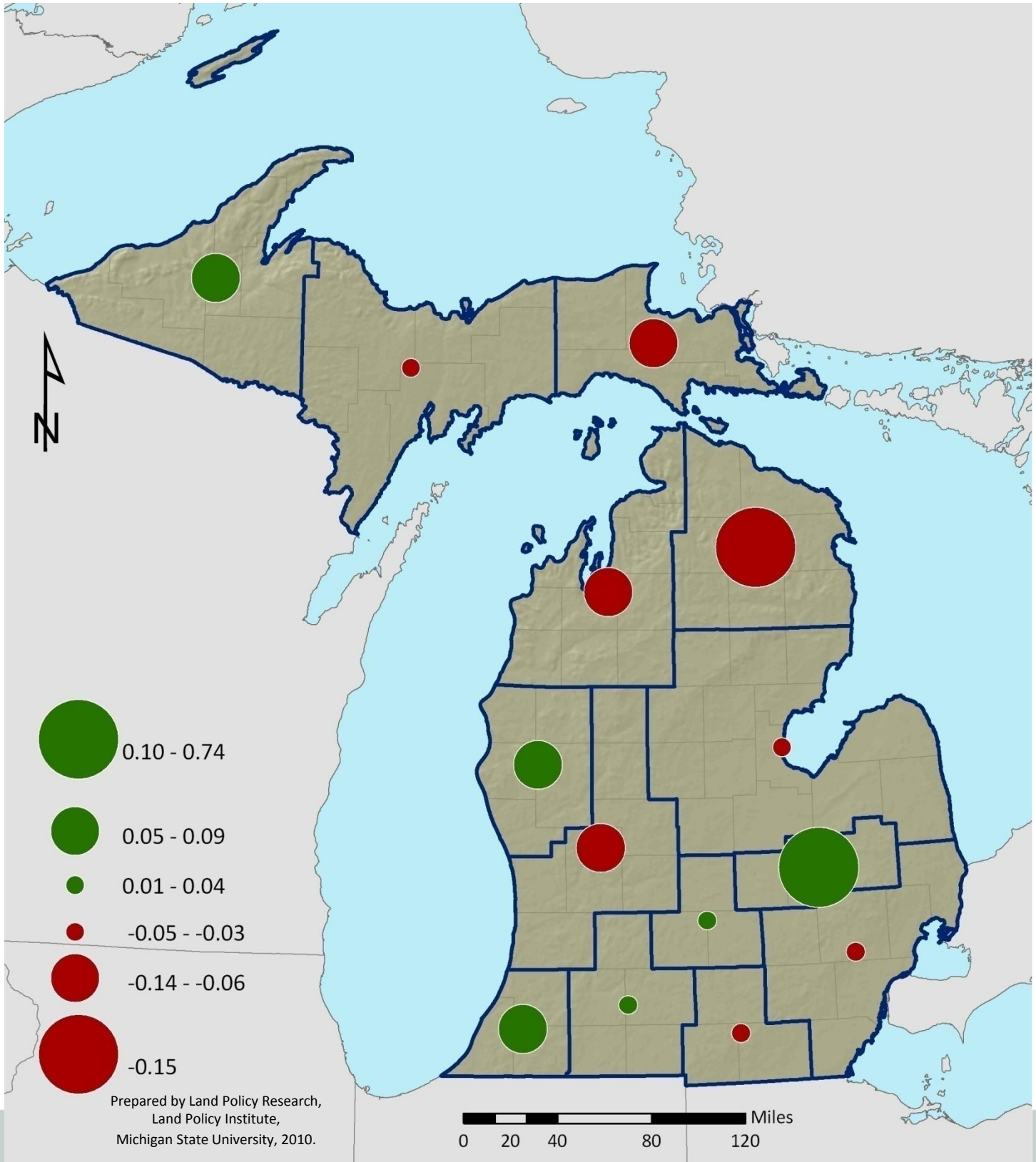
Environmental Technology State LQ Chart



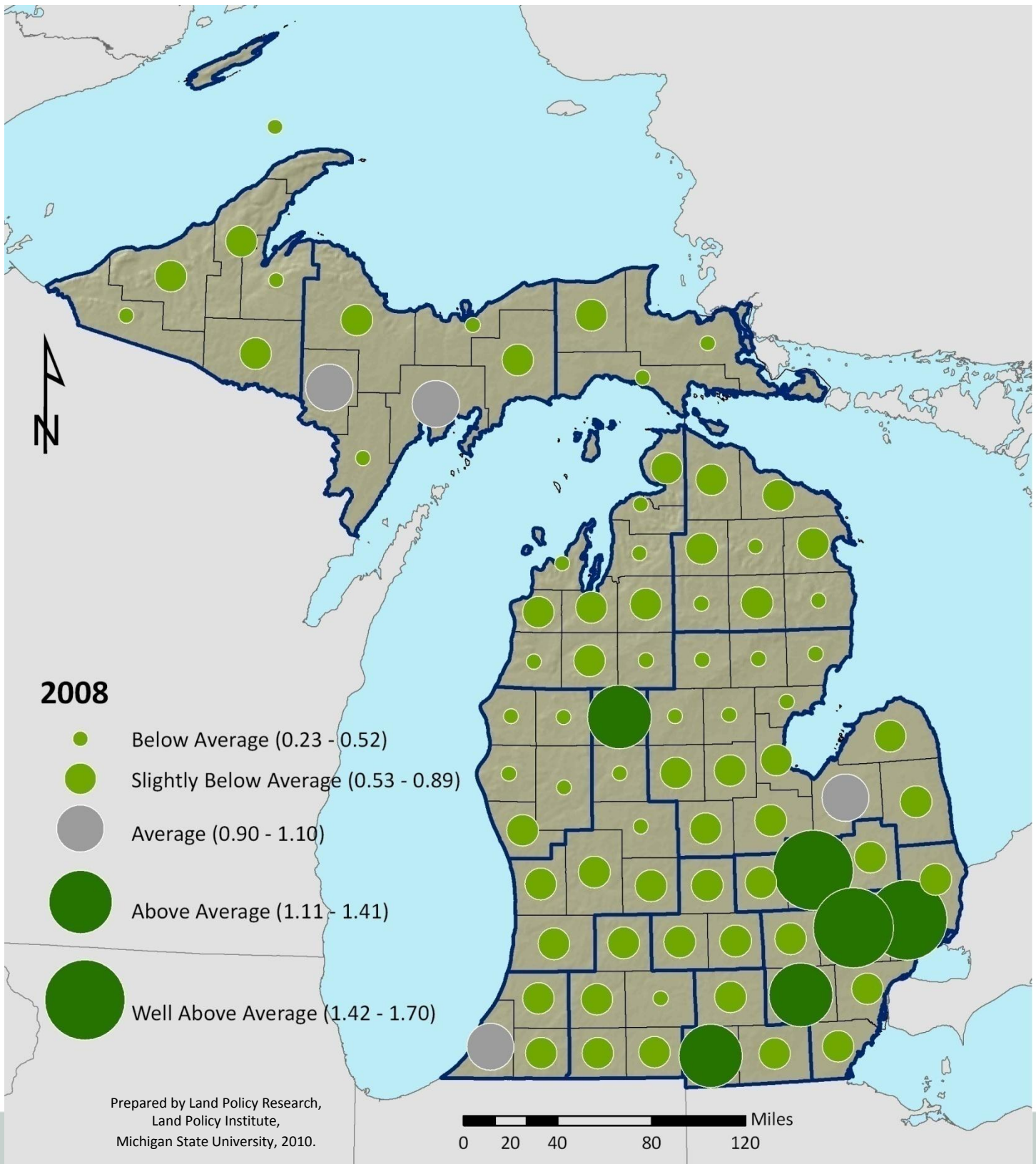
Regional Location Quotient Distribution



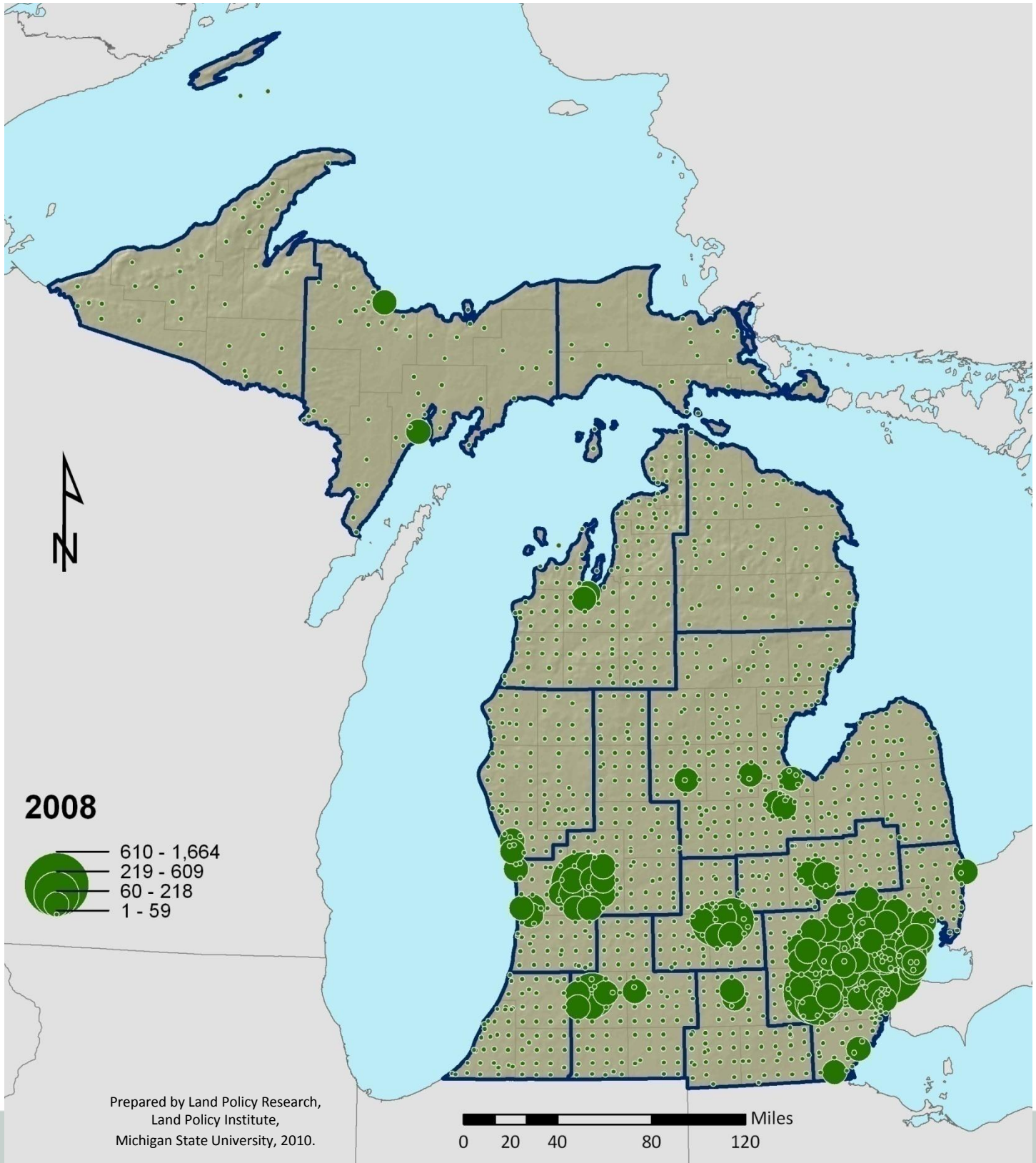
Change in Regional Location Quotient Distribution 2002-2008



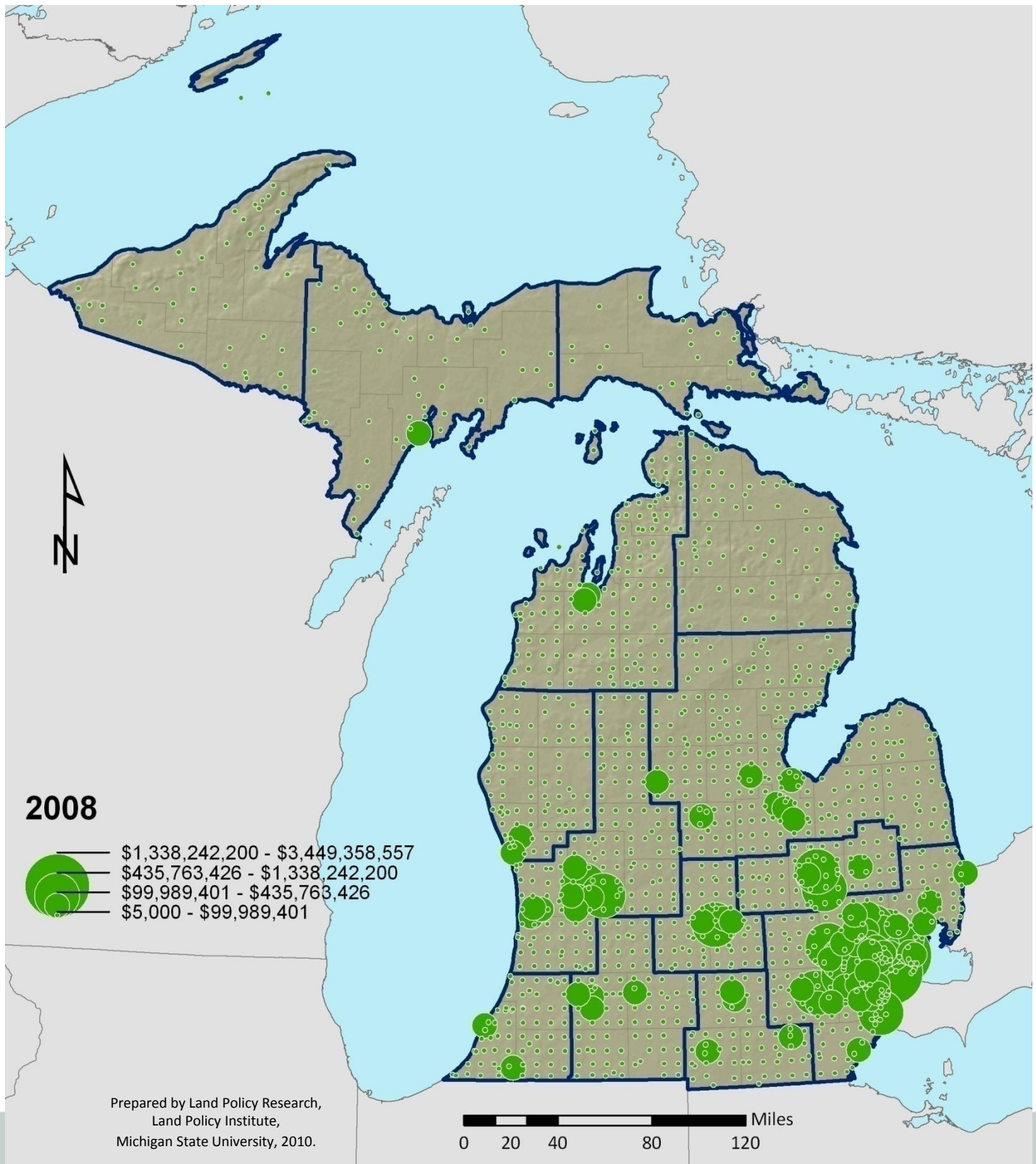
County Location Quotient Distribution



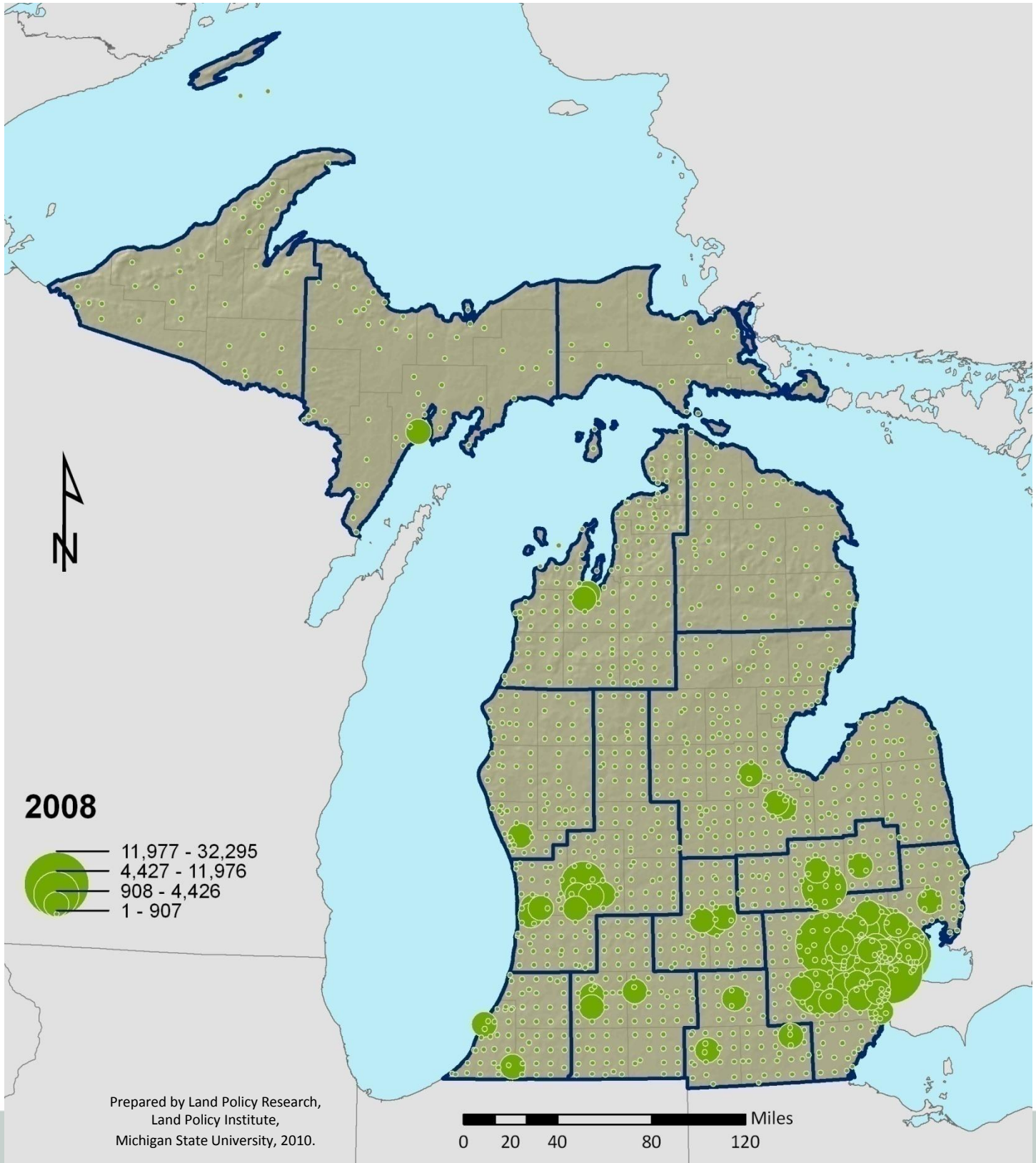
Establishments Statewide



Sales Statewide



Employment Statewide

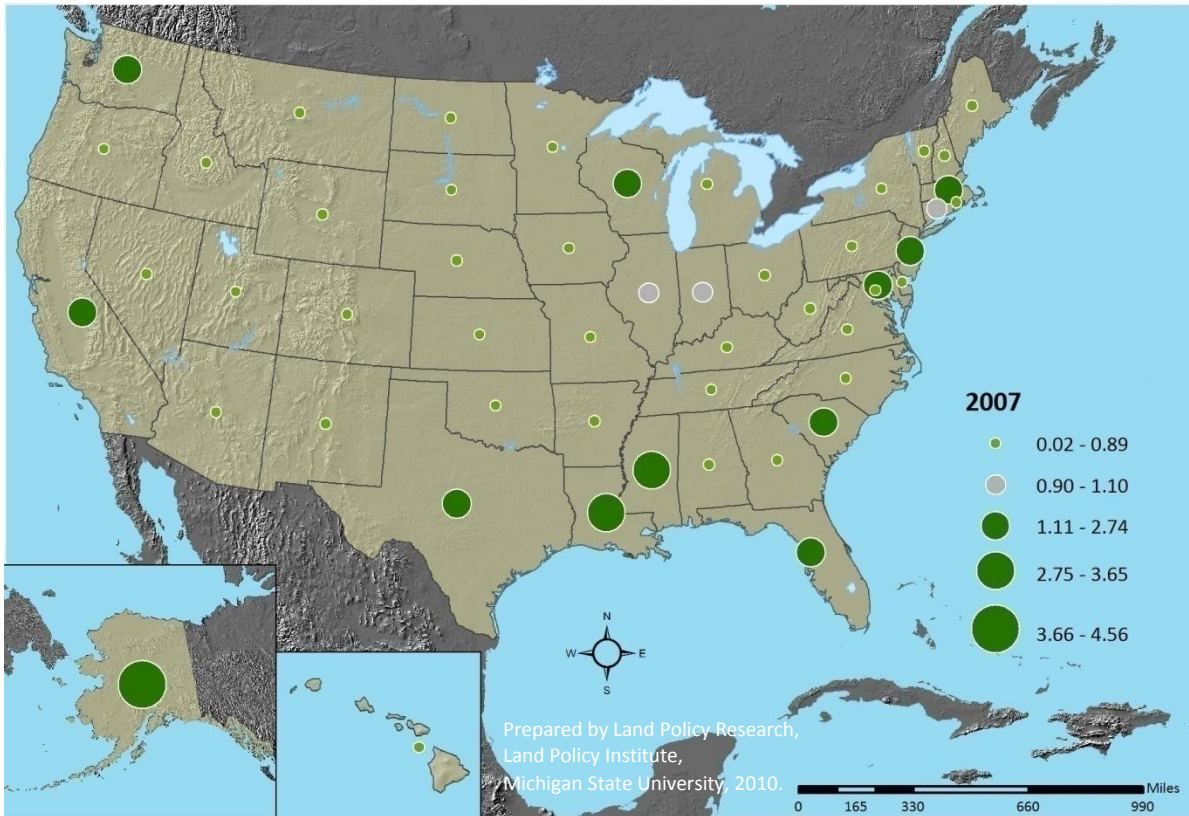


Fisheries and Freshwater Industries Cluster Analysis

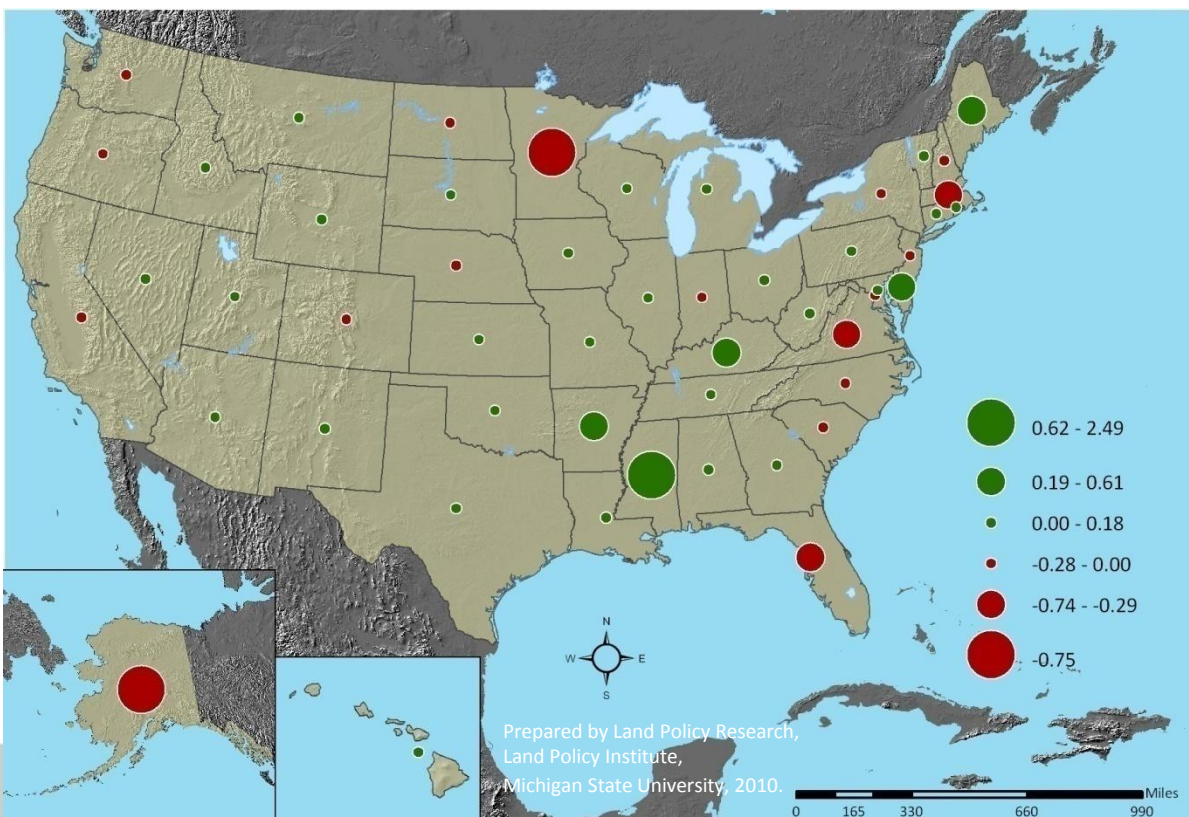
This cluster includes the fisheries and related activities such as processing, canneries, transportation, port operations, and boat building (for a complete specification see Appendix 1). These industries comprise a longstanding and important segment in Michigan's economy.



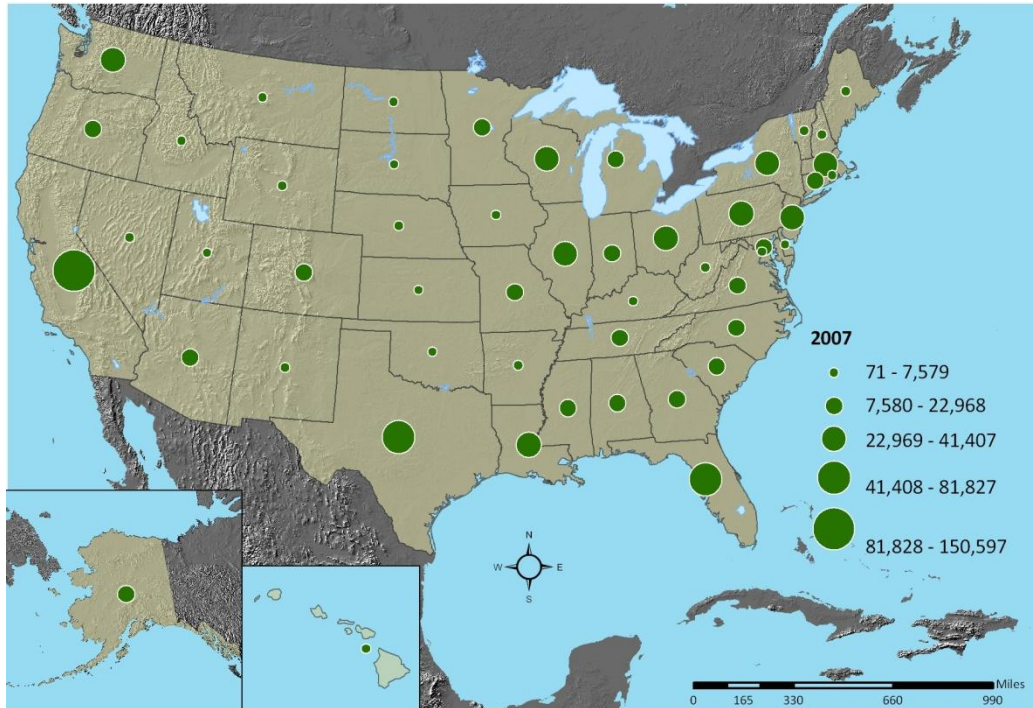
National Location Quotient



Change in Location Quotient 2003-2007

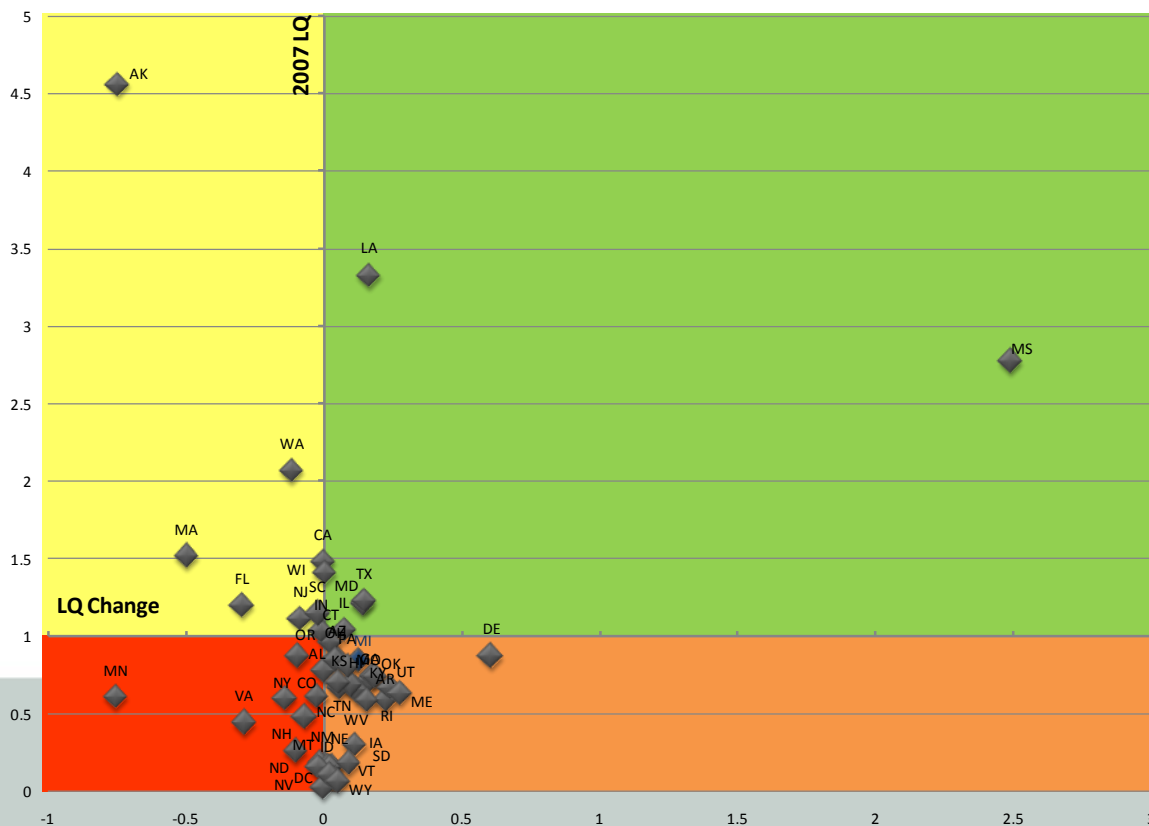


National Employment Distribution

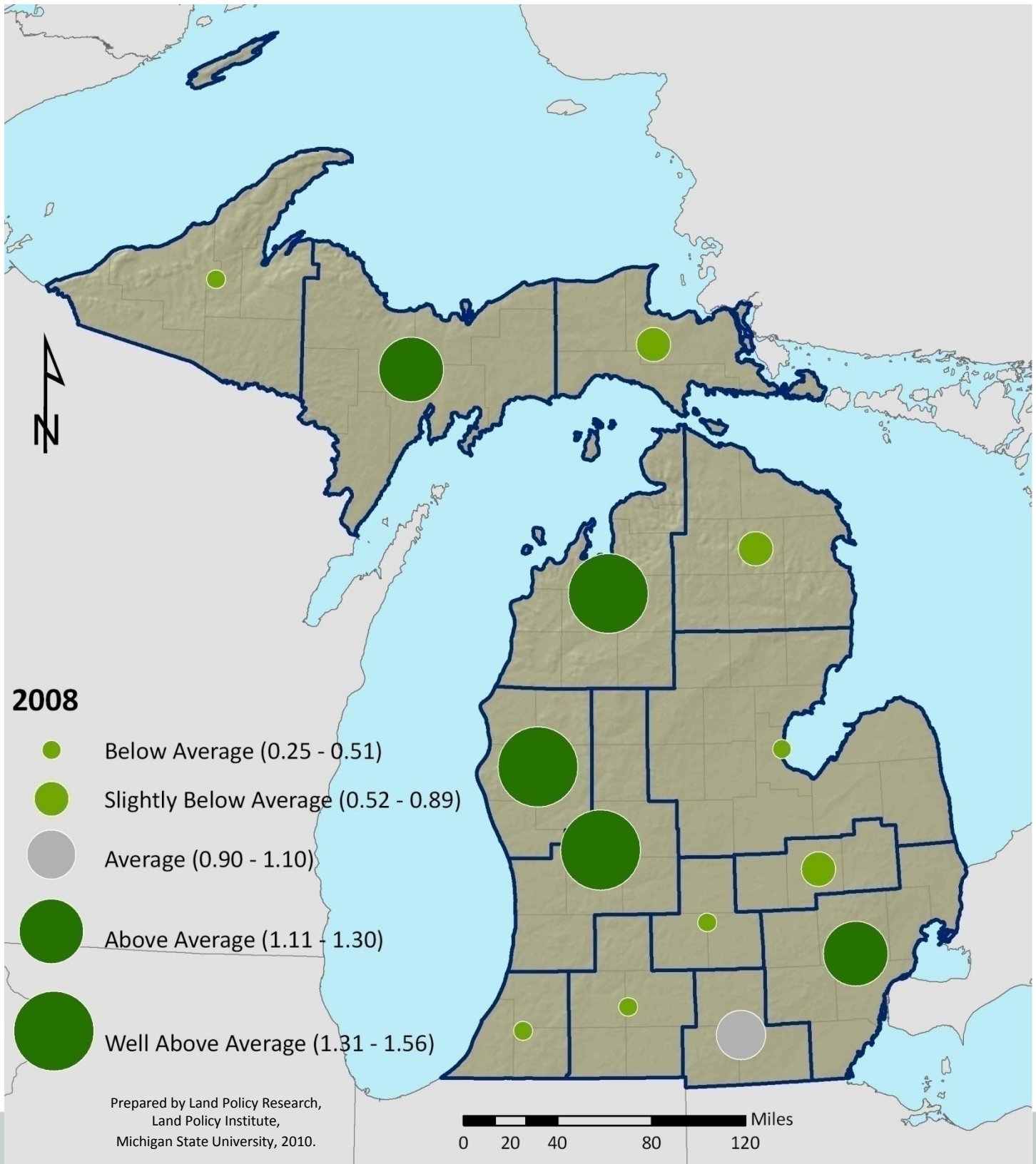


50 State Location Quotient Distribution

Fisheries and Freshwater Industries State LQ Chart

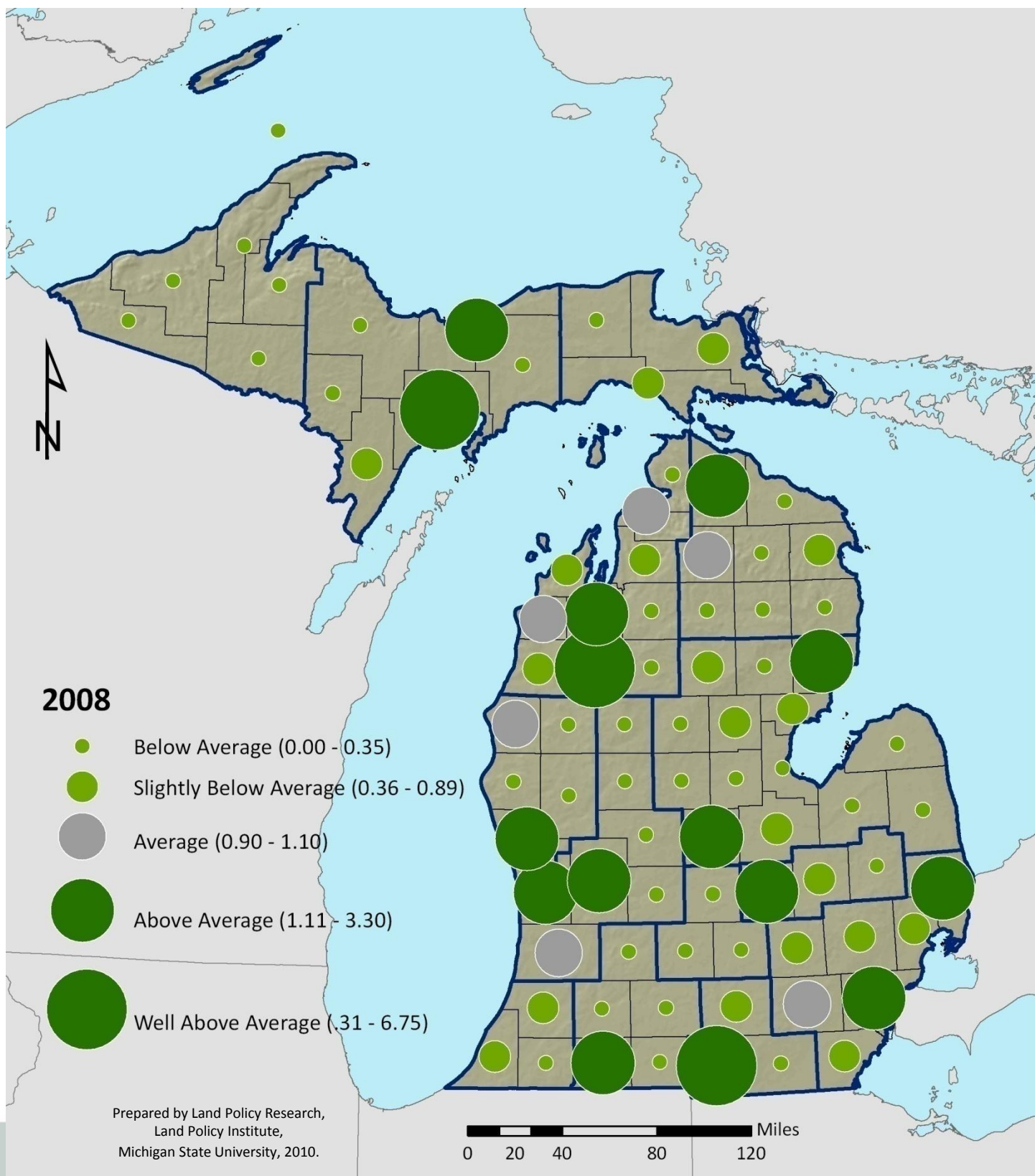


Regional Location Quotient Distribution

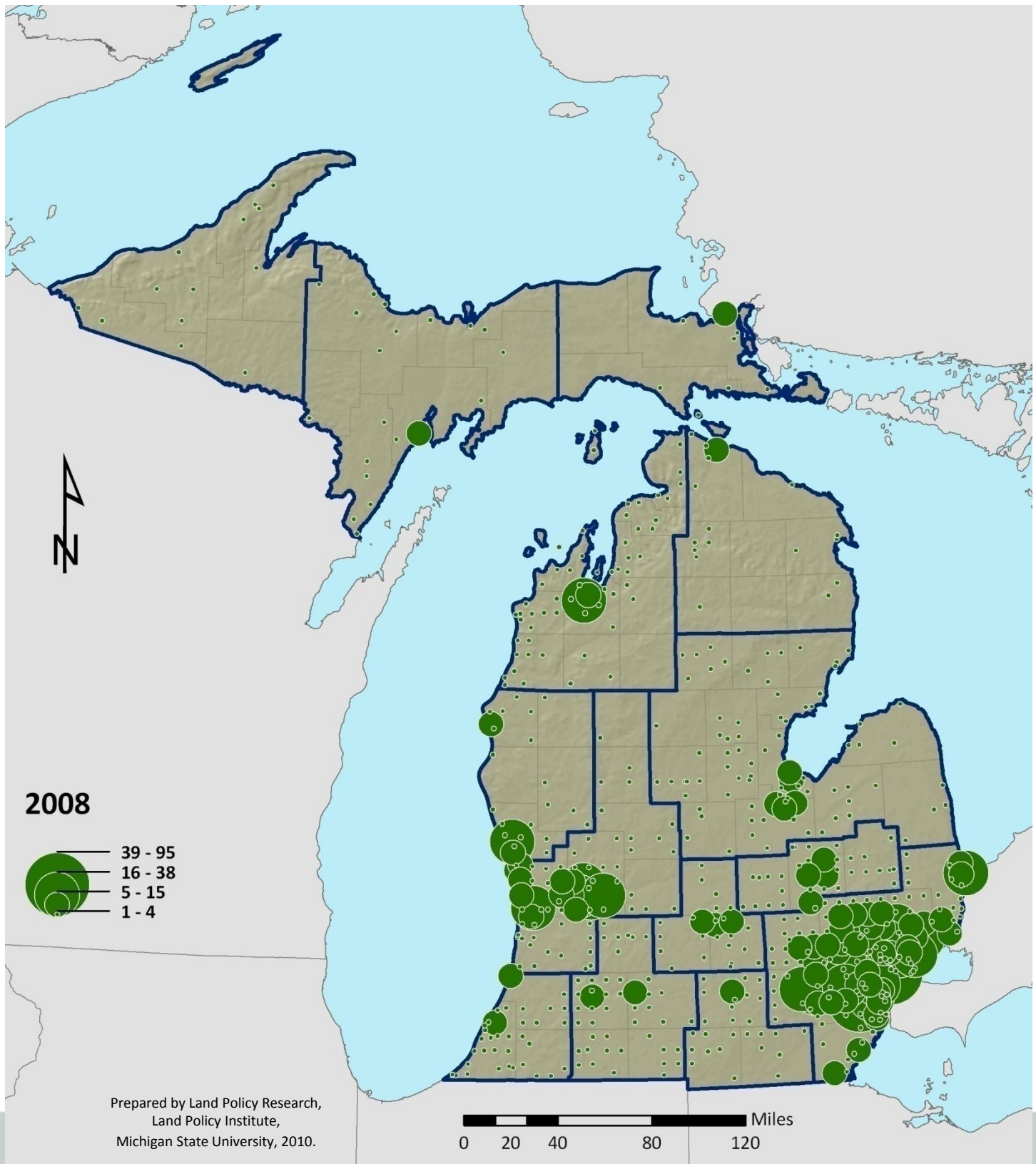




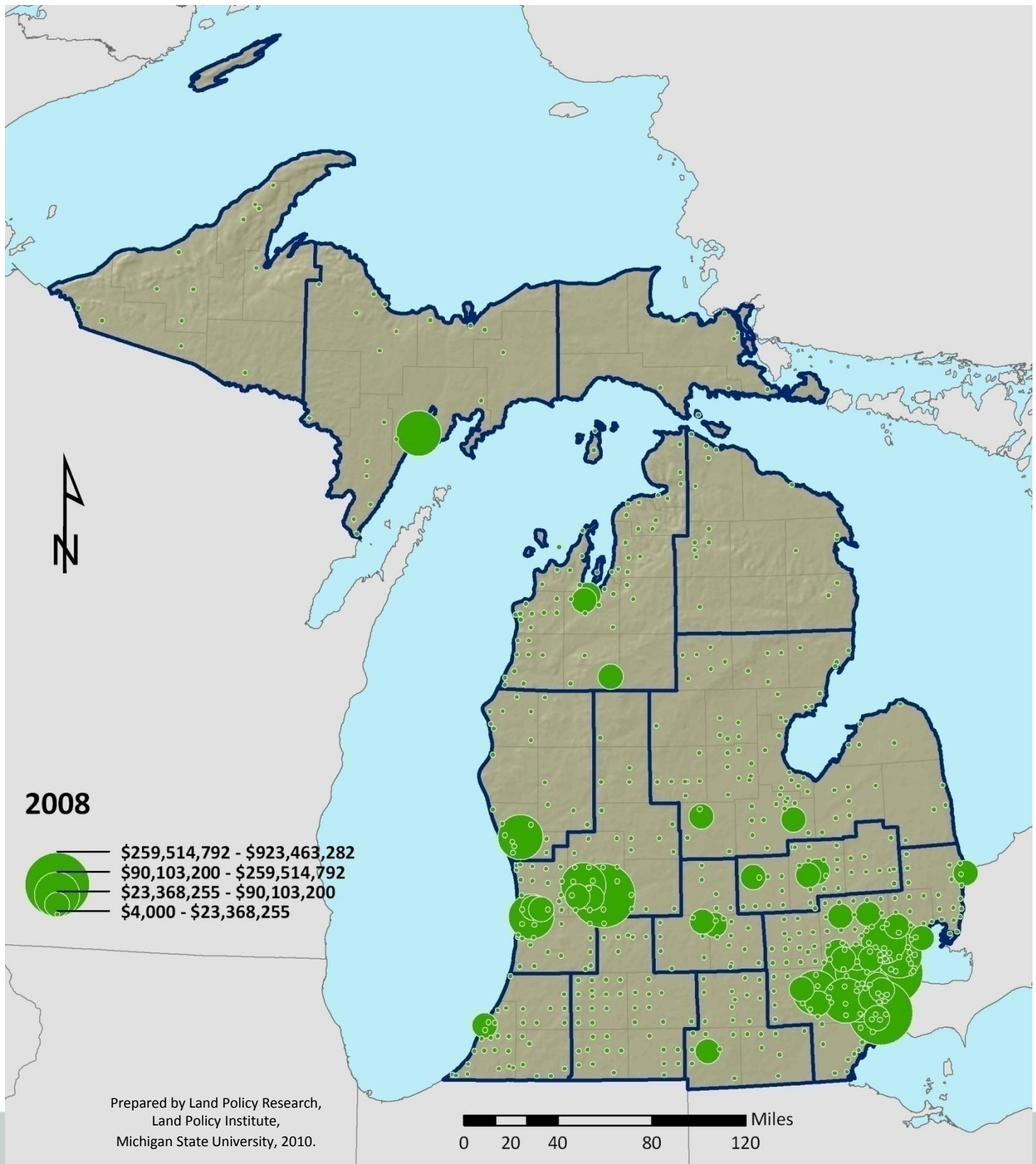
County Location Quotient Distribution



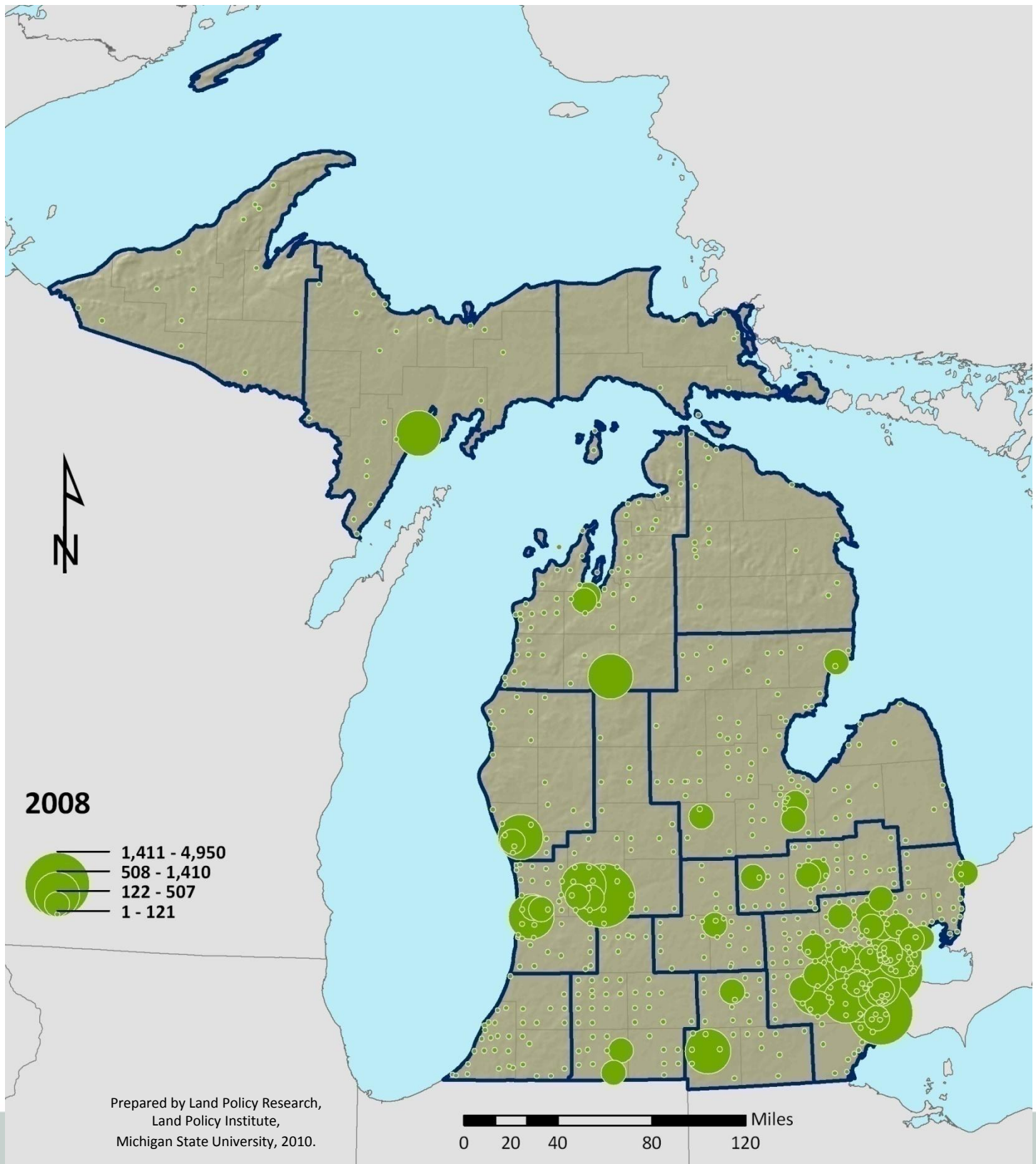
Establishments Statewide



Sales Statewide



Employment Statewide

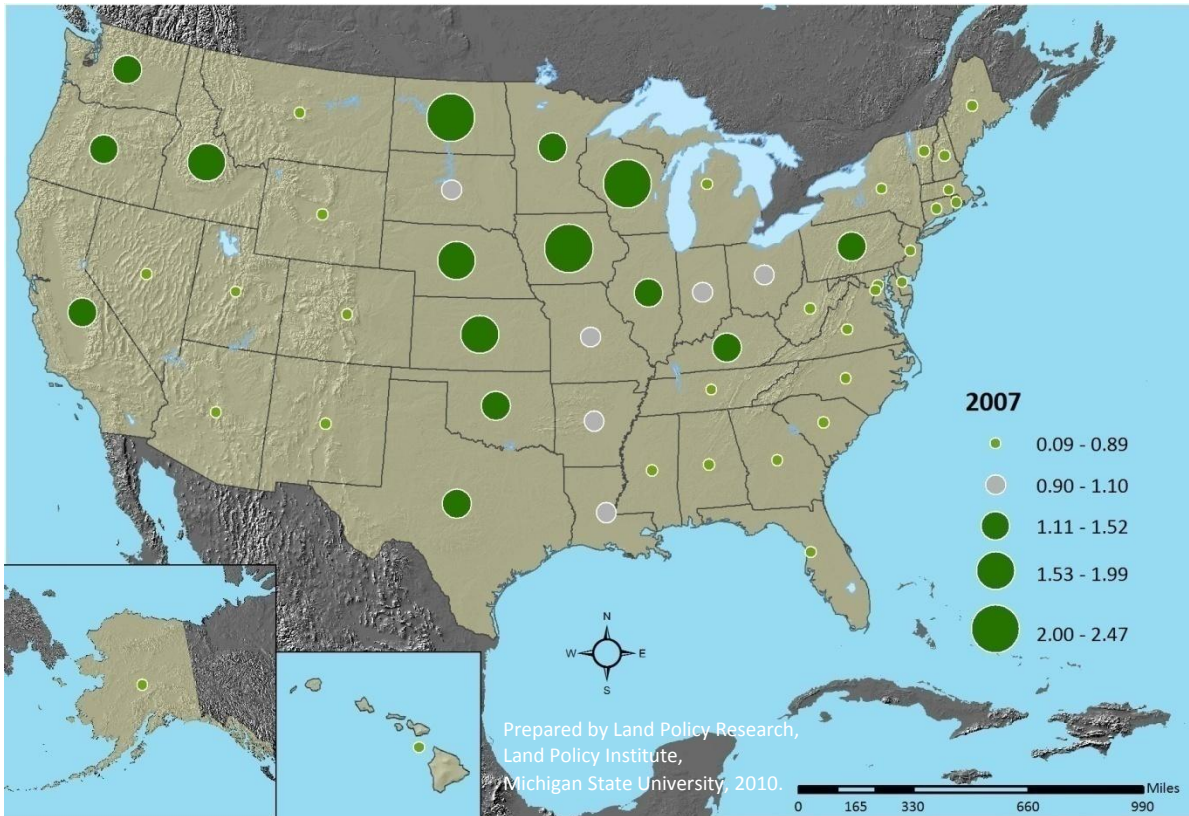


Food Innovation Cluster Analysis

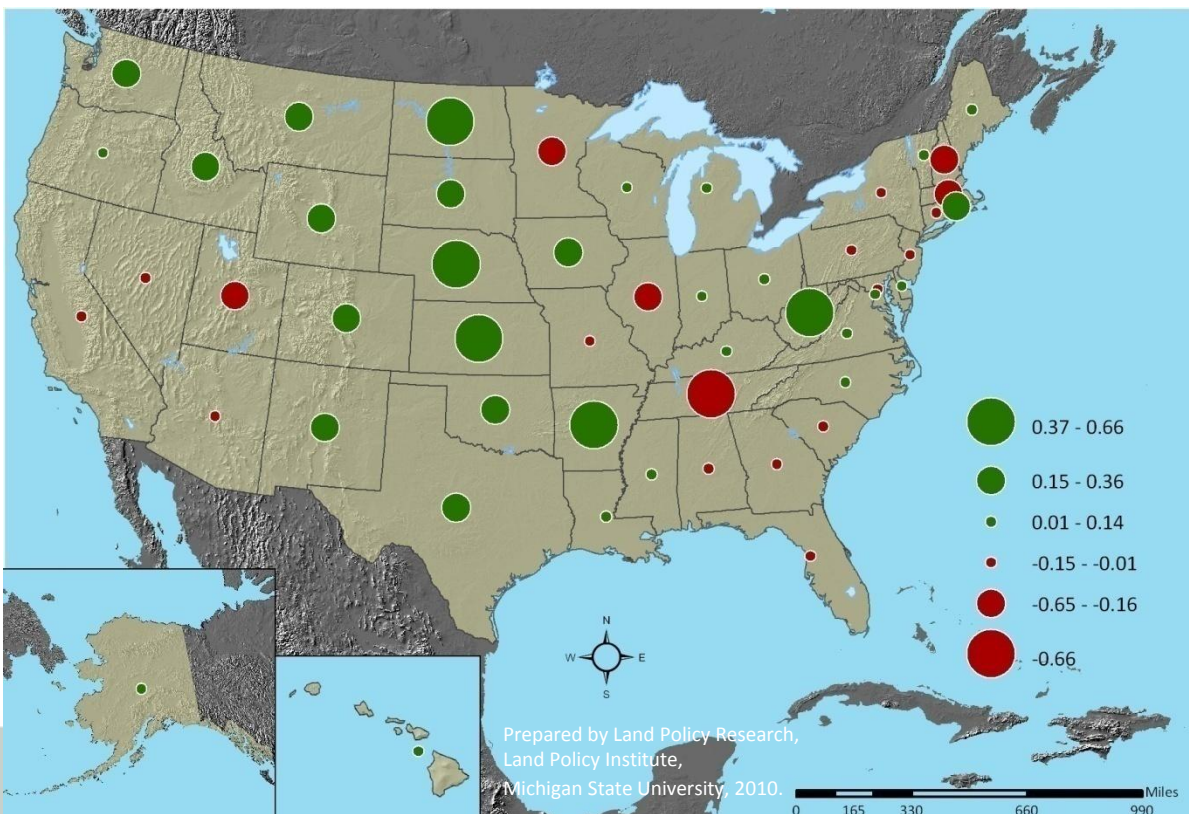
This cluster includes industries such as food value-added industries such as packaging, processing, supplements etc. (for a complete specification see Appendix 1). While not a traditional anchor point for Michigan's economy the lack of value-added processing and food product development coupled with the second most diverse agricultural sector in the nation and a strong agricultural university indicate a cluster that could be ramped up. Other opportunities in natural foods, whole foods, and the overall "foodie" movement are also emerging, as are nutraceutical and herbal medicine opportunities



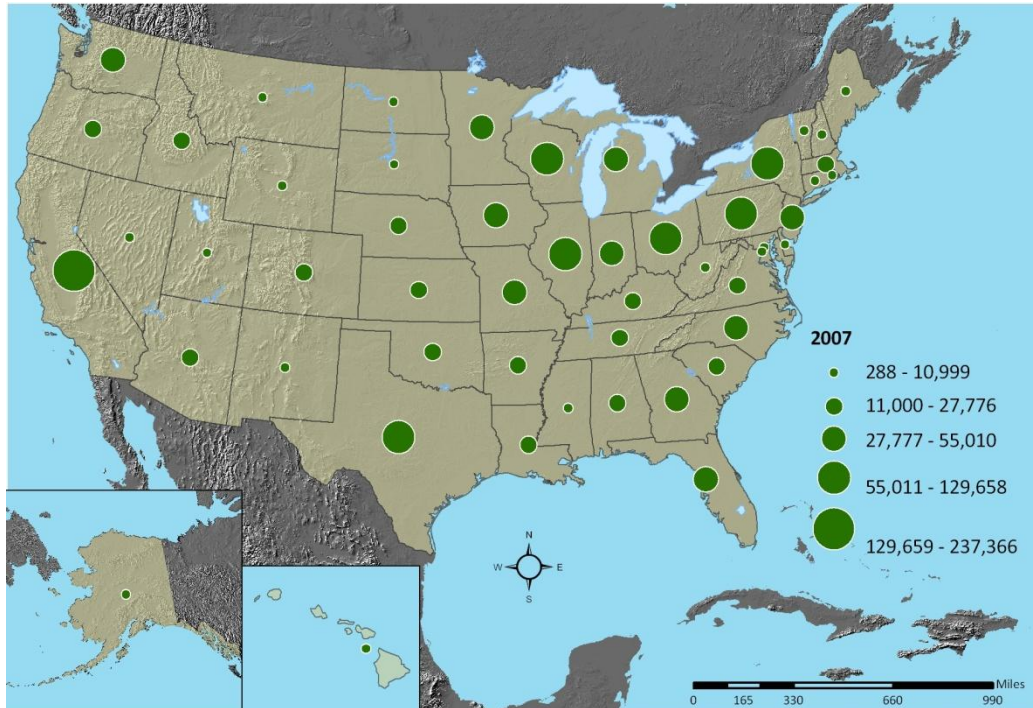
National Location Quotient



Change in Location Quotient 2003-2007

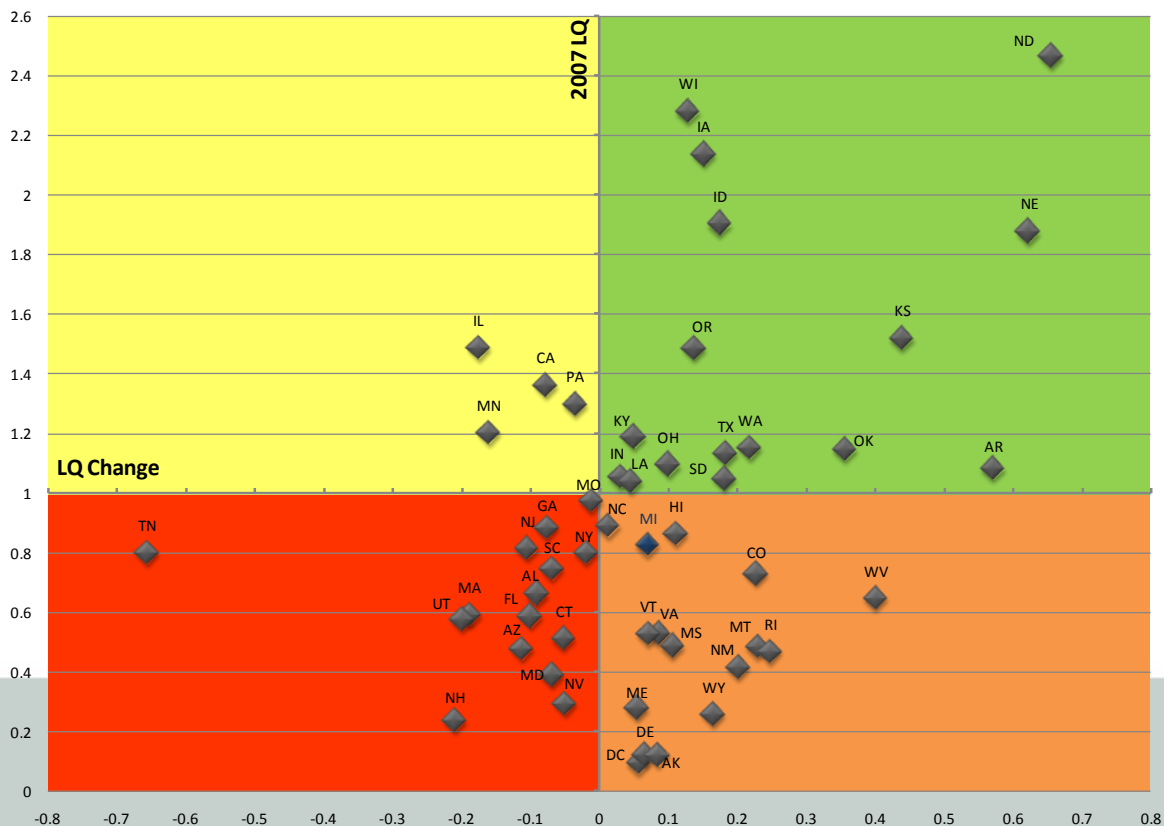


National Employment Distribution

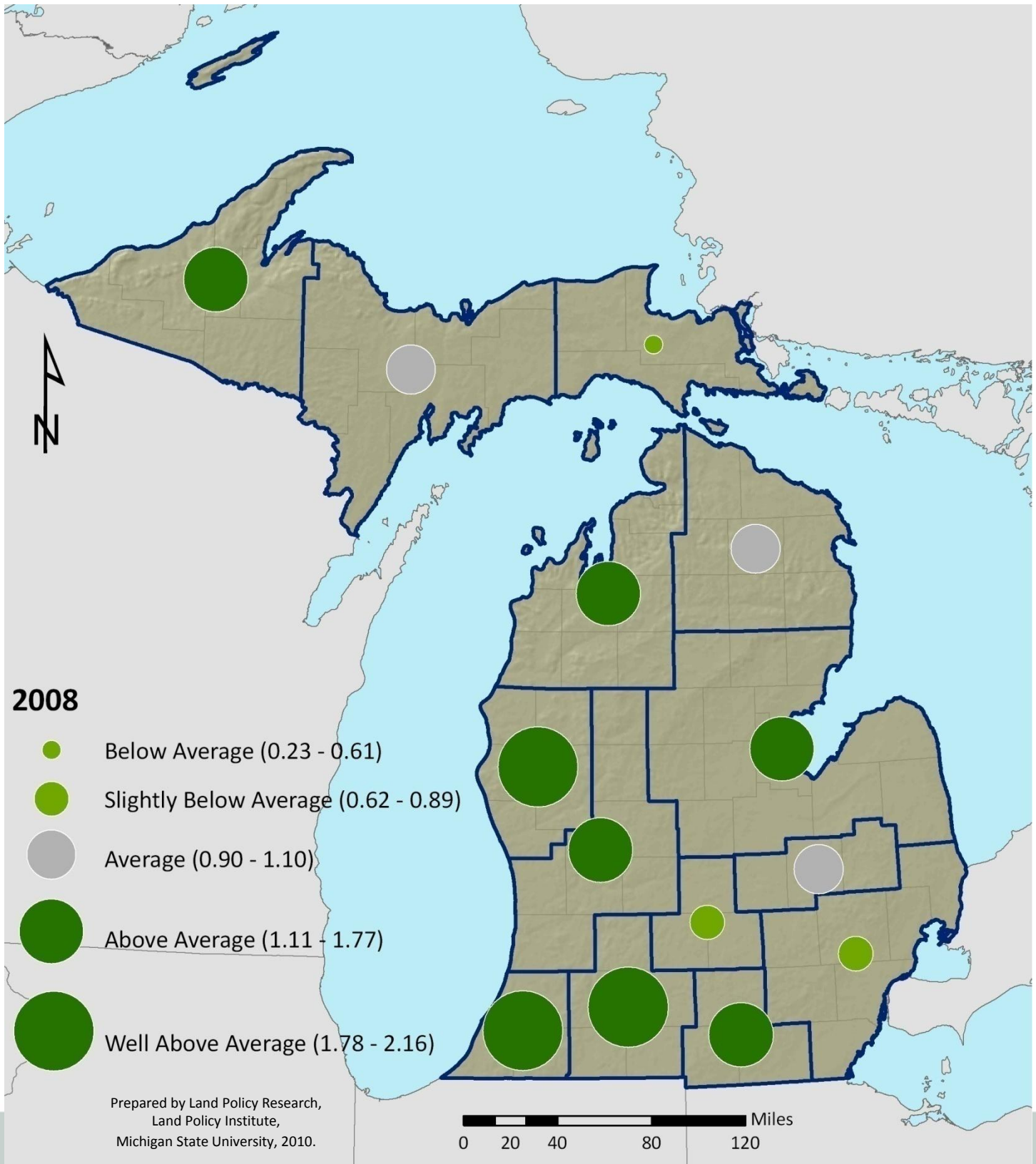


50 State Location Quotient Distribution

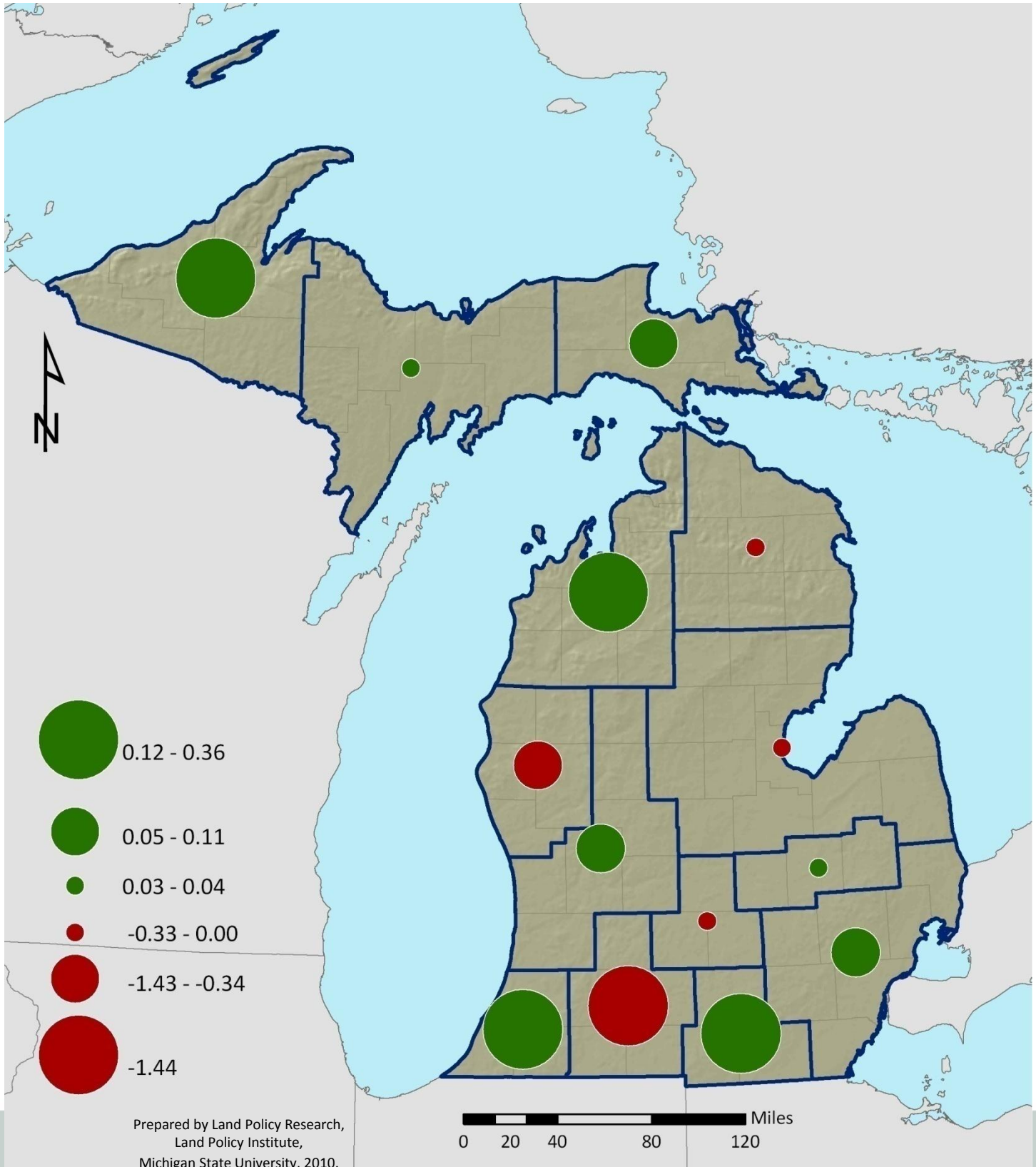
Food Innovation State LQ Chart



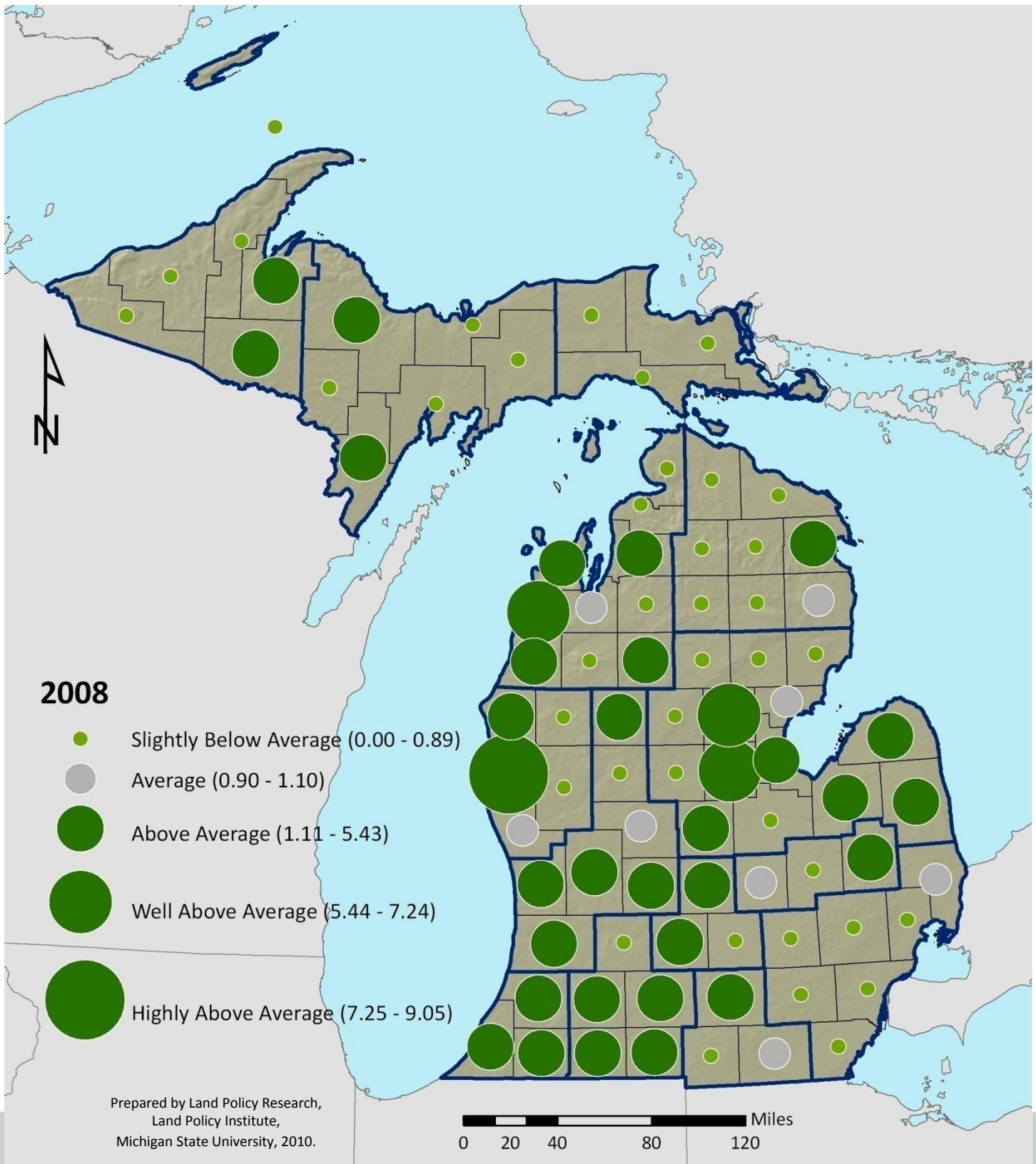
Regional Location Quotient Distribution



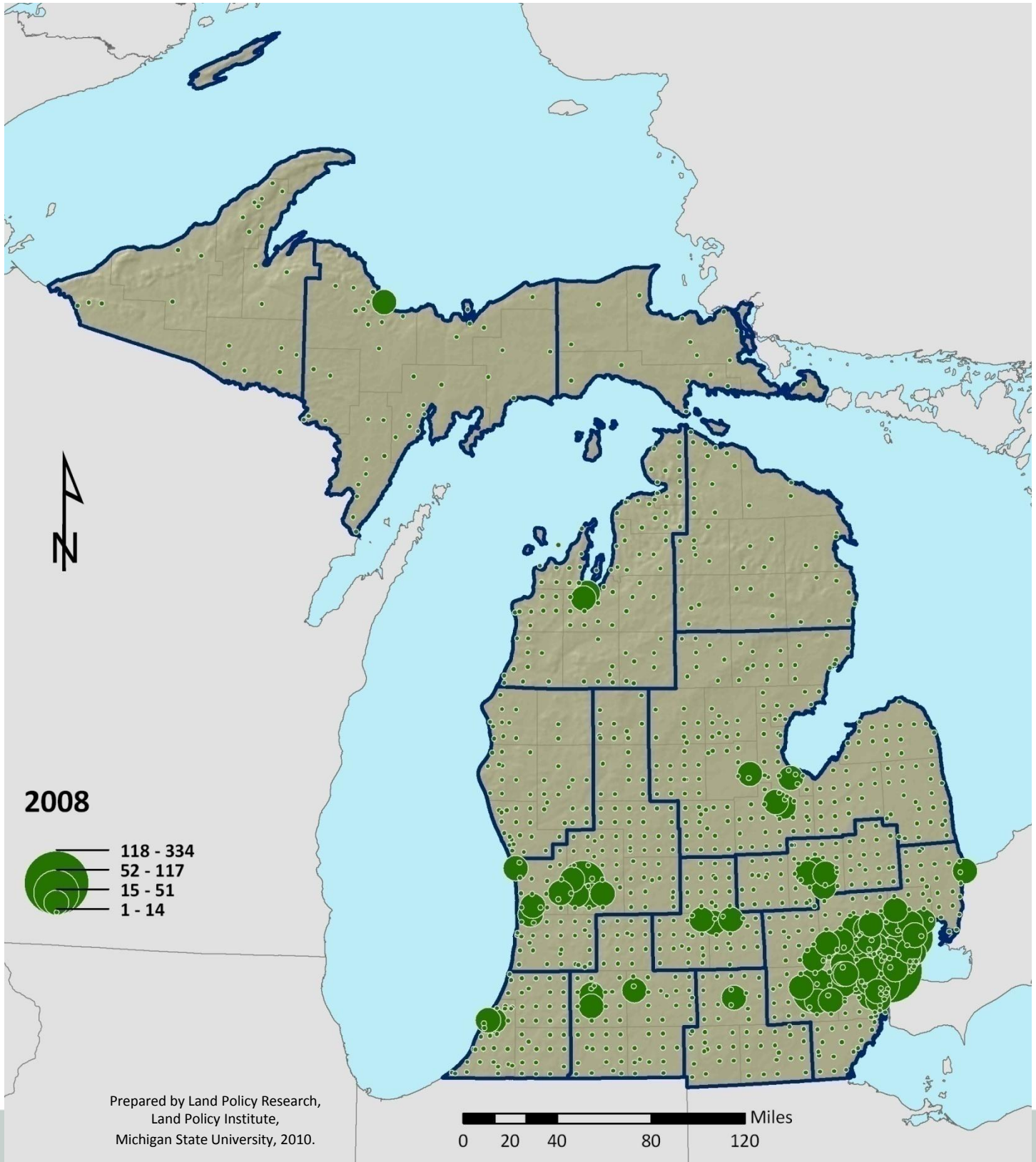
Change in Regional Location Quotient Distribution 2002-2008



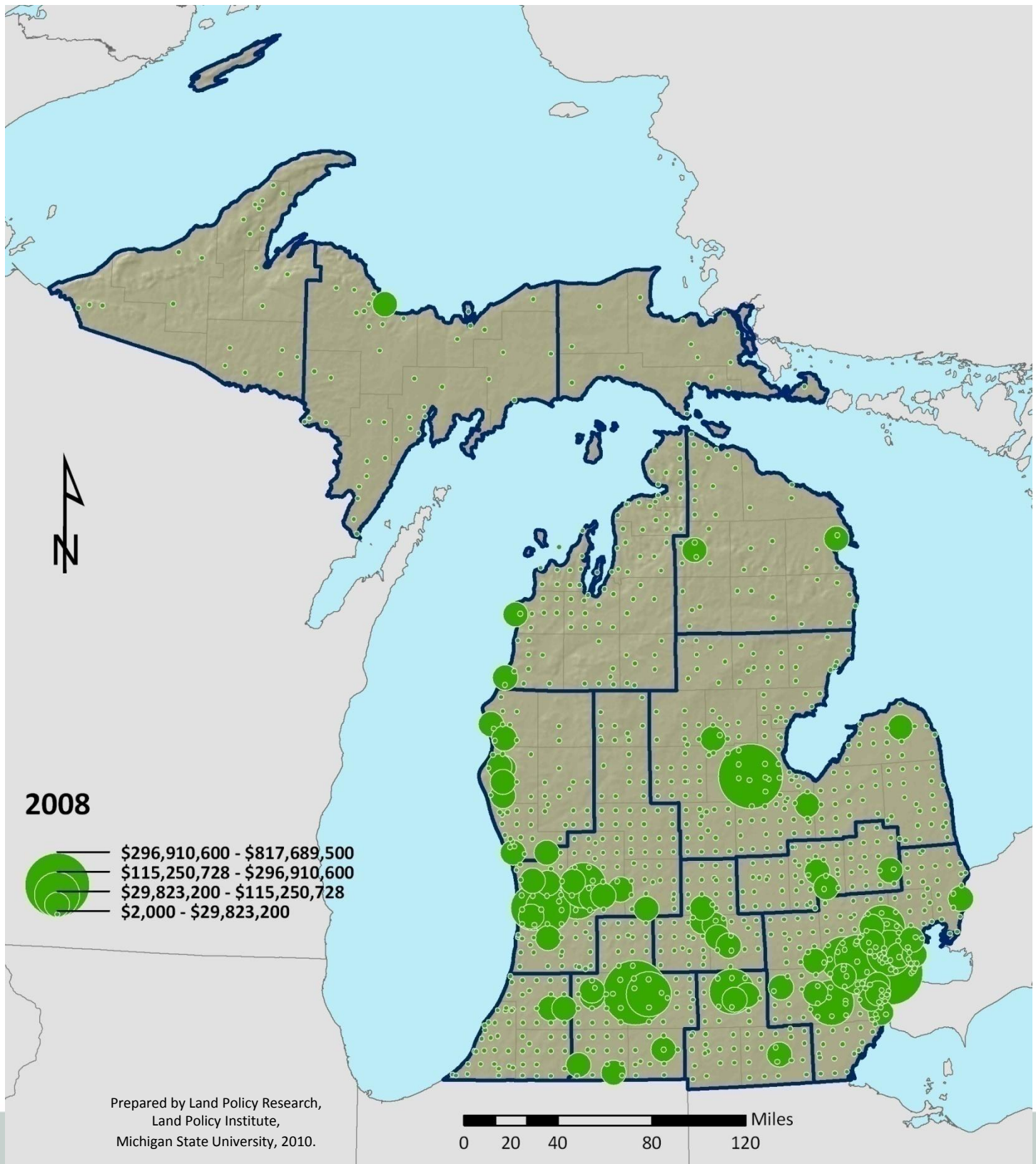
County Location Quotient Distribution



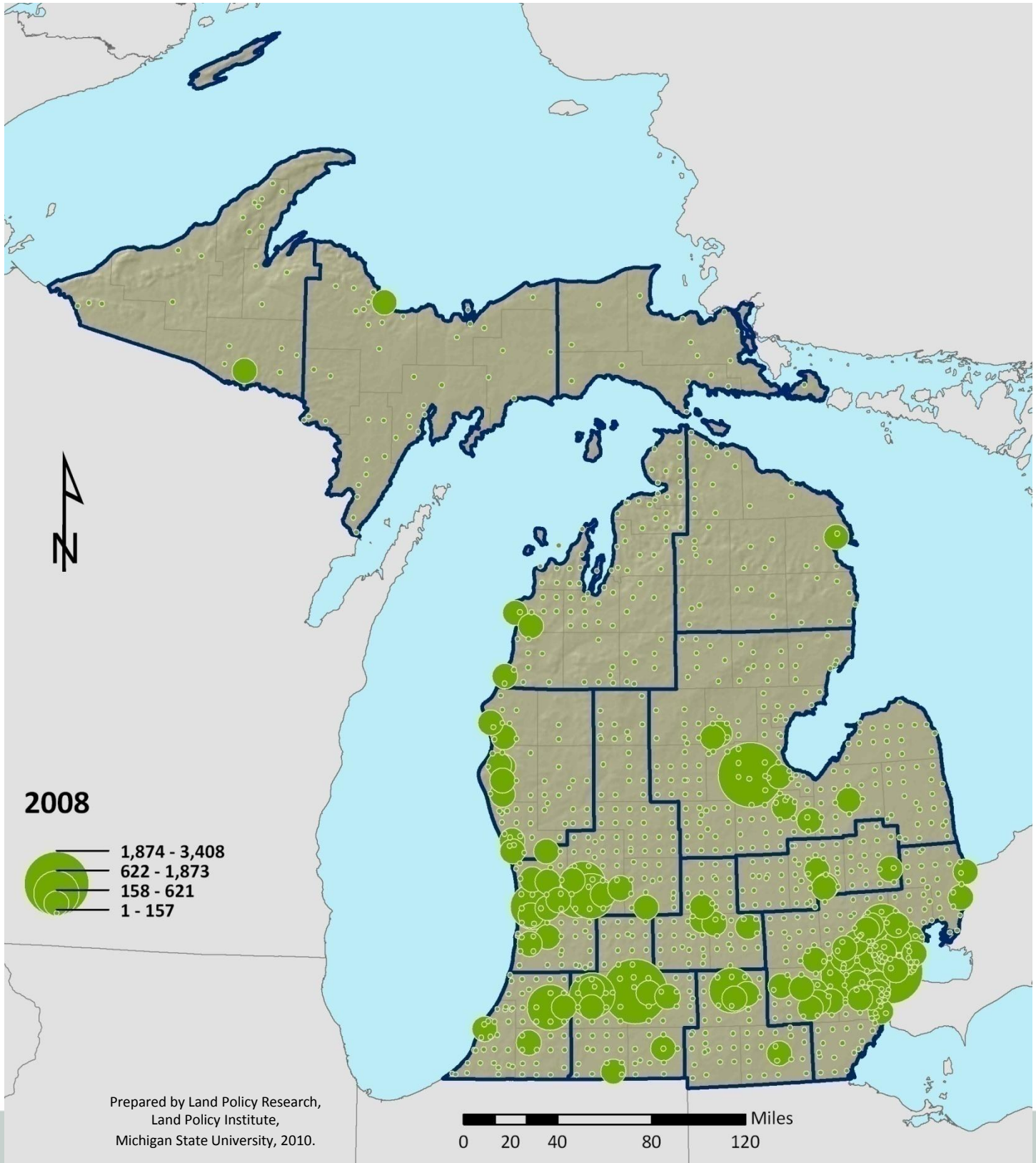
Establishments Statewide



Sales Statewide



Employment Statewide

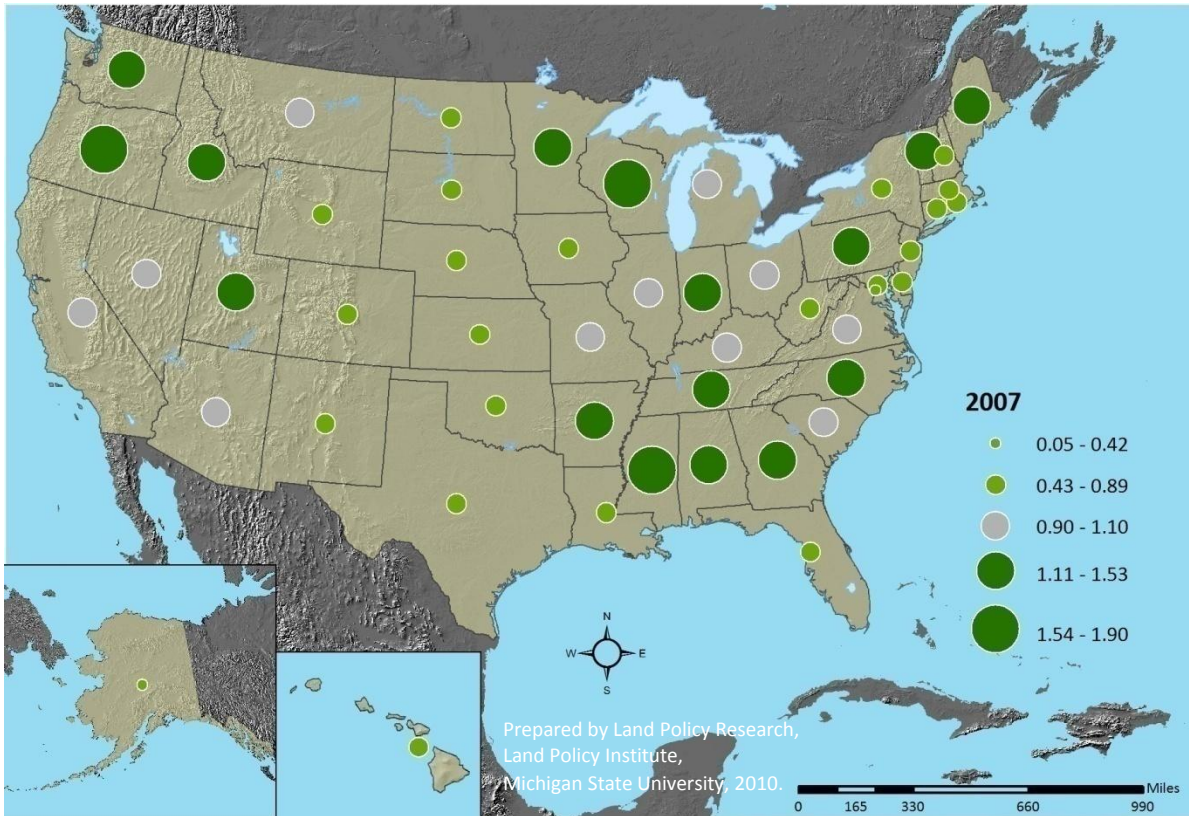


Forestry and Wood Products Cluster Analysis

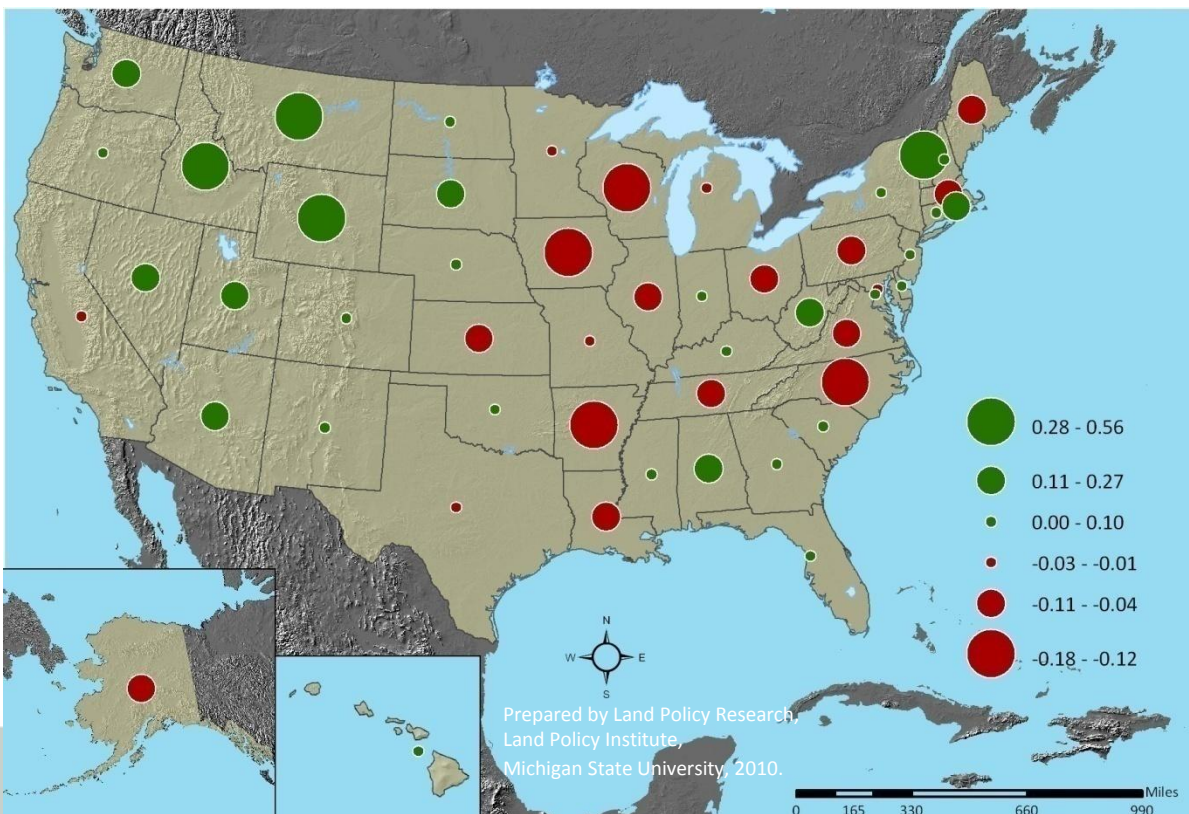
This cluster includes the industries directly or indirectly engaged in forestry, paper pulp and paper manufacture, milling of wood products etc. (for a complete specification see Appendix 1). Michigan has traditionally supported a solid forestry cluster that is bolstered by our extensive natural forestry assets. However, the overall decline in construction nationally, has seriously hurt this cluster.



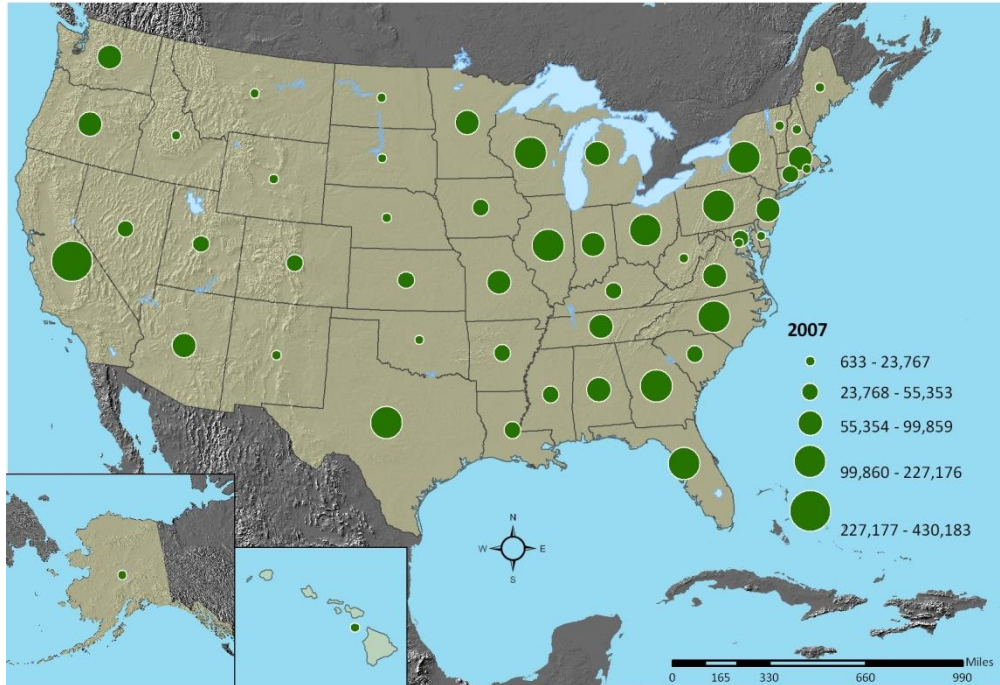
National Location Quotient



Change in Location Quotient 2003-2007

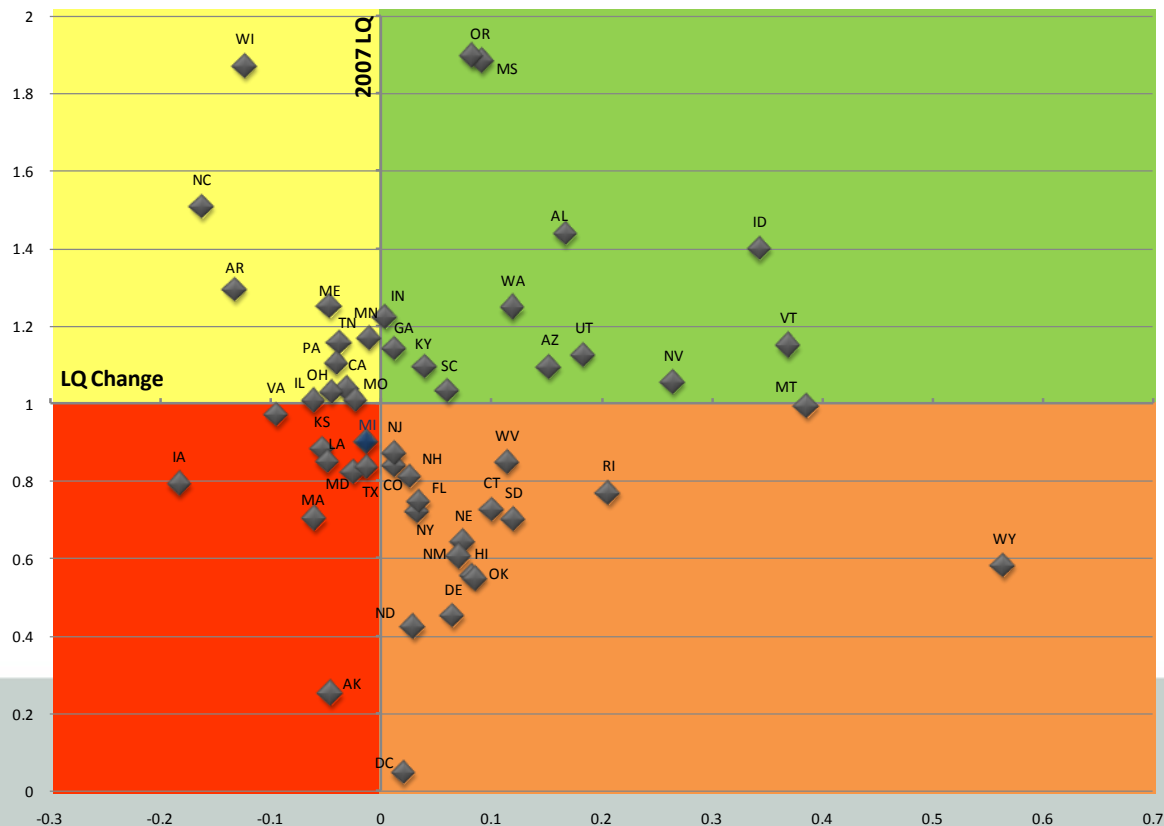


National Employment Distribution

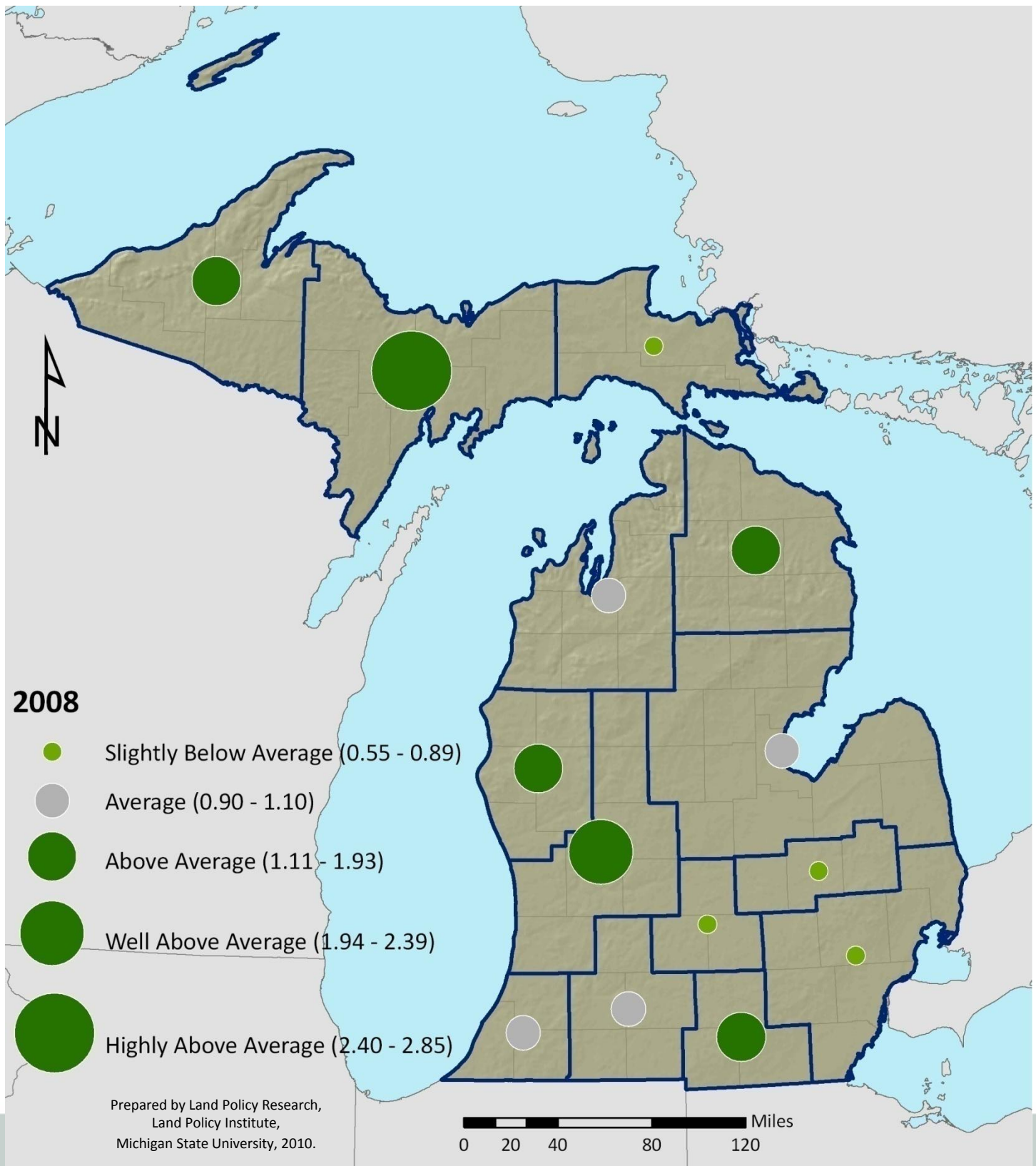


50 State Location Quotient Distribution

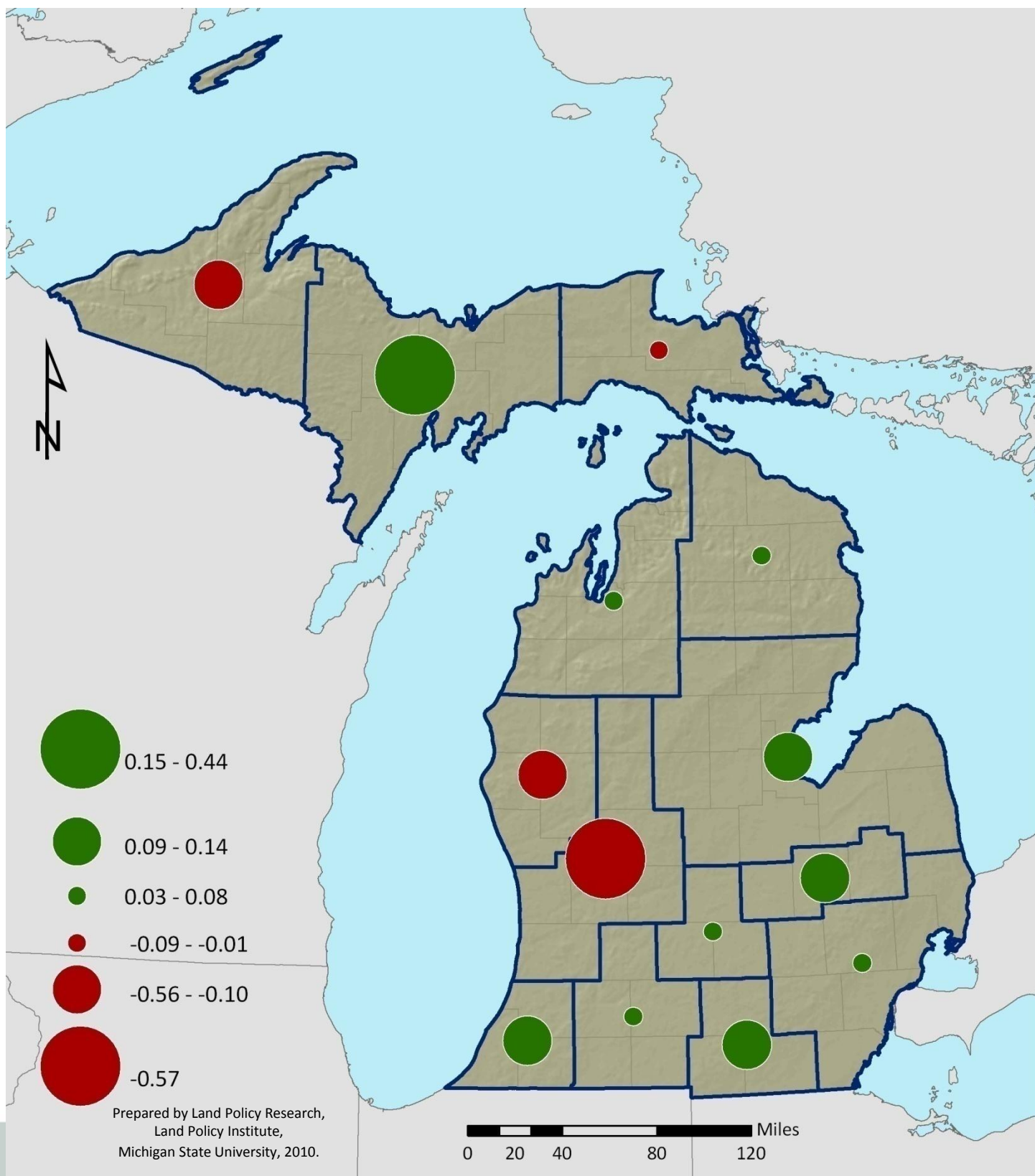
Forestry and Wood Products State LQ Chart



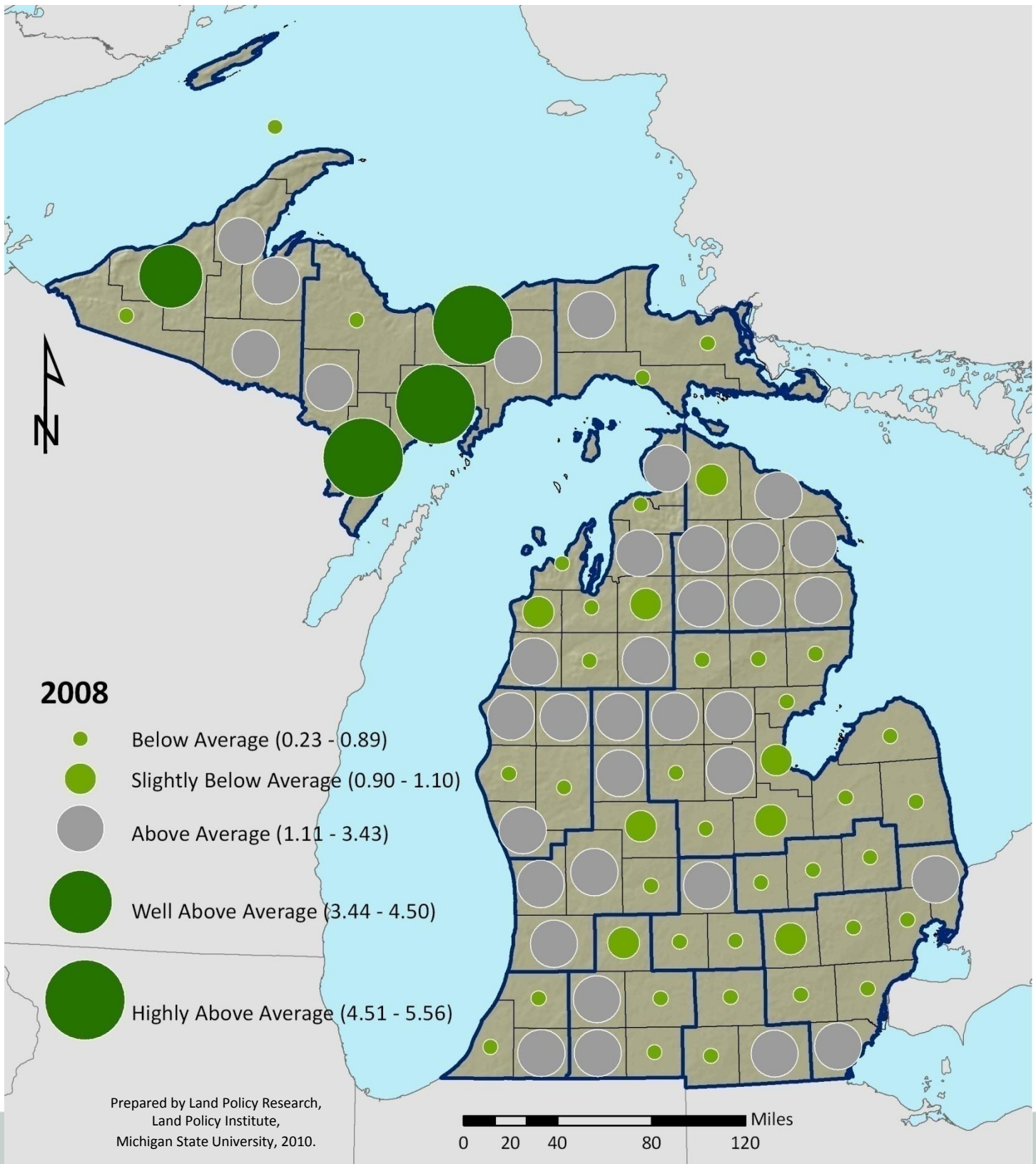
Regional Location Quotient Distribution



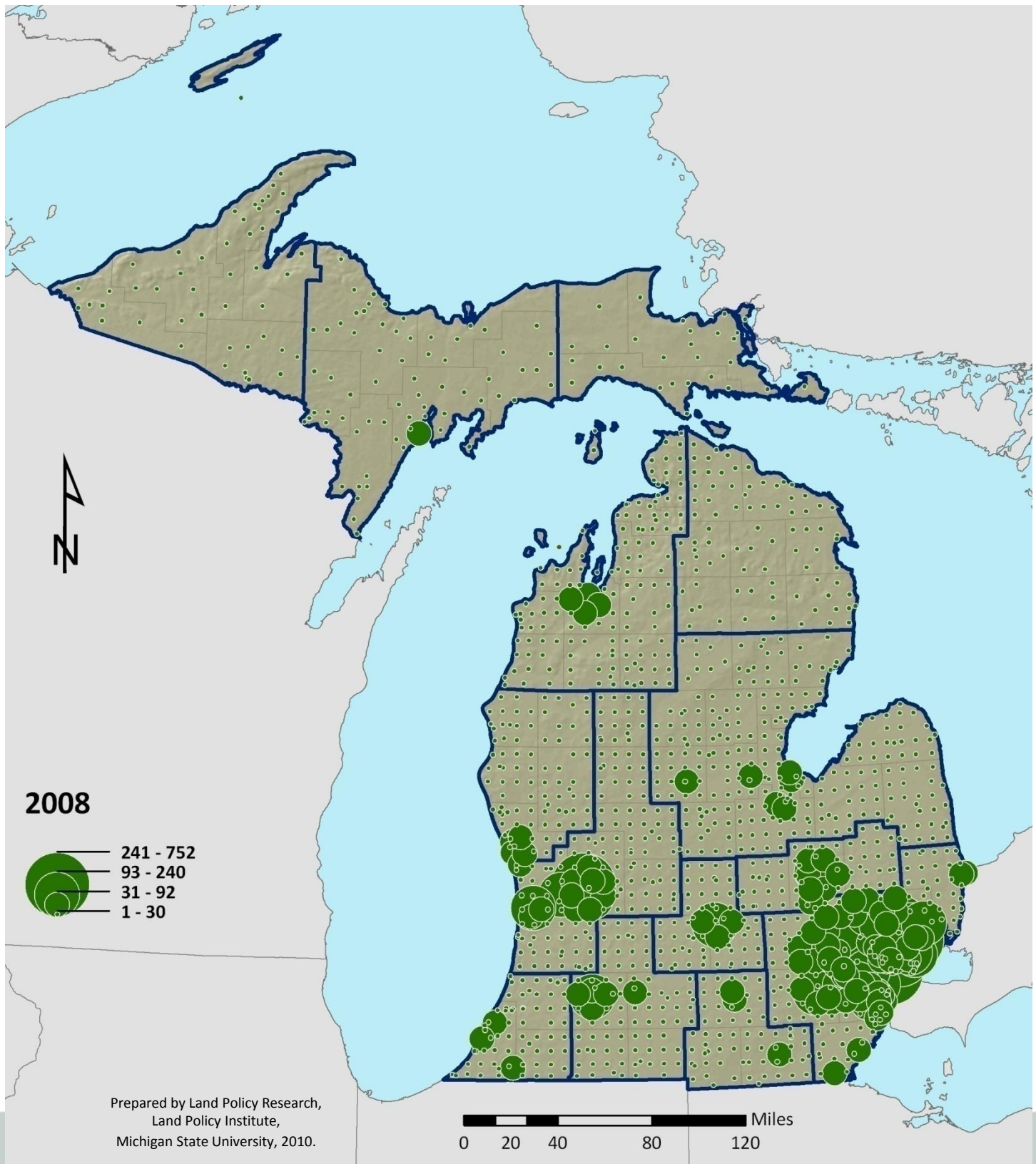
Change in Regional Location Quotient Distribution 2002-2008



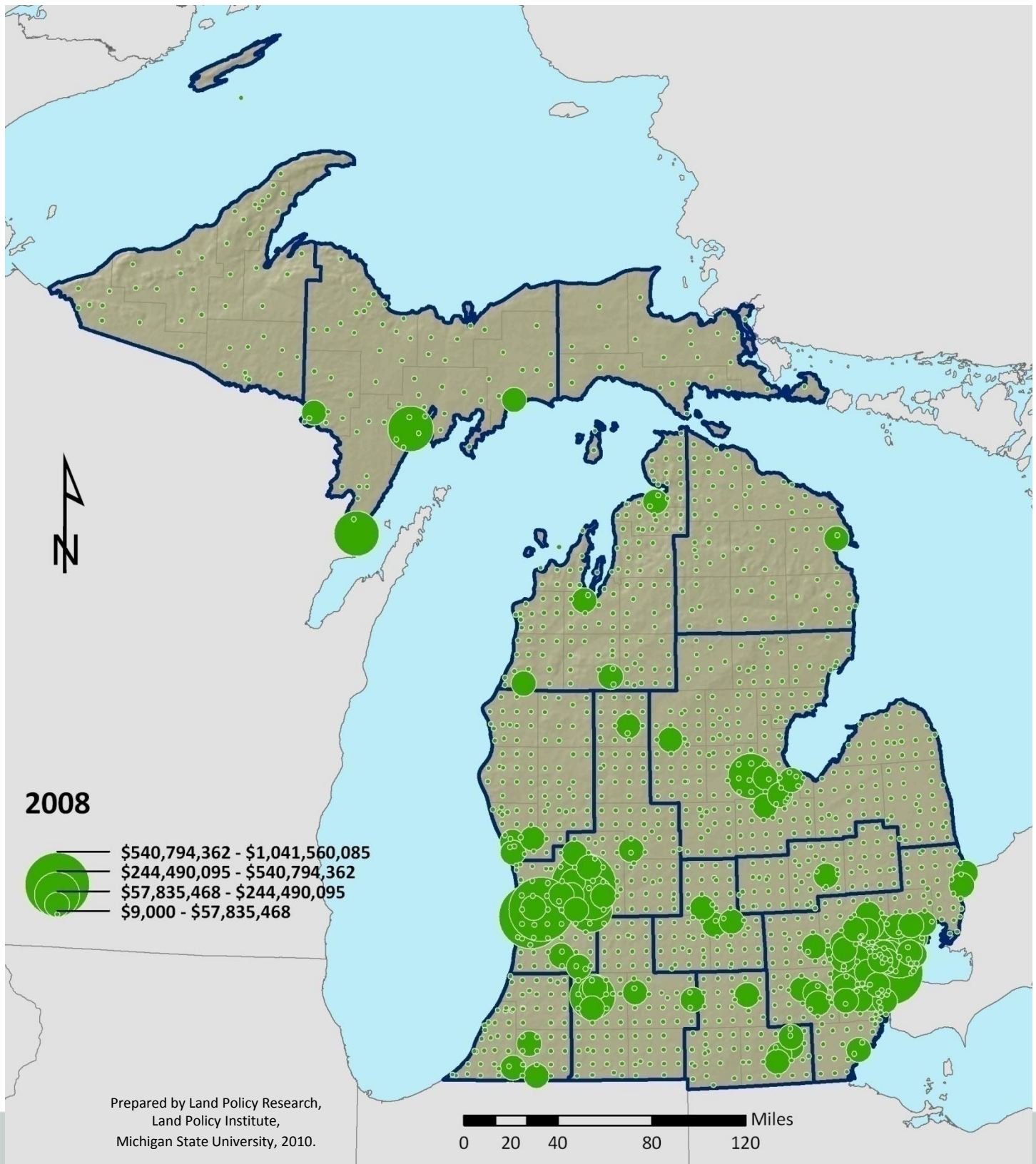
County Location Quotient Distribution



Establishments Statewide



Sales Statewide



Employment Statewide

