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ANDERSON ECONOMIC GROUP

The Economic Footprint of Michigan's Insurance Industry

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I. Executive Summary

PURPOSE OF REPORT

The insurance industry provides insurance products to millions of people across Michigan.[1] In the most basic sense, the insurance industry helps Michigan residents manage their risk, giving them peace of mind in the face of uncertain events.The insurance industry also makes a significant contribution to Michigan's economy by employing workers and investing in Michigan communities, both financially and through community service. In addition, the industry supports thousands of insurance agencies throughout the state, a majority of which are independently-owned businesses.

The purpose of this report is to measure the economic footprint of the insurance industry in the state of Michigan through the many contributions the industry makes to Michigan's economy. These contributions include:

- spending by insurance carriers, agencies, and employees;
- jobs and salaries in the insurance industry;
- taxes paid to the state of Michigan by the insurance industry;
- activity by Michigan companies that rely on the insurance industry for their business; and
- investments and charitable contributions made by the insurance industry.

OVERVIEW OF APPROACH

The insurance industry consists of insurance carriers and insurance agencies. Insurance carriers collect premiums, cover claims, and provide financial security in retirement. Insurance agents help customers find an appropriate insurance product and manage the relationship between carriers and customers.

Our analysis is based on regulatory information regarding the number and scale of insurance firms, informed by an extensive survey of insurance carriers. This data gives us direct knowledge about the operations of insurance carriers and the revenues of insurance agencies, which allows us to estimate the size and scope of these firms' operations. This data forms the basis of our economic footprint analysis.

The economic footprint of an industry refers to all the direct spending that occurs in a state by the industry as well as indirect spending supported by this spending. This approach differs from economic impact because it does not account for economic activity that would have taken place even without the presence of the industry—a thought experiment that does not make sense for such an established industry. The economic footprint presented in this report is for the 2014 calendar year.

For more detailed information see "Appendix A. Methodology" on page A-1.

1. In this report, "insurance industry" refers to the combination of insurance carriers and agencies in the life, health, and property & casualty insurance industries.

OVERVIEW OF FINDINGS

1. The insurance industry helps support $37.1 billion in spending, 114,000 jobs, and $6.3 billion in earnings throughout Michigan.

The total economic footprint of the insurance industry in Michigan is $37.1 billion worth of spending. This includes $16.4 billion spent in Michigan directly by the insurance industry and $20.7 billion in indirectly supported spending. In addition, the industry helps support 114,000 total jobs, including directly employing 41,000 people. Lastly, the industry directly supports $3.3 billion of earnings and $6.3 billion total.

For more information see "Economic Footprint of Michigan's Insurance Industry" on page 4.

2. The insurance industry employs a variety of different types of workers, including over 7,000 information technology (IT) professionals.

As previously noted, the insurance industry employs over 41,000 people in Michigan. The insurance industry has a diverse workforce, which includes investment managers, claims investigators, actuaries, and IT professionals. The insurance industry employs over 7,000 IT professionals. Overall, the insurance industry pays out $3 billion in wages, and the average amount of compensation is $85,000, reflecting the skill and training needed to perform many jobs in high-demand fields. In comparison, the average compensation for Michigan workers across all industries is $59,000.

See "Michigan's Insurance Industry Workforce" on page 8 for more information.

3. The Insurance industry pays over $500 million in taxes to the State of Michigan and its local governments.

This $500 million includes business income taxes and property taxes paid by the insurance carriers. The insurance industry pays a special tax on all premiums written in Michigan. This dedicated premiums tax raised over $360 million for the State of Michigan in fiscal year 2014. In addition, some insurance carriers reported paying another $13 million in other state business income taxes. In comparison, the State of Michigan collected a net of $890 million from all business taxes in fiscal year 2014. Finally, the insurance industry paid $130 million in property taxes to the State of Michigan and its local governments.

See "Taxes Paid By the Insurance Industry" on page 7 for more information.

4. The insurance industry invests in Michigan companies, local government bonds, and real estate.

The Michigan insurance carriers we surveyed invested over $1 billion in Michigan assets.[2] Roughly 45% of these assets were in both municipal bonds and real estate. The remaining 10% was invested in stocks of Michigan-based companies.

The high demand for municipal bonds helps the communities in Michigan. These bonds are typically used by local governments to finance capital investments, such as buildings for schools and libraries, and road infrastructure.

See "Investments in Michigan Businesses and Communities" on page 10.

5. The insurance industry contributed over $44 million in charitable contributions to Michigan charitable organizations in 2014.

Michigan's insurance industry donated over $44 million to charity in 2014. In addition, employees in the industry volunteered over 63,000 hours at company-sponsored charitable activities that same year.

This number is a conservative estimate of the charitable and volunteer work of the entire insurance industry because our survey only covers employees of insurance carriers. The contributions of insurance agencies are also very important and are not captured above.

See "Charitable Contributions" on page 11 for more information.

ABOUT ANDERSON ECONOMIC GROUP

Anderson Economic Group is an economic consulting firm, specializing in economics, financial valuation, market analysis, and public policy with offices in East Lansing and Chicago. We advise some of the country's leading businesses, governments, and institutions.

For more information see "Appendix B. Authors and Contributors" on page B-1.

2. This is a very conservative measure of their investment, as we only surveyed a population equal to approximately 30% of the life insurance and property and casualty insurance industry.

II. Economic Footprint of Michigan's Insurance Industry

Michigan insurance providers have operations throughout the state that support jobs and spending in their communities. In this section, we discuss spending associated with the insurance industry in terms of both employing workers and purchasing goods and services. We then discuss how insurance industry operations translate into a significant economic footprint in the state of Michigan.

DEFINITION OF ECONOMIC FOOTPRINT

The economic footprint described in this section includes all spending, employment, and earnings associated with the insurance industry. Insurance providers and their employees contribute to the Michigan economy in two ways:

1. The *direct* effect of the insurance industry's economic activity includes spending, employment, and earnings that are directly attributable to insurance providers' operations in the state, including hiring Michigan residents and paying Michigan companies for goods and services.
2. The *indirect* effect of the industry's economic activity occurs as dollars re-circulate throughout the Michigan economy. Suppliers for the insurance industry are part of a supply chain and have vendors of their own who benefit indirectly from insurance industry spending. In addition, employees use their wages to buy groceries from the local grocery store, and contractors may use their revenues from the insurance industry to buy new equipment or expand their office space. Even then, dollars continue to circulate as grocery store owners and equipment providers now have more money to purchase goods and services in the state.

INSURANCE INDUSTRY EXPENDITURES

Insurance Industry Expenditures

The insurance industry, due to its size and nature, makes significant expenditures. Firms within the industry spend money for the following purposes:

- Payroll, which includes spending on salaries, wages, and benefits;
- Commissions, which include the money paid to insurance agents and brokers for their services.
- Non-payroll, which includes goods and services provided by third-party vendors. Non-payroll expenditures include spending on contractors hired by the industry, maintenance of the offices and locations, office supplies, any other expenditure needed to operate a company.
- Claims, which includes the spending paid out for services for policyholders. Claims expenses vary widely based on the type of insurance. Life insurance typically is paid out as a cash payment to the beneficiaries of the policyholder. Annuity payments are paid to contract holders to assist them in their retirement Meanwhile, automobile insurance may be paid out to mechanics for services to repair a damaged vehicle. Health insurance is paid directly to health providers for services.

Data Aggregation

Insurance companies provided us with information on their total payroll and non-payroll spending, as well as an estimate of the percentage of total spending that occurs in Michigan.

We aggregate the total spending that occurs *in* Michigan to calculate the insurance industry's economic footprint in "Economic Footprint of Insurance Industry" below. In this section, we discuss the spending that makes up the insurance industry's economic footprint. For more information on how we estimate spending in Michigan, see "Appendix A. Methodology" on page 1.

Insurance Industry Spending in 2014

Insurance Industry Employees and Payroll. We estimate that the insurance industry spent $3.5 billion on payroll in 2014. This consists of $3 billion in salary and wages for the 41,000 workers at insurance carriers and nearly $500 million in employee benefits.

Insurance Industry Commission Spending. In addition to payroll spending, the insurance industry pays commission to agents for products that the agents place with their clients. The over 58,000 registered agents and brokers in Michigan earned more than $13 billion of commission.

Insurance Industry Non-Payroll Spending. We estimate the insurance companies spent $3.3 billion at vendors in Michigan. This spending helps support the insurance industry by providing insurance providers with the professional services, supplies, and resources they need to operate.

Insurance Industry Claim Spending. In 2014, insurance companies paid out almost $50 billion in claims in Michigan. These claims help Michiganders in need after unforeseen events or assist them in remaining financially secure during their retirement.

ECONOMIC FOOTPRINT OF INSURANCE INDUSTRY

While providing insurance to families across Michigan, insurance providers support a significant amount of spending, jobs, and earnings in the state. We aggregate the spending, jobs, and earnings associated with the following sources of economic activity to estimate the industry's economic footprint[3]:

- Payroll spending;
- Non-payroll spending; and
- Commission spending.

3. Claims spending is not included in the economic footprint of insurance industry. We considered this to be money transfer that are part of the services provided to the beneficiaries.

To estimate the insurance industry's economic footprint in the state, we include the spending done by the industry in Michigan and the indirect effects it supports. Our estimates for economic footprint are presented in terms of total output, earnings, and jobs. Our estimates for spending in the state are presented below. Further details on specific categories of expenditures can be found in "Appendix A. Methodology" on page 1.

Output

The insurance industry spends money in the state on payroll, commission, and nonpayroll expenses. This spending helps support economic output throughout Michigan. We estimate that economic footprint of Michigan's insurance industry is $37.1 billion. Table 1 below summarizes the footprint of Michigan's insurance industry.

TABLE 1. Economic Footprint of Michigan's Insurance Industry

	Directly Supported	Indirectly Supported	Total Supported
Output	$16.4 billion	$20.7 billion	$37.1 billion
Jobs	41,007	72,960	113,967
Earnings	$3.0 billion	$3.3 billion	$6.3 billion

Source: Survey of Insurance Companies, DIFS, BEA RIMS II Multipliers
Analysis: Anderson Economic Group, LLC

Much of this directly and indirectly supported spending comes from the commissions earned by insurance agents. The $13.0 billion in commissions earned by insurance agents helps create $13.9 billion in additional spending.

Jobs

In addition to the 41,007 direct jobs at insurance carriers, there are indirect impacts of the insurance industry. The operations of the insurance industry help support an additional 72,960 jobs. These indirect jobs are jobs supported at vendors of the insurance industry, including agents and their staffs. As a result, the insurance industry helps support a total of 113,967 jobs.

Earnings

The insurance industry pays $3 billion in salary and wages. In addition to these direct earnings[4], the operations of the insurance industry help support indirect earnings as well. In total, the insurance industry supports $6.3 billion in earnings, including $3.3 billion in other industries.

4. The term "earnings" includes the salary and health benefits of employees and the income received by the proprietors of businesses.

TAXES PAID BY THE INSURANCE INDUSTRY

The insurance industry pays many different taxes to state and local governments.[5] In total, we estimate the insurance industry paid $500 million business income and property taxes. In addition, the insurance industry withholds income taxes from their employees. We estimate the insurance industry withheld $137 million in personal income taxes from employees. This number does not include personal income taxes withheld from independent agents and their staffs.

Business Income Taxes

Insurance carriers in Michigan pay a dedicated tax on premiums. Michigan-based carriers pay a flat 1.25% of premiums. Out-of-state insurers pay a different rate related to their home's state tax rate for Michigan-based insurers.[6] In total, Insurance carriers paid $362 million premium taxes in Michigan.

While premium taxes are the primary way in which the state collects business income taxes[7] from the insurance industry, a small portion of our sample paid some other business income tax as well. We estimate that the industry paid an additional $13 million in other business income taxes.

In comparison, the state collected net total of $890 million from business income taxes in fiscal year 2014. As a result, the insurance industry paid 42% of Michigan's net business taxes. These numbers suggest that the insurance industry in particular pays a large portion of business income tax in Michigan.

Property Taxes

The insurance carriers and agencies own buildings and real estate in Michigan, and they pay property taxes on these assets. We estimate that insurance carriers pay $128 million in property taxes to governments in Michigan.

Employee Personal Income Taxes

In addition to business taxes, the employees of the insurance industry pay taxes on their earnings. We estimate that insurance carriers withheld $128 million in state income taxes from employees and $8.7 million in local income taxes in 2014.[8] These numbers exclude personal income taxes paid by employees of insurance agencies.

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5. See Anderson Economic Groups's "2015 Business Tax Burden Rankings."
6. If the home state charges a higher percentage than Michigan, Michigan levies an additional tax so that the percentage paid is the same as the rate in the home state.
7. Business income taxes include the Corporate Income Tax, the Michigan Business Tax, and the Single Business Tax.
8. These withholdings may be more than the total amount that the State of Michigan receives from these employees once the employees file tax returns.

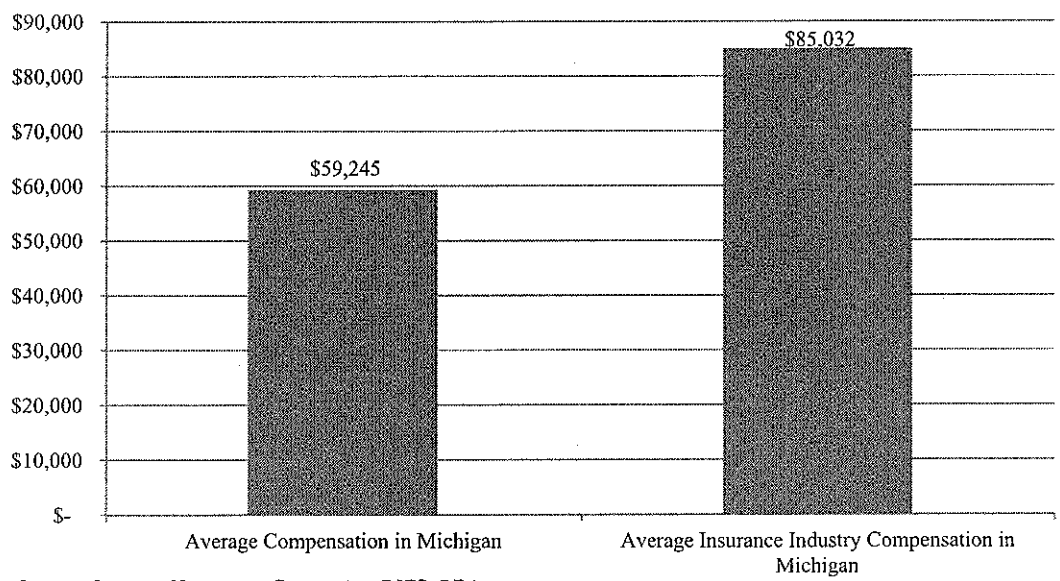
III. Michigan's Insurance Industry Workforce

The insurance industry hires employees within a variety of fields. While the industry is known for hiring actuaries and insurance agents, companies employ workers in many other fields. For instance, the insurance industry needs to hire investment managers to invest assets that are reserved to pay claims and other obligations. In addition, the insurance industry maintains large IT staffs to help insurance operations and protect personal information of policyholders. In this section, we breakdown the level of and types of employees in the insurance industry.

INSURANCE INDUSTRY EMPLOYMENT

In Michigan, the insurance industry employs over 41,000 people. On average, these individuals receive total compensation of over $85,000, including $81,000 in wages. In comparison, the total compensation for the average worker in Michigan is $59,250 including wages and benefits. This difference reflects the high skill level of employees of the insurance industry, as well as the contributions the industry makes to the state by providing good paying jobs. Figure 1 below illustrates the comparison.

FIGURE 1. Comparison of Average Insurance Industry Compensation to Average Compensation in Michigan



Source: Survey of Insurance Companies, DIFS, BEA
Analysis: Anderson Economic Group, LLC

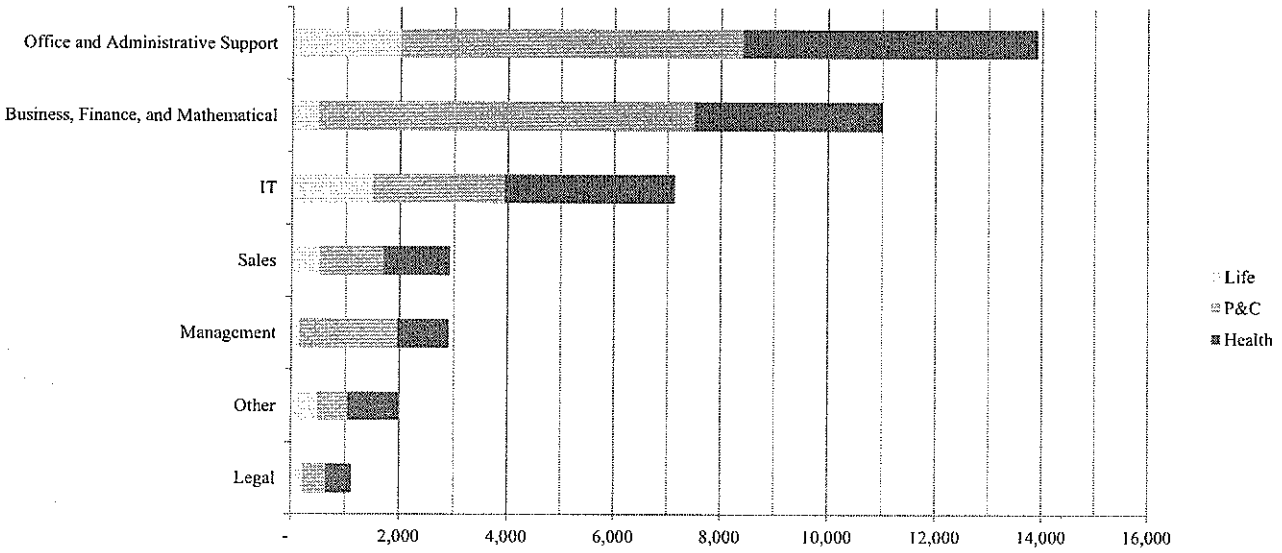
These numbers represent employees of insurance carriers, and they exclude employment at independent insurance agencies. Currently, there are over 58,000 agents that reside in Michigan at over 8,000 agencies. We estimated that insurance agencies in Michigan earned $13 billion in commissions. This suggests the average agency earned $1.6 million to support its operations, including paying licensed agents and support staff.

TYPES OF JOBS IN THE INSURANCE INDUSTRY

While the insurance industry is known for employing actuaries and business professionals, the industry employs people in a diverse set of occupations. In particular, the insurance industry is directly responsible for over 7,000 IT and computer professionals, including contractors. This amounts to nearly 20% of the industry's workforce, demonstrating that the insurance industry is among the most high-tech in the state. The high average compensation in the insurance industry is due to the high skill of the workforce. Many employees are in high-skill and high-demand occupations, resulting in the higher compensation needed to attract talent.

In addition, the insurance industry employs people in a wide variety of other professions. Figure 2 below shows the breakdown of insurance industry employment by occupational category. These categories include a wide variety of jobs. For instance, insurance companies hire claims investigators to prevent insurance fraud, marketing professional to help promote the provider or agency, and medical professionals to serve as a resource for customers.

FIGURE 2. Insurance Industry Employment by Occupational Category



Source: Survey for Insurance Companies, DIFS
Analysis: Anderson Economic Group, LLC

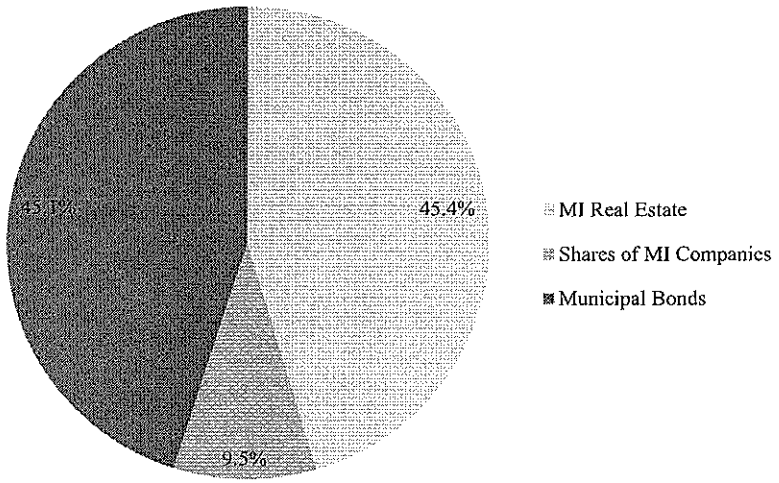
IV.Investments in Michigan Businesses and Communities

The insurance industry also invests in Michigan in a variety of ways. These investments range from investing in Michigan-based financial assets, making financial contributions to charities in Michigan, and having employees that volunteer their time to the community.

INSURANCE INDUSTRY INVESTMENTS

In the course of providing insurance, Michigan's insurance industry manages assets worth billions of dollars in order to ensure they can pay potential claims. These assets are invested in a variety of ways, including real estate, municipal bonds, and stocks—some of which are invested in Michigan-based assets. Companies participating in our survey of the industry had nearly $1.5 billion of combined investment in Michigan. Figure 3 below shows the breakdown of investments by category.

FIGURE 3. Breakdown of Insurance Industry Investments by Category



Source: Survey of Insurance Companies
Analysis: Anderson Economic Group, LLC

The industry as a whole, which includes companies not participating in this part of our survey, likely has much more invested in the state than is included in these results.[9]

9. While the employment structure and expenditures of the firms in our survey had enough consistency to allow estimates of the economic scope of the industry in the previous section of this report, the survey responses regarding investment behavior showed much greater diversity in investment behavior. As a result, we cannot use the survey responses to estimate the total size of Michigan-centered financial investments by Michigan's insurance industry.

These investments help communities in Michigan by increasing the value of these assets. The insurance industry's stock investments help increase the value of the stocks of Michigan companies. This larger value helps shareholders, including employees and retirees. Investment in Michigan real estate keeps the value of real estate marginally higher, ensuring a stable source of income for local communities. Finally, investment in community bonds helps fund important investments in the community. Our survey suggests that insurers heavily invest in municipal bonds, which helps local communities get better interest rates, saving the local community money or allowing the community to make a larger investment.

CHARITABLE CONTRIBUTIONS

Monetary Donations

In addition to investing money in Michigan assets, the insurance industry donates money to Michigan charities. Our survey sample reported nearly $5.7 million dollars in donations. This number implies that the total industry donated over $44 million to Michigan charities. These charities include local Boys and Girls Clubs, United Way, Toys for Tots, Easter Seals, and more.

The above analysis excludes the donations that independent agencies contribute to their local communities. Agencies across Michigan donate to organizations in their community. For instance, Garceau Insurance Agency Inc in Escanaba donated $24,000 and volunteered time at various charities, including 4H, Tri-County Safe Harbor, Salvation Army, Saint Vincent DePaul, Honor Flight, Bike & Classic Car Night.

Volunteer Work

Besides donating to charities, the insurance industry actively encourage their employees to volunteer in the community. On average, each employee in the insurance industry spends one and half hours a year volunteering. This means employees of the industry volunteer a total of 63,000 hours each year at company sponsored events for charity. This number of hours is equivalent to having 30 additional full-time workers at the organizations they are volunteering to serve.

While the numbers are impressive, the stories from these volunteer opportunities are even more impressive. In particular, several companies manage to find ways to address challenges in their communities by utilizing insurance industry resources. Multiple insurance companies reported working with Michigan children by encouraging exercise. In addition, another insurance company uses its expertise to provide financial literacy education to students, particularly focusing on Detroit. Finally, some insurance companies participate in the National Auto Body Council's "Recycled Rides," a program that brings insurers, body shops, and vendors together to provide vehicles for veterans in need.

This volunteer work does not include the work by independent agents and their staffs. Independent agents often donate time to causes in their local community. Since insurance agencies are located all across Michigan, this volunteer work helps all areas of Michigan. For instance, City Insurance Group helps support many different causes in Marquette County including the Upper Peninsula Animal Welfare Shelter, Bay Cliff Health Camp, Beacon House, and Marquette County History Museum.

Appendix A. Methodology

This appendix describes how data sources were used to create maps included in this report and the methodology used to complete our economic footprint analysis.

ESTIMATING ECONOMIC FOOTPRINT

We define *economic footprint* as the aggregate spending, jobs, and earnings in Michigan that are associated with the insurance industry. Economic footprint includes both direct effects and indirect effects, as described below:

1. The *direct* effect of the insurance industry's economic activity includes spending, employment, and earnings that are directly attributable to insurance providers' operations in the state, including hiring Michigan residents and paying Michigan companies for goods and services.
2. The *indirect* effect of the institutions' economic activity occurs as dollars re-circulate throughout Michigan's economy. Suppliers for the companies are part of a supply chain and have vendors of their own who benefit indirectly from company spending. In addition, employees use their wages to buy groceries from the local grocery store, and contractors may use their revenues from the companies to buy new equipment or expand their office space. Even then, dollars continue to circulate as grocery store owners and equipment providers now have more money to purchase goods and services in the state.

To estimate indirect spending, we multiplied direct spending by final demand output multipliers released by the U.S. Department of Commerce's Regional Input-Output Modeling System (RIMS II). We estimated the indirect jobs and earnings using RIMS II direct-effect multipliers.

Spending

We estimate the direct and indirect spending for the following sources of economic activity:

- Company payroll spending;
- Company non-payroll spending; and
- Commission payments.

Difference Between Economic Footprint and Net Economic Impact

In this report, we present the *economic footprint* of Michigan's insurance industry. In other studies, we estimate the *net economic impact* of institutions and projects in a defined region.

Economic footprint is defined as the employment, earnings, and spending in a region that are related to *all* economic activity of the subject being studied. *Net economic impact* is defined as the employment, earnings, and spending in a

region *caused* by the subject of study, and excludes all employment, earnings, and spending that would have occurred in a region even without its presence.

For example, in the absence of a given company, operations at other companies in the state would expand; the land that it occupies might instead contain houses, a park, or farmland; and many of the employees that work at that company would have a job elsewhere in the state. That company's net economic impact captures the extent to which the economic activity related to a company *exceeds* the economic activity that would have occurred in its absence.

In this report, we estimate the economic *footprint* of the insurance industry in the state of Michigan. This includes *all* spending, employment, and earnings at those companies, as well as the indirect effects of that activity. We present economic footprint instead of net economic impact because the characteristics of a hypothetical Michigan economy in the absence of any insurance industry is too unpredictable to properly analyze. We generally do not apply net economic impact analysis to an entire statewide sector.

Since we estimate economic footprint instead of net economic impact, we cannot say with confidence whether the spending we attribute to the companies would have happened even in the companies' absence, as we can with a net economic impact estimate. We can, however, say that the economic footprint describes the scope of economic activity by insurance industry as well as the indirect effects of that spending on local vendors and households.

Estimating Economic Footprint

One of the challenges for estimating economic footprint is that the multipliers are established for marginal changes in an industry instead of the total industry. In particular, the multipliers include spillover effects from the industry to other companies in the industry. For instance, we cannot include the indirect effects of supplier purchasing health insurance. As a result, we had to modify the economic impact multipliers to account for this effects. We used the detailed multipliers to make an expert judgement about the magnitude of these changes. Table A-1 on page A-3 below shows our modifications. Tables A-2 and A-3 show the complete economic footprint calculations.

TABLE A-1. Multipliers used for Economic Footprint Analysis

Industry	Multiplier Type	Original Multiplier	Adjusted Multiplier
Insurance carriers	Direct-effect Earnings	2.1667	2.0956
Insurance carriers	Direct-effect Employment	2.0293	1.9626
Insurance agencies, brokerages, and related activities	Final-demand Output	2.1355	2.0662
Households	Final-demand Output	1.1652	1.1596
Administrative and support services	Final-demand Output	2.0183	2.0133
Professional, scientific, and technical services	Final-demand Output	2.0835	2.0784
General merchandise stores	Final-demand Output	1.9200	1.9165
Other retail	Final-demand Output	1.9212	1.9168

Source: BEA RIMS II Multipliers
Analysis: Anderson Economic Group, LLC

Table A-2. Economic Output Supported by the Insurance Industry in Michigan

Spending Categories	Spending in Michigan	Output Multipliers	Total Spending	*Reference: Indirect Spending*
Payroll*	$ 3,003,594,861	1.16	$ 3,482,983,619	$ 3,482,983,619
Commission	$ 13,028,750,237	2.07	$ 26,921,915,802	$ 13,893,165,565
Non-payroll	$ 3,336,925,181	2.01	$ 6,697,844,522	$ 3,360,919,341
	$ 16,365,675,417		*$ 37,102,743,943*	*$ 20,737,068,526*

**Note: Multipliers are final demand multipliers and give the total direct and indirect effects for all categories of spending except payroll spending, which is not considered 'output.'*

Sources: AEG survey of insurance companies, DIFS, BEA RIMS II Multipliers

Analysis: Anderson Economic Group, LLC

Table A-3. Earnings and Jobs Supported by the Insurance Industry in Michigan

Type of Impact	Direct Effect	Multipliers	Total Supported	*Reference: Insurance Agencies and Indirect Effects*
Earnings	$ 3,003,594,861	2.10	$ 6,294,344,471	$ 3,290,749,610
Jobs	41,007	2.78	113,967	72,960

Sources: AEG survey of insurance companies, DIFS, BEA RIMS II Multipliers

Analysis: Anderson Economic Group, LLC

EMPLOYMENT OCCUPATION DEFINITIONS

We define employment occupations by the primary Standard Occupational Classification definitions. For the most part, we only focused on the primary definition level. We did separate computer occupations from mathematical occupations to better determine the IT and computer related professionals.

INFORMATION REGARDING SURVEY SAMPLE

The information in this report is informed by a survey insurance companies. These groups represent some of the largest insurance carriers in the life insurance and property and casualty insurance sectors. Our survey sample did not include health insurance companies. Our sample includes 21% of the life insurance market, including 83% of Michigan-based companies by total premiums. In addition, our sample includes 31% of the property and casualty market, including 51% of the Michigan-based companies by total premiums.

DATA FROM REGULATORY BODIES

The Department of Insurance and Financial Services (DIFS) provided us with information about the insurance industry, publicly available data, and background for this report.

Appendix B. Authors and Contributors

ABOUT ANDERSON ECONOMIC GROUP

Anderson Economic Group, LLC is a boutique consulting firm founded in 1996, with offices in East Lansing, Chicago, and Istanbul. Our team has a deep understanding of advanced economic modeling techniques and extensive experience in multiple industries in multiple states and countries. We are experts across a variety of fields in tax policy, strategy and business valuation, public policy and economic analysis, and market and industry analysis.

The consultants at Anderson Economic Group are often published on topics within their respective fields of expertise. Publications from our team include:

- *Annual State Business Tax Burden Rankings,* published since 2007.
- *The State Economic Handbook,* published by Palgrave Macmillan, 2008, 2009, and 2010.
- *Applied Game Theory and Strategic Behavior,* published in 2009.
- *The Economics of Business Valuation: Toward a Value Functional Approach,* published by Stanford University Press in 2013.
- *Business Economics and Finance with MATLAB®, GIS, and Simulation Models,* published in 2000.

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Please visit www.AndersonEconomicGroup.com for more information.

ABOUT THE AUTHORS

Alexander L. Rosaen. Mr. Rosaen is Director of Public Policy and Economic Analysis. Mr. Rosaen's background is in applied economics and public finance. Mr. Rosaen's recent work includes several economic and fiscal impact analyses, including of proposed real estate developments, power plants, and infrastructure projects;

analysis of tax incentives; and analysis of Michigan ballot proposals on property taxes and road funding.

Prior to joining Anderson Economic Group, Mr. Rosaen worked as a mechanical engineer for Williams International in Walled Lake, Michigan. Mr. Rosaen holds a Masters in Public Policy from the Gerald R. Ford School of Public Policy at the University of Michigan. He also has a Masters of Science and a Bachelors of Science in mechanical engineering from the University of Michigan.

Zeid El-Kilani. Mr. El-Kilani is a Senior Analyst with Anderson Economic Group working in the Public Policy and Economic Analysis practice area.

Mr. El-Kilani's recent work includes economic scope studies for various business and assessments of local tax differentials in local economic development. His work focuses on data analysis and evaluating existing economic research. His background is in health economics and economic analysis.

Prior to working at AEG, Mr. El-Kilani worked at the Michigan Veterans Affairs Agency in the Strategy Division. In addition, Mr. El-Kilani completed a fellowship with the Economics Staff at the Center for Drug Evaluation and Research of the US Food and Drug Administration.

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