An Economic Impact Analysis of Humana in Florida – Final Report

Contracted by:
Humana

By:
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Executive Summary

Humana, a Fortune 500 company, insures more than 2 million people in Florida through its Medicaid, Medicare Advantage, PDP, Medicare Supplement, Commercial (full insurance & ASO), and Tricare programs. Due to its current growth in the health insurance industry in Florida, Humana contracted with the Florida State University Center for Economic Forecasting and Analysis to conduct an economic research analysis study of Humana's economic impact in Florida.

The economic research study is based primarily on six years of Humana's financial data to present the economic impacts by each of the state's eleven Regions for year 2022 and forecasted impact through 2035.

According to the most recent data, Humana employed 10,800 associates in Florida and was only one of two health plans selected to serve Florida Medicaid members statewide.

The impact Humana is making on the Florida economy is significant. Based on 2020 data (in $2022), the research team found the total economic impacts of Humana are estimated to be a total of $48 billion in total economic output, including 288,169 jobs; $18 billion in income or wages; and $472 million in state and local taxes (fiscal impacts).

The analysis included forecasting future impact through 2035. The total economic impacts for Florida from current to year 2035 vary year-to-year but trend upward.

Employment increases incrementally from 208,848 in year 2021 to 258,912 jobs in year 2035. Annual Output increases steadily from $31.5 billion in year 2021 to $64.6 billion in year 2035. Personal Income increases incrementally from $13.9 billion in year 2021 to about $35.3 billion in year 2035.

In addition to the economic impact, Humana contributes to the well-being of the communities it works in. For example, in 2020, Humana made nearly $2 million in donations to community organizations like the Area Agency on Aging, Boys and Girls Clubs, and others. Outside of the corporate contributions, Humana associates gave a combined total of 29,857 hours of volunteer time.

The results reveal that the impacts on the Florida economy will be positive and significant in terms of Output, Employment, and Income, both for year 2022 and across years to 2035.

Introduction and Literature Review

Humana *recently contracted with* the Florida State University Center for Economic Forecasting and Analysis (FSU CEFA[1]) to conduct an economic research analysis study of Humana's economic impact in Florida. The economic research study is based on Humana's financial data collected over the last six years. The research team will also collect any additional pertinent demographic, statistical and anecdotal analyses results.

Humana is committed to helping Florida improve health outcomes for its most vulnerable communities. Humana, a Fortune 500 company, insures more than 2 million people in Florida (see map below for numbers by category).

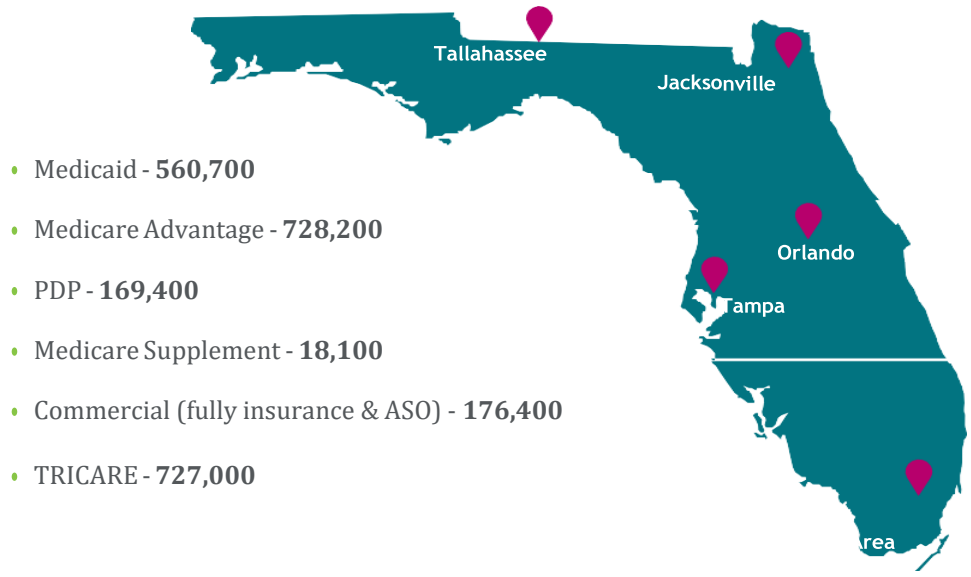


Figure 1. Map of Florida by Humana Program Type and Number of Insured, 2021

As of March 2017, the company employed 10,800 associates in Florida. In 2018, Humana was only one of two health plans selected to serve Florida Medicaid members statewide. Over the past five years, Humana's operational discipline and innovation have resulted in over $100 million in cost savings in Florida.[2] The proposed economic impact analysis will include the following Humana programs in Florida: Medicaid, Medicare Advantage, PDP, Medicare Supplement, Commercial (full insurance & ASO) and TRICARE.

[1] The FSU Center for Economic Forecasting and Analysis (FSU CEFA), see: http://www.cefa.fsu.edu
[2] Humana/Humana Florida Medicaid – Fact Sheet 2021. Personal Communication: Jana Thomas, VP SE Region Medicaid Business Development.

The following section presents an overview of the healthcare sector in the U. S. and its impact on the economy. The market structure of the healthcare sector is summarized in the first section of this review. Second, the following literature review presents examples of other economic impact analyses of healthcare and insurance providers. Third, this study reviews other kinds of economic analyses that are used to describe the benefits and costs of healthcare provision. Finally, the economic benefits of access to healthcare and overall health are presented.

The Healthcare Sector

To put this analysis in context, the overall healthcare system of the United States (U.S.) is discussed, followed by the ways that Florida differs from the rest of the country. The U.S. healthcare system is unique among advanced economies in that there is no universal mandate to provide healthcare. Instead, healthcare is largely provided ad-hoc through individual hospitals and practices. To protect healthcare consumers from unexpected costs, numerous intermediary organizations and firms have arisen that provide various forms of health insurance (Rice, Rosenau, Unruh, & Barnes, 2020).

The two largest intermediaries are Medicare and Medicaid, which are publicly funded insurers that serve populations with low access to private health insurance. Medicaid primarily serves low-income populations, while Medicare primarily serves older adults. Together, Medicare and Medicaid insure about 36 percent of Americans. While Medicare and Medicaid are regulated by the Centers for Medicare & Medicaid Services, individual states oversee the administration of Medicaid programs for their residents. Therefore, each state has unique organizational and regulatory approaches for its Medicaid programs. For example, some states directly administer Medicaid benefits, while other states contract services out to private organizations. Additionally, some states use a fee-for-service model, where providers bill state Medicaid providers on a per-item basis, while other states use a managed care system, where private intermediaries are paid a regular, fixed fee to manage each participant's healthcare (Rice, Rosenau, Unruh, & Barnes, 2020). This kind of arrangement is known as a managed care plan and represents a large portion of Humana's operations in Florida.

About 55 percent of Americans have private health insurance, usually through an employer. Approximately 40 percent of health expenses in the U.S. are paid by private insurers. Private insurers offer various kinds of plans, the most popular of which are Preferred Provider Organizations (PPO; 44 percent of plans) and Home Maintenance Organizations (HMO; 26 percent of plans). HMOs have a network of care providers that patients must use in seeking care, and patients face high out-of-pocket costs for using providers that are out-of-network. PPOs also have a network of providers, but the out-of-pocket costs for out-of-network

providers tend to be much lower. This limits unexpected costs to consumers, and for this reason PPOs have become the most popular form of health insurance in the U. S. (Rice, Rosenau, Unruh, & Barnes, 2020). In addition to insuring people who are not covered by Medicare and Medicaid, many companies offer supplemental insurance that can cover costs that Medicare and Medicaid do not.

Approximately 10 percent of Americans have no health insurance at all. The uninsured in America face very high out-of-pocket costs for receiving health services. For example, a three-day hospital stay costs on average $30,000 in the U. S. (Himmelstein, Woolhandler, Lawless, Thorne, & Foohey, 2019). While many healthcare providers have programs to provide some relief to low-income customers without insurance, they are often not well advertised and are underutilized. Additionally, even after bill reductions, healthcare costs can still be very high for the uninsured. Medical debt is the second most common reason for personal bankruptcy in the U.S. after loss of income (Himmelstein, Woolhandler, Lawless, Thorne, & Foohey, 2019).

The healthcare market in Florida differs in some ways from that of the overall U.S. Healthcare services are a more significant portion of Florida's economic activity. They comprised 8.1% of the GDP of Florida in 2013, significantly more than the U.S. GDP at 6.6% (The Florida Legislature Office of Economic and Demographic Research, 2015). The large share of healthcare in Florida's GDP is driven by Florida's higher than average population of older adults who are major users of healthcare. In addition, the life expectancy and longevity of older adults in Florida has been increasing, likely due to improvements in healthcare. As older adults live longer, their higher-than-average consumption of healthcare lasts for longer, further increasing the importance of the healthcare sector in Florida (The Florida Legislature Office of Economic and Demographic Research, 2015).

Economic Impact Analyses

A number of healthcare related organizations have become interested in determining how much they contribute to their local, state, and national economies. One method for computing economic contributions is through an economic impact analysis, similar to this current economic research study. The methodology of economic impact studies is discussed later, as it is the same methodology used in this report, but in brief, these studies use economic multipliers to calculate the direct, indirect, and induced effects of economic activities or changes in activities. Economic impacts can be calculated for organizations, industries, or sectors at the local, state or national levels.

Economic Impact Analyses of Health Insurance and Managed Care Companies

Most closely related to this study are two examinations of the state and sub-state economic impacts of Molina Healthcare in New Mexico and Florida (Harrington & Haskins, 2017; Peach, 2017). The Florida study collected and presented five years of payments to providers, premium taxes, revenues, charitable contributions, headcounts, and compensation data. Based on the data collected, an impact analysis using IMPLAN was conducted. Direct, indirect, and induced effects of the economic activity of Molina in Florida totaled nearly $3 billion in economic output, over 25 thousand jobs created, and over $1.2 billion in income, or wages (Harrington & Haskins, 2017). Using a similar methodology, the New Mexico study found that Molina Healthcare generated over $1.8 billion in economic activity and created over 3,700 jobs in New Mexico when including direct, indirect, and induced effects (Peach, 2017). This study also included regionalized findings. Molina Healthcare impacted Albuquerque County the most, generating $799 million in direct, indirect, and induced economic expenditures and over three thousand jobs.

A part of Humana's operations in Florida includes managed care plans for Medicaid and CHIP. One economic impact study recently analyzed the economic impact of CareSource, a managed care provider in the state of Ohio (Lendel, 2020). The author reports that CareSource supported a total of 4,467 jobs, $289 million in labor income, and $468 million in economic output in the Dayton, OH region when including direct, indirect, and induced effects. In addition, CareSource supported a total of 8,407 jobs, $523 million in labor income, and $965 million in economic output in all of Ohio when including direct, indirect, and induced effects (Lendel, 2020).

Economic Impact Analyses of Insurance Industries

From a broader perspective, several studies have focused on the economic effects of the health insurance industry and all insurance-related industries in different states. For example, an economic impact study of the health insurance industry of Connecticut found that it generated almost $15.5 billion in direct, indirect, and induced economic activity. The health insurance industry also supported a total of 47,500 jobs, $15.5 billion in sales and inventory changes, and $9.9 billion in value added in Connecticut (Connecticut Economic Resource Center, Inc., 2019). Another study examined the economic impact of the insurance industry in the state of Michigan. Insurance companies in Michigan supported over 138 thousand jobs, $9.1 billion in labor income, and $38 billion in economic activity when including direct, indirect, and induced effects (Public Sector Consultants, 2019).

Economic Impact Analyses of Healthcare and Hospital Systems

Healthcare and hospital systems also have been investigated across several studies that examined the economic impacts they have on their local economies. For example, one study found that Fairview Health Services supported 61,182 jobs, $5.3 billion in labor income, and

$12.7 billion in economic output in the state of Minnesota (Nielsen, Roman, & Shekels, 2020). Another study looked at the economic impact of the health sector on Holmes County, Florida. It found that in 2008, the health sector supports 693 jobs and $22.6 million in economic output in Holmes County, including direct, indirect, and induced effects (St. Clair, Doeksen, & Hartman, 2008).

Another study examined the economic impact of all private physicians' offices in Florida (Harrington & Aydin, 2009). In 2009 Florida was experiencing a shortage of qualified medical professionals. In response, the Florida Medical Association commissioned a report from FSU CEFA on the impact of Florida's private physicians' offices and the introduction of new physician residency programs on the economy of Florida. The study found that private practice physicians' offices supported nearly 650,000 jobs in Florida, with $41 billion in wage income, $93 billion in total economic activity and $6 billion in government revenues. The study also determined that if Florida increased the number of graduate medical education residency programs up to the national average, it would create an additional 44,000 jobs, $4.1 billion in wage income, and $6.3 billion in economic activity by 2020.

Other Economic Analyses in Healthcare

Economic impact analyses have a limitation in that they examine primarily the effects of spending and employment on economic activities. They are limited in that they cannot respond to more general economic questions about the healthcare industry. For example, economic impact analyses often do not include a reasonable counterfactual, meaning they do not try to determine what kind of economic activity would take place if a particular organization, industry, or sector had taken a different path. Additionally, there are economic effects of healthcare that extend beyond spending and employment, including increases in human capital, longevity, and well-being. Other types of economic valuation methods are used to measure those kinds of quality of life variables.

For example, the costs and benefits of specific medical procedures can be measured using cost-consequence analysis, cost-minimization analysis, cost-effectiveness analysis, cost-utility analysis, and cost-benefit analysis. All these techniques seek to weigh the cost of providing a procedure against the benefits to healthcare consumers. Unlike economic impact analyses, these studies include counterfactuals; the costs and benefits of procedures are compared to both similar procedures, or no procedure at all. These analyses differ from each other in the way they measure benefits. Cost-consequence analyses take an agnostic approach to benefits, simply listing the benefits of a procedure and its alternatives. Cost-minimization analyses compare procedures where outcomes are assumed to be equal, but costs differ. Cost effectiveness analyses measure outcomes in units that are relevant to the particular procedure, for example; life expectancy, millimeters of mercury for blood

pressure, or glucose levels. Cost-utility analysis uses a common metric (e.g., quality-adjusted life-years) to compare procedures that target different health outcomes. Finally, cost-benefit analyses put a monetary value on outcomes so that procedures that target different health outcomes can be compared to each other (Folland, Goodman, & Stano, 2013).

Numerous studies have also been performed that examine the contribution of the healthcare sector to the overall economy. The effects of spending on healthcare differ from system to system due to the general makeup of the population, the public-private mix of healthcare spending and provision, the efficiency of healthcare provision, and local geography and customs (Darvas, Moës, Myachenkova, & Pichler, 2018). Although there are numerous factors that contribute to healthcare outcomes, there is a general correlation between healthcare spending per capita and health outcomes. The United States is a notable exception to this correlation, however. Figures 2[3] and 3[4] compare healthcare spending per capita in the U. S. and the European Union (E. U.) from 2013 to 2018.

Healthcare spending per capita is much higher in the U. S. than in the E. U. and has increased substantially since 2013, from just over $8,000 per person to over $10,500 per person. In contrast, healthcare spending in the E. U. remained flat over the same period at around $3,500 per person. Nevertheless, average life expectancy in the E. U. is higher than in the U. S. and has increased from 2013 to 2018, while it has remained flat in the U. S. This indicates that there may be wide-spread inefficiencies in healthcare spending in the U. S.

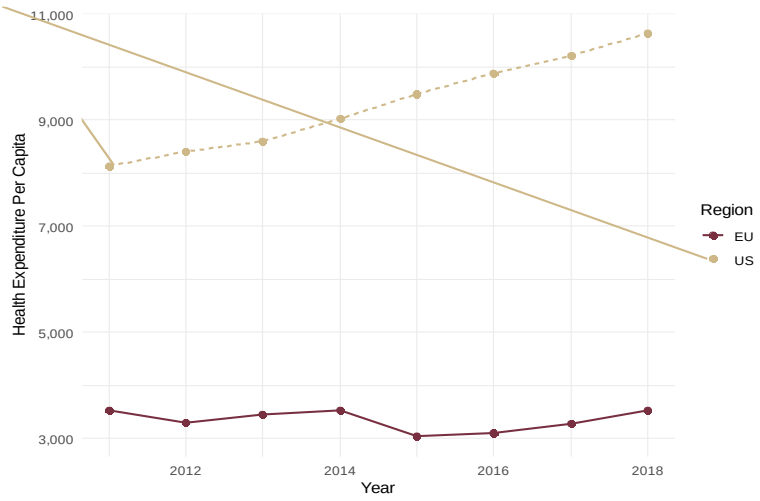


Figure 2: Healthcare Spending per Capita in the U. S. and the E.U.

Not only does spending on healthcare stimulate the economy through direct expenditures, but improved health has important macroeconomic implications of its own. For example, better healthcare has an immediate impact on the labor supply through reducing sick days. Individuals with better health tend to get sick less often and are therefore out of the labor

[3] Source: World Health Organization. Health expenditures per capita are measured in current US dollars.
[4] Source: World Health Organization. Life expectancy at birth measured in years.

supply less often, leading to better utilization of labor. Better health outcomes also have implications for human capital production, especially among children. Children with better health miss fewer days of school and have improved focus on learning. A healthier population means human capital can be acquired more quickly and completely, leading to greater productivity in the labor force. Finally, better overall health improves the quality of life and financial well-being of older adults. Aging with better health means that older adults are less prone to falls and less likely to become seriously ill, avoiding costly medical bills.

Humana is a part of these benefits to improved health by providing insurance and managed care plans to Floridians. As stated earlier, the role of insurance providers in the U. S. healthcare system is to prevent households from facing large, unexpected medical bills. Humana fills this role not only by offering insurance and managed care plans, but also through incentivizing and promoting preventative care for its customers. While this study limits itself to the immediate economic impact of Humana's operations in Florida, it is important to note that Humana's reach in the economy extends beyond solely economic impacts, through the economic benefits of improved health.

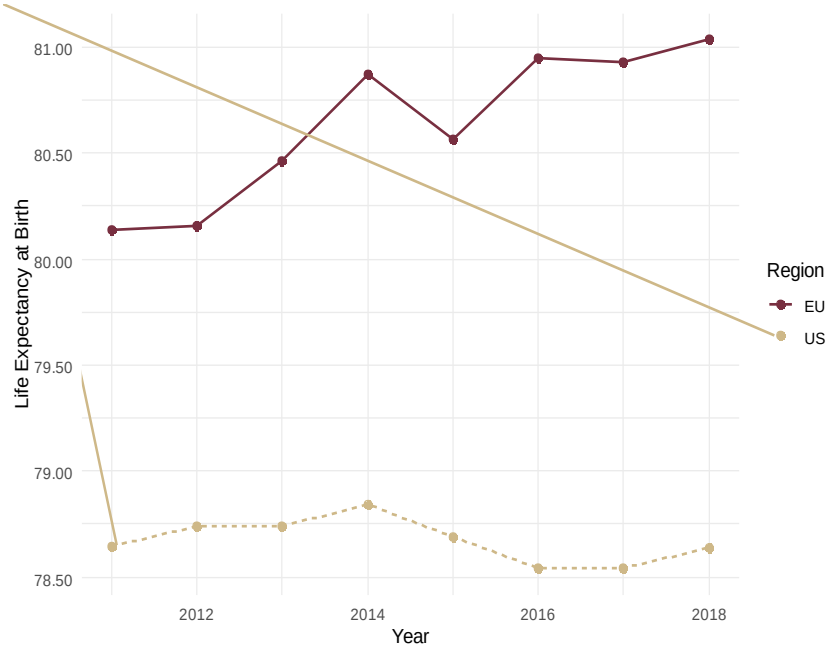


Figure 3: Life Expectancy at Birth in the U. S. and the E. U.

Economic Data and Methodology

The FSU CEFA research team requested time series data for expenses and revenues from the Humana data collection team[5] in early November 2021. The data request was further refined into an "Economic Impact Analysis Florida Data Codebook" (i.e., several versions) guideline for the data collection and research teams. The data comprised the following categories:

Data

- **Revenues by Type and by Geographic Location:**
  - Revenues
    - **Years:** Delineate across 6 years: 2016 – 2021 YTD (Excel sheet, 6 total)
    - **Geography:** Delineate across 11 regions (Excel columns)
    - **Types:** Delineate by product line (Excel rows)
      - Medicaid Managed Care
      - Medicare Advantage
      - PDP
      - Medicare Supplement
      - Commercial
      - TRICARE
- **Operating Expenses by Line Item and by Operational Center:**
  - Employee Salaries 2019-2021
    - **Note:** Actual salaries paid or calculated based on title and midpoint pay; data only available from 2019 to current due to system constraints
    - **Labor categories:** by EEOC codes for classification
    - **Years:** Delineate across 6 years: 2016 – 2021 YTD
    - **Geography:** Include based on employee residing in Florida, regardless of role; Delineate across 11 regions
  - Payments to Healthcare Providers (by type and region)
    - **Note:** Include all payments made to providers to care for Florida members, payment data will be based on member location, not provider location
    - **Definition:** Include Medical expenses; based on classifications of provider categories, contingent on classifications in the system (e.g., hospital, Rx, etc.)
    - **Years:** Delineate across 6 years: 2016 – 2021 YTD
    - **Geography:** Delineate across 11 regions

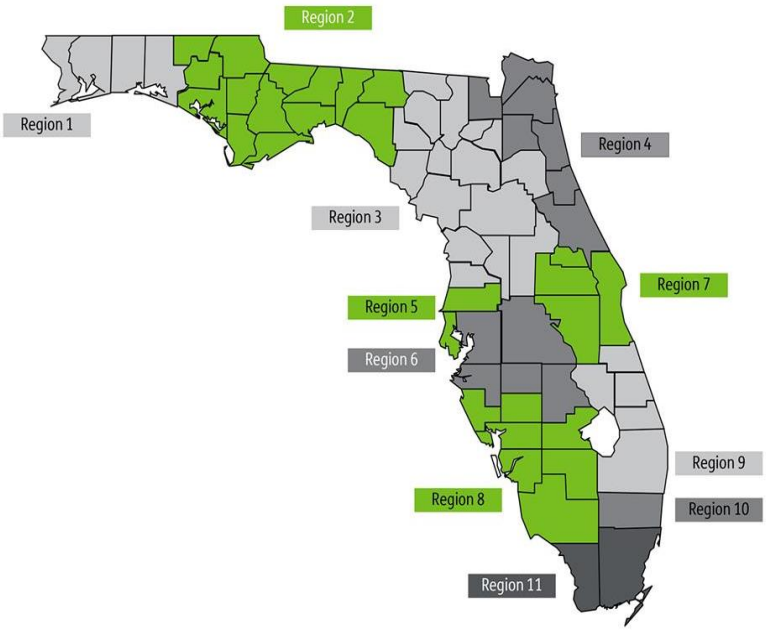
[5] Humana data provided by: Ms. Jana Thomas, Mr. Tom O'Bryan, Mr. Ron Weeden, Ms. Mary Jane Beeson, Ms. Jocelyn Carter, Ms. Kimberly Aitken, Mr. Ted Doll, Ms. Josephine Piraneo.

- Payments to Vendors
  - **Payments to Vendors** operating in Florida, including vendors that support operations and not captured with medical expenses above
  - **Years:** Delineate across 6 years: 2016 – 2021 YTD
  - **Geography:** Delineate across 11 regions
- Interest Expense
  - **Years:** Delineate across 6 years: 2016 – 2021 YTD
- Other (e.g., other expenses particular to the insurance industry)
  - **Data** included a characterization of expense
  - **Example of data to include:** Lease expenses
  - **Years:** Delineate across 6 years: 2016 – 2021 YTD

- Numbers of Employees –
  - Employee Headcount
    - **Definition:** Average headcount over the year
    - **Employment type:** Delineate by full-time, part-time, contractor
    - **Function**: Delineate by occupation code and whether FT/PT/Contractor
    - **Geography:** Include based on employee residing in Florida, regardless of role; Delineate across 11 regions or county
    - **Years:** Delineate across 6 years: 2016 – 2021 YTD
- Non-operating expenses
  - Capital Investments
  - Other investments
- Charitable Contributions
  - Contributions
    - **Data:** Include name of organizations in Florida including sponsorships, partnerships, and grants
    - **Include:** Medicaid, Humana Foundation, and Bold Goal investments
    - **Years:** Delineate across 6 years: 2016 – 2021 YTD to the extent available/applicable
- Operational Centers in Florida
  - Number of offices, clinics in Florida and location
    - **Years:** Delineate across 6 years: 2016 – 2021 YTD
- Misc. Notes
  - Include code sheet of 11 regions and their counties

As mentioned above, the Humana data were separated into Humana's 11 Regions. For data that were not categorized by a Region, the research team included the uncategorized data into a "No Region" Region, comprising the State of Florida. The Regions[6] are shown below:

- Region 1: Escambia, Okaloosa, Santa Rosa and Walton
- Region 2: Bay, Calhoun, Franklin, Gadsden, Gulf, Holmes, Jackson, Jefferson, Leon, Liberty, Madison, Taylor, Wakulla, and Washington
- Region 3: Alachua, Bradford, Citrus, Columbia, Dixie, Gilchrist, Hamilton, Hernando, Lafayette, Lake, Levy, Marion, Putnam, Sumter, Suwannee, and Union
- Region 4: Baker, Clay, Duval, Flagler, Nassau St. Johns, and Volusia
- Region 5: Pasco and Pinellas
- Region 6: Hardee, Highlands, Hillsborough, Manatee and Polk
- Region 7: Brevard, Orange, Osceola and Seminole
- Region 8: Charlotte, Collier, Desoto, Glades, Hendry, Lee, and Sarasota
- Region 9: Indian River, Martin, Okeechobee, Palm Beach and St. Lucie
- Region 10: Broward
- Region 11: Miami-Dade and Monroe



[6] See: https://www.humana.com/medicaid/florida-medicaid

Figure 4. Map of Florida by Humana's 11 Regions, 2021

In summary, data were requested from Humana on payments to medical service providers, non-medical vendor payments, donations to charitable organizations, payroll amounts and employee headcounts for each of the eleven coverage regions for six years. The research team requested that amounts be attributed to one of the six insurance plans, whenever possible. Humana was able to provide six years of medical expenses attributable to insurance plans. In addition, Humana provided six years of data for non-medical vendor payments and donations to charitable organizations, as well as three years of data on payroll amounts and employee headcounts. However, while Humana was able to provide data at the county or coverage Region level, it does not attribute non-medical expenses to individual insurance plan areas.

Since Humana did not assign non-medical vendor payments, donations, payroll, or number of employees to individual plans, the research team estimated how much of each would be attributed to each plan, by year, and by coverage region. To do so, the research team determined the proportion of medical expenses attributed to each plan by year and by coverage region, then split the other expenses between plans in the same proportion. For example, in 2020, the proportion of medical expenses in Region 2 were: 3.83% Commercial/ASO/Tricare, 31.28% Medicaid, 63.04% Medicare Advantage, 0% Medicare Supplement, and 0% PDP. Therefore, non-medical vendor payments, donations, payroll and number of employees were apportioned to each plan in Region 2 in 2020 using the same proportions. Finally, Humana requested that the analysis be conducted by the categories "Medicaid" and "Non-Medicaid" so the expenses and estimated apportionments were summed over the Non-Medicaid categories to create the "Non-Medicaid" category.

Humana provided internal codes, or SIC codes, of their payments to providers and non-medical expenses. The research team mapped as many of these codes to IMPLAN industry classification codes as possible. However, there were many expenses where either Humana did not provide descriptions, or the team was unable to map the description to an IMPLAN industry code. These expenses were assumed to be in the "Misc. Retail" category. In addition, most expenses were provided at the county or market area level, but a substantial portion of the expenses did not have an associated county or market area. These expenses were not included in the regional models but were included in the "No Region" model of Florida. Therefore, it should be noted that the direct effects in each region do not sum to the total direct effects in Florida.

Payroll and employee headcounts were provided for each county in Florida but could not be provided for years prior to 2019. These amounts were first aggregated up to the coverage region area, then projected back to 2016 using the average growth rates in employees and payroll from years 2019-2021. Also, entries for county in employee headcounts and non-

medical expenses contained a small number of errors that prevented their aggregation to the coverage regions. While they were not a significant portion of the entries, the research team corrected them (e.g., county misspellings, country entry instead of county, etc.) whenever possible in order that as many "clean" expenses could be included in the aggregations. Some expenses could not be attributed to coverage regions, even after corrections. These expenses were not included in the coverage region individual IMPLAN models but are included in the state IMPLAN model of Florida, and are labeled "No Region".

The research team determined that, due to changes in the expense structure of Humana prior to 2021, the economic impact analysis in IMPLAN would be more precise using the most recent 2021 data (rather than an average of the six years of data). Therefore, years prior to 2021 are not included in the IMPLAN analysis, but are included in the REMI analysis, as REMI is a dynamic model (i.e., includes multiple years). Finally, REMI can only be used at the state level, so all amounts were aggregated to the state level for the dynamic economic impact analyses, using REMI.

The following Figures depict Humana's expenses and revenues average percentage changes, by Region, from years 2016-2021. Figures 4 and 5 show that while overall Humana's operations have been growing in Florida, growth has not been distributed evenly. Growth in expenses and revenues have occurred most rapidly in Regions 3 and 8, while remaining close to zero in Region 11 and declining in Region 6. In addition, there has been a steady decline in expenses and revenues that could not be categorized by Region. This likely reflects improving data practices on the part of Humana, as more expenses can be categorized by Region in later study periods. Comparing the growth in expenses to the growth in revenues also provides some validation of the data. If there were major issues in categorizing either expenses or revenues by region, one would expect growth in expenses to not match growth in revenues. However, Figures 4 and 5 show that the two measures largely coincide, indicating the categorization of revenues and expenses by county and region to be valid.

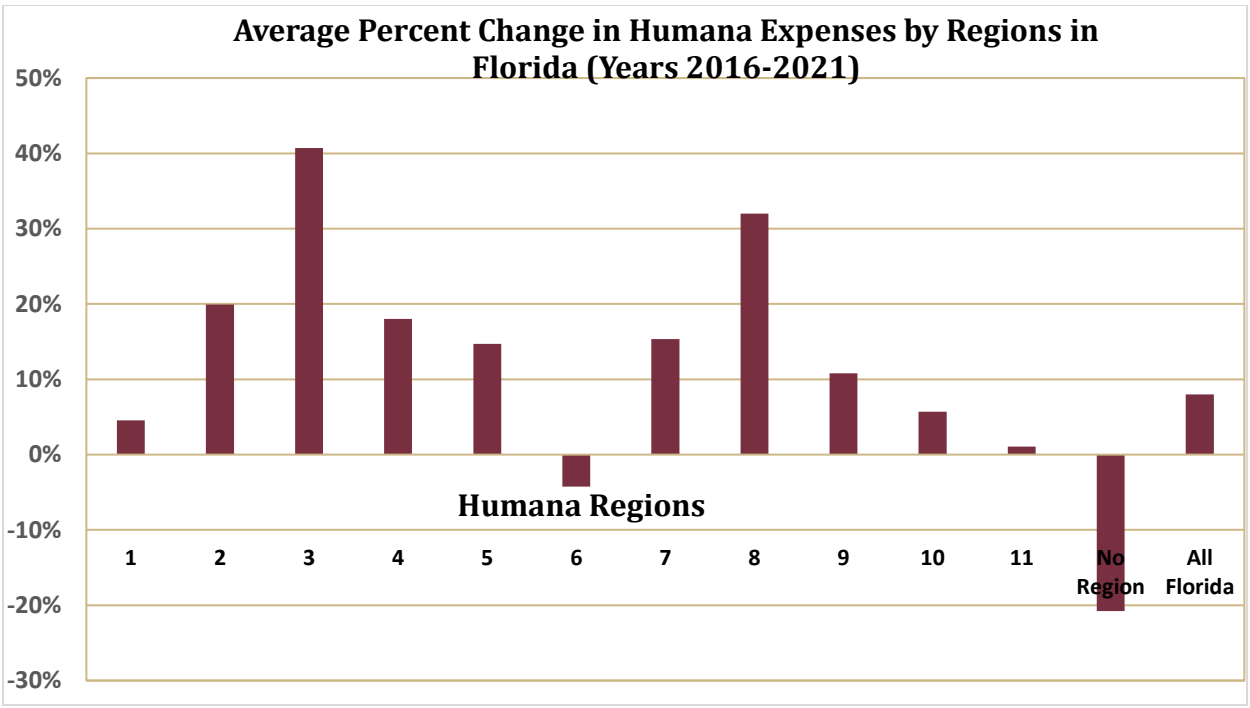


Figure 5. Average Percent Change in Humana Expenses in Florida from 2016-2021

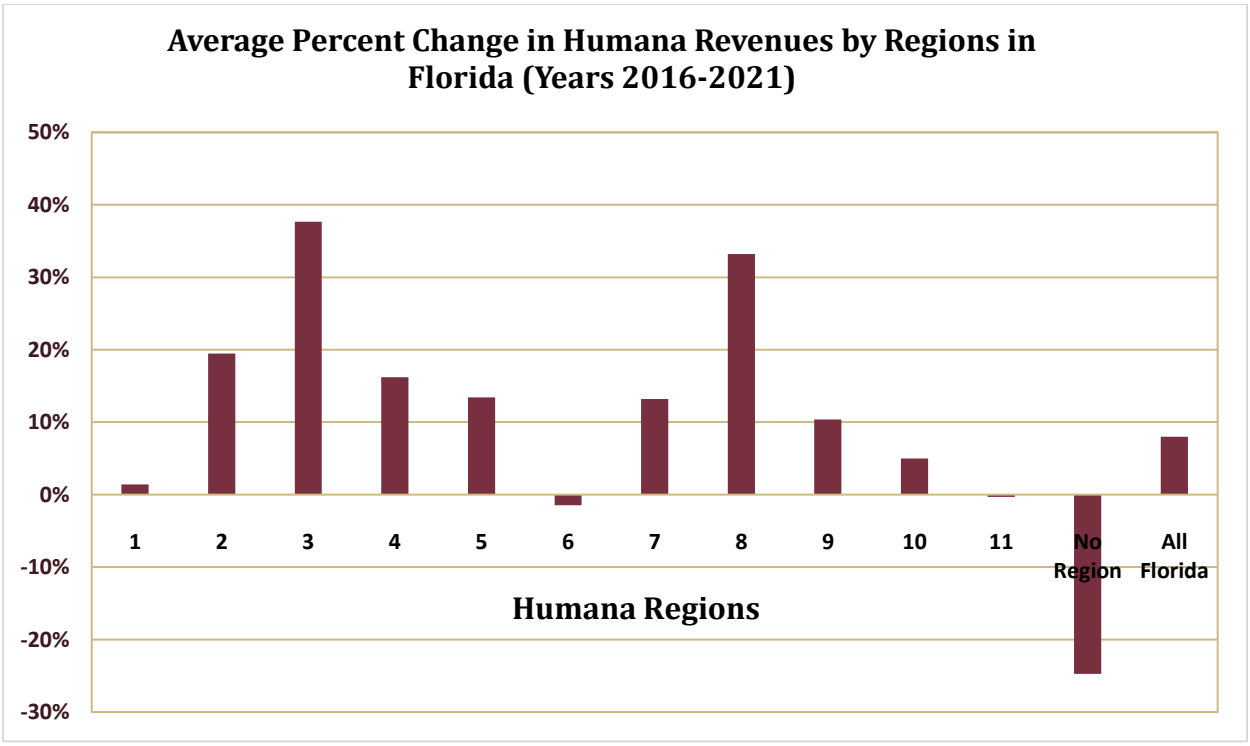


Figure 6. Average Percent Change in Humana Revenues in Florida from 2016-2021

Economic Impact Analysis

Economic Impact Analysis (IMPLAN)

The next step in this research study is the economic impact analysis. FSU CEFA used a well-established analytical tool known as the Impact Analysis for Planning, or IMPLAN® model. The theoretical framework is input–output (I/O), developed by Wassily Leontief, for which he received the Nobel Prize in 1973. IMPLAN, founded in 1993, is a widely accepted integrated I/O model that is used extensively by state and local government agencies to measure proposed legislative and other program and policy economic impacts across the private and public sectors. There are several advantages to using IMPLAN:

- It is calibrated to local conditions using a relatively large amount of local county level and state of Florida specific data;
- It is based on a strong theoretical foundation; and
- It uses a well-researched and accepted applied economics impact assessment methodology supported by many years of use across all regions of the U.S.

The basic assumption of the IMPLAN model is that the fundamental information in I/O analysis involves the flow of products from each industrial sector (producer) to each of the industrial sectors considered as consumers. Similar to REMI, IMPLAN assumes uses the Regional Purchase Coefficient (RPC) approach to regionalize the technical coefficients. The primary sources of employment and earnings data are County Business Patterns' data and Bureau of Economic Analysis (BEA) data.

The economic impact model used for this analysis was specifically developed for the counties of Florida, and includes 534 sectors, 25 institutional sectors, and most recent dataset[7] – year 2020 data. IMPLAN's principal advantage is that it may be used to estimate direct, indirect, and induced economic impacts for any static (point-in-time) economic stimulus. IMPLAN uses an economic multiplier approach to estimating impacts. Consistent with standard practice, the direct impacts, as well as the indirect and induced impacts, are calculated for Humana's Florida-specific 11 markets, or coverage Regions. In addition, the FSU CEFA research team also developed an IMPLAN model for all of Florida, to represent those data that were not categorized by location.[8] This study evaluates Humana's economic impacts, measured in terms of economic output (the value of industry production), local employment or jobs, and income or wages.

[7] Florida 2020 data was released at the end of December 2021, and used in this study.
[8] Please refer to Figure 4 of this study for a definition of Humana's eleven market areas, or regions.

Results of the Economic Impact Analysis (IMPLAN)

It is expected that Humana will generate the following types of economic impacts in the 11 coverage Regions:

- Direct Impacts. Direct impacts relate to: a) the short-term business activity associated with Humana-related construction, etc., and; b) the ongoing economic activity associated with the Humana related-businesses or firms.
- Indirect Impacts. Indirect impacts will result when local firms directly impacted by Humana, in turn purchase materials, supplies or services from other firms.
- Induced Impacts. Induced impacts relate to the consumption and spending of employees of firms that are directly or indirectly affected by Humana. These would include all of the goods and services normally associated with household consumption (i.e., housing, retail purchases, local services, etc.).

The economic impact findings of Humana for Medicaid, Non-Medicaid, and Totals are shown in Table 1, and are estimated to be a total of 288,169 jobs, about $18 billion in income or wages and about $48 billion in total economic output, in Florida.

Table 1. Economic Impact Analysis Results for Humana, by Medicaid & Non-Medicaid and Totals, by Market Region

Humana Regions (1-11) Medicaid Economic Measure	Economic Output (Sales/Revenues)	Employment or Jobs	Income or Wages
Region 1	$578,742,399	3,693	$219,598,174
Region 2	$230,131,398	1,588	$95,506,188
Region 3	$628,477,003	3,695	$200,453,697
Region 4	$706,489,608	4,137	$279,514,234
Region 5	$1,067,837,307	6,835	$434,746,906
Region 6	$2,913,549	9	$791,198
Region 7	$587,658,389	3,644	$235,395,349
Region 8	$863,836,143	5,648	$399,792,975
Region 9	$894,513,368	5,652	$348,335,454
Region 10	$972,446,571	5,775	$304,947,657
Region 11	$1,150,663,279	6,853	$421,941,373
No Region	$113,423,149	548	$28,882,106
Grand Total	**$7,797,132,163**	**48,077**	**$2,969,905,311**

Humana Regions (1-11) Non-Medicaid Economic Measure	Economic Output (Sales/Revenues)	Employment or Jobs	Income or Wages
Region 1	$1,998,774	13	$809,518
Region 2	$481,568,108	3,290	$186,676,291
Region 3	$46,784,746	290	$14,859,638
Region 4	$3,243,838,300	19,820	$1,201,133,440
Region 5	$5,966,480,292	40,004	$2,332,211,173
Region 6	$2,883,276,732	11,388	$796,267,744
Region 7	$4,066,429,446	24,824	$1,541,878,560
Region 8	$2,521,119,470	16,358	$1,068,021,790
Region 9	$3,073,164,030	19,530	$1,162,636,517
Region 10	$3,615,723,517	21,361	$1,262,467,581
Region 11	$5,057,801,452	29,763	$1,873,148,869
No Region	$8,955,478,851	53,451	$3,236,808,858
Grand Total	**$39,913,663,718**	**240,092**	**$14,676,919,979**

Table 1. Economic Impact Analysis Results for Humana, by Medicaid & Non-Medicaid and Totals, by Market Region, Cont.

Humana Regions (1-11) Total (Med. + Non-Med.) Economic Measure	Economic Output (Sales/Revenues)	Employment or Jobs	Income or Wages
Region 1	$580,741,173	3,706	$220,407,692
Region 2	$711,699,506	4,878	$282,182,479
Region 3	$675,261,749	3,985	$215,313,335
Region 4	$3,950,327,908	23,957	$1,480,647,674
Region 5	$7,034,317,599	46,839	$2,766,958,079
Region 6	$2,886,190,281	11,397	$797,058,942
Region 7	$4,654,087,835	28,468	$1,777,273,909
Region 8	$3,384,955,613	22,006	$1,467,814,765
Region 9	$3,967,677,398	25,182	$1,510,971,971
Region 10	$4,588,170,088	27,136	$1,567,415,238
Region 11	$6,208,464,731	36,616	$2,295,090,242
No Region	$9,068,902,000	53,999	$3,265,690,964
Grand Total	**$47,710,795,881**	**288,169**	**$17,646,825,290**

*** in 2022 $**

IMPLAN calculates both the direct impact of a change in economic activity and the indirect and induced impacts as described in the methodology section. Tables 2 and 3 depict the total direct, indirect, and induced effects of the expected economic impacts based on the 2021 data for Humana, and the projected fiscal impacts. The fiscal impacts include federal, in addition to state and local taxes collected within the Humana Regions due to Humana's operations. It includes income tax paid by Humana employees, social insurance tax (including employee and employer paid contributions), corporate profit tax, property tax, sales tax, motor vehicle license taxes, fees, among others. The FSU CEFA research team estimates that state and local taxes generated by the additional economic activity will be about $472 million.[9]

[9] All impacts are presented as impacts to the Regions with monetary figures presented in current (2022) dollars. Additionally, the analysis is based on annual expenses data provided by the Humana data team. The economic impact analysis does not include any quality of life nor opportunity costs (alternative investment) valuation. Small differences in the estimates (and totals) may occur due to rounding.

Table 2. Economic Impact Results (Direct, Indirect & Induced) for Humana, by Medicaid & Non-Medicaid Totals, and by Market Region

Output	Direct	Indirect	Induced	Total
Region 1	$304,274,668	$149,185,254	$127,281,251	$580,741,173
Region 2	$384,621,810	$163,544,661	$163,533,035	$711,699,506
Region 3	$358,728,358	$201,297,494	$115,235,897	$675,261,749
Region 4	$1,911,476,637	$1,047,101,550	$991,749,721	$3,950,327,908
Region 5	$3,546,629,658	$1,820,624,372	$1,667,063,569	$7,034,317,599
Region 6	$1,380,804,457	$980,896,297	$524,489,527	$2,886,190,281
Region 7	$2,145,812,921	$1,307,140,664	$1,201,134,250	$4,654,087,835
Region 8	$1,876,252,370	$796,633,933	$712,069,310	$3,384,955,613
Region 9	$2,107,209,308	$1,200,712,273	$659,755,817	$3,967,677,398
Region 10	$2,327,281,836	$1,374,730,540	$886,157,712	$4,588,170,088
Region 11	$3,072,923,830	$1,978,995,474	$1,156,545,427	$6,208,464,731
No Region	$3,982,154,209	$2,792,629,290	$2,294,118,501	$9,068,902,000
Grand Total	**$23,398,170,062**	**$13,813,491,802**	**$10,499,134,017**	**$47,710,795,881**

Employment	Direct	Indirect	Induced	Total
Region 1	1,915	917	874	3,706
Region 2	2,637	1,106	1,135	4,878
Region 3	1,983	1,192	810	3,985
Region 4	11,631	5,965	6,361	23,957
Region 5	24,432	11,477	10,930	46,839
Region 6	4,038	4,126	3,233	11,397
Region 7	13,290	7,507	7,671	28,468
Region 8	12,160	5,246	4,600	22,006
Region 9	13,719	7,120	4,343	25,182
Region 10	13,770	7,661	5,705	27,136
Region 11	18,395	10,911	7,310	36,616
No Region	24,416	15,301	14,282	53,999
Grand Total	**142,386**	**78,529**	**67,254**	**288,169**

Table 2. Economic Impact Results (Direct, Indirect & Induced) for Humana, by Medicaid & Non-Medicaid Totals, and by Market Region, Cont.

Income	Direct	Indirect	Induced	Total
Region 1	$139,345,982	$41,645,385	$39,416,325	$220,407,692
Region 2	$182,429,642	$50,727,396	$49,025,441	$282,182,479
Region 3	$133,962,331	$47,980,277	$33,370,727	$215,313,335
Region 4	$824,601,920	$333,924,853	$322,120,901	$1,480,647,674
Region 5	$1,695,314,009	$555,599,681	$516,044,389	$2,766,958,079
Region 6	$341,611,197	$285,875,072	$169,572,673	$797,058,942
Region 7	$969,199,928	$426,836,931	$381,237,050	$1,777,273,909
Region 8	$964,237,076	$271,938,810	$231,638,879	$1,467,814,765
Region 9	$899,396,494	$395,050,849	$216,524,628	$1,510,971,971
Region 10	$909,472,444	$393,316,161	$264,626,633	$1,567,415,238
Region 11	$1,300,385,482	$619,469,118	$375,235,642	$2,295,090,242
No Region	$1,683,533,627	$856,043,660	$726,113,677	$3,265,690,964
Grand Total	**$10,043,490,132**	**$4,278,408,193**	**$3,324,926,965**	**$17,646,825,290**

in 2022 $

Table 3. Estimated State and Local, and Federal Taxes, for Humana, by Medicaid & Non-Medicaid Totals, and by Market Region

Humana Regions (1-11) Economic Measure	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6
State & Local Taxes	$4,387,942	$2,605,920	$6,104,342	$49,635,973	$56,874,822	$58,588,803
Federal Taxes	$46,275,774	$58,415,682	$49,150,276	$323,532,929	$599,291,293	$181,170,429
Humana Regions (1-11) Economic Measure	**Region 7**	**Region 8**	**Region 9**	**Region 10**	**Region 11**	**No Region**
State & Local Taxes	$42,805,997	$4,047,011	$28,051,652	$52,737,322	$50,992,371	$115,464,467
Federal Taxes	$361,576,358	$316,778,970	$316,516,983	$337,295,355	$464,518,561	$700,472,176

Humana Regions (1-11) Economic Measure	Grand Total
State & Local Taxes	$472,296,622
Federal Taxes	$3,754,994,786
Grand Total	**$4,227,291,408**

*** in 2022 $**

The top ten industries experiencing the largest positive employment impact in the Humana Regions are shown in Figure 7. "Hospitals" was the industry most impacted by Humana's operations, with 38,962 jobs. The second and third largest impacts, were in the "Offices of Physicians", and "Outpatient Care Centers", with 24,544 jobs, and 20,107 jobs, respectively. The Fourth, Fifth, and Sixth-largest impacts, were in the "Insurance Carriers"; and "Insurance Agencies, Brokerages and Related Activities"; and "Other Real Estate" industries, with 15,294 jobs, 15,090 jobs, and 12,439 jobs, respectively. The remaining largest impacted industries were: "Retail, Misc." (10,216 jobs), "Other Ambulatory Health Care Services" (9,496 jobs), "Employment Services" (7,893 jobs), and "Retail, Health and Personal Care" (5,525 jobs).

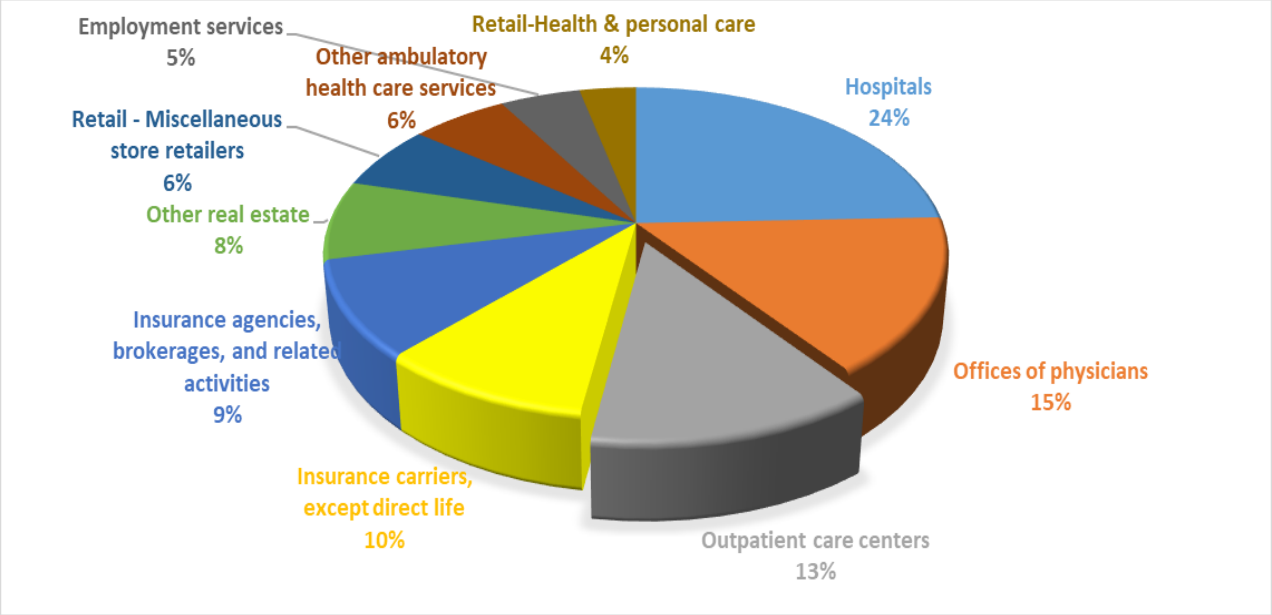


Figure 7. Top Ten Industries by Employment for Humana in Florida

When compared to the Florida market area, Humana's economic impacts align relatively well with the top impact activities generated by Florida's economy, primarily in the: "Other Real Estate", "Offices of Physicians", "Hospitals", "Employment Services", and "Retail" sectors.

Economic Impact Analysis (REMI)

REMI (2020 data) is a widely used dynamic integrated input output (I/O) and econometric model. The REMI model is based on neoclassical theory and was founded in 1980. The model's structure incorporates inter-industry transactions and endogenous final demand feedbacks. The basic assumption of REMI is that the model is based on theoretical structural restrictions rather than individual econometric estimates based on single time-series observations for each region. It has much in common with the computable general equilibrium (CGE) models. REMI is used extensively to measure proposed legislative and other program and policy economic impacts across the private and public sectors of the state by the Florida Joint Legislative Management Committee, Division of Economic and Demographic Research, the Florida Department of Employment Opportunity and other state and local government agencies. In addition, it is the chosen tool to measure these impacts by a number of universities and private research groups that evaluate economic impacts across the state and nation. REMI shares two underlying assumptions with mainstream economic theory: households maximize their utility and producers maximize their profits. It includes hundreds of equations that describe cause-and-effect relationships in the economy, extending beyond an I/O model. The REMI used for this analysis (version 2.5.0) was developed specifically for the state of Florida and includes 160 sectors. REMI's principal advantage is that it is a dynamic I/O econometric model and can be used to forecast both direct and indirect economic effects over multiple-year time frames. REMI uses three sources of employment, wage and salary data: the Bureau of Economic Analysis (BEA) employment, wage and personal income series, ES 202 establishment employment and wage and salary data, and county business patterns (CBPs) data published by the Bureau of the Census. The industries are based on the North American Industrial Classification System (NAICS).

Humana's 15-year economic impact forecast time horizon is based on projected operating data (six years of Humana's expenses input data[10]), by Medicaid or Non-Medicaid categories, relative to the baseline economy. The expenses input data included the following data categories (by individual insurance plan) for operating data provided by Humana[11]:

- Payments to Medical Service Providers;
- Non-Medical Vendor Payments;
- Donations to Charitable Organizations;
- Payroll Amounts and Employee Headcounts for each of the 11 Coverage Regions;

[10] Input data described in previous data methodology section. The six years are: 2016-2021.
[11] Input data provided by Ms. Jana Thomas, Humana VP SE Region, Medicaid Business Development.

For each of the following categories[12]:

- Medicaid Managed Care
- Medicare Advantage
- PDP
- Medicare Supplement
- Commercial
- TRICARE

FSU CEFA then derived the totals (used in the REMI model) based on the operating data (six years of program expenses input data). There was no duplication of any category nor numbers provided in the input data. In order to estimate the expected growth rate of operating expenses, an assumption of three percent annually was used. Employee income and counts were based on a growth rate of two percent annually.[13]

[12] Categories were further condensed into: 1) Medicaid and; 2) Non-Medicaid categories.
[13] The growth rate(s) for operating expenses and income, of three percent and two percent, respectively, were based on economic assumptions related to growth rates for expenses/income which are based on the current credit underwriting standards.

Results of the Economic Impact Analysis (REMI)

The 15-year economic impact results, as depicted in the following Figures, and based on projected operating data (six years of program expenses input data), show the impact of Humana, by Medicaid or Non-Medicaid categories, and Totals, relative to the baseline economy of Florida.

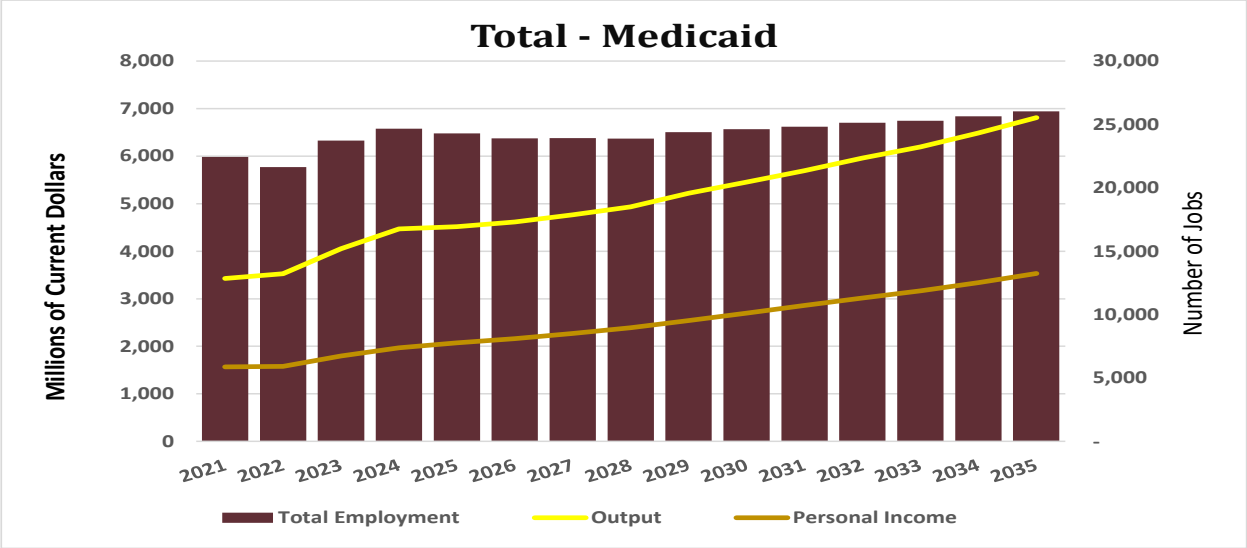


Figure 8. Total Economic Impacts for Humana's Medicaid Program in Florida for Years 2021-2035

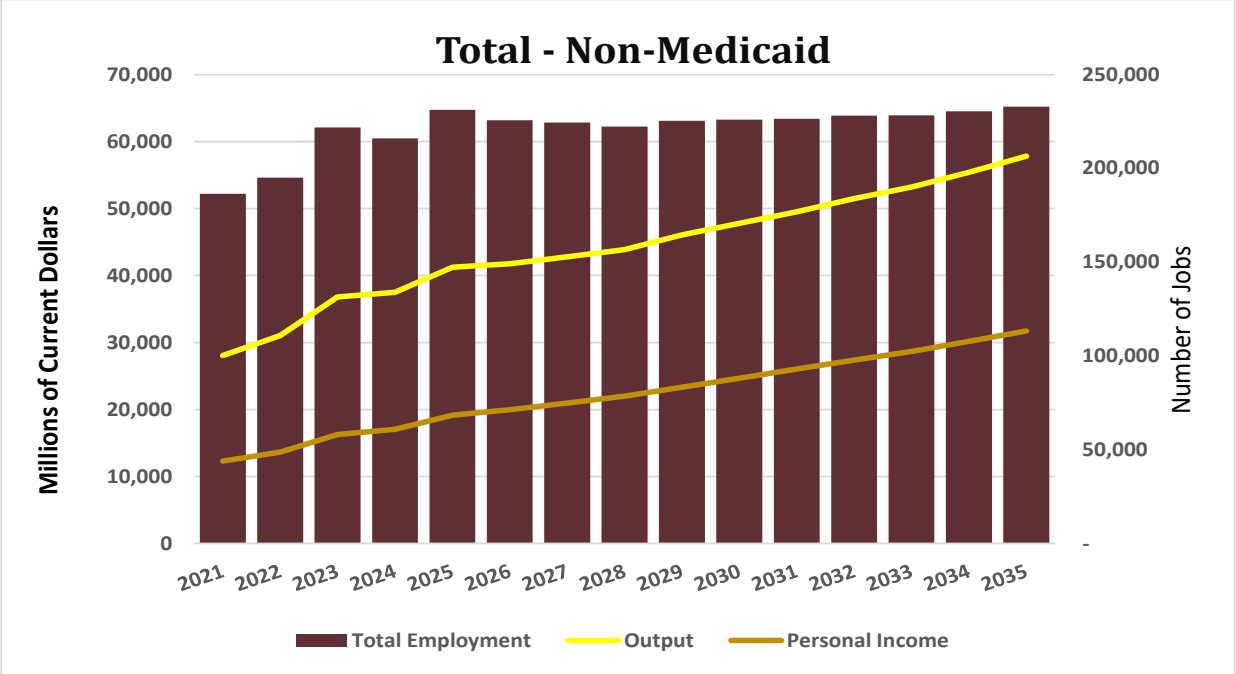


Figure 9. Total Economic Impacts for Humana's Non-Medicaid Program in Florida for Years 2021-2035

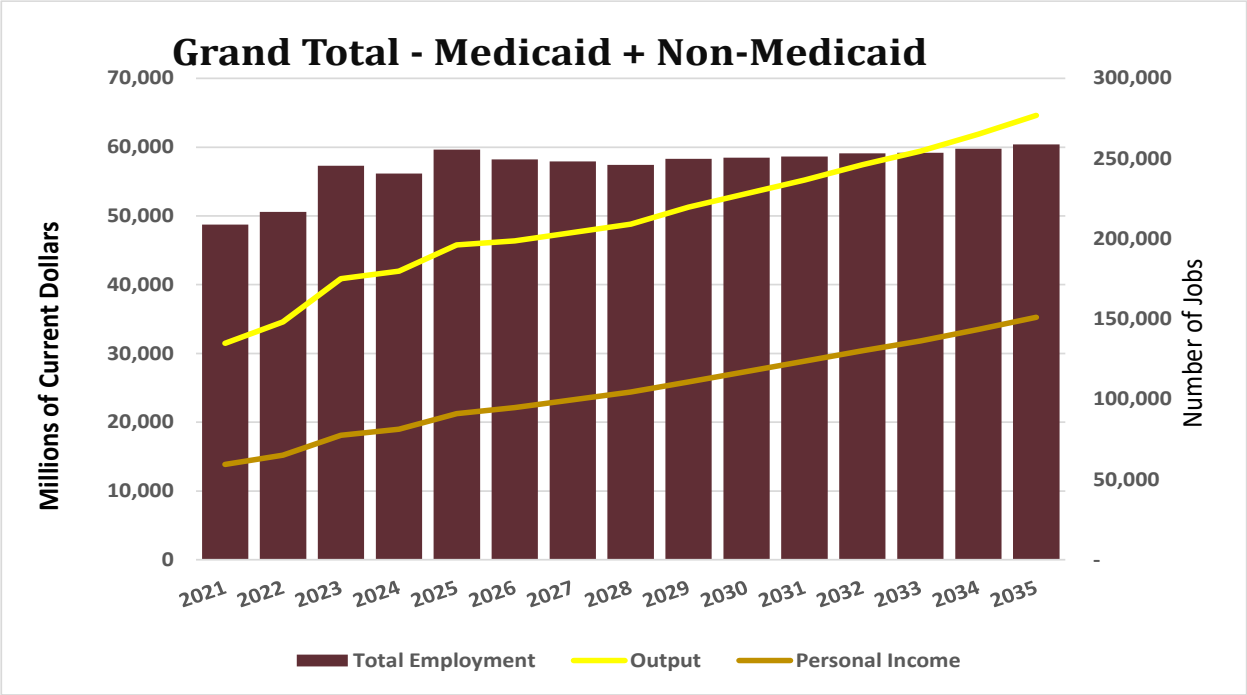


Figure 10. Total Economic Impacts for Humana's Medicaid and Non-Medicaid Programs in Florida for Years 2021-2035

In summary, the total economic impacts presented below:

- Employment increases by 255,539 jobs in 2025, before settling at 258,912 jobs in 2035.[14] After the first five years of operations where the market demonstrates an over-employment strategy, it begins to decrease to year 2028, and then gradually increase in numbers of jobs annually thereafter.
- Annual Output increases steadily from $31.5 billion in year 2021 to $64.6 billion in year 2035.
- Personal Income increases incrementally from $13.9 billion in year 2021, to about $35.3 billion in year 2035.

The results reveal that the impacts on the Florida economy will be positive and significant, in terms of Output, Employment, and Income, both for year 2022, and across years to 2035.

[14] The job increases for each program (Medicaid and Non-Medicaid) are compared to a baseline (i.e., no Humana program investment activity).

Results and Conclusions

Humana, a Fortune 500 company, insures more than 2 million people in Florida through its Medicaid, Medicare Advantage, PDP, Medicare Supplement, Commercial (full insurance & ASO), and Tricare programs. According to the most recent data, Humana employed 10,800 associates in Florida and was only one of two health plans selected to serve Florida Medicaid members statewide. Due to its current growth in the health insurance industry in Florida, Humana contracted with the Florida State University Center for Economic Forecasting and Analysis to conduct an economic research analysis study of Humana's economic impact in Florida. The economic research study is based primarily on six years of Humana's financial data. The economic impact results are presented in this research study, both in terms of impacts by each of their eleven Regions for year 2022 and, specific to Florida, to year 2035.

In Summary, the Economic Impact Findings Include:

The research team found that relating to the impact results (in $2022) by region, the total economic impacts of Humana are estimated to be a total of:

- 288,169 jobs;
- $18 billion in income or wages;
- $48 billion in total economic output, and;
- The state and local taxes (fiscal impacts) are $472 million.

The total economic impacts for Florida over time to year 2035:

- Employment increases incrementally from 208,848 in year 2021 to 245,591 in year 2023. It then dips to 240,709 in year 2024, and then reaches an initial peak of 255,539 jobs in year 2025. It then again continues to dip annually to 246,116 in year 2028, and then persists to climb steadily annually to 258,912 jobs in year 2035.
- Annual Output increases steadily from $31.5 billion in year 2021 to $64.6 billion in year 2035.
- Personal Income increases incrementally from $13.9 billion in year 2021, to about $35.3 billion in year 2035.

The results reveal that the impacts on the Florida economy will be positive and significant, in terms of Output, Employment, and Income, both for year 2022, and across years to 2035.

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