Impact of Health Insurance Industry on the State of Connecticut

Prepared for Connecticut Association of Health Plans
Prepared by Connecticut Economic Resource Center, Inc.

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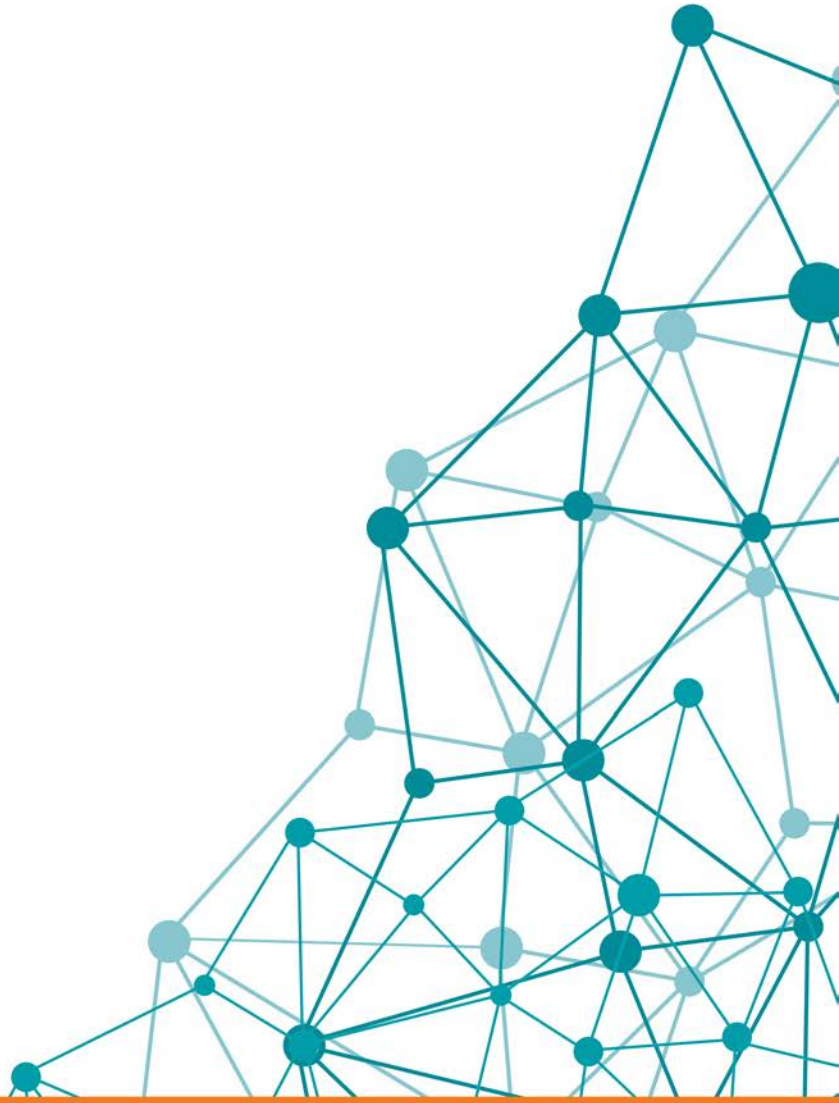

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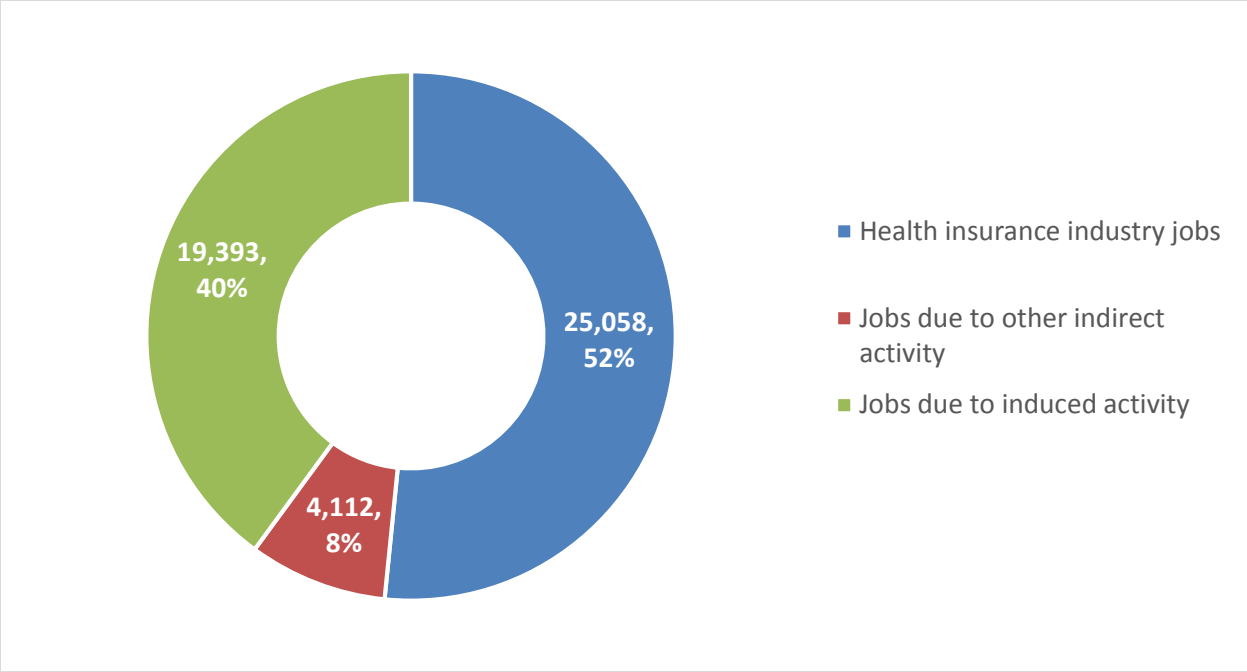
EXECUTIVE SUMMARY

With Hartford still known as the "Insurance Capital of the World," it is no surprise that the health insurance industry is a key industry in the state. There are 25,000 jobs in Connecticut's health insurance industry. These jobs are in insurance carrier companies, agencies, brokerages, and companies involved other health insurance activities. This analysis estimates that another 23,500 jobs are generated across Connecticut from the insurance industry's activity and the household spending generated by the labor income from this activity. This suggests over 48,500 jobs are associated with the health insurance industry's operations in the state.

Figure 1: Total Impact on Employment in Connecticut from the Health Insurance Industry, 2018



Source: Connecticut Association of Health Plans (CTAHP); Emsi 2019.2; IMPLAN 2017 model for Connecticut; CERC calculations.

The activity in the health insurance industry can also be measured by its contribution to the state's economic output. In 2018 almost $15.5 billion in sales and inventory changes were generated, with over $11.2 billion of this due to direct operations of the industry and another $4.3 billion resulting from the other indirect activity and induced activity. The largest part of this output is value added, with the health insurance industry estimated to be contributing $9.9 billion of this critical measure to the state last year.

Labor income (including employee compensation, both wages and benefits, and proprietors' income) is the largest component of value added. It totaled $5.2 billion, with $3.6 billion estimated to be generated directly from the insurance industry activity and an additional $1.6 billion

produced as that activity rippled through Connecticut's economy as income from indirect support activity for the insurance sector and from household spending.

This economic activity also includes tax payments from health insurance companies and workers to state and local governments as well as fees and other payments required under state statutes. In addition, all the companies support nonprofit organizations across the state through charitable contributions and volunteer services.

This analysis shows that the health insurance industry is an important sector of Connecticut's economy. However, because of rapid changes in technology and significant changes and continued uncertainties to national and state-level policies, the industry's potential and continued diverse contributions to the state's economy are clearly challenged. The uncertainty and expected changes are likely to have impacts on employment, output, and the other economic indicators in the state. This report shows that while some of these changes may be offset by changes in other industries, options that involve policies that could mitigate and allow time for the companies to adjust to the future will benefit the competitive position of this industry in the state and the state's economy.

SECTION 1: ECONOMIC IMPACTS OF THE HEALTH INSURANCE INDUSTRY IN CONNECTICUT

In 2018, economic activity associated with health insurance supported an estimated 48,560 jobs in Connecticut. These jobs are in health insurance industries and all other industry sectors as the economic activity from that industry ripples through the state. The health insurance industry also generated a total estimated impact on output in the state of almost $15.5 billion in 2018. This impact on output included $9.9 billion in value added, or wealth created in the state due to industry activity including an estimated $5.2 billion in labor income.

Impacts of Employment in Connecticut

While Hartford is often called the "Insurance Capital of the World," the state's health insurance companies are located around the state, including offices in jurisdictions including Norwalk, Middletown, Wallingford, and Windsor Locks (Table 1). The Connecticut Association of Health Plans (CTAHP) estimates that over 17,900 employees work at their member companies.

Table 1: CTAHP Member Company Employment and Locations in Connecticut, 2018

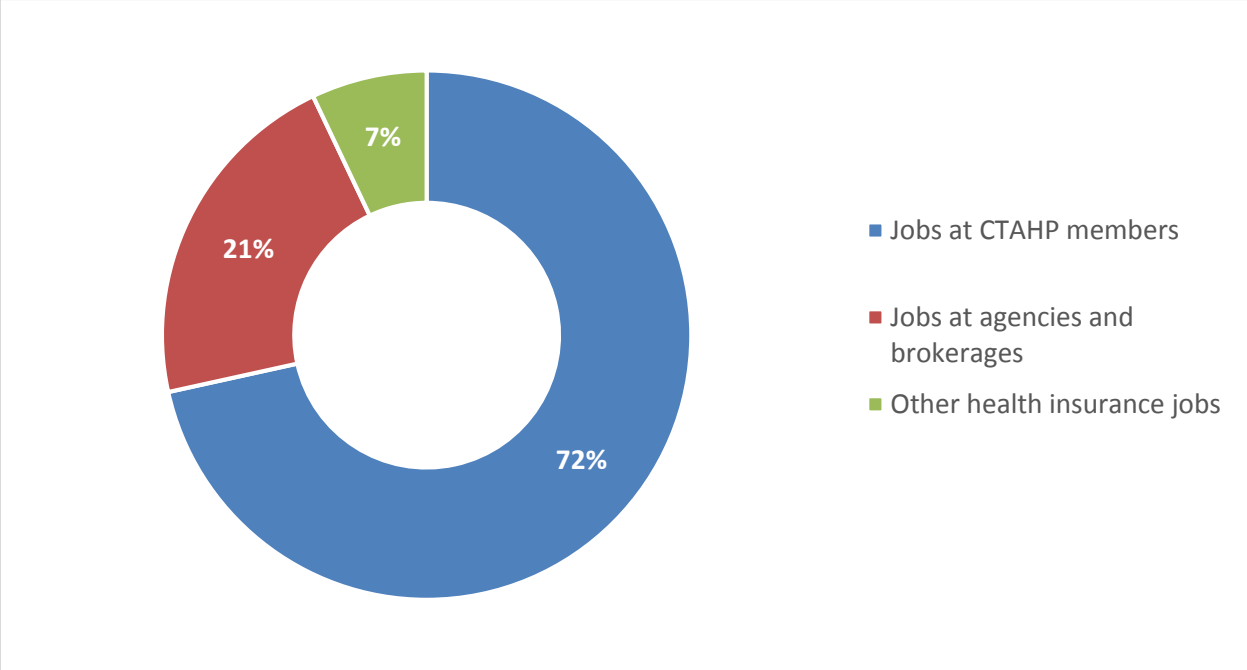
Company	Employment	Primary Locations
Aetna	5,300	Hartford, Middletown, Norwalk
Anthem	1,100	Wallingford
Cigna	4,649	Bloomfield, Milford, Windsor, Windsor Locks
ConnectiCare	650	Farmington
Harvard Pilgrim Health Care	30	Hartford
UnitedHealthcare	6,200	Glastonbury, Hartford, Rocky Hill, Windsor

Source: CTAHP, Roundtable Discussion with the Gubernatorial Candidates, 2018.

The employees at the carriers generated an estimated 7,130 jobs in other sectors of the health insurance industry in Connecticut in 2018 (Figure 2). This includes an estimated 5,360 jobs at agencies and brokerages and an estimated 1,770 jobs in claims adjusting and processing and other administrative activities. These jobs represent some of the health producers, agents, and brokers licensed to operate in the state, since many of these licensees likely also sell other insurance lines, such as property and casualty or life insurance. Changes to the health insurance industry in the state may not result in job losses for licensees, as many or most sell a mix of

insurance products. The jobs estimates used throughout this report also does not include out-of-state license holders.[1]

Figure 2: Distribution of Health Insurance Industry Jobs in Connecticut, 2018

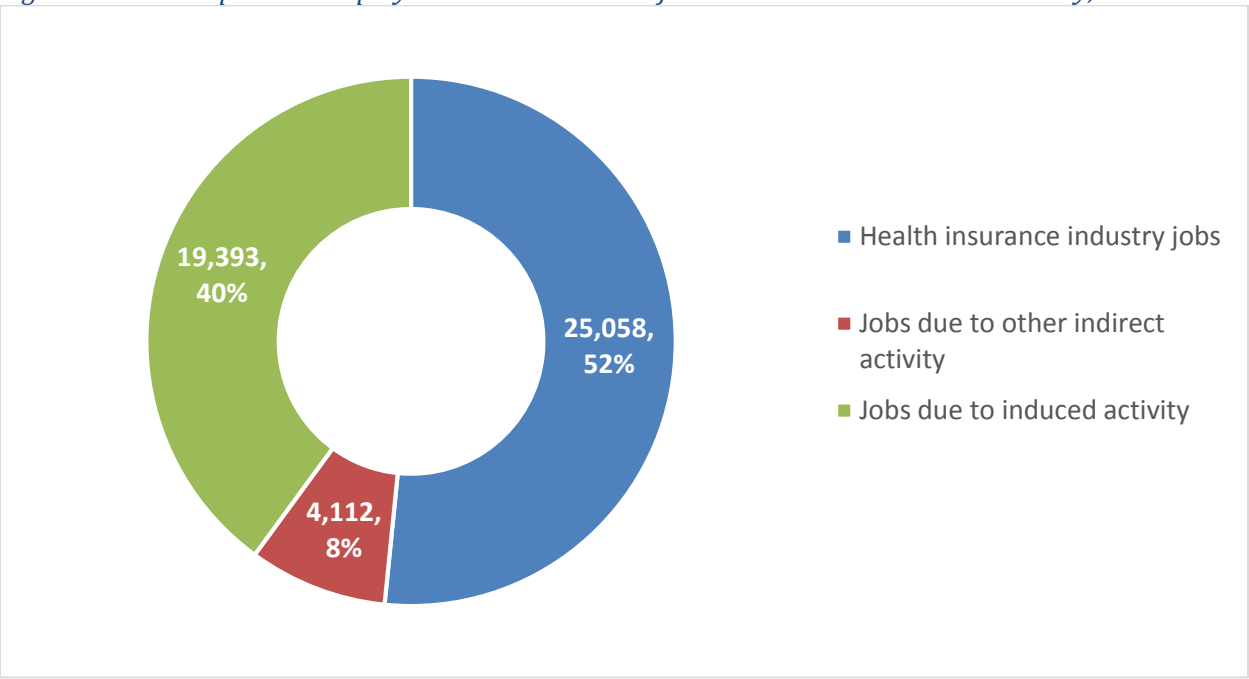


Source: CTAHP; Emsi 2019.2; IMPLAN 2017 model for Connecticut; CERC calculations.

As the effects of the health insurance industry rippled through the wider state economy, another 23,500 jobs were estimated to have been supported in Connecticut (Figure 3). As such, almost half of jobs generated by the health insurance industry in Connecticut were due to these secondary effects. About 19,400 jobs were estimated to be the result of indirect activity, as companies across the state meet requirements for output from the health insurance industry. Examples of indirect activities include: technology companies that provide support for health insurance industry websites; facilities maintenance and support needs; real estate agents or brokers who assist health insurance companies with their location needs; or wholesale or retail trade in office supplies, such as paper, pens, and computers. An additional 4,110 jobs were due to induced activity, as spending from the labor income received by employees working in the health insurance industry and employees of the indirectly-affected establishments cascades through the state's economy from household spending on goods and services.

[1] Connecticut Insurance Department data shows 65,000 licensed health insurance producers or agents and 200 licensed health brokers in the state. Data provided by CTAHP.

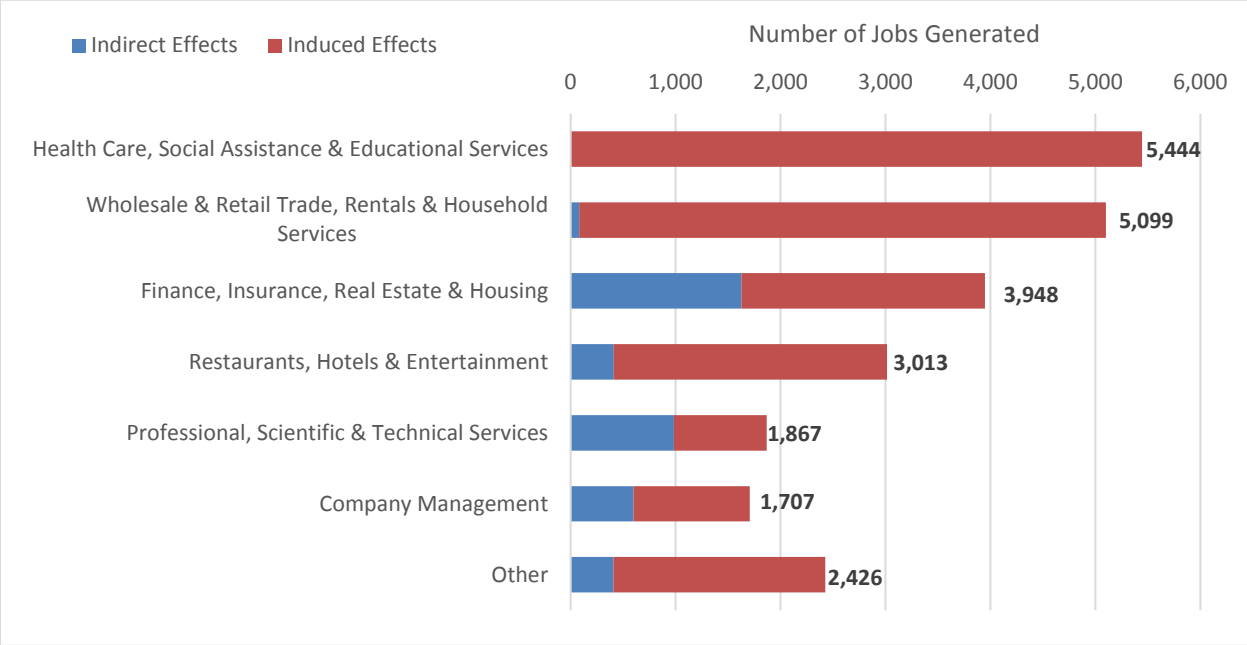
Figure 3: Total Impact on Employment in Connecticut from the Health Insurance Industry, 2018



Source: CTAHP; Emsi 2019.2; IMPLAN 2017 model for Connecticut; CERC calculations.

These indirect and induced jobs generated by the health insurance industry activity can be broken down by the industry in which they are occur. Over 5,440 jobs are estimated to be generated via secondary effects in Health Care, Social Assistance, and Educational Services, while almost 5,100 jobs were generated in Wholesale and Retail Trade, Rentals, and Household Services (Figure 4). Together, the jobs created in these two industries represent 45% of all jobs supported via secondary effects of the health insurance industry. Moreover, in both industries, most of these jobs were due to induced effects as workers spent their labor income.

Figure 4: Secondary Effects on Employment by Industry from Health Insurance Industry in Connecticut, 2018[2]



Source: CTAHP; Emsi 2019.2; IMPLAN 2017 model for Connecticut; CERC calculations.
Note: "Other" includes industries such as: Transportation, Couriers & Warehousing; Other Services; Information; Construction; Government Utilities, Transit & Enterprises; Manufacturing; and Agriculture, Mining, Extract & Utilities.

An additional 3,9948 jobs are estimated to have been supported in Finance, Insurance, Real Estate and Housing (FIRE and Housing) as a result of secondary activity of the health insurance industry. Within the FIRE and Housing industry, over 1,625 jobs were supported through indirect effects, and another 2,320 jobs resulted from induced effects generated by household spending from incomes earned either directly or indirectly from the health insurance industry. Secondary effects of spending by the health insurance industry supported:

- Over 3,013 jobs in Restaurants, Hotels, and Entertainment;
- Over 1,867 jobs in Professional, Scientific and Technical Services; and
- Over 1,707 jobs in Company Management.

[2] Because the indirect effects of the health insurance industry are included in "Health insurance activity" rather than "Other indirect activity," as shown in Figure 2 and Figure 3, they are not included in the Finance, Insurance, Real Estate, and Housing industry as shown in Figure 4.

Impacts of Output on Connecticut

In 2018, the health insurance industry in Connecticut generated a total estimated impact on output in the state of almost $15.5 billion in 2018 (Table 2). The total impact of the health insurance industry in Connecticut represents all the activity that occurs in the state due to the industry. This includes activity from the health insurance carriers located in the state, who are serving both global insurance markets, as well as local activity from insurance agencies and brokerages that sell health insurance plans to businesses or individual consumers, and activity from companies providing other health insurance services, such as claims adjusting.

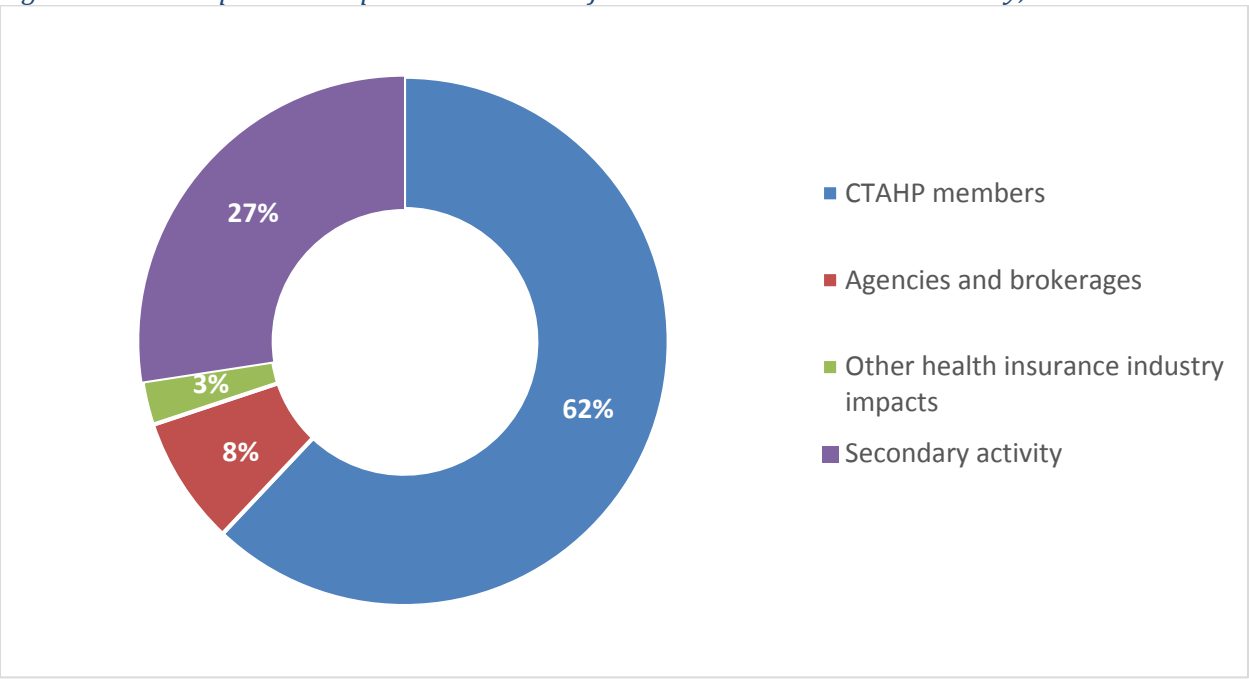
Table 2: Total Annual Impact on Output on Connecticut from the Health Insurance Industry, 2018

	Output (Mil 2019$)
Total	**$15,495**
Health insurance carrier- and agency-related activity	$11,246
Secondary activity	$4,250
Other indirect activity	$1,168
Induced activity	$3,082

Source: CTAHP; Emsi 2019.2; IMPLAN 2017 model for Connecticut; CERC calculations.

Over $9.6 billion in output is estimated to be a direct effect of the carrier activity of the six CTAHP members (Figure 5), which generated an estimated $1.2 billion in output due to activity by agencies and brokers and $415 million in the remainder of the health insurance industry in Connecticut.

Figure 5: Total Impact on Output in Connecticut from the Health Insurance Industry, 2018

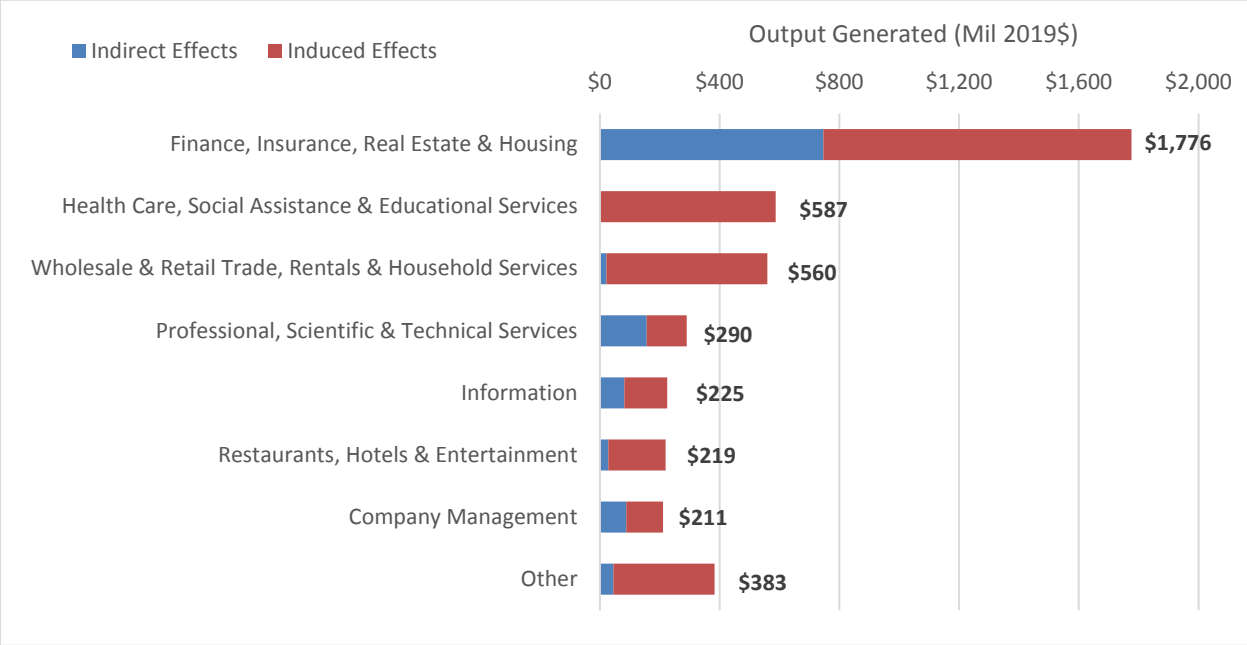


Source: CTAHP; Emsi 2019.2; IMPLAN 2017 model for Connecticut; CERC calculations.

The health insurance industry also produced $4.3 billion in secondary activity in the state, including almost $1.17 billion in other direct activity as other firms increased their production to meet the needs of the health insurance industry. Finally, $3.1 billion in output was created due to induced activity, as workers in the health insurance industry and the indirectly impacted firms spent a share of their labor income on household goods and services in the state.

The output generated by the secondary activity associated with the health insurance industry in Connecticut includes an impact of $1.78 billion on Finance, Insurance, Real Estate, and Housing (Figure 6). This represents 42% of the total secondary effect on the state's economy. The second and third largest secondary effects on output were estimated to be on Health Care, Social Assistance and Educational Services ($587 million) and Wholesale and Retail Trade, Rentals and Household Services ($560 million). These secondary effects were largely driven by household spending (induced effects) as the health insurance industry spending ripples through the wider state economy due to workers spending their earned income on household goods and services. Secondary effects were also expected to generate over $200 million in output in: Professional, Scientific & Technical Services ($290 million); Information ($225 million); Restaurants, Hotels, and Entertainment ($219 million); and Company Management ($211 million).

Figure 6: Secondary Effects on Output by Industry from Health Insurance Industry in Connecticut, 2018[3]



Source: CTAHP; Emsi 2019.2; IMPLAN 2017 model for Connecticut; CERC calculations.
Note: "Other" includes industries such as: Transportation, Couriers & Warehousing; Other Services; Construction; Government Utilities, Transit & Enterprises; Manufacturing; and Agriculture, Mining, Extract & Utilities

Impacts on Value Added and Labor Income

Included in the output measure of the total contribution to the state's economy from Connecticut's health insurance industry is value added, a measure of the wealth generated in the state due to the health insurance activity. As such, value added represents output minus the cost of all intermediate inputs. In 2018, the industry generated total value added estimated at over $9.90 billion (Table 3). Of this, over $7.19 billion in value added was due directly to the health insurance carrier- and agency-related activity in the state. Another $2.71 billion in value added was generated by the secondary effects of the health insurance industry and includes $742 million in value added from indirect activity and nearly $2.0 billion of value added from induced activity.

[3] Because the indirect effects of the health insurance industry are included in "Health insurance activity" rather than "Other indirect activity," as shown in Figure 5, they are not included in the Finance, Insurance, Real Estate, and Housing industry as shown in Figure 6.

Table 3: Total Annual Impacts on Value Added and Labor Income in Connecticut from the Health Insurance Industry, 2018

	Value Added (Mil 2019$)	Labor Income (Mil 2019$)
Total	**$9,907**	**$5,168**
Health insurance carrier- and agency-related activity	$7,192	$3,588
Secondary activity	$2,714	$1,579
Other indirect activity	$742	$421
Induced activity	$1,972	$1,159

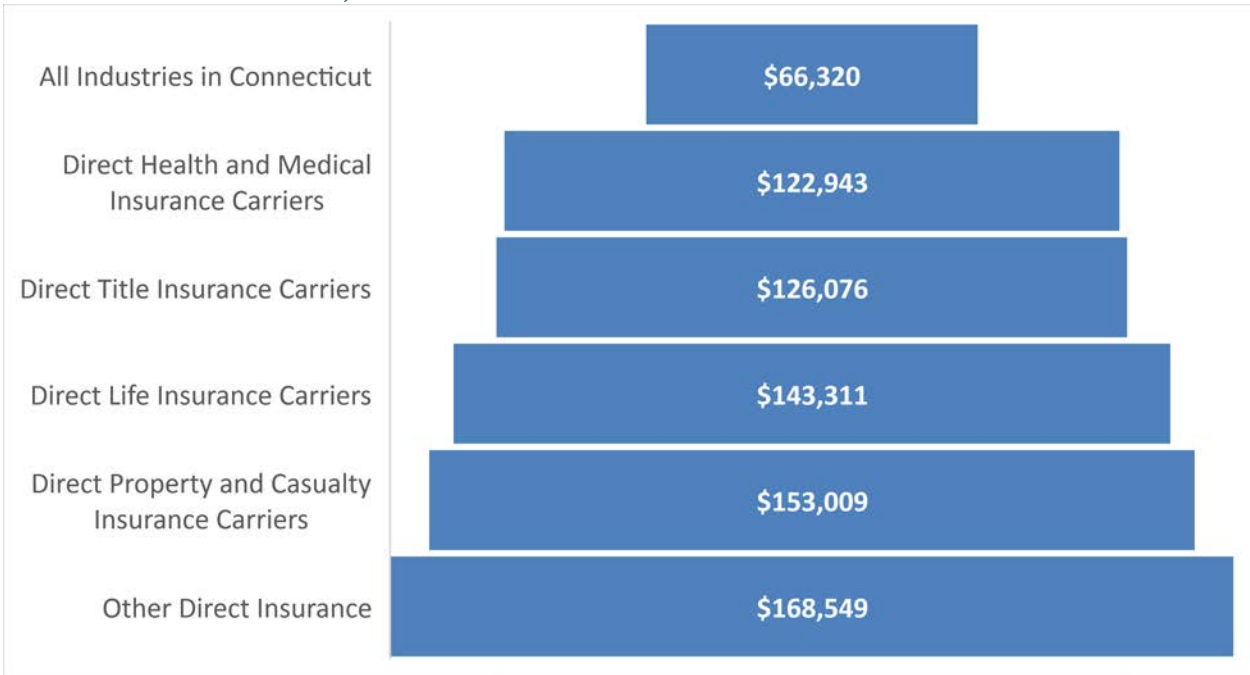
Source: CTAHP; Emsi 2019.2; IMPLAN 2017 model for Connecticut; CERC calculations.

Labor income, which includes employee compensation, both wages and benefits, and proprietors' income, is a major component of value added. The total labor income generated in Connecticut in 2018 due to the health insurance industry was estimated as $5.17 billion. This includes $3.59 billion in labor income that is the result activity at the health insurance carriers, agencies, brokers, and other firms. Another $421 million in labor income is estimated to have accrued to workers through indirect activity, as other companies increase their production due to health insurance industry activities, while $1.16 billion is induced through employees' household spending.

Earnings in the health insurance industry are higher than average earnings in all industries in the state. Wages, salaries, and proprietor earnings in Direct Health and Medical Insurance Carriers (NAICS 524114) were $122,943 in 2018.[4] This is well above the average wages, salaries, and proprietor earnings, which was $66,320 in 2018.[5] However, as shown in Figure 7, average earnings in the health insurance carrier industry tend to be the lowest among all carrier activity.

[4] Source: Emsi, 2019.2.
[5] Ibid.

Figure 7: Current Wages, Salaries, and Proprietor Earnings for Jobs in Direct Insurance Industries and All Industries in Connecticut, 2018



Source: Emsi, 2019.2.

SECTION 2: OTHER ECONOMIC CONTRIBUTIONS OF THE HEALTH INSURANCE INDUSTRY

The health insurance industry also contributes to the State of Connecticut through the taxes its companies and workers pay to state and local governments. In addition, the industry makes significant contributions to nonprofit organizations in the state.

Insurers' and Workers' Taxes

At the state level, one of the primary tax assessments on health insurers is the premium tax, a tax they pay on the value of their premiums rather than paying the state's corporate income tax rate.[6] Insurers covering "normal" risks, whether incorporated in Connecticut or other states, pay a rate of 1.5% on net direct premiums, while insurers for "unique or uncommon risks" pay a rate of 4.0% of gross premiums. For most health insurers, these premium taxes are millions of dollars; the total for one company is likely to exceed $19 million for 2018.[7] The Connecticut Department of Revenue Services (CT DRS) reported that total revenue to the state from the premium tax from all applicable insurers was over $209 million in Fiscal 2018.[8]

However, there are also tax credits available to help offset the costs of the premium tax, some of which are available to companies that are not in the state's insurance industry. (Examples of these credits include offsets available for charitable giving or specific economic development fund investments.) Health insurers incorporated in Connecticut with assets under a threshold may qualify for additional credits. CT DRS estimated that the preliminary total for calendar year 2017 insurance tax credits was over $59 million.[9]

The state's whole insurance industry funds the Connecticut Insurance Department, which was budgeted at almost $27 million in Fiscal 2018, and the health insurance carriers pay a portion of those costs.[10] The state's health insurance carriers also fully fund a series of public health and welfare programs. In Fiscal 2018, this funding totaled over $101 million and included money for:

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[6] For more information on the premium tax, see Office of Legislative Research Report 2015-R-0260. Per the Connecticut Department of Revenue Services Annual Report for Fiscal Year 2017-2018, the tax rate for insurers paying a share of net direct premiums dropped from 1.75% to 1.5% effective January 1, 2018. https://portal.ct.gov/-/media/DRS/Research/annualreport/DRS-FY18-Annual-Report.pdf?la=en

[7] Data supplied by CTAHP.

[8] CT DRS Annual Report Fiscal 2017-2018. The report also noted that there were 1,338 insurance companies that were taxpayers of the premium tax.

[9] Ibid.

[10] Ibid.

Immunization/DPH Insurance Fund Assessment; Needles and Syringe Exchange Program; AIDS Services; Breast and Cervical Cancer Detection and Treatment; X-Ray Screening and Tuberculosis Care; Venereal Disease Control; Children's Health Initiatives; Office of Healthcare Advocate; Office of Health Strategy; and Access Health, which is Connecticut's health insurance exchange.[11] In addition,

As employers in the state, Connecticut's health insurance companies also collect withholding taxes for their workers' income taxes and pay into the state's unemployment system. In 2018, total withholding taxes collected by the health insurers were over $42 million while unemployment taxes collected were over $2 million. In addition, Connecticut residents working in the health insurance industry pay personal income taxes to the state and property taxes (e.g., residence, automobile) to local governments.

Charitable Contributions

Connecticut health insurers make many charitable contributions each year to nonprofits located across the state. The contributions include both monetary support and employee volunteer hours. Charities supported by state health insurance carriers includes:

- American Heart Association
- Boys and Girls Clubs of Hartford
- Chamber of Commerce of Eastern Connecticut
- Connecticut Science Center
- East Haven Fall Festival
- Easter Seals Goodwill Industries
- Foodshare
- The Governor's Prevention Partnership
- Hartford Stage Company
- Hole in the Wall Gang Camp
- Jackson Laboratory
- Junior Achievement
- Travelers Championship
- The Village for Families and Children
- Wallingford Family YMCA
- Women's Business Development Council
- Yale New Haven Hospital

[11] Data supplied by CTAHP.

SECTION 3: CHALLENGES TO CONNECTICUT'S HEALTH INSURANCE INDUSTRY

In addition to traditional challenges to the health insurance industry such as moral hazard and information asymmetry, the industry also remains in a state of flux due to national and state-level policy changes. The Affordable Care Act (ACA, also known as "Obamacare") remains unstable, especially as the mandate for most Americans to have health insurance was repealed in the Tax Cuts and Jobs Act of 2017 and effective in 2019. While the number of insured Americans increased under the ACA, the program also implemented regulations on health services that needed to be covered under health insurance plans and limited the ability of firms to price premiums based on individual risk. Moreover, the current state of the entire ACA remains in question as a judge in Texas ruled the program unconstitutional in December 2018 and the Justice Department has filed paperwork with the appeals court agreeing that the ACA is unconstitutional. This continued instability, and the patchwork health insurance regulations occurring at the state level across the country, are likely to increase administrative costs within the health insurance industry and also make investments and other planning for the future of the industry difficult.

There is additional instability for the future of the industry as many of the Democrats running for the presidential nomination support some version of "Medicare for all" or another public option to expand access to health care. For example, in a Washington Post analysis, 16 of 17 candidates have shown support for a public option, by sponsoring a Senate proposal with a Medicaid buy-in public option, introducing a public option in his state, or via the candidate's website or response to the Post's question.[1]

There are also potential changes to the health insurance industry in Connecticut, where the state capital is commonly known as the "Insurance Capital of the World." There are currently bills before the General Assembly to create a public option plan for small businesses and nonprofits (i.e., those under 50 employees). The plan would be administered by the Connecticut Comptroller's Office, which also administers a health insurance plan that municipalities in the state can join.[2]

Moreover, as with many other industries, the health insurance industry continues to be affected by changing technological trends and access to information. While insurers may use digital technologies to reach additional clients, to collect data to more accurately price insurance costs and provide benefits, and for marketing purposes, there is also concern about cybersecurity risks – both in general and with the additional data captured by industry firms – and the ability of consumers to purchase their insurance products directly from the company via the internet.

[1] https://www.washingtonpost.com/graphics/politics/policy-2020/medicare-for-all/?utm_term=.b9f10a52195a

[2] https://ctmirror.org/2019/05/12/stakeholders-square-off-over-proposed-public-option-health-coverage/

These rapid changes in technology and significant changes and continued uncertainties to national and state-level policies are challenging the industry's potential and continued diverse contributions to the state's economy. The uncertainty and expected changes are likely to have impacts on employment, output, and the other economic indicators in the state. Options that involve policies that could mitigate and allow time for the companies to adjust to the future will benefit the competitive position of this industry in the state and the state's economy.

As can be seen in Table 4, a 10% decline in the industry's size will decrease output in the state by approximately $1.6 billion and decrease employment by an estimated 4,855 workers. A reduction in Connecticut's health insurance industry by 50 percent – perhaps due to large carrier companies relocating to other states – could easily result in an overall loss to Connecticut's economy of more than $7.7 billion in output and over 24,280 jobs.

Table 4: Projected Impacts of a Smaller Health Insurance Industry

	Employment (Jobs)	**Output (Mil 2019$)**	**Value Added (Mil 2019$)**	**Labor Income (Mil 2019$)**
Current State of Industry, 2018[3]	25,058	$11,246	$7,192	$3,588
Current Total Impact of Industry, 2018[4]	48,564	$15,495	$9,907	$5,168
Industry Decreases by:				
10%	-4,856	-$1,550	-$991	-$517
25%	-12,141	-$3,874	-$2,477	-$1,292
50%	-24,282	-$7,748	-$4,954	-$2,584

Source: CTAHP; Emsi 2019.2; IMPLAN 2017 model for Connecticut; CERC calculations.

Due to the complexity of the industry and the interaction of industry characteristics and the state and/or national economy, the specific scenarios that would play out for various national or state policy proposals cannot be determined. Policies that negatively impact health insurance carriers in the state might be partially offset over time by gains in other industries. A shift to a public option, for example, may necessitate increases in employment in government and might limit jobs losses in the health insurance industry, as workers will be needed to administer the plan, or for doctors, nurses, and other health care practitioners and technical workers as more Connecticut residents are able to access health care. Due to break points and the "lumpiness" of investment

[3] "Current state of the industry" represents the current output, employment, and other activity of the health insurance industry in Connecticut in 2018, based on employment data provided by CTAHP and on the IMPLAN economic model.

[4] "Current Total Impact of Industry" includes the health insurance industry activity as well as the secondary activity generated in the state as spending by the health insurance industry ripples through the economy.

options, estimates on the effect earnings from health insurance activity and the impact on value added and labor income would impossible to forecast.

SECTION 4: CONCLUSION

Connecticut's health insurance industry is an important component of the state's economy. Over 25,000 workers in the state in 2018 were estimated to be directly employed in health insurance carriers, agencies, brokerages, and other firms, while almost 19,400 jobs were associated with indirect activity due to the health insurance activity and another 4,100 jobs due to induced activity as the health insurance spending rippled through the state. The industry also produced almost $15.5 billion in economic output in 2018, with over $11.2 billion of this due to direct operations of the industry and another $4.3 billion resulting from the other indirect activity and induced activity. The largest part of this economic impact on output is value added, which includes labor income of $5.2 billion in Connecticut due to the health insurance industry.

As with the health care industry, the health insurance industry remains in a state of change due to national and state-level policy and technology changes. These changes may lead to lower employment in the health insurance industry and in the state's economy as a whole; if this occurs there could also be a decrease in economic output and other economic indicators. However, depending on which types of changes occur and how they are implemented, jobs in other industries, including health care, computers, mathematics, and government may increase, offsetting these employment losses and the associate loss in output. Planning and moving carefully on changes in this important industry are critical for the state's economy.

APPENDIX: OVERVIEW OF IMPLAN MODEL AND GLOSSARY

The goal of this analysis is to understand the full impact on the health insurance industry in the State of Connecticut.

This appendix briefly reviews the concepts behind the IMPLAN model used for this analysis as well as the technical specifications. It includes a glossary of impact analysis terms.

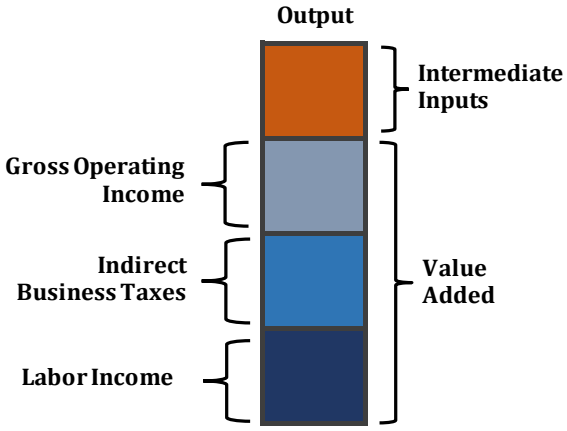
IMPLAN Modeling

The IMPLAN economic impact model is a comprehensive input-output industry structure with a full social accounting matrix to reflect changes in final demand. The industry input-output industry structure is based on up to 536 industry production functions that are unique for each region. Industries not present in the region are zeroed out and all goods and services provided for regional production from those industries are imported. The model is then recompiled to ensure that the regional inputs and all other industries and the commodities in the model correctly accounted for these revisions. The social accounting matrix includes nine household income levels and estimates of the total regional income represented for each household income level. The model also includes state and federal institutions and expenditure patterns for all goods and services for each. These include federal military and non-military and public enterprise activity and state and local government education, non-education and investment activities. Each household income level and each of the government-related institutions noted above have their own expenditure patterns and the total expenditures for each of these institutions is included in the model.

By default, the regional IMPLAN model used here is calibrated to specific economic costs and impacts in Connecticut. It is also designed to include only the estimated share of the inputs produced inside the state, which produces a conservative but regionally-accurate assessment of the impact. IMPLAN also allows the user to modify the default industries or to add new industries to more accurately model unique regional activities or circumstances.

As a comprehensive input-output model, IMPLAN provides estimates of impacts on a regional economy using several different economic measures. The most comprehensive measure IMPLAN uses is output, a measure of sales and inventories. As can be seen in Figure 8, output includes intermediate inputs and value added. Intermediate inputs are goods and services used by a region's businesses in production. By definition, intermediate inputs do not go into the region's final demand. Value added, the difference between the sales generated by an industry and the cost of production, is also referred to as Gross Regional Product (GRP). GRP represents the contribution of the production process on the final demand or the market price of a good or service.

Figure 8: Components of Output in IMPLAN Model



The components of GRP or value added include labor income, gross operating income, and indirect business taxes. Labor income is the sum of employee compensation (wages and salaries including benefit contributions) and proprietor income. Indirect business taxes include the resources extended toward payment of levies collected by government entities for taxes (except payroll and income) and fees related to operation. Lastly, gross operating income is the residual not paid into operational activities and includes profits, capital investment, rents, and other related incomes.

Once an IMPLAN model is built for a specified region, all dollar denominated and employment industry activity for production, social activity of final demand and trade outside of the region to both foreign and other domestic regions has been accounted for. It is with this completely structured model that the full economic impact from a given activity can be estimated for the region. In most cases, the initial economic activity is classified as the direct effects that are specified by the analyst.

The IMPLAN model then estimates the secondary effects as they would ripple through the regional economy. In the IMPLAN model, these secondary effects are identified as the indirect and induced effects. The indirect effect captures subsequent inter-industry spending and feedback mechanisms that result from supply chain linkages across the initially impacted sectors and commodities as specified in the production functions. The induced effect captures iterative rounds of spending associated with changes in income that accrues to the nine household groups differentiated by income levels and spending patterns specified by the model. These changes in income can be specified directly by the analyst to any or all household groups or to all groups based on labor income distributions or can be derived from within the model as income changes observed by the direct and indirect activities as noted above.

Glossary of Impact Analysis Terms

Activity – a summary term to reflect all economic occurrences in the health insurance industry in Connecticut.

Direct Effect – the measure of the initial or immediate economic activity defined by analyst as the sum of the total or a part of the change in output due to a specified change in a region's economy. For this analysis these measures can include employment, labor income, revenues or costs. The direct effect that is reported by the IMPLAN model takes into account the regional industrial profile, and estimates of out-of-regional purchases that would directly affect the immediate activity are removed from the direct effect estimate reported by the model.

Employment – direct, indirect, and induced employment estimates derived from the IMPLAN model are based on the total full-time and part-time jobs associated with the production. This more comprehensive measure provides a better link into the social accounting matrix that observes household income changes.

Employment Compensation – the measure of salaries and wages and the benefit packages associated with payments for labor to employees.

Indirect Effect – the change in a region's economic activity that is associated with the input of regional goods and services required to meet the change in production observed in the direct activity. The inter-industry purchases identified in the industry production function developed by the input-output methodology serves as the basis for the summary measures of the regional indirect effects for all economic measures present in the IMPLAN model. The inter-industry linkages are based on the regionally specified production functions that identify the share in production of each of the 536 commodities in the model. As such they are the estimates of the value of the inputs (goods and services) needed from the regional industries to support the level of activity specified in the initial observed change (direct effect) modelled by the analyst.

Induced Effect – the change in the regional economy due to the change in the spending of income associated with the production observed in the direct effect and estimated in the indirect effect. These spending estimates are based on nine different household income levels used in the social accounting matrix of the IMPLAN model.

Labor Income – this includes both the income of employees paid by others as well as income earned by an establishment's proprietor(s).

Output – measures the value of production by a business or industry. In an IMPLAN analysis output includes total sales and inventory changes.

Proprietors' Income – the IMPLAN model's estimate of all income generated by an activity or in an industry that is associated with non-employee business or property owners. Along with employee compensation it is reported as labor income in an IMPLAN analysis.

Regional – the area for which impacts are measured. For this analysis, the region is the State of Connecticut.

Secondary Effects – impacts on the regional economy due to the health insurance industry. Secondary effects are the sum of indirect and induced effects. As such they are the additional economic impact to the immediate activity being specified by the analyst that is estimated by the IMPLAN model. The secondary effects exclude the immediate activity or the direct effect.

Value Added – the part of the total increase in production or output that is associated with the generation of new wealth in a region. For an impact analysis such as this, value added includes employee compensation, proprietors' incomes, indirect business taxes, profits, and other profit types of income. Value added is the amount of the total sales that has not been generated by the purchase of goods and services used in production. A regional impact analysis removes any value adding activity that leaves the specified region.