

**ECONOMIC ANALYSIS**

**NURSING HOMES' CONTRIBUTION**

**TO**

**WISCONSIN'S**

**ECONOMY & EMPLOYMENT**

**Dennis K. Winters, Principal Investigator**



**March 2009**

# NURSING HOMES' CONTRIBUTION TO WISCONSIN'S ECONOMY & EMPLOYMENT

## ***EXECUTIVE SUMMARY***

The economy is in the throes of an economic recession and a structural change. The business cycle combined with a financial crisis dominates the current state of affairs. Already underway demographics and globalization are causing permanent disruptive changes in the structure of the economy. Wisconsin is very much a part of both events. Job losses and the pending retirement of aging Baby Boomers affect Wisconsin as much if not more than other states due to the nature of state's traditional industry mix and higher than national average population age.

Wisconsin's nursing homes make a highly valued contribution to not only the clientele served and their families, but also to the state and the individual communities in which they reside. In some communities, the local nursing home may be the largest and most stable employer in the area, supplying jobs, incomes and sustainability to other local area businesses. Moreover, the older relative age of Wisconsin's population and the fact that elderly care cannot be outsourced overseas makes senior care providers of increasing importance to the state's economy. Therefore, nursing homes' economic health and value to their communities and the state cannot be overlooked.

In the winter of 2009, the Wisconsin Health Care Association and Wisconsin Association of Homes and Services for the Aging asked NorthStar Economics, Inc. to undertake an analysis of the economic contribution nursing homes make to Wisconsin's economy. NorthStar used data drawn from the State of Wisconsin 2007 Medicaid Cost Reports obtained from the Department of Health Services as input into an economic impact model to determine the size of the economic contribution nursing homes make to state's economy.

### ***In Summary, Wisconsin's nursing homes:***

- ***Spend almost \$2.9 billion on payroll and goods and services in the state***
- ***Account for almost \$5.2 billion in economy activity within the state***
- ***Pay out \$1.8 billion in wages, salaries and benefits***
- ***Employ 51,000 workers and support another 53,000 workers in supply industries***
- ***Maintain facilities to accommodate some 34,000 residents, and***
- ***Are responsible for over \$342 million in state income, sales, and property taxes.***

The total economic contribution nursing homes make to Wisconsin's economy is large indeed. As a business resource, Wisconsin's nursing homes should remain a viable segment of the state's economic landscape. Furthermore, Wisconsin's nursing homes will become increasingly valuable as the state's elderly population increases with the aging of the Baby Boomers. By the year 2010, Wisconsin's population over 65 years of age will be growing 3.75% per year. This compares to a growth rate for the state's total population of less than .09% per year. The growing elderly segment of the state's population will require an ever-increasing level of services provided by Wisconsin's nursing homes and other long-term care providers.

## Direct Economic Impacts

Wisconsin nursing home expenditures totaled almost \$2.9 billion in 2007 and they employed 50,737 workers, an equivalent of 35,352 full-time equivalent positions. This is approximately the same employment as each of the paper, printing, plastics, real estate, and accommodation industries' in the state.<sup>1</sup>

Nursing homes paid out about \$1.8 billion in total payroll and benefits in 2007, some 62% of total operating costs. Another \$1.1 billion dollars were spent in the purchase of goods and services from other supply chain businesses. Nursing home facilities paid out nearly \$10.4 million dollars in real estate, property and municipal taxes and fees.

### Direct Economic Inputs

<u>Items</u>	<u>Amount</u>
Payroll & Benefits	\$1,767,038,610
Purchases of Good & Services	1,090,175,378
RE, PP, Municipal Taxes & Fees	<u>10,390,238</u>
<b>Total</b>	<b>\$2,867,604,226</b>

To fairly represent the impact nursing home employee spending makes to the state, we use only discretionary disposable income. We arrive at that figure by subtracting personal income tax, Social Security, and FICA withholdings from the total payroll numbers. Federal and state income taxes were calculated using average tax rates against personal income from the Wisconsin Tax Payers Alliance. We also assumed no other income, earned or otherwise. This yields a conservative estimate of personal income taxes paid as no account was given for income from savings deposits, bond or equity investments or rents or transfer payments.

Federal income taxes paid by Wisconsin's nursing home employees in 2007 were estimated at \$178 million. State income taxes amounted to \$44 million. Company paid employee benefit costs totaled almost \$379 million in 2007. The flow of benefits payments within the state economy is unclear so those were shared down to half the expenditure. Facility real estate, property, and municipal taxes and fees totaled \$10.4 million. These costs were subtracted out of the business expenditure totals, but later accounted for in government revenues.

## Total Economic Contribution

The flow of dollars spent by nursing facilities within the state's economy expands as the money passes through the hands of supply chain firms. Nursing home employees spend their income on other goods and services in the local economy and the nursing homes themselves purchase goods and services from supply chain businesses. The firms along the supply chain in turn pay wages and salaries and purchase goods and services from businesses further along the chain. As a result, the total money spent by a nursing home on payroll and goods and services expands to a larger monetary impact in a regional economy. This is referred to as the multiplier effect. Some of the dollars are lost to other regions by out-of-state purchases of goods and services by employees and supply chain businesses and is termed leakage.

## Method

Using coefficients from input/output models of economic activity developed by Dr. William A. Strang of the University of Wisconsin—Madison, and IMPLAN as guides, the fiscal flows of payroll, taxes, business purchases, and employment are multiplied to estimate the total economic contribution that Wisconsin’s nursing homes make to the state’s economy.<sup>2</sup> The data was drawn from the State of Wisconsin 2007 Medicaid Cost Reports.

Due to the limited detail of the data used, precise quantification of the total economic contribution is not possible. Therefore, the analysis was undertaken with the intention of erring on low side and the reported results should be viewed as conservative estimates of the total economic contribution that Wisconsin’s nursing homes make to the state’s economy. For example, no consideration was given to the flow of federal money back to Wisconsin in terms of non-health care aids of the \$178 million Wisconsin’s nursing homes’ employees paid in federal income taxes. Other earned and un-earned income of nursing home employees is also not considered in the calculation. In-state flows of employee benefit payments were unclear and have been accounted for at a fifty percent share.

## Monetary Flows

Due to the multiplier effect, the total monetary impact is larger than the nursing homes’ direct expenditures of \$2.4 billion suggests, even with deductions for federal taxes and benefits paid. Nursing home employee purchases of food, clothing, shelter, entertainment and other goods and services in turn pay for, among other things, the wages and salaries of the employees at the patronized business establishments and so forth. Some of the earnings are saved and some of the money leaks out of the region through out-of-state purchases, mostly by businesses’ purchases of goods manufactured outside the state. Business purchases act in the same manner, only with greater leakages through out-of-state purchases. The leakages reduce the direct cash flows and hence the total economic contribution calculated.

### Total Economic Impact of Wisconsin’s Nursing Homes

<u>Category</u>	<u>Direct Impact</u>	<u>Economic Multiplier</u>	<u>Economic Contribution</u>
Payroll net Taxes and Leakages	\$1,019,797,533	2.4	\$2,388,749,807
Purchases of Good & Services	1,279,586,428	2.8	2,653,348,448
Wisconsin Personal Income Tax	44,409,046	2.8	125,828,591
RE, PP, Municipal Taxes & Fees	<u>10,390,238</u>	2.1	<u>29,439,700</u>
<b>TOTAL</b>	<b>\$2,354,183,245</b>		<b>\$5,197,366,546</b>

The total economic contribution to the state attributable to Wisconsin nursing homes was nearly \$5.2 billion in 2007. This is a conservative figure as data limitations forced a cautious approach to the quantitative analytics. Nevertheless, it is readily apparent that Wisconsin nursing homes’ activities are overwhelmingly beneficial to the state’s overall economy – the private sector, workers, the government, and Wisconsin’s citizenry at large.

## Jobs Creation

Wisconsin nursing homes directly employ almost 51,000 workers, amounting to over 35,000 FTE positions. However, the total jobs impact the state's nursing homes make is far greater than their immediate employment requirements. The goods and services nursing homes and their employees demand for daily operations require a supply chain of manufacturing, processing, and distribution that is manned by other businesses. As a result, the operational needs of the nursing homes indirectly employ another roughly 53,000 workers in the state.

The indirect employee figure is derived through two different methods. One method (jobs-to-jobs) is to multiply the number of nursing home employees by a factor that relates to jobs to support the employee. The other method (dollars-to-jobs) applies a different factor to the dollars spent on business goods and services by the nursing homes. The total indirect job creation is the sum of the two.

Using the first method, jobs-to-jobs, the 35,352 FTE nursing home jobs in Wisconsin generates another 13,437 jobs in supply chain businesses in the state. The jobs multiplier used here is 0.38.<sup>3</sup> That is to say that for every 100 nursing home jobs, there are another 38 jobs created in the state to fulfill the supply needs of those nursing home workers both at work and at home.

The calculus is somewhat different under the second, dollars-to-jobs, method. The estimated number of jobs generated is a function of the total business spending of the state's nursing homes. We use total business purchases, in this case \$1,289,976,666, the total expenditures figure reported by the State of Wisconsin 2007 Medicaid Cost Reports. The jobs multiplicative factor is 30.6 jobs per \$1 million in expenses.<sup>4</sup> The result is that the \$1.3 billion in Wisconsin nursing home business spending creates a total of 39,522 jobs. Adding all jobs together totals 88,312 FTE jobs due to the nursing homes' operations across the state.

### Jobs Creation of Wisconsin's Nursing Homes

<u>Job Creator</u>	<u>Number of Jobs</u>
Total Number of Nursing Home Workers	50,737
Nursing Homes FTE Employment	35,352
Jobs-to-Jobs additions	13,437
Nursing Homes Business Spending-to-Jobs	<u>39,523</u>
<b>Total FTE Jobs Created</b>	<b>88,312</b>

## Generation of State Tax Revenue

Federal income tax payments represent leakages out of the regional economy. No assumption was made about the amount of non-Medicaid federal tax revenue that flows back to Wisconsin in this analysis. Essentially all of the personal income tax paid to the state is spent back in the state's economy. Therefore, state income taxes are included in the total economic contribution that the firms and their employees make to state, as are sales taxes, and real estate, property and municipal taxes and fees.

Nursing Homes’ employees pay state income, sales, and property taxes. Jobs created as a result of nursing homes’ activities generate additional tax revenue for Wisconsin. The total Wisconsin income, sales, and property tax revenue generated due to nursing homes presence in the state totaled over \$342 million in 2007.

**Tax Revenue Generation of Wisconsin’s Nursing Homes**

<b><u>Tax Revenue Generation</u></b>	<b><u>Tax Revenue</u></b>
Employee Tax Revenue	\$135,462,167
Staff Generated Jobs Tax Revenue	49,890,403
Nursing Homes Taxes and Fees	10,390,238
Nursing Home Spending Generated Jobs Tax Revenue	<u>146,743,419</u>
<b>Total State Tax Revenue Generated</b>	<b>\$342,486,227</b>

## Summary

Wisconsin’s nursing homes make a highly valued contribution to not only their clientele and families they serve, but also to the state and the individual communities in which they are located.

Direct payroll, corporate tax payments, and business purchases by Wisconsin nursing homes amount to almost \$2.9 billion per year. Employee payroll, including benefits, constitutes the largest share at over \$1.4 billion, amounting to 61% of total nursing home expenditures. Business purchases amount to \$1.1 billion dollars. Personal state income and corporate taxes and fees combine for almost \$146 million. Wisconsin nursing homes employed over 35,000 FTE employees.

The multiplied effects of nursing home activity spotlights the enormous economic contribution Wisconsin’s nursing homes make across all sectors of the state’s economy, totaling almost \$5.2 billion. Consumption by the state’s nursing home employees contributed over \$2.5 billion in sales revenue to Wisconsin’s economy in 2007. The total economic impact of nursing homes’ purchases from other Wisconsin based businesses amounted to over \$2.7 billion in 2007. The total economic impact of corporate and personal income taxes paid to the state by the nursing homes and their employees amounted to almost \$342 million. Total jobs created as a result of Wisconsin nursing homes activities amount to over 88,000.

It is readily apparent, even with the conservative estimates made in this study, that Wisconsin’s nursing home profession makes a very large contribution to the state’s economic health. The nursing home profession is overwhelmingly beneficial to the state, the private sector, workers, the government, and Wisconsin’s citizenry at large.

## Economic Impact of a Typical 100-Bed Nursing Home Facility

The total economic impact of the nursing home profession can be broken down to a “typical” 100-bed facility. In calculating these figures, we shared the aggregate numbers down to represent a 100-bed sized residence and then applied the same sales, output and jobs multipliers as in the statewide analysis above.

The typical 100-bed nursing home spends about \$6.4 million on non-payroll and payroll expenses. Total non-payroll facility expenditures amount to \$3.6 million with payroll including benefits being about \$2.8 million. The 100-bed facility employs 97.5 FTE workers and creates another 146.1 jobs.

### **Typical 100-bed Nursing Home Facility Expenditures and Economic Contribution**

<b><u>Item</u></b>	<b><u>Direct</u></b>	<b><u>Multiplier</u></b>	<b><u>Total Contribution</u></b>
Payroll net Taxes and Leakages	\$2,811,683	2.4	\$6,643,633
Purchases of Good & Services	<u>3,556,594</u>	2.1	<u>7,396,714</u>
<b>Total Expenditures</b>	<b>\$6,368,277</b>		<b>\$14,040,347</b>
Business Spending to Jobs (\$:jobs)	3,556,594	\$1M:30.6	109.0
Jobs to Jobs (jobs:jobs)	97.5	1:0.380	<u>37.1</u>
<b>Total Jobs</b>	<i>Includes 97.5 direct jobs:</i>		<b>243.6</b>

The total economic contribution of a single 100-bed nursing home amounts to over \$14.0 million, with most of the money going to the local community through employee wages and supply chain business purchases. Each 100-bed facility, figuring \$6.4 million in total expenditures, creates almost 244 jobs and generates about \$944,000 in tax revenue.

Nursing homes create jobs and local demand for goods and services. Each nursing home plays a significant role in the care of Wisconsin’s elderly citizens in its area. Each also contributes to the health of the local community’s economy. Elderly care demand is growing and is especially important through the current economic downturn. Both nursing home roles are likely to increase as the Baby Boomers age and their demand for quality nursing care swells immensely over the next 10 to 20 years.

## **Backnotes**

- 1) Current Employment Survey, U.S. Bureau of Labor Statistics, 2008.
  - 2) Winters, Dennis K., Strang, William A, The University of Wisconsin-Madison's Economic Contribution to the Region, June 2003.
  - 3) IMPLAN jobs-to-jobs figures for these calculations.
  - 4) IMPLAN dollars-to-jobs figures for these calculations.
-