

The Economic Impact of the Value-Added Portion of the Wood Products Industry in Vermont in 2006



Vermont Wood Manufacturers Association

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Prepared by:

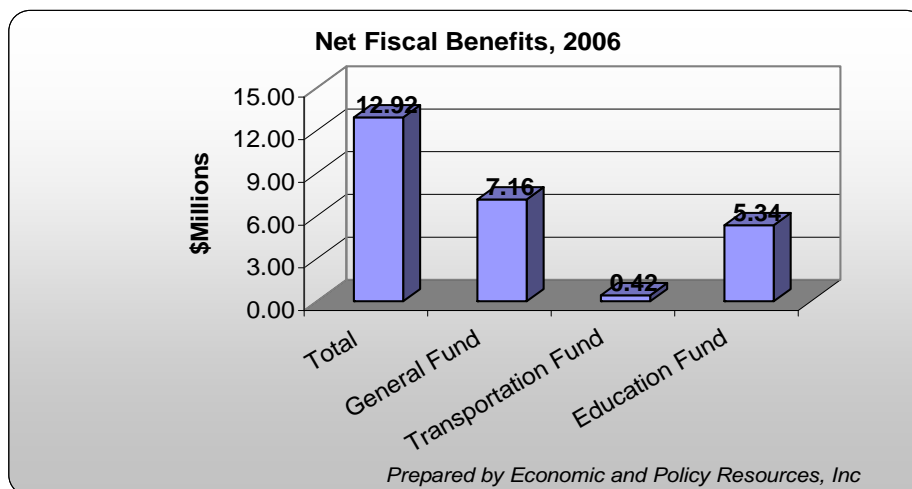
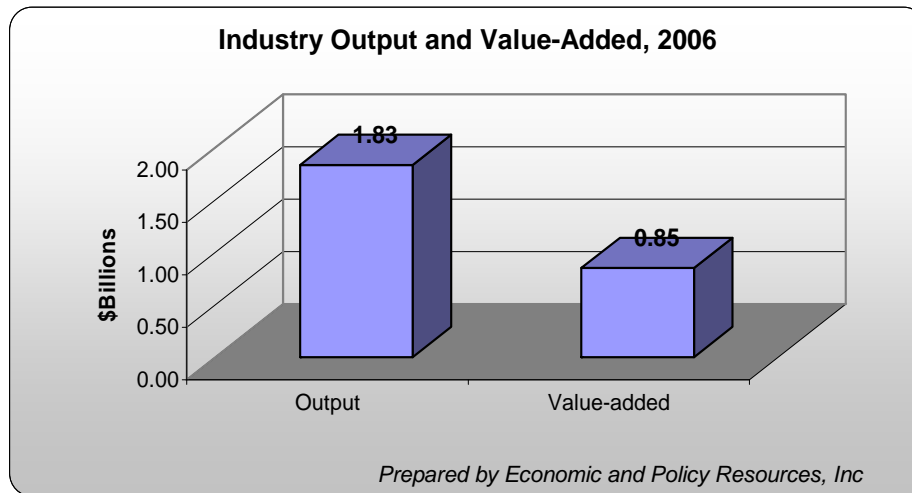
EPR Economic &
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Summary

Overall, this study indicates that the value-added portion of the wood products industry remains an important export sector that provides thousands of jobs and a substantial amount of personal income for Vermonters and their families. This study also finds that the industry provides substantial revenues to the state net of the state costs associated with job holders and their families.

In 2006, the value-added wood products industry:

- Supported **13,807** direct and indirect jobs in the state.
- Produced **\$1.83 billion in output** with **\$0.85 billion in value added** corresponding to **3.5%** of Vermont's total Gross State Product in that year.
- Generated **\$486 million** in personal income in 2006 dollars.
- Generated **\$49.21 million** in revenue to the state and a **net fiscal benefit** of **\$12.92 million**.



1. Introduction

This economic impact study is intended to update a similar assessment that was completed in January of 2001. That study estimated that in 2000 the value-added portion of the wood products industry in Vermont accounted for a total of 18,463 direct and indirect jobs and \$330 million in personal income. Since the 2001 study, there has been a full-blown economic recession and the federal government has completely restructured how it collects and publishes jobs, income, and output data. This makes direct comparisons to the 2001 study difficult to understand.

2. Methods

This latest impact assessment study was completed using the most recent employment data available from the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce and data from third party published sources. Estimates of the direct jobs in the industry were made using the BEA data, and these were then entered into an input-output model¹. The input-output model then estimated the multiplier impact of the industry and stated this impact in terms of direct and indirect jobs, personal income, and the value of industry output. The input-output results were then entered into the VEPC (Vermont Economic Progress Council) fiscal cost-benefit model to determine the industry's net fiscal impact on the state.

The method used to estimate the economic impact of the value added wood products industry is commonly referred to as the military base-closure approach. This approach measured the impact of the industry on the state's economy by essentially eliminating it from the economy. The negative impact of removing the industry from the state economy was then measured in terms of employment, personal income, and the value of the industry's output.

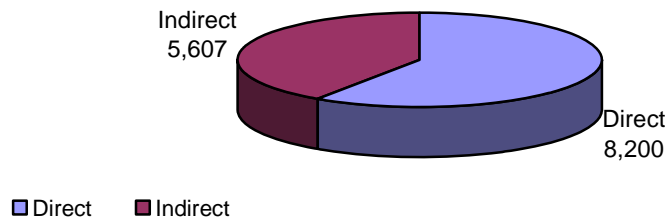
3. Description of the Industry

Part of the challenge of completing this impact assessment study was to develop a credible estimate of the number of direct jobs in the industry considering the fact that the federal government changed the way it collects and reports job, income and output data since the last study. In 2000, data was collected and reported according to the Standard Industrial Classification (SIC) codes, a system that had been in place since the early 1900s. Since that time, the coding system has changed to the North American Industrial Classification System (NAICS), a system that is designed to address many of the functionality issues that were buried within the of SIC code system. The problem is that for an industry such as the value-added wood products industry, which cuts across several sectors, a whole new analysis-culling approach was needed to develop an estimate of the number of direct jobs in the industry under the still new NAICS collection-reporting system used by the U.S. government. Add to that the fact that the U.S. and Vermont economies have experienced a full-blown economic

¹ The REMI input-output model.

recession since 2000 (in 2001), and comparisons between this study and the 2001 study are difficult—if not impossible.

Direct & Indirect Jobs Supported by the Industry



For the purposes of this study, the value-added wood products industry consists of extraction and transportation of timber, private sector forestry management and support activities, sawmill operations, wood products manufacturing, paper manufacturing, and portions of furniture manufacturing. This study defines the value-added wood products industry as follows in Table 1:

Table 1. Direct Employment by NAICS Sector, 2006

NAICS	Description	Employment
113	Forestry and Logging	1,919
1153	Forestry Support Activities	110
321	Wood Products Manufacturing	2,859
322	Paper Products Manufacturing	1,276
337(wood portion)	Furniture Manufacturing	2,036
	Total	8,200

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BEA employment data were available from 2006 for wood products, paper, and furniture manufacturing.² Lack of available data in recent years due to potential company-identity disclosure concerns by the Vermont Department of Labor made it necessary for this study to develop estimates for employment in logging and forestry support activities. Using BEA data available at the NAICS sector level, employment in the NAICS subsector ‘Forestry and Logging’ was estimated based on its historical proportion (pre-2001) of the NAICS sector labeled “Forestry, Fishing and Related Activities.” The number of Vermonters employed as

² An estimate of the wood portion of the furniture manufacturing industry was developed based on other government employment data, Quarterly Census of Employment and Wages (QCEW), available for 2006. The QCEW proportion was used to estimate employment at the subsector level, as BEA data is available only at the sector level.

foresters was estimated to be between 100 and 120 in a recent study by the North East State Foresters Association. This study used the mid-point of that range, or 110 jobs, relative to what was reported in the subsector “Forestry Support Activities” in that study.³ This study estimated that there were a total of 8,200 direct jobs in the value-added wood products industry in Vermont in calendar year 2006. Relative to calendar year 2000, using the same NAICS-based estimating approach, the current job level corresponds to an overall decline of 1,821 jobs or 18.1%. Although the number of jobs in the industry has declined since 2000, output of the industry has increased indicating that gains have been made in terms of productivity. This phenomenon is evident in manufacturing overall, both in Vermont and at the national level.

4. Results

Fiscal Benefits

The Fiscal benefits to the state in 2006 were estimated using the VEPC cost-benefit model. Revenue to the General Fund amounted to \$23.47 million, including \$9.68 million in Personal Income tax, \$12.41 million in Sales Tax and \$1.45 million in Corporate Income Tax. Transportation Fund revenues amounted to \$4.19 million and revenue to the Education Fund amounted to \$21.55 million. These revenues represent a total of \$49.21 million to the state. When factoring in fiscal costs to the state related to the presence of the industry in the state the total net benefit to the state amounted to \$12.92 million.

Employment and Output

Results of the input-output model indicate that the value-added portion of the wood products industry accounted for a total of 13,807 full- and part-time Vermont jobs in 2006, or 3.7% of the state’s non-farm private jobs in 2006 (Table 2). This included 8,200 direct jobs and 5,607 indirect or induced jobs, implying a multiplier effect of 1.68 per direct job. The industry accounted for \$1.83 billion of output, including \$0.85 billion in value added (Table 3). The industry also generated \$486 million in personal income in 2006 (this includes direct and indirect effects).

Table 2. Total Employment Attributable to the Industry, 2006

	Direct	Indirect	Total	Total as % of Vermont Jobs ¹
Number of Jobs	8,200	5,607	13,807	3.7%

Notes:

¹Non-farm private employment in 2006 was 369,640

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³ North East State Foresters Association 2007 report.

Table 3. Industry Output and GSP¹ in Billions, 2006

	Industry Output	Value-Added (GSP) ²	Total GSP	Industry as % of Total GSP
Estimated Value	1.83	0.85	24.21	3.5%

Notes:

¹GSP is Gross State Product²Only value-added portion is counted in GSP*Prepared by Economics and Policy Resources, Inc*

Table 4 below compares the contribution of selected industries to the Vermont GSP⁴. As the value-added portion of the wood products industry cuts across several sectors, the output estimated by this study includes portions of the manufacturing and agriculture sectors shown below.

Table 4. Contribution to Vermont GSP by Selected Industries in Billions, 2006

Industry	GSP	% of Total GSP
Total Gross Domestic Product by State	24.21	100.0%
Agriculture, forestry, fishing, and hunting	0.34	1.4%
Construction	1.30	5.3%
Manufacturing	2.93	12.1%
Retail trade	2.01	8.3%
Information	0.91	3.7%
Finance and insurance	1.48	6.1%
Real estate and rental and leasing	2.92	12.1%
Professional and technical services	1.45	6.0%
Educational services	0.52	2.1%
Accommodation and food services	1.04	4.3%

Source: Bureau of Economic Analysis

*Prepared by Economic and Policy Resources, Inc*⁴ GSP is Gross State Product

Sources:

1. Vermont Wood Manufacturers Association. Economic Impact of the Value-Added Portion of the Forest and Wood Products Industry in Vermont, 2001.

Available at <http://www.vermontwood.com/facts.html>

2. U.S. Bureau of Economic Analysis, employment and GDP data by NAICS, 2006. Available at <http://www.bea.gov/regional/spi/>

3. North East State Foresters Association. The Economic Impact and Wood Flows from Vermont's Forests, 2007.

Available at <http://www.nefainfo.org/publications.htm>