Arkansas Forest Industry Productivity

A 20-Year Assessment

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The 2022 IMPLAN data shows a **40% employment decline** in the Arkansas forest industry over the past two decades (Figure 1). Despite this decline, the industry's contributions to the state's GDP continued to grow, reflecting a 69% rise from 2001 to 2022. However, the forest industry performance lags behind the overall industrial growth in Arkansas, where total employment increased by 15% and GDP increased by 137% during the same period.

Labor Productivity

The employment contraction of the Arkansas forest industry since 2001 has been offset by significant gains in productivity (Figure 2). **Productivity** measures how efficiently inputs like labor are used to produce outputs (in this case GDP). Figure 2 reflects the average economic output produced per employee.

From 2001 to 2022, **most sectors within the industry experienced important improvements in labor productivity**. The solid wood products sector saw the highest increase, with productivity rising from $36.4 thousand per employee in 2001 to $191.6 thousand per employee in 2022—a 426% growth. The logging sector also showed significant productivity gains, with a 102% increase over the same period. Other sectors like pulp and paper, and furniture experienced increases of 88% and 77%, respectively. These improvements are likely attributed to the adoption of advanced mechanization and technology since the early 2000s [1]. The forestry sector was the exception with a slight decline of 3% in productivity from $72.3 thousand per employee in 2001 to $70.1 thousand per employee in 2022.

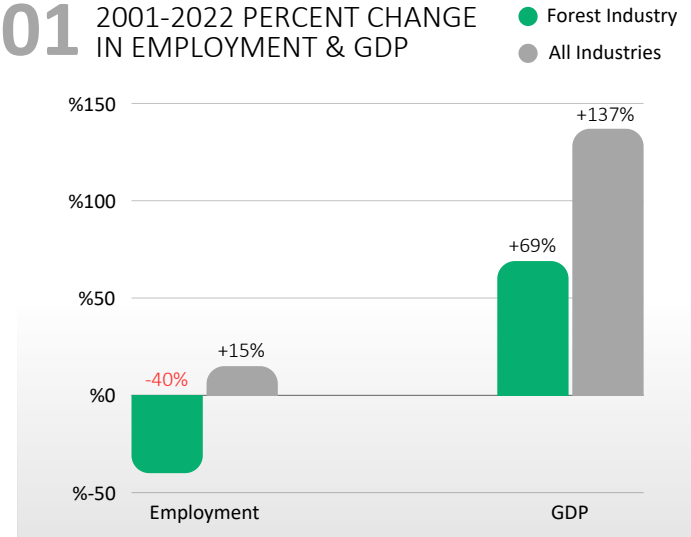
Labor Income

Labor income is the sum of employee compensation (e.g., wages, salaries, benefits, and payroll taxes) and proprietor income (e.g., payments received by self-employed individuals and business owners). **Per capita labor income** reflects the average earnings of all individuals working in the industry.

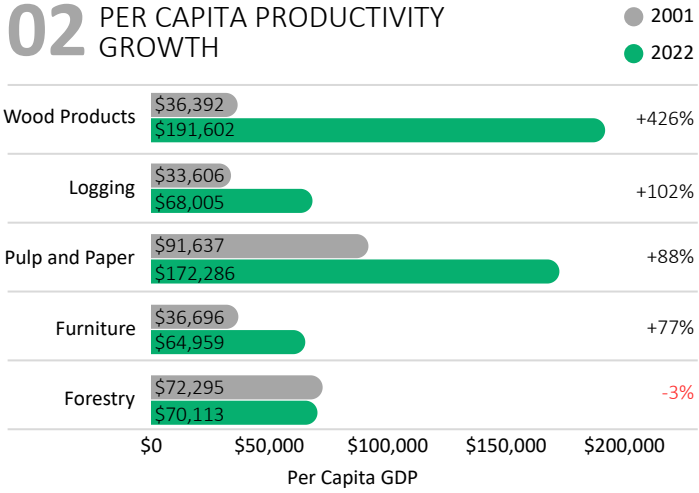
Since 2001, **all sectors in the forest industry have experienced income growth** (Figure 3). The solid wood products sector had the highest per capita growth, increasing from $32.4 thousand in 2001 to $66.2 thousand in 2022—a 104% increase. In contrast, the logging sector, the second most productive, experienced a more modest income growth of 42%.

Despite this growth in labor income, **it has not kept pace with significant productivity gains.** This indicates that while output per worker has increased, the payments to employees and business owners have not risen proportionately. The gap between productivity and income growth can be attributed to a combination of policy choices, including labor and tax regulations that make more challenging for individuals in the industry to secure a fair share of the productivity gains [2].

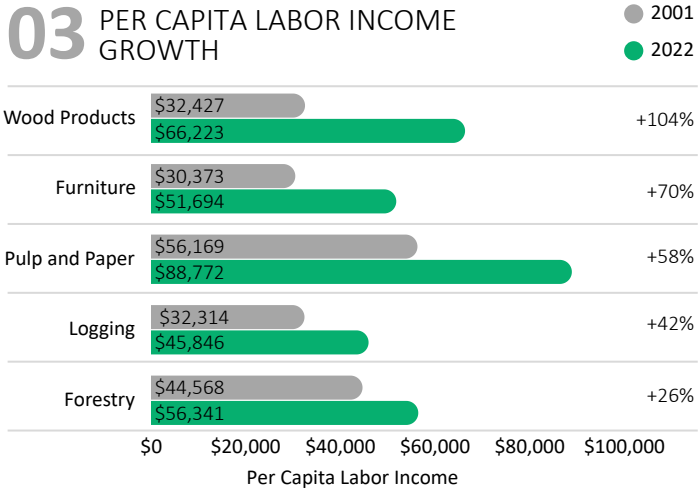
01 2001-2022 PERCENT CHANGE IN EMPLOYMENT & GDP



02 PER CAPITA PRODUCTIVITY GROWTH



03 PER CAPITA LABOR INCOME GROWTH



Data source: IMPLAN. Note: Dollar values are not inflation adjusted.

[1] Baker, S. 2022. Logging Employment Constraints Threaten Forest Industry Growth. Forisk Blog.
[2] Economic Policy Institute. 2024. The productivity-pay gap. Retrieved from www.epi.org/productivity-pay-gap/

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