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Economic Contribution of the Texas Christmas Tree Industry, 2023

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Introduction

Christmas trees are an important holiday tradition in many households, businesses, communities, and organizations across the U.S. According to the National Christmas Tree Association, almost 350 million Christmas trees are growing on approximately 15,000 tree farms across 350,000 acres of land in the U.S. Among all Christmas tree species, the most popular include Fraser fir, noble fir, Douglas-fir, balsam fir, and Scots pine (National Christmas Tree Association 2023).

Figure 1 shows a timeline of real and artificial Christmas tree sales in the U.S. from 2004 to 2022. In general, the total sale of Christmas trees has increased in recent years. The total sale of Christmas trees was \$46.6 million in 2022, increasing from \$36.1 million in 2004. The sale of real Christmas trees in the U.S. has decreased since 2018, while the sale of artificial Christmas trees has expanded annually since 2015. In 2004, the sale of real Christmas trees exceeded that of artificial trees by a notable margin, with figures of \$27.1 million for real trees and \$9 million for artificial trees. Since 2020, the sale of artificial trees has been higher than that of real trees. In 2022, the U.S. saw a total of over \$22 million in sales for real Christmas trees and approximately \$24 million for artificial Christmas trees (National Christmas Tree Association 2023).

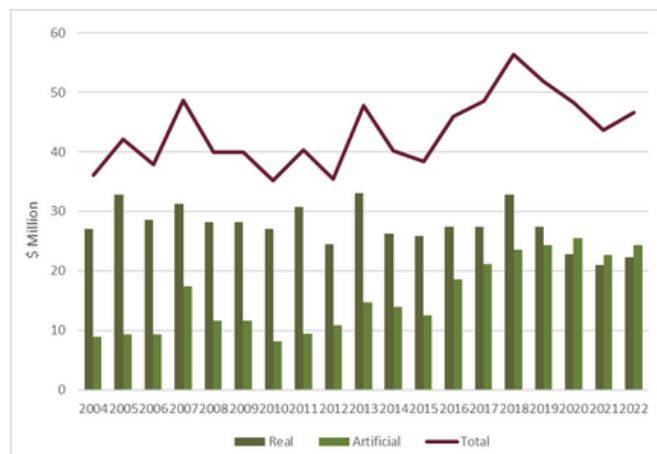


Figure 1. Sales of Christmas trees in the United States from 2004 to 2022

Real Christmas trees benefit the environment in many different ways compared to artificial ones. As petroleum-based products, artificial Christmas trees contain plastics that are not biodegradable and may contain metal toxins such as lead which creates a long-term environmental burden upon their disposal. However, much like forest trees, Christmas trees growing on tree farms reduce soil erosion and improve water quality, provide habitat for wildlife, create scenic beauty and recreational opportunities, sequester carbon, emit oxygen, and are renewable and compostable.

Texas is an important contributor to the sale of real Christmas trees in the U.S. with over 4 million purchased annually. Prior to the 1980's, most of the trees sold in Texas were imported from other states, including Oregon, Wisconsin, and Michigan. While retail sales of Christmas trees imported from northern and western states are still a significant portion of the Christmas tree industry in Texas, there is now a large and growing number of choose-and-cut tree farms across Texas (Texas Christmas Tree Growers Association 2020).

U.S. Bureau of Labor Statistics estimates for 2022 rank the Texas Christmas tree industry second in the U.S. South behind Florida based on average annual employment and wages. Nationally, Texas ranks fourth behind California, Florida, and Oregon (U.S. Bureau of Labor Statistics, 2023). With limited information currently available, this report examines the contribution of the Christmas tree industry to the Texas economy.

Methods

To estimate the contribution of the Texas Christmas trees industry to the state's economy, the IMPLAN (Impact Analysis for Planning) input-output modeling system was employed (IMPLAN Group, 2023). IMPLAN is widely used for conducting economic simulations (Steinback 1999, Zhang and Stottlemeyer, 2020). To simulate the overall impact of the Christmas tree industry on the Texas economy, IMPLAN was used to estimate how the direct effects of expenditures on Christmas trees contributed to the indirect effects of supporting sectors as well as induced effects of consumption by households. The direct, indirect, and induced effects are related to changes in employment, labor income, value added, and industrial output resulting from industry activities. In addition, the multiplier effect of the social accounting matrix (SAM) was evaluated by calculating the relationship between different sectors to reflect industry impacts on the local economy.

Results

Results of the economic contribution analysis of the Texas Christmas tree industry are shown in Table 1. The Christmas tree industry generated over \$397 million in direct effects and employed 3,869 people with a payroll of over \$97 million. The state received over \$224 million from Christmas tree activities through payroll, other employee compensation, and property taxes. Ancillary industries indirectly contributed \$176 million in output, provided 1,130 jobs with \$57 million in labor income, and \$93 million in value added. Induced effects were over \$140 million, 774 jobs, \$45 million in labor income, and \$79 million in value added.

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Including direct, indirect, and induced impacts, the sector had a total economic contribution of \$714 million in industry output, supporting nearly 6,000 jobs with a payroll of \$200 million, and \$397 million in value added.

The SAM multiplier reflects the additional jobs, labor income, value added, and output to the local economy created by an industry to the local economy (IMPLAN Group, 2023). For instance, every job created by the Texas Christmas tree industry resulted in an additional 0.49 jobs and \$1.04 in payroll in Texas. An additional \$0.77 of value-added was created when one dollar of value-added was generated by the Texas Christmas tree industry. The SAM multiplier for output was 1.80, indicating that every dollar of output generated by the Texas Christmas tree industry contributed an additional \$0.80 to the rest of the state's economy.

Table 1. The economic contribution of the Christmas tree industry in Texas*

<i>Impact Type</i>	<i>Employment</i>	<i>Labor Income</i>	<i>Value Added</i>	<i>Output</i>
<i>Direct Effect</i>	3869	97.40	224.20	397.08
<i>Indirect Effect</i>	1130	57.12	93.30	176.36
<i>Induced Effect</i>	774	44.65	79.34	140.44
<i>Total Effect</i>	5773	199.18	396.84	713.88
<i>SAM</i>	1.49	2.04	1.77	1.80

*Economic contribution analysis was conducted based on the 2021 IMPLAN data and results are given in 2023 dollars. Labor income, value added, and output are expressed in millions of dollars.

In conclusion, real Christmas trees have numerous environmental benefits over artificial alternatives; they are renewable and recyclable, stabilize soil and protect water supplies, absorb carbon while emitting oxygen, and provide habitat for wildlife. And while the Texas Christmas tree industry has received relatively little attention in the past, results of this study clearly demonstrate that it is an important contributor to the state's economy.

References

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