Department of Forestry
MICHIGAN STATE UNIVERSITY

Report on

Comparing State Reported Stumpage Price Data in Michigan and neighboring States.

Prepared for:

Forest Resource Division, Michigan Department of Natural Resources

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Abbreviations

CF	Commercial Forestry Program
DNR	Department of Natural Resources
MBF	Thousand Board Feet
MFL	Managed Forest Law
MI	Michigan
MN	Minnesota
OSB	Oriented Strand Board
QFP	Qualified Forestry Program
USDA	United Stated Department of Agriculture
USFS	USDA Forest Service
WI	Wisconsin

Executive Summary

The timber sales program plays a vital role in sustainable forest management, balancing economic and environmental goals. The key objectives of this report include comparing state timber sales with private sector sales in Michigan, as well as comparing stumpage prices and market dynamics between Michigan, Minnesota, and Wisconsin.

Key Findings:

1. Michigan State vs. Private Sector Timber Sales:
    - Michigan has 20 million acres of forest land, with 61.47% privately owned. However, data on private timber sales is sparse.
    - Surveys of loggers, consulting foresters and mill owners revealed significant challenges with a very low response rate on prices. They reported on business challenges that include financial strain due to increasing operational costs, limited timberland access, and market volatility.
    - Respondents reported a wide price range for sawtimber ($0.40 to $245 per MBF), with minimal data for other timber products like veneer and pulpwood. The average travel distance to mills was 69.71 miles.
2. State Timber Sales in Michigan:
    - Analysis of Michigan Department of Natural Resources data highlighted significant price volatility for key species. Sugar Maple showed dramatic fluctuations, peaking at $14,00 per MBF. Red Oak and White Oak consistently maintained higher prices ($250-$750 per MBF).
    - Softwoods like Red Pine and Jack Pine also displayed substantial volatility, while species like Balsam Fir and Northern White Cedar maintained more stable price trends, usually under $50 per cord.
3. Challenges in Comparing State and Private Stumpage Prices in Michigan:
    - The small sample size of private sector responses limits direct comparisons with public timber sales.
    - Financial pressures, market dynamics, and a lack of trust in providing pricing information hinder the collection of private timber sales data. Loggers expressed dissatisfaction with current market conditions and public pricing reported by the Michigan DNR.
4. Comparison of Michigan and Minnesota Timber Sales:
    - Michigan's private forestland management programs, such as the Qualified Forest Program, incentivize sustainable logging, while Minnesota's larger publicly managed forests lead to stricter regulations and more controlled harvests.
    - Minnesota's timber market, especially for softwoods like Aspen and Red Pine, has shown more stability over the years. However, Michigan's timber market is more dynamic, with significant price fluctuations, particularly in species like Black Cherry and Tamarack.

- Stumpage prices in Minnesota showed growth for species like Aspen and Birch, while Oak and Ash experienced more volatility. Similar trends were seen in Michigan, where hardwood markets have been more stable compared to softwood species.

5. Comparison of Michigan and Wisconsin Timber Sales:
   - The state's Managed Forest Law (MFL) program, akin to Michigan's Qualified Forest Program, incentivizes sustainable private land management.
   - Wisconsin timber prices for species like Sugar Maple, Oak, and Aspen have fluctuated over the years, with some species like Cherry and Oak experiencing significant price volatility.
   - Wisconsin's sawtimber market demonstrated price increases for key species such as Red Maple, Red Oak, and Spruce from 2010 to 2024, reflecting changing market conditions and demand.

The timber sales program in Michigan, Minnesota, and Wisconsin shows significant variability across species, with market dynamics and ownership structures influencing pricing trends. While public timber sales data is relatively robust, challenges in collecting private sector data in Michigan highlight the need for improved communication and trust-building with industry stakeholders. Michigan's timber market displays more volatility compared to Minnesota's, particularly in softwood species, while Wisconsin's strong focus on pulp and paper provides a steady industrial base for timber production. Sustainable forest management and consistent data collection will be essential to balancing economic and environmental goals in the Lake States region.

1. Background

The timber sales program in Michigan and the two neighboring lake states—Wisconsin and Minnesota—plays a critical role in managing forest resources and supporting the regional economy. Michigan has approximately 20.1 million acres of forest land, 61.47% of which is privately owned, 23% owned by the state, and the remainder managed by the national forest system and federal agencies (USFS 2020a). The forest products industry in Michigan provides 96,000 jobs and contributes $22 billion to the state's economy (Michigan DNR 2024). Minnesota has about 17 million acres of forest, with 39% managed by the state and 45% owned by private landowners (USFS 2020b). Wisconsin also holds approximately 17 million acres, where 21% is managed by the state and 70% by private landowners (USFS 2021).

Given the significant proportion of state-managed forest land in these regions, timber sales conducted by state agencies are critical for sustainably harvesting timber, ensuring forest health, biodiversity, and long-term productivity. These timber sales provide raw materials for industries such as paper, lumber, and bioenergy, contributing significantly to local economies. The program also balances environmental goals—such as wildlife habitat conservation and watershed protection—with economic interests, following rigorous forest management practices. The Lake States region, known for its vast forested landscapes dominated by hardwood and softwood species, continues to prioritize sustainable harvesting methods to meet market demands while maintaining ecological integrity (USFS 2024).

The forests in the Lake States region are characterized by diverse ecosystems, comprising a mix of hardwood and softwood species such as maple, oak, aspen, pine, and spruce (Cook 2020). Over the years, forest cover has remained relatively stable due to a strong emphasis on sustainable forest management, which aims to balance ecological, economic, and social objectives (USFS 2020a). Timber production remains a key economic driver in the region, supplying materials for industries such as sawmills, pulp and paper, furniture, and construction. In Michigan, forest management primarily focuses on commercial timber production, with the forest products industry adding $9.9 billion to the state's GDP (Poudel 2022).

While state agencies periodically collect and publish reports on timber sales, information on timber sales from private lands in Michigan is largely unknown. Therefore, our overarching goal, building on efforts from the past few years and supported by multiple grants, is to survey forest product supply chain businesses (loggers, consulting foresters, mill managers and owners, etc.) to collect and present this information. This will support better decision-making for timber sales and bidding. In line with this goal, this report aims to cover the following **objectives**.

- Compare Michigan state timber sales with private sector timber sales and identify the challenges associated with collecting private timber sale information.
- Visualize timber sale and other survey data from public and private sectors, enabling a comprehensive comparison and analysis.
- Compare public timber sale data for Michigan with Wisconsin and Minnesota.

2. Materials and Methods

Data for this research was collected from two main sources: public logging data provided by state agencies (the Michigan, Minnesota, and Wisconsin DNRs) and private sector data obtained through Qualtrics surveys distributed to loggers, consulting foresters, and mill owners. The public logging data consisted of historical records on timber sales, harvest volumes, and forest management practices on state and federal lands. These records, provided in Excel format, contained a substantial amount of information that required filtering and processing.

Private sector data was gathered through surveys designed to capture insights from industry professionals on logging practices, sales trends, and challenges they face in the current market. Two rounds of surveys were conducted in February and May 2024, with additional rounds planned following Dillman's Tailored Design Method (Dillman et al. 2014), which emphasizes multiple follow-ups to maximize response rates. In the two rounds of surveys, 66 responses were collected: 23 from consulting foresters, 29 from loggers, and 5 from mill owners. These surveys aimed to collect detailed information on various aspects of the forestry industry, including sawtimber, Boltwood, veneer, pulpwood, and biomass sales.

Python, MS Excel, and ChatGPT were extensively used to manage and analyze the collected datasets. The public logging data, provided in Excel format, contained tens of thousands of rows, requiring efficient filtering and organization. A series of custom Python scripts were written to filter and clean the data, removing irrelevant fields and isolating key variables related to logging activity, species harvested, and land use patterns. Python's Pandas library streamlined this process, enabling the manipulation of large datasets with ease.

Similarly, the Qualtrics survey responses, exported as CSV files, underwent a comparable filtering process. This involved parsing incomplete responses, standardizing categorical data, and ensuring consistency between public and private sector data for comparative purposes.

After cleaning and organizing the data, visualizations were generated using ChatGPT, Python, and MS Excel to highlight trends and comparisons between the public and private sectors. These visualizations, including bar charts and line graphs, helped illustrate differences in logging practices, timber sales, and harvesting methods across different land ownership categories. The visual tools not only made the data easier to interpret but also played a crucial role in identifying patterns such as species preference in private logging compared to public land management practices.

3. Results

3.1 Comparison of State and Private Stumpage Prices in Michigan

Key Findings from the Survey

The range of business operations spanned from 2 to 40 years (n=15), with an average of 20.8 years, indicating some ownership transfers but predominantly established businesses. Sixteen respondents facilitated sawtimber sales, with prices ranging from $0.40 to $245 per MBF. Veneer logs and pulpwood had limited pricing data, with two respondents reporting veneer log harvests, though they did not provide specific price or average information. Biomass sales were reported by two respondents, with prices ranging from $2 to $70. Seven respondents reported harvesting pulpwood, with one providing pricing data. Additionally, seven respondents reported an average one-way travel distance from the logging site to the mill, averaging 69.71 miles. Most mail survey respondents were over the age of 50.

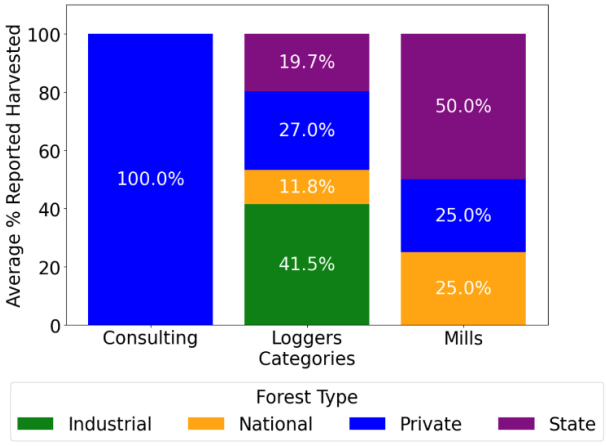


Figure 1. Distribution of Harvest by Ownerships for different businesses/professionals in Michigan.

Key Findings from the timber sales data from Michigan DNR report

Some species exhibit significant price fluctuations in sawlogs over time. For example, Basswood, Black Cherry, and Sugar Maple experienced extreme price spikes around 2015, followed by sharp declines. The peak prices for Sugar Maple, Basswood, and Black Cherry reached $1,463, $1,400, and $990 per MBF, respectively, in two distinct periods, followed by steep drops back to baseline levels. Red Oak and White Oak show higher price trends compared to other species, ranging between $300 and $600 per MBF. Red Oak exhibits notable fluctuations, though less extreme than Black Cherry and Sugar Maple. Sugar Maple shows a slight upward trend, while White Ash experiences some fluctuations but without major spikes. Other species, such as Beech, Paper Birch, Black Ash, Mixed Oak, and Mixed Aspen, remain in a lower price range, generally under $250 per MBF, with minimal fluctuations.

Historically, species like Basswood, Black Cherry, and Sugar Maple have commanded higher prices than other species, with larger price swings, especially during the 2012–2017 period. These fluctuations likely reflect shifts in market demand or supply constraints. In contrast, species such as Balsam Fir, Jack Pine, Mixed Aspen, and Northern White Cedar have had relatively stable prices, consistently trading below $200 per MBF over the entire period. After peaking between 2015 and 2017, prices for most species generally trended downward, particularly those that had experienced large increases. This decline likely reflects changes in demand, supply, or broader market conditions, such as policy shifts or transformations within the lumber industry. In recent years, prices have stabilized at lower levels compared to their earlier

peaks, with only modest variations, and no major price resurgence is evident in the 2020–2024 timeframe.

Overall, our analysis concludes that while some species experienced significant sawlog price surges in the mid-2010s, the market has stabilized in recent years, with most species trading at moderate and relatively stable prices. The volatility and price spikes likely reflect temporary market dynamics during the 2010–2017 period.

Red Pine exhibits the most volatile trend, with significant price spikes around 2010, 2014, and 2016, when prices exceeded $200 per cord. However, it stabilized after 2016, fluctuating around $100 per cord in recent years. Jack Pine, Northern White Cedar, and Tamarack saw moderate price peaks around 2015, with prices ranging from $50 to $100 per cord, but they have followed a declining trend since 2016. Balsam Fir, White Pine, and Basswood have shown relatively low and stable pricing, staying below $60 per cord throughout the period. Prices for these species exhibit minimal fluctuations, indicating a stable market. Tamarack experienced an upward spike between 2014 and 2016, but like the others, it stabilized after 2017.

In summary, Red Pine and Jack Pine demonstrate greater market volatility, while species like Balsam Fir and Northern White Cedar maintain more stable and lower price trends over time.

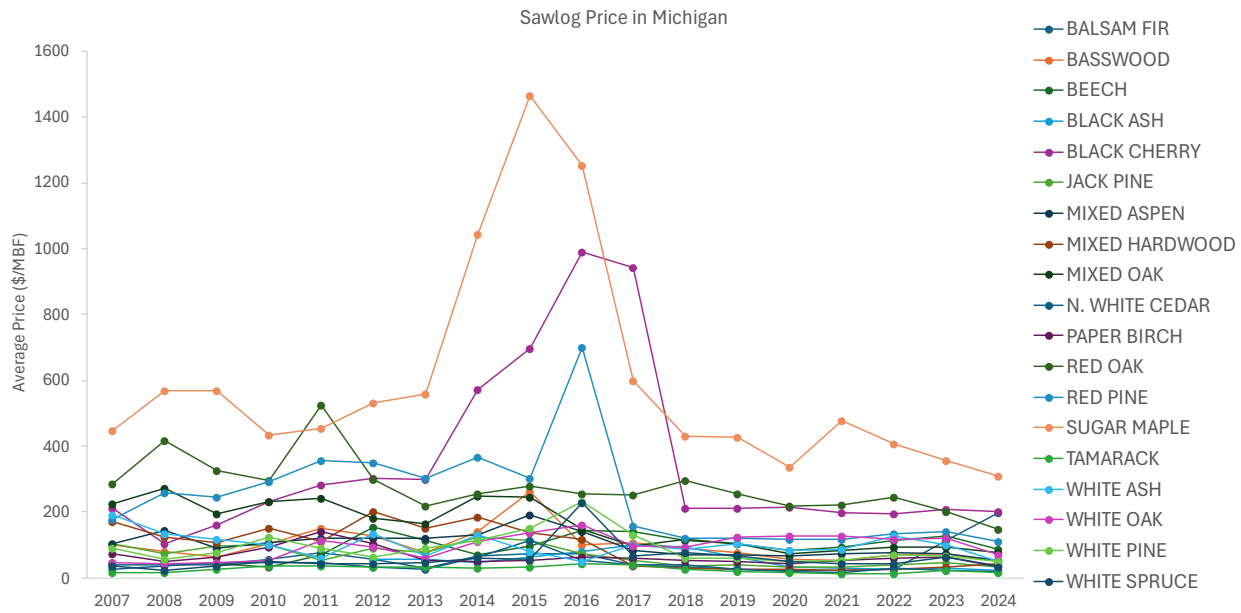


Figure 2. Average annual stumpage price of different hardwood species of timber for different products in Michigan from timber sale program. (Source: Michigan DNR)

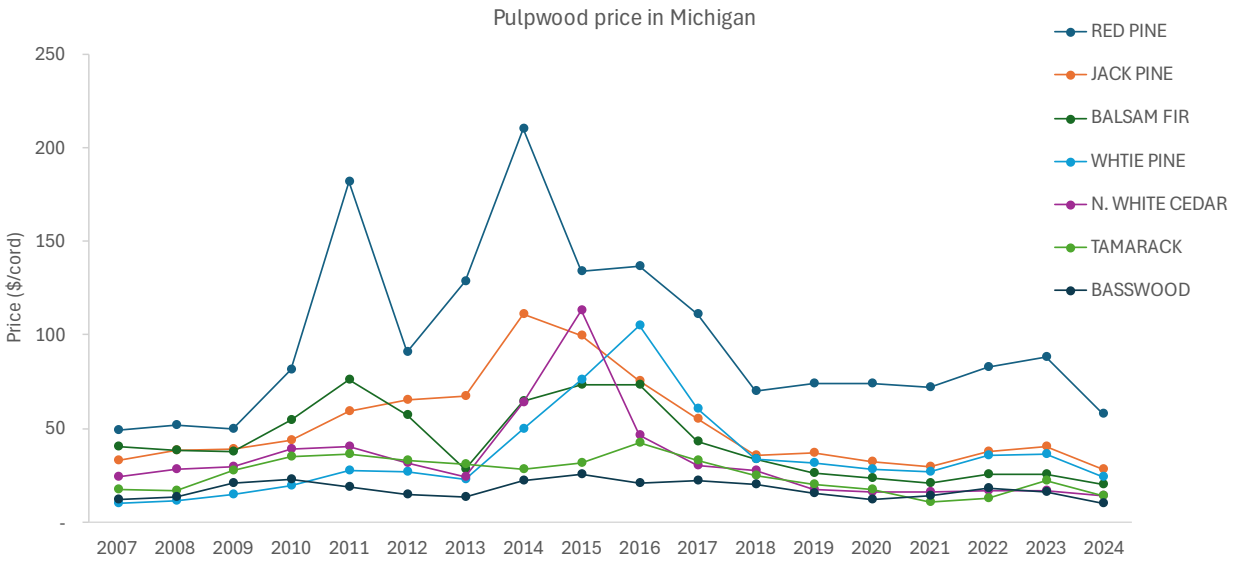


Figure 3. Average annual stumpage price of different softwood species of timber for different products in Michigan from timber sale program. (Source: Michigan DNR)

3.2 Challenges in comparing State and Private Stumpage Prices in Michigan

With only four responses from private timber sales from two round of survey, a comparison would not make sense. Respondents expressed significant concerns about the financial pressures facing small businesses in the logging industry. Key challenges include:

- Financial Strain: Operating costs and costs of living are squeezing loggers, with compensation controlled by purchasers of raw forest products rather than those who harvest and transport them. This results in an inability to cover operational costs effectively. The logging sector is struggling with inadequate compensation amidst rising costs for equipment, labor, insurance, and fuel. The risk-reward ratio is now seen as unfavorable, leading many to consider alternative careers.
- Timberland Accessibility: Conservation easements and nature conservancies are reducing accessible timberlands, and over-harvesting on private lands threatens future timber availability.
- Market Dynamics: There is a looming shortage of harvestable bolt logs, with current market dynamics exacerbating the issue.
- Impact of COVID-19: The downturn due to COVID-19 forced some small loggers to exit the industry, unable to sell their products or equipment.
- Competitive Bidding: Competitive bidding for state jobs and mills' controls over profitability adds to the financial strain, making it difficult for loggers to sustain their businesses.
- Dissatisfaction: Many stakeholders, particularly loggers, are extremely hesitant about sharing pricing information but express significant dissatisfaction with the industry and public sale prices reported by the MI DNR.
- Lack of private timber sales data: Survey implementation and data collection have been particularly challenging due to lack of databases for address and contact information of loggers and consulting foresters. We have been working hard to build bridges and trust to get loggers and foresters to participate. Continued follow-up with loggers, consulting foresters, mill managers, and owners at the various state and respective organization meetings has resulted in trust-building, leading to 66 responses.

Figure 4. Word count visualization showing top three barriers to increased harvesting in the area reported by loggers, consulting foresters, and mill owners.

3.3 Comparison of State Timber Sales Stumpage Prices of Michigan and Minnesota

(Source: https://www.dnr.state.mn.us/forestry/timbersales/stumpage.html)

hen comparing logging policies between Michigan and Minnesota, three key differences emerge. First, Michigan has a larger proportion of privately-owned forest land and offers incentivized programs like the Qualified Forest Program and Commercial Forestry Program, which provide tax breaks for sustainable logging practices. In contrast, Minnesota has a higher percentage of publicly and county-owned forests, leading to stricter regulations and more controlled harvesting practices, with conservative logging approaches on public land. Second, Michigan has a more diverse forest products industry, utilizing various types of timber, while Minnesota's industry is more specialized, focusing on sectors like paper and oriented strand board (OSB) production, making it more susceptible to market shifts. Lastly, Minnesota's harvest levels have recently declined, reflecting the state's sensitivity to market fluctuations.

An analysis of Minnesota's stumpage prices over a ten-year period reveals significant trends in both cord products and sawtimber. For cord products, Ash prices remained stable, ranging from $8.51 to $10.88 per cord. Aspen showed consistent growth, increasing from $24.99 in 2013 to $30.73 in 2021. Birch experienced moderate fluctuations but remained stable, while Oak prices slightly decreased, reaching $12.57 in 2021. Basswood remained steady, and Maple prices fluctuated with a 1.9% increase in 2021. Balsam Fir displayed notable volatility, peaking in 2016 before declining by 31.2% in 2021. Prices for both types of spruce decreased, and Tamarack saw a 15.5% reduction. Red Pine prices grew, reaching $149.11 in 2021, while White Pine remained stable. The Hardwood Cord Composite index rose by 4.7%.

In the sawtimber market, Ash experienced significant volatility, peaking at $196.37 in 2018 before rebounding to $89.96 in 2021. Birch prices increased from $35.70 in 2012 to $80.54 in 2021, while Elm prices dropped sharply to $43.99 in 2021. Oak exhibited considerable volatility, declining to $108.64. Basswood prices remained stable, and Maple fluctuated between $94.29 and $110.28. Overall, Minnesota's stumpage market presents a blend of stability and volatility, with cord products like Aspen and Birch showing growth, while species like Ash and Oak reflect market fluctuations. These insights are crucial for stakeholders in the timber industry.

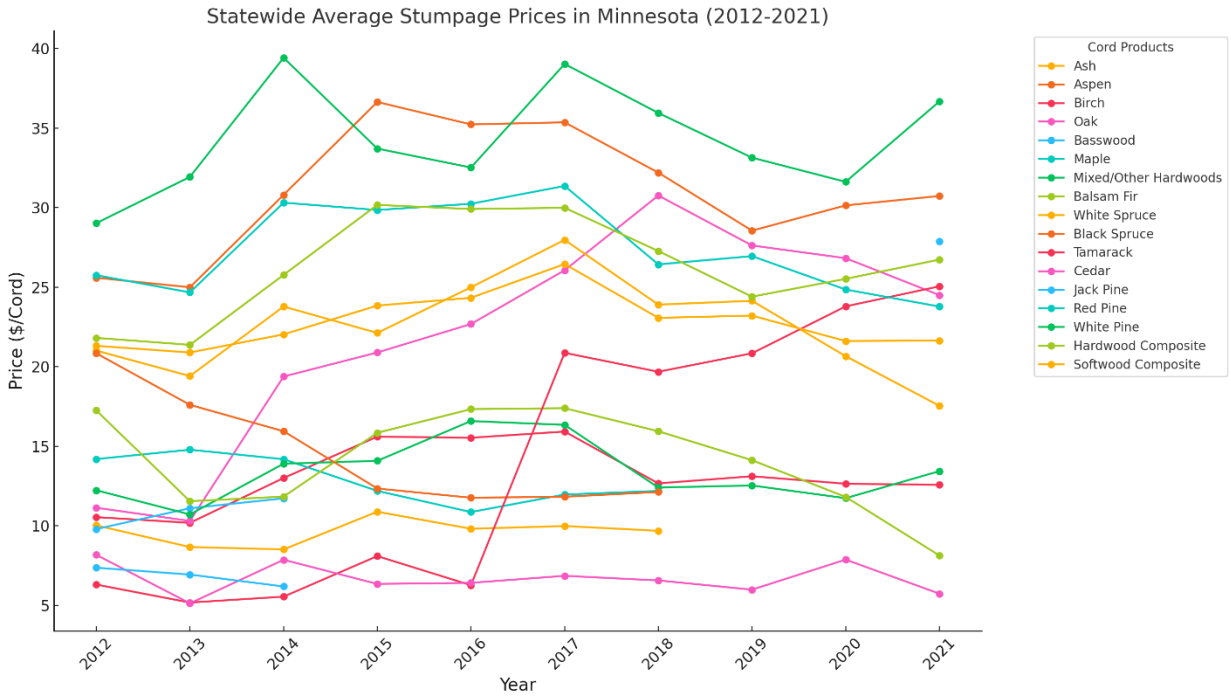
An analysis of the softwood markets in Minnesota and Michigan highlights contrasting trends over the years. Minnesota's softwood market has remained relatively stable since 2006, particularly with species like Red Pine and Jack Pine, which peaked around that time—Red Pine reaching nearly $60 per cord. After this initial spike, prices in Minnesota leveled out, indicating a more predictable market environment. Conversely, Michigan's softwood market has shown more volatility, particularly with Tamarack and White Pine, which have experienced significant price fluctuations. For example, Tamarack peaked at over $200 per cord around 2010, reflecting broader price fluctuations across various species in Michigan.

Both states exhibit modest price movements for Ash species compared to Oak and Maple. However, Michigan's Ash prices have remained relatively stable over time, showing smaller fluctuations, while Minnesota's Ash prices have seen more pronounced peaks and troughs, especially between 2005 and 2015. This suggests that Michigan's Ash market has been less

volatile, whereas Minnesota's hardwood market, particularly for Oak, has experienced greater instability. Notably, Minnesota's Ash prices have displayed more variability, with significant peaks around 2013 and 2017, further supporting the view that Michigan's hardwood market is generally more stable.

In terms of logging policies, three key findings emerge from the comparison between Michigan and Minnesota. First, Michigan has a larger proportion of private forest land ownership and utilizes programs like the Qualified Forest Program, which provides tax incentives for sustainable logging practices. In contrast, Minnesota has a higher percentage of public and county-owned forests, resulting in stricter regulations and more controlled harvesting processes. Public land logging in Minnesota tends to be conservatively managed, limiting the annual timber harvest. Second, Michigan boasts a more diverse forest products industry that utilizes a wide range of timber types, while Minnesota primarily focuses on paper and OSB production. This specialization has made Minnesota more vulnerable to market shifts, contributing to a decline in harvest levels in recent years.

Overall, this comparative analysis illustrates that while Minnesota's softwood market stabilized post-2006, Michigan's market is more dynamic, characterized by significant price fluctuations across various species. Additionally, differences in forest land ownership and logging policies further shape the distinct market environments and timber production strategies in both states.



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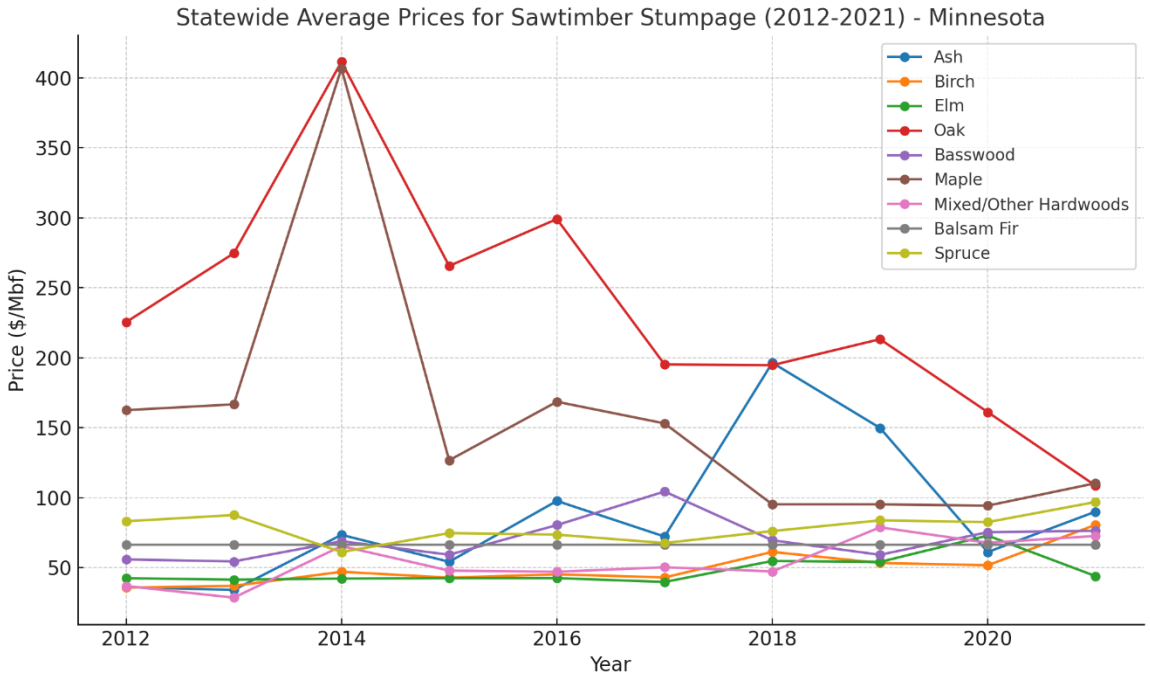

Figure 6. Average annual stumpage price of different sawtimber species of timber for different products in Minnesota from timber sale program. (Source: Minnesota DNR https://www.dnr.state.mn.us/forestry/timbersales/stumpage.html)

3.4 Comparison of State Timber Sales Stumpage Prices of Michigan and Wisconsin

Wisconsin has a robust timber industry that supports its significant presence in pulp, paper, and other forestry-related sectors. Wisconsin's forestry industry is a cornerstone of the state's economy, particularly in the northern regions. The forest products sector contributes approximately $24 billion annually, with a major focus on paper production, as Wisconsin has historically been the largest paper-producing state in the U.S. The state also boasts a strong industrial base for both softwood and hardwood processing. Compared to Michigan, Wisconsin has a similar mix of private and public forest lands, with the Wisconsin Department of Natural Resources (WI DNR) managing a substantial portion. Wisconsin's Managed Forest Law (MFL) program offers tax incentives to private landowners for sustainable timber management, similar to Michigan's Qualified Forest Program (QFP), though the MFL has a broader scope and longer history in Wisconsin's forest management strategy. Public land logging in Wisconsin is regulated, but state policies encourage a steady supply of timber from both public and private sources.

An analysis of timber prices from 2010 to 2024 highlights several trends across different species of sawlogs. Sugar Maple prices generally increased, starting at approximately $296.41 in 2010, peaking at $359.22 in 2013, and settling at $262 by 2024. Ash prices fluctuated significantly, beginning at $146.67 in 2010, peaking at $195.83 in 2023, and rising to $246.67 by 2024. Aspen prices were inconsistent, reaching highs like $238 in 2012, though many years showed missing data. Birch prices varied as well, starting at $141.67 in 2010 and peaking at $171.50 in 2016, though data gaps persisted from 2020 to 2024. Cherry sawlog prices fluctuated greatly, beginning at $141.67 in 2010 and reaching a high of $375 in 2013, though several years of data were missing. Oak prices exhibited substantial growth from $177.43 in 2010 to $530 in 2013 but dropped to $100 in 2023 before slightly increasing to $181 by 2024. Other Pine species showed moderate fluctuations, starting at $145.80 in 2010 and rising to $175 by 2024. Red Maple prices increased from $151.27 in 2010 to a high of $225 in 2023, though they slightly declined to $158.33 by 2024. Red Oak prices steadily rose from $278.92 in 2010 to $350 by 2024, while Red Pine prices remained stable, increasing slightly to $181 by 2024. Spruce prices fluctuated, starting at $80.33 in 2010 and reaching $137.50 by 2024. White Oak prices remained stable, generally ranging from $60 to $126.15, with minimal fluctuations. Lastly, other hardwoods demonstrated variability, with prices typically between $100 and $200. Overall, this data indicates that while some species experienced steady price increases, others showed volatility, reflecting shifting market conditions and demand over time.

For timber prices from 2010 to 2024, several key patterns emerge, especially among cordwood species. Ash prices began at $21.80 in 2010, displaying significant volatility, including a low of $1.00 in 2021, before rising to $2.50 in 2023 and ending at $0 in 2024. Aspen prices started at $26.95 in 2010, peaking around $35.48 in 2015, then stabilizing, finishing at $9.33 in 2024. Balsam Fir prices varied considerably, with peaks like $20.98 in 2013, but lacked data for several years, ending with a low of $5.29 in 2021. Birch prices began at $32.90 in 2010, fluctuating to a peak of $52.00 in 2014, though data gaps persisted in the following years, ending

with no recorded prices in 2024. Jack Pine prices started at $39.97 in 2010, peaking at $43.46 in 2014 before steadily declining, ending with no recorded prices in 2024. Oak timber prices began at $26.21 in 2010, peaked at $31.69 in 2015, and then decreased to $2.00 by 2023, with no data in 2024. Other Pine species experienced notable fluctuations, starting at $35.02 in 2010 and showing a low of $7.00 in 2022, with no data for 2024. Red Maple prices started at $30.72 in 2010, fluctuating over the years and peaking at $85.41 in 2024. Red Oak prices began at $36.43 in 2010, showed variability with a peak of $72.11 in 2020, then dropped to $9.17 in 2024. Red Pine prices showed inconsistent fluctuations, ranging between $12.48 and $30.79 throughout the period. Spruce prices began at $30.79 in 2010 and experienced a sharp drop to $4.00 by 2024. Lastly, prices for other hardwoods and Others varied, with Others starting at $25.87 in 2010 and finishing with no recorded data in 2024. These patterns highlight the substantial fluctuations in timber prices over the years, driven by changing market dynamics and evolving demand.

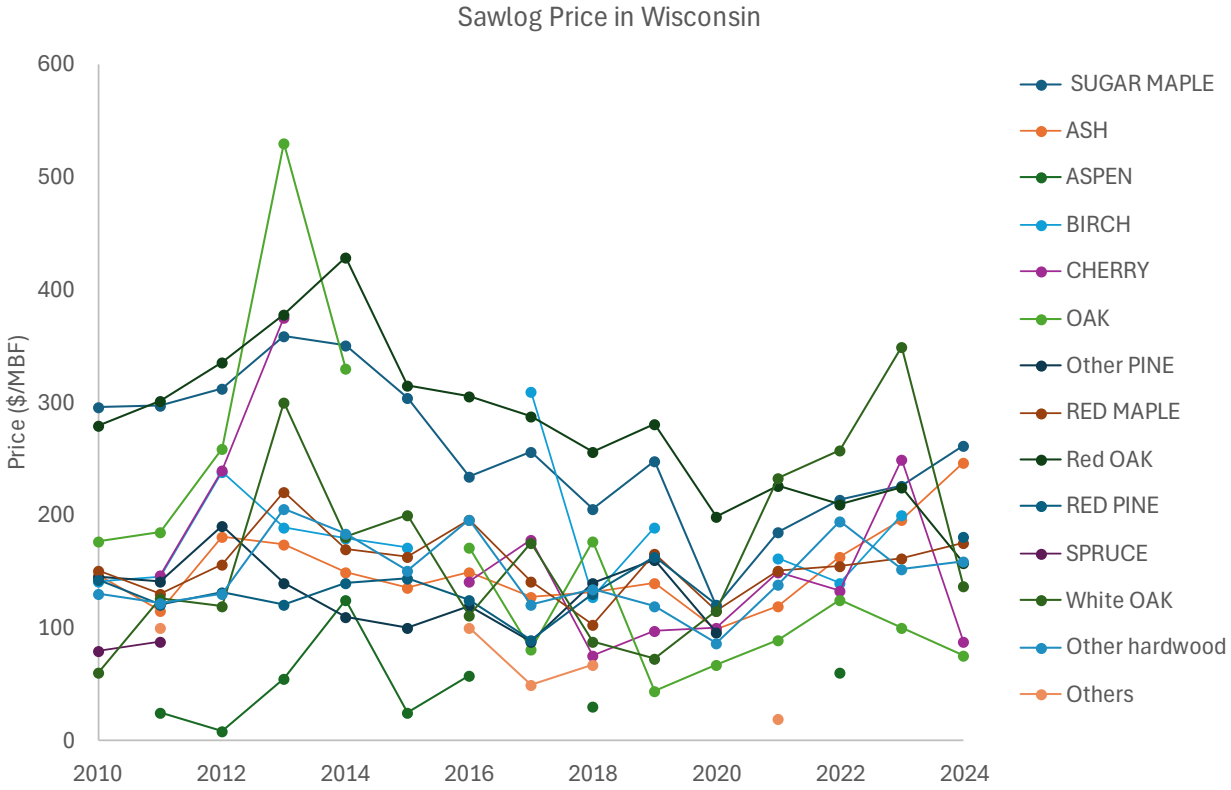

Figure 7. Average annual stumpage price of different sawtimber species of timber for different products in Wisconsin from timber sale program. (Source: Wisconsin DNR)

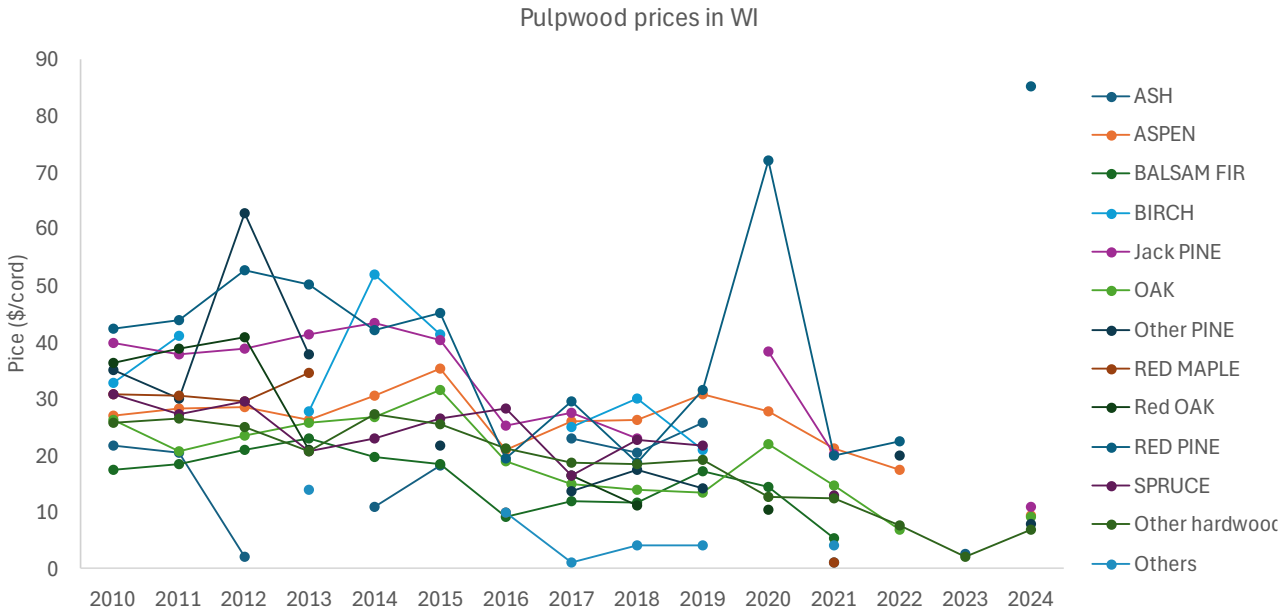

Figure 8. Average annual stumpage price of different pulpwood species of timber for different products in Wisconsin from timber sale program. (Source: Wisconsin DNR)

4. Conclusions

This report provides several key insights into timber market trends and logging practices across different states. Survey data revealed the challenges faced by Michigan's logging businesses, including financial strain due to rising operational costs and competitive market dynamics. The data on timber prices across these states underscores the varying trends and fluctuations experienced by different species over time. In Michigan, species such as Sugar Maple, Black Cherry, and Basswood have shown dramatic price spikes, particularly during the 2012–2017 period. These fluctuations may reflect changes in market demand, supply constraints, and broader economic conditions affecting the timber industry. The extreme price volatility observed in these species, especially with peaks around 2015 followed by sharp declines, indicates the complexities of managing timber resources amidst fluctuating market conditions.

In contrast, Minnesota's timber market exhibits a blend of stability and volatility, particularly among hardwood species like Ash and Oak. While some species have experienced notable price peaks, such as Ash, which reached a high of $196.37 in 2018, others like Birch and Oak reflect a more erratic pricing pattern. The hardwood market in Minnesota has shown greater instability compared to Michigan, suggesting that market dynamics and demand for different species are influenced by various external factors, including economic shifts and regulatory changes. Wisconsin's timber prices also demonstrate notable trends, particularly for Sugar Maple, which peaked at $359.22 in 2013 before settling at $262 in 2024. Other species like Ash and Oak reflect significant price fluctuations as well, indicating the changing dynamics within the state's timber market.

In conclusion, the analysis of timber markets in Michigan, Minnesota, and Wisconsin illustrates the complexities of regional dynamics, market trends, and logging policies.

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Appendix

Some notable comments from Michigan' forest product supply chain businesses from the survey

"Small businesses in the logging industry are being squeezed in all aspects of operating costs and costs of living. ALL monies earned are dictated by the purchasers of raw forest products, not the people who harvest and transport."

"There is no chance of covering the costs of operation due to how compensation is computed and paid out."

"Logging sector has not been compensated enough through years with rising equipment, labor, insurance, and fuel costs to keep people engaged. It's a better and easier career path to work for government or someone else."

"I had to change professions due to the downturn in the economy because of COVID. I could not sell wood to the mills as a small logger. I cannot sell my equipment as nobody wants to buy and get into the business."

"We need additional wood-using industries, especially woody ethanol and finished wood products."