Adventure Works Sales Analysis

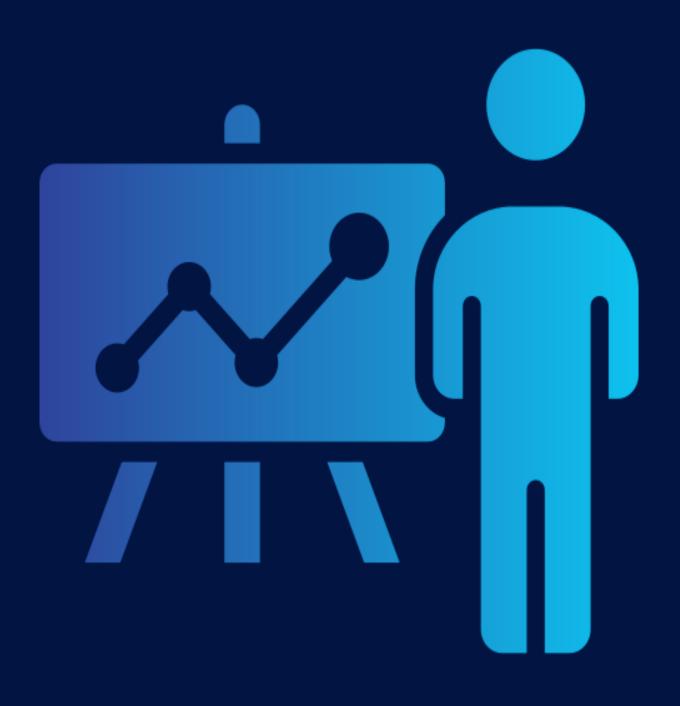
Comprehensive review of sales performance, key metrics, and actionable insights



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Introduction

Adventure Works is a fictional company specializing in outdoor and adventure gear, with a focus on products like bicycles and related accessories. This report analyzes sales data from 2005, 2006, 2007 and 2008 drawing from comprehensive dashboards that cover KPIs, temporal trends, product performance, customer contributions, and demographic breakdowns. The goal is to provide actionable insights into profitability, growth patterns, and optimization opportunities, helping stakeholders understand past performance and inform future strategies. Data highlights significant year-over-year growth, driven by increased transactions and revenue, amid a competitive market landscape.

KPI Comparison to Previous Year

This section compares key performance indicators (KPIs) for 2005, 2006, 2007 and 2008 Years, including COGS, Revenue, Quantity, Profit, Profit Margin, and Transactions. The data shows significant growth across most metrics, driven by increased sales volume. The Selected Year Is 2007.

- Total Quantity: 473 units (+80.00%)

- Total COGS: \$59.83M (+18.32%)

- Total Revenue: \$102.38M (+19.14%)

- Total Profit: \$42.55M (+20.32%)

- Profit Margin: 41.6% (+1.22%)

- Transactions: 24.44K (+80.26%)

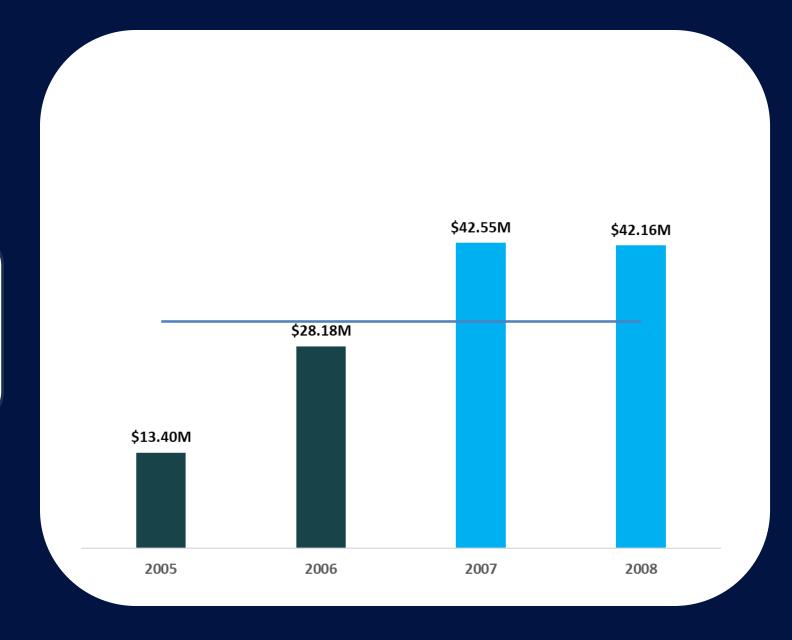


Yearly Performance Metrics

Focusing on years exceeding average performance in Total Revenue, Profit, and Transactions. From the dashboard (covering 2005–2008), 2007 stands out as above average, with highlighted contributions from high-performing years. Average Profit across years is approximately \$15.72M (derived from visible data points: 2005 ~\$13.40M, 2006 ~\$28.18M, 2007 \$42.55M, 2008 ~\$42.16M, but 2008 appears partial).

- Years Above Average: 2007 and 2008.
- 2007 Metrics: Revenue \$102.38M, Profit \$42.55M, Transactions 24.44K.
- Insights: 2007 exceeds the average by 70% in profit, driven by a 67.1% contribution from highlighted years (likely 2007–2008).







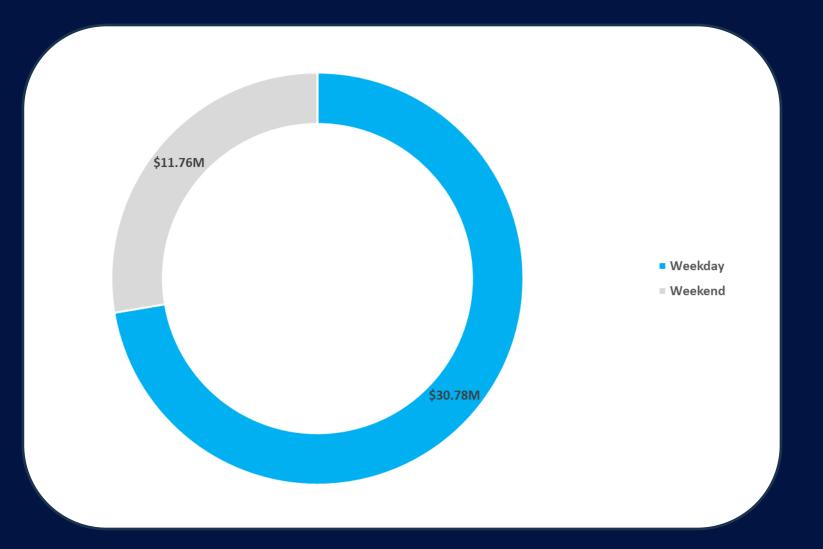
Monthly Profit Trends



Profits show a steady upward trend, peaking in the last quarter, with collective October-December accounting for 41.4% of total profit.

- Monthly Profits (2007): Jan \$1.9M, Feb \$2.1M, Mar \$2.1M, Apr \$2.2M, May \$2.4M, Jun \$2.3M, Jul \$3.8M, Aug \$3.7M, Sep \$4.4M, Oct \$4.8M, Nov \$5.2M, Dec \$7.6M.
- Trend Insights: Early months (Q1–Q2) average ~\$2.1M/month; later months (Q3–Q4) jump to ~\$5.0M/month, suggesting seasonal demand or marketing success.







Profit by Week Type

Assessing profit based on different week types (weekday vs. weekend). Weekdays dominate, contributing the majority of profits.

- Weekday Profit: \$30.78M (72.3% of total).
- Weekend Profit : \$11.76M (27.7% of total, inferred from pie chart).
- Insights: Weekdays make up 72.3% of total profit, indicating business-oriented or mid-week purchasing patterns

Quarterly Profit Analysis

Evaluating profit performance on a quarterly basis for 2007. Profits accelerate through the year, with Q4 being the strongest.

- Q1 Profit:\$6.10M (14%).
- Q2 Profit: \$6.94M (16%).
- Q3 Profit: \$11.88M (28%).
- Q4 Profit: \$17.63M (41%).
- Insights : Q4 alone drives 41% of annual profit, possibly due to holiday seasons.



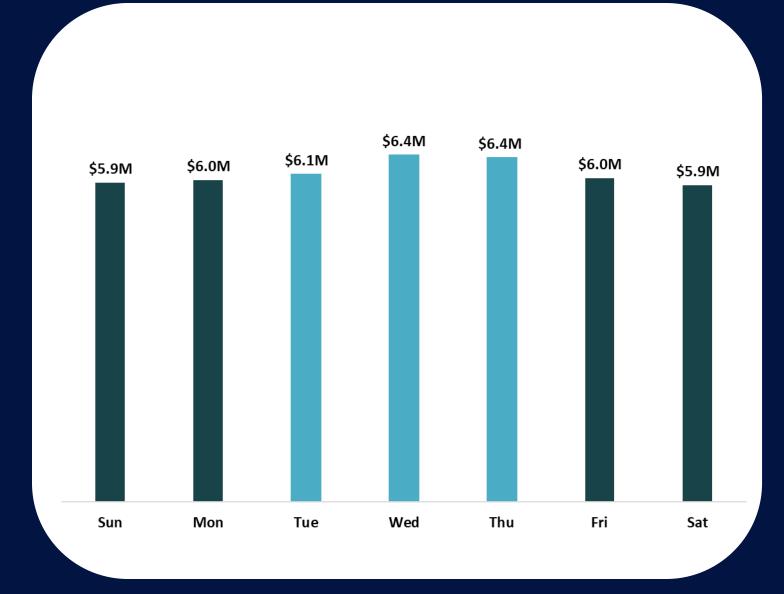


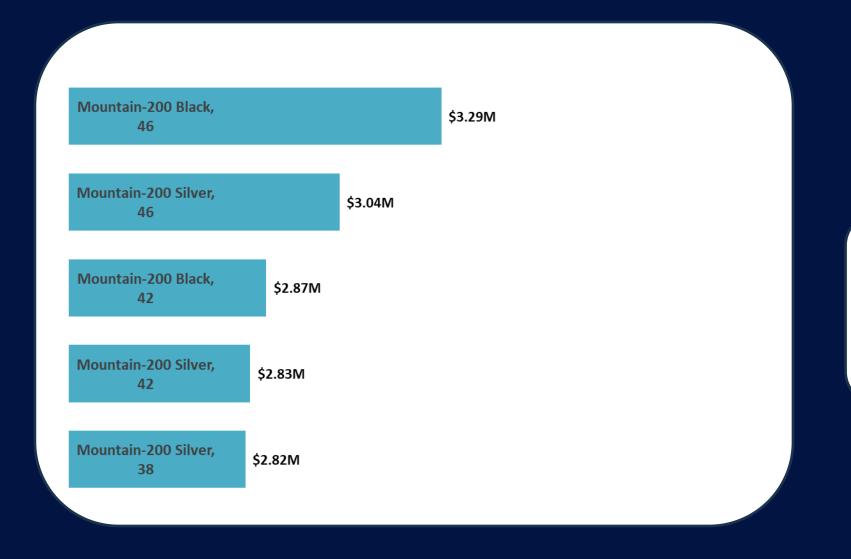
Profit by Weekday

Examining profit trends specific to weekdays. The dashboard highlights that certain weekdays (e.g., mid-week) contribute 44.3% of total profit.

- Key Insights: Mid week days (Tue-Thu) likely peak, based on aggregated 44.3% contribution from highlighted weekdays.
- Overall Distribution : weekdays overall outperform weekends (as per week type).







Top 5 Profitable Products



- Top 5:
- Mountain-200 Black, 46: \$3.29M
- Mountain-200 Silver, 46: \$3.04M
- Mountain-200 Black, 42: \$2.87M
- Mountain-200 Silver, 42: \$2.83M
- Mountain-200 Silver, 38: \$2.82M
- Contribution : Top 5 = 34.9% (\$14.85M total), Others = 65.1% (\$27.70M).
- Insights: Mountain-200 variants dominate, suggesting high demand for bikes; unsold products (473) indicate inventory opportunities.







Top 5 Profitable Customers

Highlights the top five high-profit customers, their share, and details on others.

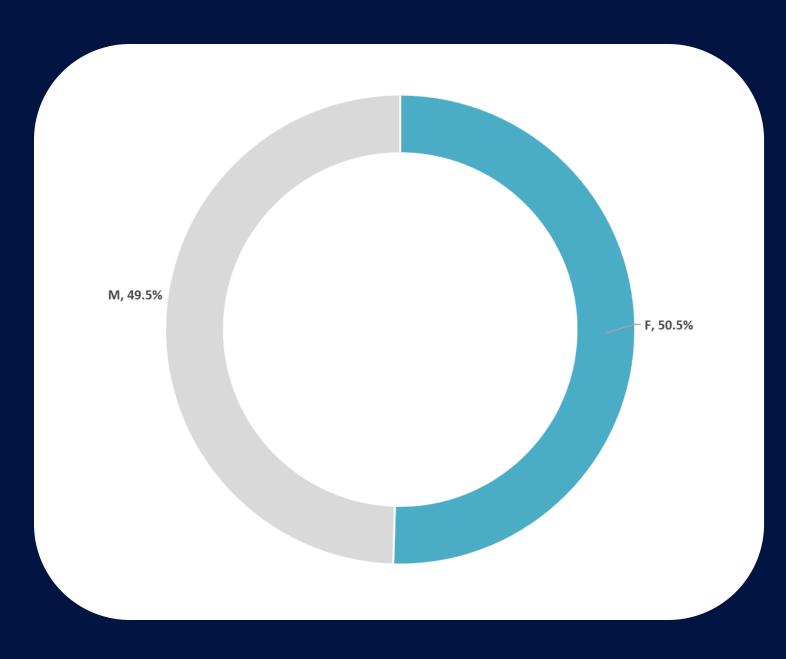
- Top 5:
- Aaron: \$43.80K
- Derrick Ruiz: \$43.36K
- Brandi Gill: \$40.94K
- Linda Carson: \$39.85K
- Carly Xie: \$39.82K
- Contribution : Top 5 = 0.5% (~\$21.15K total), Others = 99.5% (\$42.53M).
- Insights: Profit is widely distributed across 9,309 customers, with top contributors being minimal—focus on broad customer base retention.

Profit by Gender

Displays profit breakdown by gender to identify trends.

- Female: 50.5% (~\$21.49M)
- Male: 49.5% (~\$21.06M)
- Insights: Near-equal split, suggesting gender-neutral product appeal; slight female edge could inform targeted marketing.



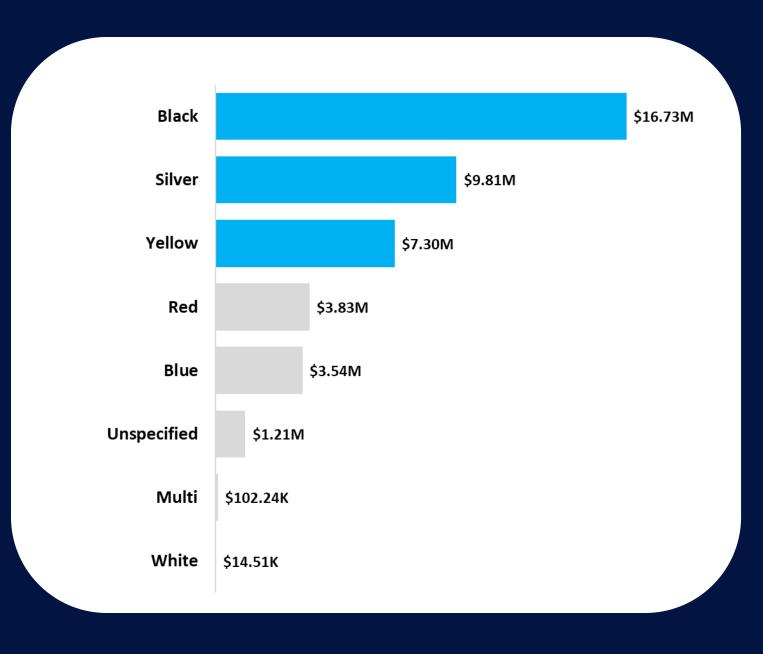


Profit by Product Color

Analyzes profits associated with product colors, highlighting best sellers for optimization.

- Profits by Color: Black: \$16.73M Silver: \$9.81M
- Yellow: \$7.30M
- Red: \$3.83M
- Blue: \$3.54M
- Multi: \$102.24K
- White: \$14.51K
- Unspecified: \$1.21M
- Insights: Black and Silver are top sellers (combined ~66% of profit), ideal for inventory prioritization.





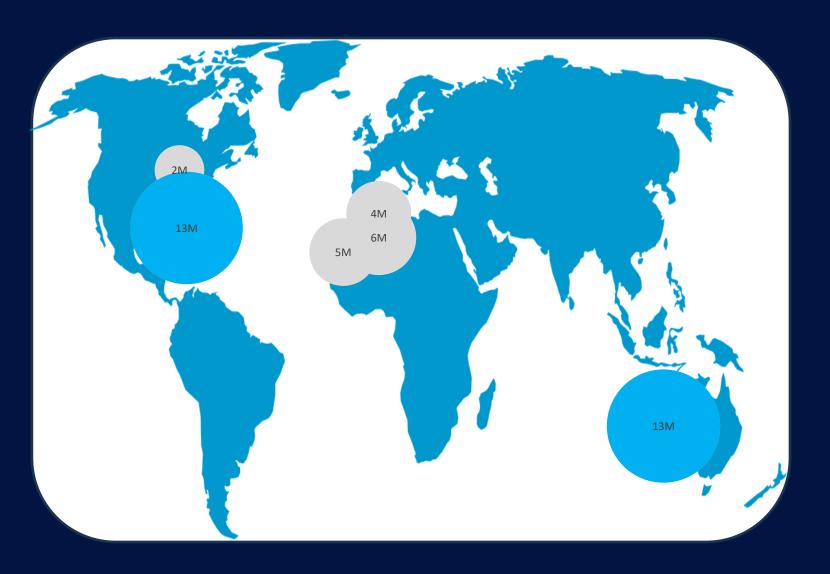
Expensive, 94.4% Less Expensive, 5.6%



Profit by Pricing Types

Examines profit variations based on pricing types, providing insights into strategy effectiveness.

- Price Above \$150 : 94.4% (\$40.16M)
- Price Below \$150:5.6% (\$2.39M)
- Insight: High-priced items drive nearly all profit, validating premium pricing; low-price segment may need volume boosts.





Country-wise Profit

Utilizes a custom map to visualize profit distribution by country, aiding geographic targeting.

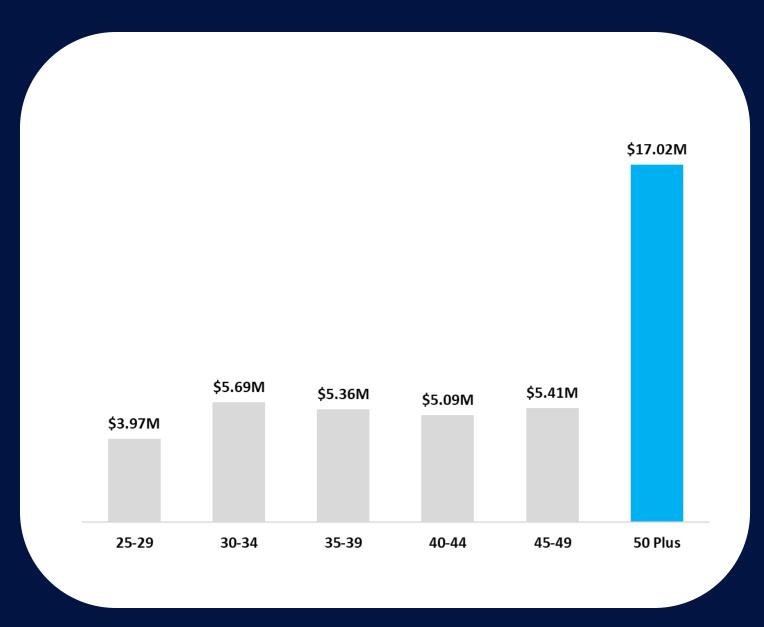
- Key Countries:
- United States: \$13M
- Australia: \$13M
- United Kingdom: \$6M
- Canada: \$2M
- France/Germany: \$9M combined
- Insights: US and Australia contribute 60.1% (\$26M), focusing expansion there; map bubbles scale with profit.

Profit by Age Groups

Segments profits into age groups to understand demographic contributions.

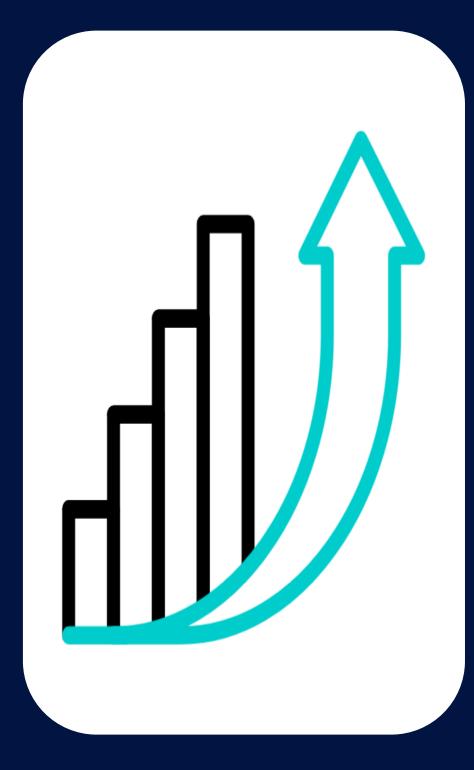
- Profits by Age Group:
- 25–29: \$3.97M
- 30–34: \$5.69M
- 35–39: \$5.36M
- 40–44: \$5.09M
- 45–49: \$5.41M
- 50+: \$17.02M (40.0%)
- Insights: 50+ group dominates at 40%, suggesting products appeal to older demographics; average customer age 46.





Key Insights

- KPI Comparison to Previous Year: All major KPIs improved significantly from 2006, with transactions and quantity leading the charge at +80%. This indicates successful expansion in market reach, possibly through new channels or promotions, though COGS rose modestly at +18.32%, maintaining healthy margins.
- Yearly Performance Metrics (Above Average Years): 2007 and 2008 exceeded average performance, with 2007's profit of \$42.55M surpassing the average by 70%, driven by a 67.1% contribution from these years.
- Monthly Profit Trends: Profits trended upward, from an average of \$2.1M in Q1 to \$5.9M in Q4, with December at \$7.6M. October–December accounted for 41.4% of total profit, suggesting seasonal demand.
- Profit by Week Type: Weekdays contributed 72.3% of profits (\$11.76M), indicating strong mid-week activity, while weekends lagged at 27.7%.
- Quarterly Profit Analysis : Q4 led with \$17.63M (41%), reflecting a significant year-end surge, likely due to holiday sales.
- Profit by Weekday: Mid- weekdays (Tue-Thu) contributed 44.3% of total profit, reinforcing weekday dominance.
- Top 5 Profitable Products (% Contribution and Others): Mountain-200 variants (black and silver) generated 34.9% of profits (\$14.85M), with black at \$18.72M, pointing to color preferences.
- Top 5 Profitable Customers (% Contribution and Others) : The top 5 customers contributed just 0.5% (~\$21K), with 99.5% from others across 9,309 customers, highlighting a broad base.
- Profit by Gender: A near-even split (50.5% female, 49.5% male) suggests gender-neutral appeal, with slight female dominance.
- Profit by Product Color (Highlighting Best Sellers): Black (\$16.73M) and silver (\$9.81M) led, comprising ~66% of profit, ideal for inventory focus.
- Profit by Pricing Types : High-priced items (above \$150) drove 94.4% (\$40.16M), validating premium pricing strategies.
- Country-wise Profit (Custom Map): The US (\$13M) and Australia (\$13M) accounted for 60.1%, with potential growth in underperforming regions.
- Profit by Age Groups: The 50+ age group contributed 40% (\$17.02M), with an average customer age of 46, indicating mature demographic strength.



Conclusion

- The 2007 sales data for Adventure Works reflects strong growth and profitability, driven by premium products, seasonal peaks, and a diverse customer base. Key opportunities include leveraging Mountain-200 variants, optimizing unsold inventory, and targeting high-profit regions like the US and Australia while focusing on the 50+ demographic. By enhancing weekday promotions and maintaining premium pricing, the company can sustain momentum. These insights recommend data-driven marketing and regional expansion to build on this foundation.



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