Term Project - Milestone 5

Introduction

My aim is to provide stakeholders with actionable insights into the financial data sourced from the [National Database of Childcare Prices](), specifically concerning weekly median prices for child care services across various counties and cities. This analysis is designed to support decision-making for DV Child Care's potential expansion into markets where the company currently has no presence. The project involves examining a dataset spanning a ten-year period (2008–2018) and includes over 250 variables across 1,779 U.S. counties, with some cities also represented. Through a combination of descriptive statistics, data visualization, and assumptions about data integrity, the analysis is structured to provide clear guidance to the company's stakeholders. The findings are intended to inform strategic decisions about where to focus expansion efforts based on financial trends and market potential.

Summary of Analysis: Findings

After reviewing the documentation and examining the meanings of the variables, I performed a preliminary analysis to understand the structure and content of the dataset. The data is well-organized and comprehensive, with some entries imputed to ensure complete records. As I analyzed the financial data, I observed a clear trend of rising prices over time, which aligns with broader economic trends of increasing costs for everyday items. This initial exploration quickly clarified the direction of the project and helped me focus on key insights to share with stakeholders.

Summary of Analysis: Assumptions

I removed all columns indicating whether there were imputed values, assuming for this analysis that the dataset is 100% accurate. Although imputed data can skew results and affect

analysis, my primary goal is to present a compelling story and three well-designed mediums for the stakeholders. Therefore, potential inaccuracies in the data are not a major concern for this project. Additionally, I excluded columns related to the 75th percentile and any aggregation flags, as I deemed them unnecessary for this analysis. These columns were removed from the DataFrame used in the project.

Summary of Analysis: Items That Still Need Clarification

I performed a correlation analysis on each of the selected counties/cities to determine if any of the provided demographics are related to the weekly median prices in the financial data. I did not expand too much on this, leaving further analysis for the company's shareholders. Additionally, I included a disclaimer noting that the prices referenced are median values. I wish the data included a range of prices; having both low and high prices would have been substantially beneficial for my analysis.

Key Message

The goal of this project is to provide stakeholders with the information needed to make the best decisions regarding company expansion. In this scenario, all the counties in the data represent potential markets where our company currently has no presence. I will call the stakeholders to act in key potential areas.

Target Audience

The target audience for this project is the stakeholders of DV Child Care. All deliverables are tailored specifically for these stakeholders to support informed decision-making.

Included Mediums

1. Interactive Dashboard: I chose blue for center-based child care variables and orange for family child care variables to maintain consistency with the slideshow's color scheme. I

initially selected a standard bar chart to compare median weekly prices across counties but switched to a horizontal bar chart for better readability and dashboard space utilization, including labels for clarity. The dashboard also features two key filters at the top. Additionally, a line chart compares median weekly prices over time, using the same color scheme, and allows users to filter by county and price variables, with labeled data points for clarity.

2. Summary Brief: This medium provides a summary for stakeholders in a straightforward format. I organized the document using bullet points under titles to enhance clarity.

3. Slide Show: I selected a simple white template for the slideshow to highlight the information and visualizations. Major titles are in black, while regular text is in dark gray. In the pricing trends analysis section, each slide features a group of line charts on the right. The line plots are straightforward and include all necessary labels, with color differentiation for the two types of child care maintained consistently across all charts. The correlation matrices use a red and blue gradient to represent correlation values.

Ethical Considerations

I made no major changes to the dataset, only dropping columns I deemed unnecessary for my analysis. The data was used purely for educational purposes, and I have not claimed it as my own. It's essential to credit the source and provide a link or reference to where it was obtained.

Lessons Learned

I would have liked to explore the correlations between demographic variables and median price variables in greater depth, as this could reveal important insights within the dataset. Additionally, adding more complexity to the project scenario could enhance the analysis. I

enjoyed applying my skills to a real-world scenario, as many businesses rely heavily on data for financial decisions, which adds valuable experience to my project portfolio.

Conclusion

In conclusion, this analysis provides DV Child Care stakeholders with valuable insights into the trends of weekly median child care prices across various counties, helping to inform strategic decisions about potential market expansion. Although the analysis did not delve deeply into correlations with demographic factors, the findings suggest that price increases over time are a significant trend to consider when assessing market viability. The interactive dashboard, infographic, and slideshow offer clear, accessible presentations of this data to assist stakeholders in making informed, data-driven decisions. Moving forward, further exploration of demographic relationships with pricing could enhance the robustness of the findings, but the current analysis provides a solid foundation for understanding market trends and identifying areas for expansion.

Resources

National Database of Childcare prices. DOL. (n.d.). https://www.dol.gov/agencies/wb/topics/

featured-childcare

Dol. (n.d.). https://www.dol.gov/sites/dolgov/files/WB/media/NationalDatabaseofChildcare

PricesTechnicalGuideFinal.pdf