**Title: Milestone 5 – Final Paper: Analyzing Childcare Costs**

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[DSC640-T302 Data Presentation & Visualization (2255-1)](https://cyberactive.bellevue.edu/webapps/blackboard/execute/courseMain?course_id=_525263_1)

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30th May 2025

**Introduction**

This project examines the rising costs of childcare in the United States and their broader economic impact. Using data from the National Database of Childcare Prices (NDCP), the analysis explores trends in childcare expenses, household income, and regional disparities. It investigates how these rising costs affect family budgets, economic mobility, and labor force participation—particularly among women. By highlighting affordability challenges and employment trade-offs, this project aims to inform the ongoing policy conversation around equitable and accessible childcare in the U.S.

**Summary of Analysis**

The NDCP dataset was analyzed to identify trends in childcare costs across various states, the relationship between childcare expenses and income levels, and how childcare costs impact workforce participation. Using data visualization tools such as scatter plots, line charts, and bar charts, the analysis highlights the economic burden of childcare across different income brackets, regions, and time periods. The findings suggest that rising childcare costs have significant effects on families' economic decisions and labor force participation.

**Findings**

* **Childcare Costs and Income**: There is a direct correlation between household income and childcare costs, but the extent of this relationship varies widely across different states. Higher-income households tend to spend more on childcare, but the actual cost can be significantly higher in certain regions.
* **Female Employment and Childcare Costs**: A weak positive correlation was found between rising female employment rates and childcare costs, likely due to the increased demand for childcare services as more women enter the workforce.
* **Employment Rate Trends**: Both male and female employment rates declined sharply between 2008 and 2014, with slow recovery afterward. However, male employment remained consistently higher than female employment, and the gender gap persisted through the recovery period.
* **Childcare Cost Trends**: Childcare Costs Have Risen 48% since 2008. The cost of childcare has steadily increased from 2008 to 2022, with notable spikes in 2013–2014 and 2021–2022. The cost trend indicates a growing burden on families over time, especially in high-cost states.
* **Childcare Affordability by State**: States show significant disparities in how much income families spend on childcare. For example, Families in states like New York and Idaho spend over 20% of their income on childcare, compared to less than 10% in others.

**Key Takeaway**

Childcare costs have continued to rise, and employment rates, particularly for women, saw a decline between 2008 and 2014 before gradually recovering. The rising childcare costs, combined with regional disparities, create an economic burden for working families, potentially discouraging workforce participation, especially among lower- and middle-income households. Without targeted, region-specific intervention, affordability gaps will persist and potentially widen economic inequality.

**Assumptions**

* Childcare cost calculations assume full-year childcare usage.
* Median household income (MHI) is used as a benchmark for affordability, though it may not fully account for variations in family structures or additional income sources.
* Employment trends are influenced by economic cycles and external factors (e.g., recessions, policy changes) that are not fully accounted for in this analysis.

**Direction of Story / Plan of Attack**

The central message conveyed through this project is that **childcare in the United States is increasingly unaffordable**, placing a disproportionate burden on low- and middle-income families and contributing to barriers in workforce participation, particularly for women. The story emphasizes that this is not just a personal issue—it is a structural economic problem that affects labor markets, gender equity, and long-term family well-being.

The plan of attack involves:

* Analyzing regional disparities to spotlight where the affordability crisis is most severe.
* Comparing childcare costs against income levels to highlight unsustainable financial pressures.
* Demonstrating the correlation between high childcare costs and reduced female employment.
* Presenting a strong policy case through multiple mediums to reach a wide range of audiences with tailored insights.

The goal is to **drive policy innovation** by showing that investing in affordable childcare is essential for economic participation, gender equity, and family stability.

**Target Audience**

* **Policymakers**: To inform decisions around childcare subsidies, funding, and regulations with regional sensitivity.
* **Economists and Researchers**: To offer a data-rich foundation for studying the economic impacts of childcare costs on labor markets and mobility.
* **Parents and Advocacy Groups**: To increase awareness, empower advocacy, and support local-level change through relatable and accessible information.

**Mediums Included and Purpose**

To effectively communicate the key insights from this project to diverse audiences, three different mediums were developed. Each was tailored to the specific needs and interests of its intended audience—ensuring the message about childcare affordability reaches decision-makers, researchers, and families in the most impactful way.

* **PowerPoint Presentation (Policymakers)** – A concise, visually supported format designed to communicate key findings, regional trends, and actionable policy recommendations clearly and efficiently for decision-making.
* **Infographic (Parents & Advocacy Groups)** – A visually engaging snapshot of critical statistics, affordability burdens, and state-level disparities, crafted to quickly capture attention and support public awareness and advocacy efforts.
* **Blog Post (Economists & Researchers)** – An in-depth narrative combining data visualizations with economic analysis to explore affordability trends, raise critical policy questions, and encourage deeper academic and policy discourse.

**Design Decisions**

For each medium, I chose visual elements and design principles that align with the target audience's needs:

* **Presentation for Policymakers:** A professional color scheme with clear, concise visuals that highlight key findings and policy implications.
* **Infographic for Parents & Advocacy Groups:** Bold colors and simplified visuals (bar charts, line charts, donut charts) to effectively convey affordability trends and regional disparities in a digestible format.
* **Blog Post for Economists & Researchers:** Clean fonts, neutral colors, and embedded data visualizations to support the narrative flow, offering both analysis and insights.

**Ethical Considerations**

The data used for this project was sourced from publicly available databases, such as the NDCP, and was verified for credibility. The analysis adhered to ethical standards in presenting the data, ensuring that no personal or confidential information was used without consent. I also made sure to clearly label any transformations applied to the data, particularly when filtering out outliers or focusing on specific variables.

**Data Transformations & Legal Considerations**

Some transformations included filtering data to focus on specific states or income brackets and aggregating data over time to examine trends. No data was omitted without clear labeling, and all transformations were transparently documented. There were no legal or regulatory guidelines specifically governing the use of this data, as it is publicly available. However, the data was treated responsibly, ensuring that no biases were introduced during the cleaning or presentation processes.

**Risks and Mitigation**

The primary risk in presenting the data and visualizations is the potential for misinterpretation due to the complex nature of childcare affordability and employment trends. To mitigate this, I ensured that each visualization was accompanied by clear explanations and context. Additionally, I avoided making assumptions about causal relationships and focused on presenting correlations and trends.

**Lessons Learned**

This project not only deepened my understanding of the economic factors behind rising childcare costs, but also strengthened my ability to communicate data effectively. I learned the importance of selecting the right visualizations to highlight key trends and tailoring the mediums to suit the target audience. Keeping the audience's level of knowledge in mind was crucial for telling a clear, compelling story. In future work, I’d consider expanding the analysis to include policy impacts or employer-supported childcare and refining visualization choices to better engage and inform specific audiences.

**What I Would Do Differently**

In future work, I would seek more granular data on regional childcare policies to better understand their impact on affordability. A deeper exploration of the demographics most affected—such as age, race, and family structure—would also add valuable context. Additionally, I’d expand the analysis to examine the role of policy interventions and employer-supported childcare. Refining visualization choices to match the audience’s knowledge level and using the most effective medium for each group would further strengthen the clarity and impact of the message.

**What I Enjoyed Most**

I particularly enjoyed working with the data visualizations, as they provided a clear and effective way to communicate complex trends. Creating the different mediums (presentation, blog, infographic) allowed me to experiment with different ways to convey information to different audiences.

**Conclusion**

Rising childcare costs in the U.S. emerged as more than a family burden—they represent a deep economic issue. This project explored how these costs have grown, the uneven impact across regions and income levels, and the effects on workforce participation, particularly for women. The analysis points to a clear need for targeted policy action to remove childcare as a barrier to opportunity and equity. To share these findings, I included a policy presentation, an advocacy infographic, and a research blog post—each crafted for a specific audience. Improving childcare affordability stands out not just as a social imperative but as a strategic economic investment and long-term solutions.