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CHILDCARE REGULATION INDEX IN THE STATES: 1st EDITION

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Introduction

Childcare challenges facing U.S. families are making news headlines as a "classic" example of market failure. With wages that are too low relative to prices, it is easy to assume that the childcare market simply cannot clear. This prompts calls for greater intervention in the form of subsidies. It is also why many Western countries have resorted to a fully socialized model of childcare in which childcare is all but free for most families (see Canada's $10/day program.[1] Geloso and Eisen 2017; Chandler and Dilmaghani 2023). However, a subsidy approach misses the key role that the regulatory environment of the childcare market plays in raising costs. Though well-intended, the regulatory framework cripples progress towards affordability, availability, flexibility, and quality for American families seeking childcare solutions.

Parents care deeply about the quality of care their children receive. However, what they rank even higher than staff qualifications or educational content is reliability and availability (NCES 2019), which are hard to come by in a market with long waiting lists, high turnover, and limited flexibility. States have enforced childcare oversight in a mixed fashion and with varying degrees of intensity. To visualize this, we created a Childcare Regulation Index that includes components of regulatory codes such as group size, child-staff ratios, and training hours and educational requirements for employees. This tool will enable research on the relationship between the regulatory environment of childcare and families' ability to find services that meet their needs.

The Index

Gorry and Thomas (2017) show that many popular childcare regulations are more effective at increasing cost of care than quality of care. We build on their study by comparing the regulations on childcare providers, and therefore the added costs for consumers, that shape the childcare

1. https://www.canada.ca/en/employment-social-development/news/2024/03/new-federal-law-helps-ensure-families-will-benefit-from-affordable-early-learning-and-child-care-for-generations-to-come.html

market in each state. The Childcare Regulation Index was constructed using a standard approach for scoring regulation. Higher scores represent more openness in the childcare market, what we call "childcare freedom." States with no regulation in a particular category are assigned the maximum index value (10). The score is based on a set of indicator variables, V_i, such as the maximum group size, the child-staff ratio requirements, the required annual number of training hours, and the minimal educational requirements of certain types of childcare staff members. This equation is then used to create a score between 0 and 10 for each state where i is one of the indicator variables, m_0 and m are the minimum and maximum values of each for the variable across all states and x is a

$$V_i = \frac{(x_i - m_0)}{(m - m_0)} * 10$$

state's observed regulatory value on this component. Take for example, the ratio of children to staff for groups of pre-kindergarten children. In 2012, New York had the strictest regulation permitting eight children per instructor in that age range. This is m_0. North Carolina had the loosest regulation permitting up to 20 children per instructor. This is m. A state such as West Virginia, with a maximum of 12 children per instructor, is scored in the following way on child-staff ratio:

$$V_{pre-k\ ratio} = \frac{(12 - 8)}{(20 - 8)} * 10 = 3.33$$

Sometimes, the variables are inversely related (i.e., being closer to the maximum value is a bad thing rather than a good thing). This is the case for annual number of training hours and minimum educational requirements for employees. To ensure all variables represent more childcare freedom with higher scores, the indicator variable is calculated as follows:

$$V_i = \frac{(m - x_i)}{(m - m_0)} * 10$$

From there, we average all the different variables V_i for each state to arrive at a score between 0 and 10 where the latter value represents a less regulated (i.e., more open) childcare market. The four major categories of regulation include data points for group size and staff-child ratios by age range (6 months, 9 months, 18 months and so on) and training hours and educational requirements by position (director or teacher), resulting in 17 total variables. The data for the year 2012 is from the work of Gorry and Thomas (2017). For 2020, we use the data of Ali et al. (2024).

These four features of the regulatory environment included in the index were selected because they are the most common. Again, the power of the index comes from a significant range in the intensity of standards shaping the entrepreneurial environment. For example, Illinois requires preschool teachers to have a high school diploma and 60 college credit hours, plus additional training and

experience to become licensed, whereas other states only require a GED (First Five Years Fund 2024). Other examples of what can be found in a regulatory code for childcare, which are not included in the current index, are equipment requirements. In Virginia, childcare facilities must have 75 square feet of outdoor space per child, and one-third of this must be shaded playground space with shock-absorbent surfacing. Both examples represent the lack of flexibility written into state codes. In rural areas, outdoor space is plentiful, whereas in cities this required playground space may be prohibitively expensive and therefore less important to parents. The reverse may be true for college-educated employees; those residing in cities or suburban areas are more likely to have access to higher education. Regardless of location, parents do not share identical values on what constitutes quality.

The variation in states' approaches to childcare quality gives rise to an index tool that can be compared with a variety of family-related and labor market questions.

Results

Figure 1: Childcare Regulation Quartiles

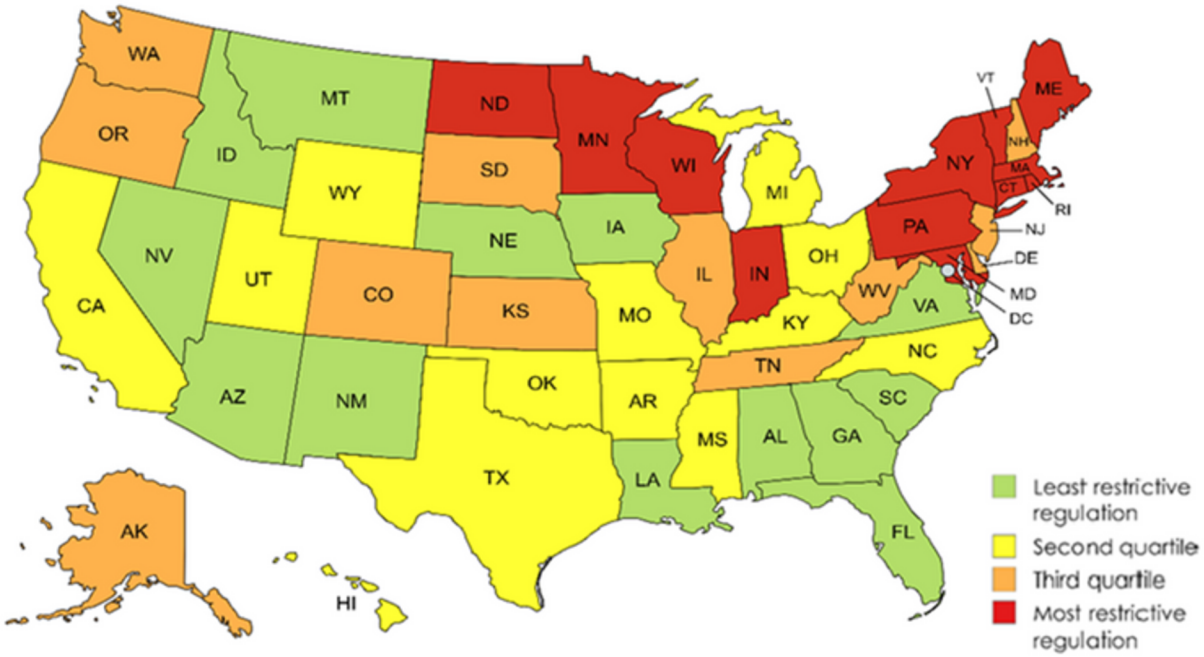

Table 1: Childcare Regulation Rankings -- Least to most restrictive

Rank	State	Index	Rank	State	Index
1	Louisiana	9.08	26	Wyoming	3.62
2	Idaho	8.7	27	Colorado	3.41
3	Florida	8.31	28	South Dakota	3.39
4	Alabama	8.12	29	West Virginia	3.15
5	Arizona	7.9	30	Alaska	3.15
6	South Carolina	7.83	31	Tennessee	3.12
7	Nevada	7.82	32	Illinois	3.07
8	New Mexico	7.82	33	Delaware	3.05
9	Montana	6.76	34	Oregon	3.02
10	Virginia	6.72	35	New Hampshire	2.93
11	Iowa	6.67	36	Kansas	2.9
12	Georgia	6.07	37	New Jersey	2.89
13	Nebraska	5.95	38	Washington	2.82
14	California	5.84	39	Indiana	2.8
15	Hawaii	5.83	40	Wisconsin	2.79
16	Arkansas	5.73	41	Maine	2.59
17	North Carolina	5.28	42	Maryland	2.27
18	Texas	5.28	43	Vermont	2.22
19	Mississippi	4.64	44	Minnesota	2.21
20	Kentucky	4.61	45	Connecticut	2.2
21	Missouri	4.49	46	North Dakota	2.13
22	Michigan	4.3	47	Rhode Island	2.09
23	Ohio	4.12	48	Pennsylvania	2.09
24	Utah	3.89	49	New York	2.07
25	Oklahoma	3.88	50	Massachusetts	1.73
				AVERAGE	4.47

The resulting index is available in Figure 1 and Table 1. As can be seen, the most restrictive quartile (red) is clustered in the high population states of New England and the Great Lakes. In contrast, the least restrictive quartile (green) is dominated by Southeast and Western states. After averaging all relevant variables, Louisiana's childcare regulations rank in the 90th percentile for childcare freedom, while Massachusetts's regulations rank in the 17th percentile. None of the scores are a perfect zero or 10, meaning some states may have more extreme regulations than Louisiana or Massachusetts in certain aspects of their code, but not in all variables.

These indicators, as many point out (e.g., Burchinal et al. 2002), are also poor indicators of true quality. Rather, they are the only "proxies" that regulators can objectively set. In contrast, through repeated interactions, parents are generally able to determine the value and level of quality on harder to evaluate metrics. However, these easy-to-observe metrics for regulators that do not correlate well with actual quality drive up cost considerably. Childcare providers must invest in meeting the regulatory standards, which can involve hiring more staff, obtaining certifications, upgrading facilities, or purchasing specialized equipment. These compliance costs are typically passed on to parents through higher fees. This is in addition to the administrative burden passed on to providers to showcase compliance. This is indeed what previous literature has found since higher regulations are tied to higher costs for parents (e.g., Gorry and Thomas 2017). In other words, regulation tighten the supply of services in ways that drive up prices which fuels the affordability concerns.

Implications

There are important implications from this array of regulations. Most notably, it can be easily tied – via the higher service prices – to lower fertility rates. In the first paper using the index, Childcare Regulation and the Fertility Gap[2], we were interested in the relationship between childcare regulation and fertility gaps. The fertility gap is another metric with substantial variation across U.S. states, and it simply compares survey data on family size goals with the total fertility rate (TFR), or average number of children per woman over her lifetime, in a given state. The U.S. average fertility gap is 0.8 children below desired family size and ranges from 0.3 (South Dakota) to 1.4 (Rhode Island) (Piano and Stone 2023). The fertility gap is shown in Figure 2. This approach enables us to analyze family formation goals and the achievement of these goals without asserting a normative position on what a person's targeted or actual fertility should be.

The inverse relationship between regulation and fertility can be observed visually in some states. The New England region generally demonstrates low index scores (most restrictive regulation) and above average fertility gaps. In our work, we find that a one-point increase in the childcare regulation index (toward more childcare freedom) is associated with a reduction of the fertility gap by 0.025 to 0.029 children.

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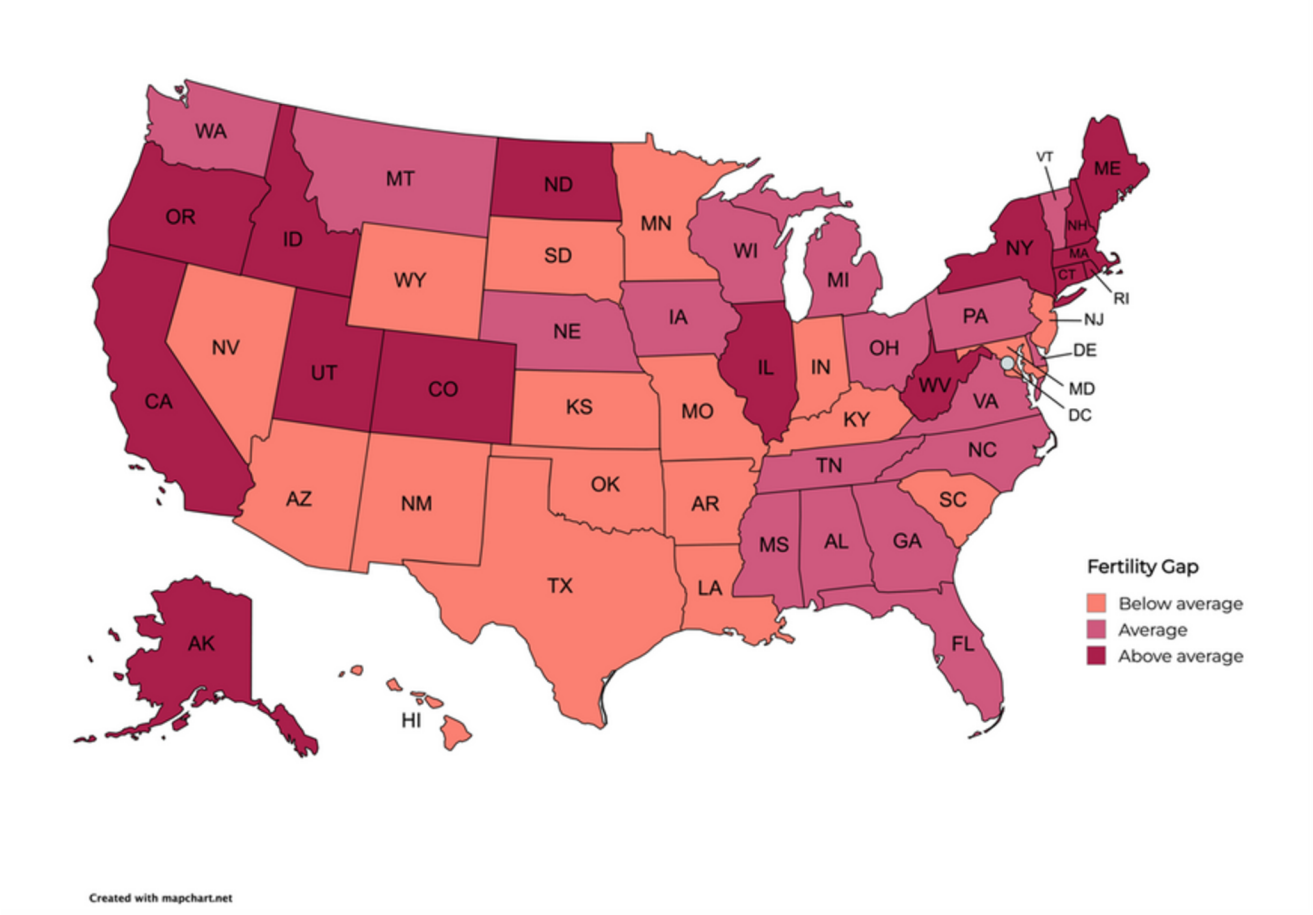
2. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4834635

Figure 2: Fertility Gaps in the United States



These margins appear small, but if the state with the most restrictive regulatory score (i.e., Massachusetts) obtained the same score as the state with the least restrictive regulatory score (i.e., Louisiana), the gap would fall by close to 0.2 children. Since the TFR in Massachusetts stood at 1.41 in the same period as the measured fertility gap, this would mean that the TFR would rise to slightly above 1.6 – an increase of 14%. If all states became as unregulated as Louisiana was, there would be fourteen states exceeding 1.9 and two would have exceeded 2.1—the highly coveted "replacement rate" that would ease concerns about the longevity of pay-as-you-go Social Security and other challenges presented by an aging population.

The intuition behind these results is that regulations have a strong effect on affordability, flexibility, and availability of childcare options, not just their quality. The cost of an additional child is directly related to childcare and other financial costs for many families. Additionally, without childcare options that fit with parents' work schedules or flexibility needs, parents in states with less childcare freedom might face a tradeoff between career and parenthood that has very little middle ground. Doepke et al. (2023) summarize the latest empirical facts regarding the relationship between female labor force participation and fertility: "Where the two [career and family] are easy to combine, many women have both a career

and multiple children, resulting in high fertility and high female labor force participation. When career and family goals are in conflict, fewer women work and fewer babies are born" (p. 2). Additionally, existing parents might want to supplement their income by opening an in-home daycare, but many states require an extensive licensing process and professional qualifications to care for more than one child besides their own (Childcare.gov n.d.). Childcare regulation not only affects the decisions of parents, but also greatly affects childcare professionals and business owners who invest energy and resources in compliance.

Conclusion

The Childcare Regulation Index was constructed to help visualize the childcare options that are available to U.S. families as well as the conditions that entrepreneurs face if they are considering becoming licensed and entering this industry. Childcare access and affordability are central concerns for growing families; the regulatory environment of the industry is one place to look as we seek answers and improvements.

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