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Authorization to Work: The Prevalence of Occupational Licensing in New England

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Proponents of occupational licensing—a policy that requires workers to obtain a government-awarded credential before they can legally practice certain professions—argue that it can reduce safety risks to consumers and improve the general quality of goods and services. Opponents argue that, given the mixed evidence of the policy's benefits to consumers, it may needlessly impede workers' ability to enter some professions (Jackson 2023a, 2023b; Sweetland and Carpenter 2022).

This debate is particularly relevant to New England, where, according to this Regional Brief's estimates, occupational licensing is more prevalent than in the United States.[1] That is, relative to the rest of the country, a larger share of workers in the region are employed in professions licensed by the state government.[2] Indeed, the licensing rates in Rhode Island and Connecticut are among the highest in the nation. Vermont's rate, on the other hand, is among the lowest. In addition, the rate of licensing varies within the New England states, especially Massachusetts, due to intrastate differences in workers' occupations.

Key Takeaways

Occupational licensing—government regulation requiring a license to practice particular professions—is more prevalent in New England than in the United States; the licensing rates in Rhode Island and Connecticut are among the highest in the nation.

The prevalence of occupational licensing varies within the New England states, primarily due to intrastate differences in workers' occupations.

Occupational-licensing prevalence is associated with labor-market institutions and conditions: States with higher rates of unionization and unemployment generally exhibit higher licensing rates, especially in New England.

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Our analysis also indicates that licensing prevalence is related to labor-market institutions and conditions. Specifically, states with higher rates of unionization and unemployment have higher rates of licensing, especially in New England. Thus, occupational licensing in the region particularly appears to be linked to labor-market costs, which has implications for assessing whether the rates of licensing within the region's states are optimal.

We analyze a sample of 54 professions using data on occupational licensing from Knepper et al. (2022). The occupations range from barber to emergency medical technician to public preschool teacher. Each of the occupations we selected for our analysis is recognized by the US Bureau of Labor Statistics (BLS), is licensed in at least one US state, and has average earnings no greater than the national average earnings for all jobs. We also use data on employed workers, with locations based on place of residence, from the Current Population Survey (CPS) and the American Community Survey (ACS), as well as data on state-level rates of unionization and unemployment from the BLS (Flood et al. 2022, Ruggles et. al 2022).[3]

Prevalence Is Greater in New England but Varies across the Region

Table 1 displays the occupational licensing rates of the New England states in 2022 as well as the corresponding regional and national rankings (including the District of Columbia). As noted, based on the 54 occupations in our sample, the prevalence of occupational licensing in the region (54.8 percent) surpasses the prevalence in the United States (51.9 percent) as a whole. Licensing rates in Rhode Island, Connecticut, and New Hampshire are greater than the national rate, whereas the rates in Massachusetts, Maine, and Vermont fall below it.

Table 1: Licensing Prevalence in New England Compared with the United States, 2022

| Share of Analyzed Workers in Licensed State-Occupation Pairings		
State	Rank (NE/US)	2022 Value (Monthly Average in %)
CT	2/11	65.6
MA	4/24	51.3
ME	5/26	50.7
NH	3/19	54.7
RI	1/5	72.3
VT	6/47	18.7

Note(s): The US ranking for states includes the District of Columbia. Licensing prevalence is calculated using information on workers employed in 54 analyzed occupations.
Source(s): Current Population Survey 2022, Knepper et al. (2022), and authors' calculations.

State-level licensing rates in the region encompass a range of 53.6 percentage points, indicating large differences in prevalence across the six states. This wide range is driven primarily by Vermont, where, at 18.7 percent, the share of workers who are licensed is the fourth smallest in the United States. Conversely, the shares in Rhode Island (72.3 percent) and Connecticut (65.6 percent) rank fifth and 11th in the nation,

respectively. The licensing rates in New Hampshire (54.7 percent), Massachusetts (51.3 percent), and Maine (50.7 percent) are comparable to each other, with a range of just 4 percentage points among them.

The prevalence of licensing varies widely within, as well across, the New England states. Figure 1 maps quintiles of the region's 2022 shares of employed workers in Public Use Microdata Areas (PUMAs, which are US Census areas of at least 100,000 people) who are in licensed occupations.[4]

Figure 1: Licensing Prevalence across Areas within New England States, 2022

Share of Analyzed Workers
Who Are Licensed (in %)

- 67–83
- 58–67
- 49–58
- 42–49
- 15–42
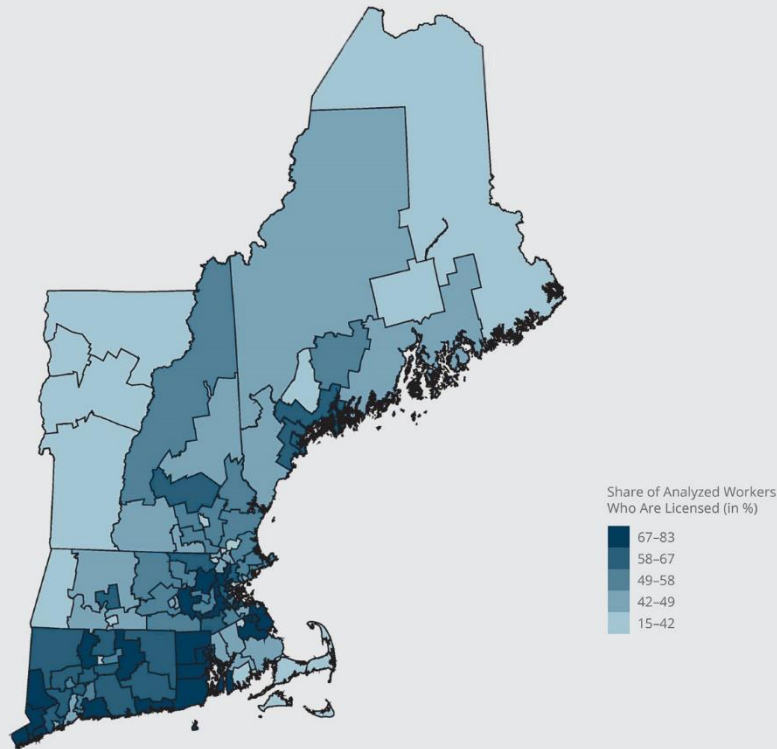
Note(s): Intrastate areas shown in the figure are US Census Public Use Microdata Areas (PUMAs). PUMAs are defined by the US Census as non-overlapping, statistical geographic areas that partition each state or equivalent entity into geographic areas containing no fewer than 100,000 people each. Color-coded quintiles for the share of licensed workers in a PUMA are displayed in the figure legend. These quintiles have ranges of values that are mutually exclusive at a greater degree of precision than the rounded values shown in the figure. Licensing prevalence is calculated using information on workers employed in 54 analyzed occupations.
Source(s): American Community Survey 2022, Knepper et al. (2022), and authors' calculations.

Among the New England states, Vermont has the least variation in licensing prevalence, ranging from 14.8 percent (Central Vermont) to 27.4 percent (Southern Vermont). Rhode Island follows closely, with licensing prevalence ranging from 64.8 percent (Pawtucket Central Falls and East Providence Cities) to 82.9 percent (Newport City). In addition to exhibiting the least variation, the licensing rates in Vermont and Rhode Island PUMAs reflect only the lowest and highest quintiles, respectively. This finding suggests that throughout each state, workers are employed in similar types of occupations.
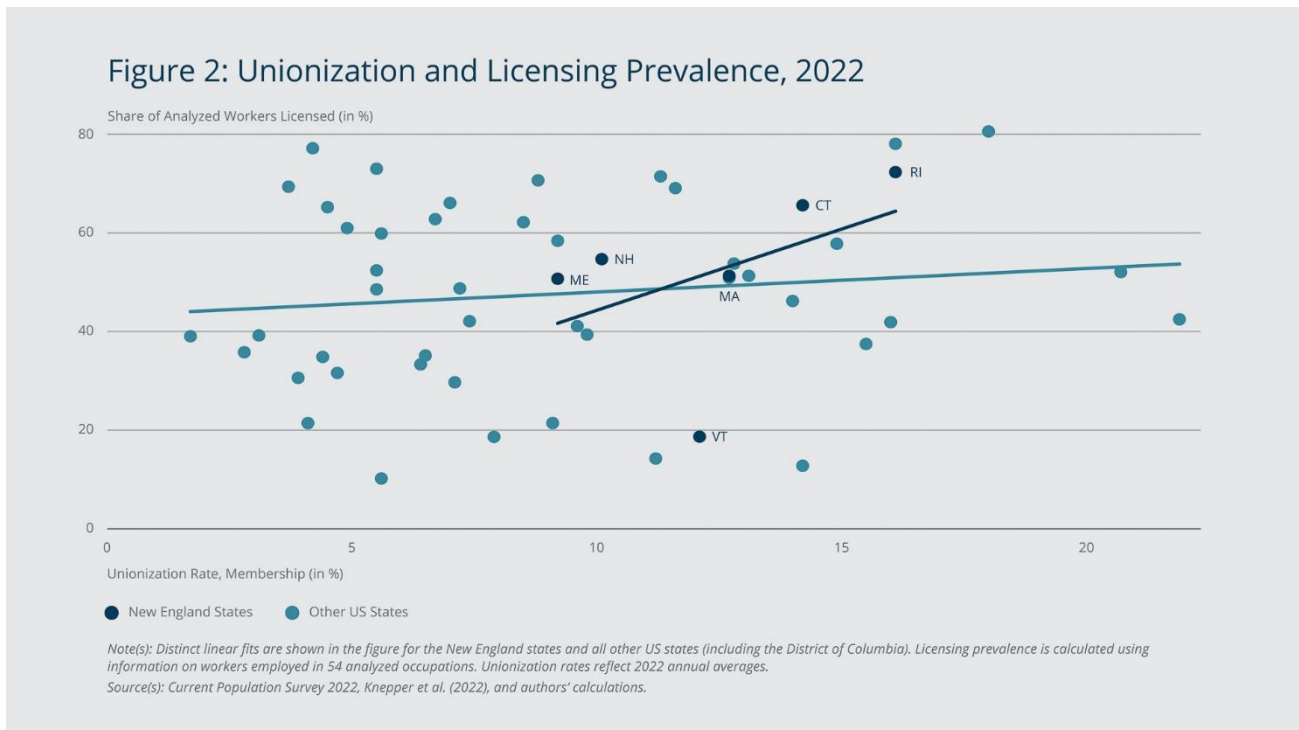
Conversely, Massachusetts displays the most variation in licensing prevalence, with a low of 29.6 percent (Cambridge) and a high of 72.9 percent (Lexington, Burlington, and Wilmington). Areas clustered around

Boston appear to have the highest licensing rates in the state. High rates of licensing also occur near the most populous cities in Connecticut (Bridgeport), Maine (Portland), and Rhode Island (Providence).

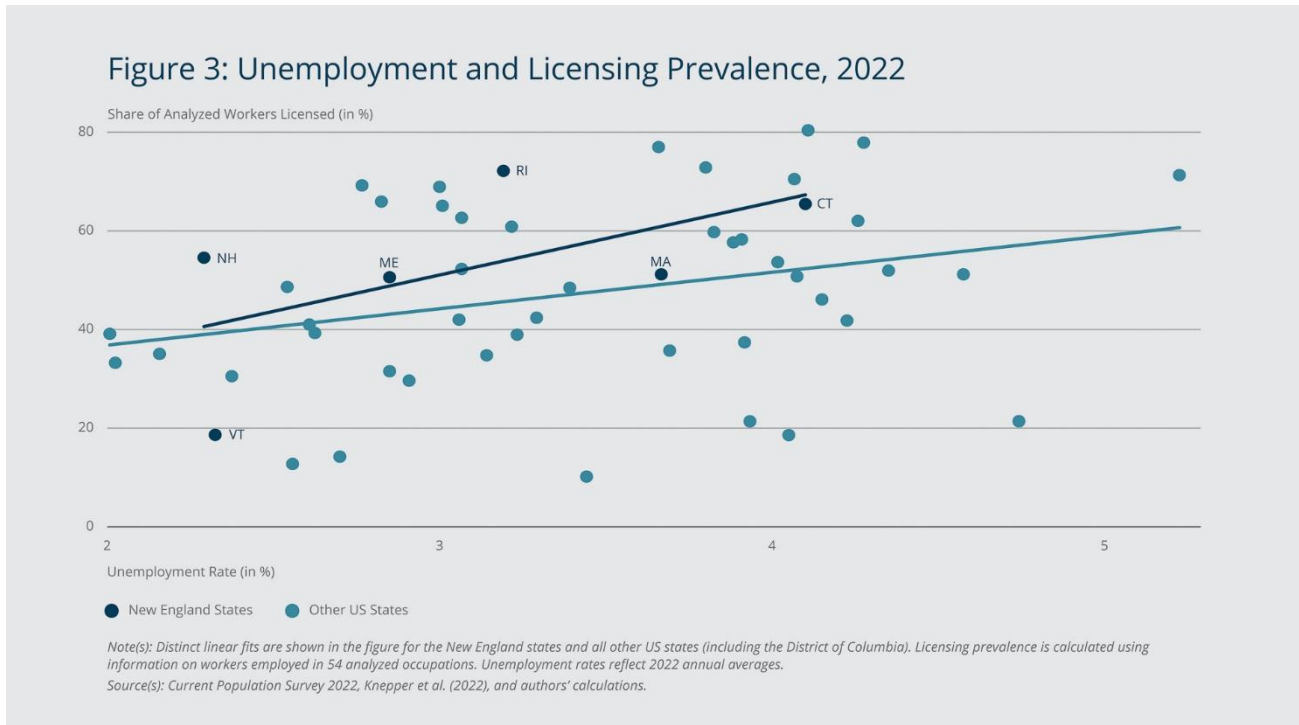## Unionization, Unemployment Relate Positively to Licensing Rate

Determining the optimal amount of occupational licensing in New England may require quantifying the policy's labor-market costs resulting from potential barriers to worker entry and comparing those costs with the estimated product-market benefits of the policy due to possible improvements in the safety and quality of goods and services for consumers. While that determination is outside the scope of this brief, examining the association between licensing prevalence in an area and local labor-market institutions and conditions can help inform how local licensing rates relate to area-specific labor-market costs. Findings from such analysis may provide guidance in determining whether the area-specific product-market benefits are large enough for the observed licensing rate to be considered optimal.

We focus on the rate of union membership as a measure of labor market institutions. Because a union, in theory, can act as a barrier to entry for workers seeking employment in a profession, higher rates of unionization can enlarge the pool of workers looking for jobs and thus raise a worker's cost of obtaining a position—that is, make it more difficult—or reduce an employer's cost of filling a position.[5] Earlier research shows that licensing prevalence in the United States has risen as the rate of union membership has fallen (Kleiner and Krueger 2013). This pattern reflects partly the decline of manufacturing, an industry where unions have traditionally been more prominent, and the growth of services, where licensing is more common than in other industries. While this trend involving rising rates of licensing and declining unionization is observed for the United States as a whole over time, it is not necessarily apparent across areas of the country at a given point in time.

Figure 2: Unionization and Licensing Prevalence, 2022

Note(s): Distinct linear fits are shown in the figure for the New England states and all other US states (including the District of Columbia). Licensing prevalence is calculated using information on workers employed in 54 analyzed occupations. Unionization rates reflect 2022 annual averages.
Source(s): Current Population Survey 2022, Knepper et al. (2022), and authors' calculations.

Indeed, the scatterplot and linear fit in Figure 2 show that in 2022, states with higher rates of unionization (2022 annual average) had modestly higher rates of licensing, and more so in New England. Specifically, a 1 percentage point increase in the unionization rate across states is mildly associated with a 3.3 percentage point increase in the licensing rate among states in New England compared with a weaker increase of 0.5 percentage point among states outside of New England.[6] We observe a similar positive relationship when examining union representation, a broader measure of unionization that focuses on whether workers are covered by a union regardless of membership status. Thus, licensing in the region is somewhat related to labor-market institutions, as reflected by measures of unionization.

Labor underutilization likely also has implications for labor-market costs to workers and employers, once again in terms of the probable ease of securing or filling an available position, all else being equal; that is, when underutilization is high as opposed to low, securing a job is more difficult, and filling a position is easier. The scatterplot and fitted lines in Figure 3 illustrate that states with higher rates of labor underutilization, measured as unemployment (2022 annual average), had notably higher rates of licensing in 2022, and to some extent, more so in New England. A 1 percentage point increase in the unemployment rate across states is roughly associated with a 14.8 percentage point increase in the licensing rate among the New England states compared with a robust, 7.4 percentage point increase among states outside the region.[7] We find a similarly positive relationship when examining the U-6 rate, a broader measure of labor underutilization that incorporates marginally attached workers who are not in the labor force and also considers workers employed part-time for economic reasons. Therefore, like unionization, labor-market conditions, as reflected by measures of labor underutilization, have a somewhat stronger link to licensing in New England than in the rest of the country.

Figure 3: Unemployment and Licensing Prevalence, 2022

Note(s): Distinct linear fits are shown in the figure for the New England states and all other US states (including the District of Columbia). Licensing prevalence is calculated using information on workers employed in 54 analyzed occupations. Unemployment rates reflect 2022 annual averages.
Source(s): Current Population Survey 2022, Knepper et al. (2022), and authors' calculations.

Implications for Licensing Policy in New England

Given the greater prominence of occupational licensing in New England, particularly in Rhode Island and Connecticut, and the potential impact on labor and product markets, understanding licensing prevalence is critical for policy discussions within the region.

Determining an optimal amount of licensing for the New England states is beyond the scope of this brief. Such an assessment would require evaluating the labor-market costs and product-market benefits of licensing compared with the costs and benefits of policy alternatives such as certification, inspections, or consumer reviews. However, as noted, in New England particularly, licensing prevalence is linked to labor-market costs, as measured by rates of unionization and unemployment. Such costs have different interpretations depending on whether they are viewed from the perspective of workers or employers. Higher rates of unionization and unemployment, all else being equal, may increase the difficulty of obtaining a position for a worker. Conversely, lower rates of unionization and unemployment, all else being equal, may increase the difficulty of filling a position for an employer.

Despite different interpretations, both perspectives arrive at the same policy implication: When labor-market costs to workers are elevated or those costs to employers are diminished, greater product-market benefits to consumers are needed to rationalize the comparatively higher licensing prevalence in the region as being optimal.

Endnotes

1. Prevalence of occupational licensing is reflected by the share of employed workers in an area who are in certain licensed professions. Observed patterns are largely similar when we use the share of state-occupation pairs that are licensed as an alternative measure of occupational-licensing prevalence (a measure applied by Jackson 2023b, Figure 5). We do not pursue this approach as the focal measure of licensing so that the distribution of worker professions can be considered when determining prevalence, which also allows us to examine intrastate differences in licensing rates. Additionally, we do not estimate the prevalence of occupational licensing using self-reported measures of licensing due to concerns about measurement error (see Jackson 2023a).

2. Occupational licenses can be issued by the federal or local government, but they are typically awarded by the state government. This study therefore focuses solely on state-level licensing. In New England, workers regularly obtain occupational licenses in exchange for a fee and often after passing an exam (Jackson 2023b).

3. Knepper et al. (2022) includes state-level licensing policy information on 102 occupations. Following Jackson (2023a, 2023b), we impose sample restrictions for data quality and then link the licensing policy data to ACS and CPS workers at the state-occupation level. The resulting sample of analyzed workers reflects 54 occupations. Contrary to Jackson (2023a, 2023b), the sample of 54 occupations in our analysis includes the "packer" occupation and excludes the "milk sampler" occupation. This slight disparity in analyzed professions is due to differences across the studies regarding the sample restrictions imposed for workers in the CPS. Specifically, analysis in Jackson (2023a, 2023b) examines the period from 2015 through 2022 and also uses longitudinal information for each worker, while this brief focuses on 2022 and relies solely on cross-sectional information. We create and implement sample weights so that estimated statistics represent the full populations of interest. Nevertheless, the calculated licensing rates correspond to the sample of analyzed workers and occupations.

4. See "Public Use Microdata Areas (PUMAs)," US Census Bureau, https://www.census.gov/programs-surveys/geography/guidance/geo-areas/pumas.html, accessed June 18, 2024. Note that we examine state-level licensing policies in this brief, and the intrastate variation displayed in the figure is not attributable to distinct licensing polices between PUMAs in the same state. Rather, this variation is driven by PUMA-level differences in the availability of occupations.
5. In a basic economic model of the labor market for a profession, one possible effect of unions is an inward shift of labor supply. In theory, such a shift would typically result in reduced employment in the profession and higher wages for the workers who remain employed in the profession.
6. The relationship between unionization rates and licensing rates is not statistically significant at conventional levels in regression analysis of the New England states or in a separate regression focusing on all other US states. However, the association in the region becomes significant if Vermont is treated as an outlier and excluded from the regression. Running a regression using all US states but allowing for a unionization–licensing relationship in New England that is distinct from the relationship in the rest of the country results in neither association being statistically significant, although, once again, the association in New England becomes significant if Vermont is excluded.
7. The relationship between unemployment rates and licensing rates is not statistically significant at conventional levels in regression analysis of New England states but is statistically significant in a separate regression focusing on all other US states. Additionally, the association in the region remains not significant if Vermont is treated as an outlier and excluded from the regression. Running a regression using all states but allowing for an unemployment–licensing relationship in New England that is distinct from the relationship in the rest of the country results in the New England association becoming nearly statistically significant and the US association remaining significant; however, the New England association becomes significant if Vermont is excluded.

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Acknowledgments

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References

Flood, Sarah, Miriam King, Renae Rodgers, Steven Ruggles, J. Robert Warren, and Michael Westberry. 2022. *Integrated Public Use Microdata Series, Current Population Survey*. Version 10.0 [data set]. Minneapolis, MN: IPUMS.

Jackson, Osborne. 2023a. "Occupational Licensing and Occupational Mobility." Research Department Working Paper 23-18. Boston, MA: Federal Reserve Bank of Boston.

Jackson, Osborne. 2023b. "Occupational Licensing and Occupational Mobility in New England." New England Public Policy Center Research Report 23-1. Boston, MA: Federal Reserve Bank of Boston.

Kleiner, Morris M., and Alan B. Krueger. 2013. "Analyzing the Extent and Influence of Occupational Licensing on the Labor Market." *Journal of Labor Economics* 31(2): S173–S202.

Knepper, Lisa, Darwyyn Deyo, Kyle Sweetland, Jason Tiezzi, and Alec Mena. 2022. *License to Work: A National Study of Burdens from Occupational Licensing*. Arlington, VA: Institute for Justice.

Ruggles, Steven, Sarah Flood, Ronald Goeken, Megan Schouweiler, and Matthew Sobek. 2022. *Integrated Public Use Microdata Series, USA*. Version 12.0 [data set]. Minneapolis, MN: IPUMS.

Sweetland, Kyle, and Dick M. Carpenter II. 2022. *Raising Barriers, Not Quality: Occupational Licensing Fails to Improve Services*. Arlington, VA: Institute for Justice.