

BARBER LICENSURE AND THE SUPPLY OF BARBER SHOPS: EVIDENCE FROM U.S. STATES

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The Institute of Justice, a public interest law firm in Washington, D.C., focuses part of its litigation on issues of the ability of citizens to enter and compete in markets unburdened by unnecessary regulations. In a study titled *License to Work: A National Study of Burdens from Occupational Licensing* (Carpenter et al. 2012), the Institute reports that “in the early 1950s, only one in 20 U.S. workers needed the government’s permission to pursue their chosen occupation.” In 2008, that number was estimated to be one in three (Kleiner and Krueger 2013).

Given its pervasiveness, occupational licensing has long been a subject of debate as to whether it serves to protect the public interest or the interests of special interest groups by acting as a barrier to entry. Proponents of occupational licensing argue occupational licensing enables better quality services to consumers that would otherwise not have been provided (Arrow 1971). It has also been argued that occupational licensure encourages prospective entrepreneurs to accumulate human capital in their occupation of choice (Akerlof 1970, Shapiro 1986). Opponents, however, argue that occupational licensing gives rise to regulatory capture (Stigler 1971) and results in barriers to entry that disproportionately affect the poor and

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disadvantaged (Dorsey 1983, Bernstein 1994). Supporting the claim of regulatory capture is Kleiner (2000), who reports that more often than not members of licensing boards are chosen from the occupations being licensed.

The literature on occupational licensure has typically focused on the effects of licensure on wages and safety. A few articles focus on licensure as a barrier to entry, but those studies largely deal with high-skilled labor markets. Carpenter and Stephenson (2006), for instance, find that 150 hours of college course work necessary to sit for the CPA exam reduces the number of candidates sitting for the CPA exam by 60 percent.

In this article, we focus on occupational licensure as a barrier to entry for one relatively low-skilled occupation—barbering. The barbering profession was one among many professions to be licensed early in the United States, with Minnesota passing the first barber licensing law in 1897 (Thornton and Weintraub 1979). Alabama was the last state to license barbers in 2013 (Burkhalter 2014). Today all states and the District of Columbia regulate barbering. In 1976, barbering was heavily regulated with average education and experience requirements of 1,460 hours and a mean apprenticeship period of approximately 18 months (Thornton and Weintraub 1979). By 2012, average education and experience requirements were 890 days and average fee requirements were \$330 (Carpenter et al. 2012).

While many studies have focused on occupational regulation and economic outcome variables, such as changes in earnings and employment (Kleiner 2000) and migration (Mulholland and Young 2016), few studies have examined the impact of occupational regulatory burdens on low-income professions such as barbering. Some previous studies have estimated the relationship between regulatory burdens and the supply of barbers (Fuchs and Wilburn 1967, Maurizi 1974, Thornton and Weintraub 1979). Thornton and Weintraub (1979) find that average minimum grade level affects the supply of barbers. Timmons and Thornton (2010) find that state barber licensure has increased barber earnings by between 11 and 22 percent.

In this study, we estimate the relationship between the state-level regulatory burden on the practice of barbering and the number of barber shops in a state. Since many barber shops are one- or two-chair shops, restrictions on the profession of barbering are

restrictions on the number of barber shops. We hypothesize that states with higher regulatory burdens on becoming a barber should have fewer barber shops per capita. Utilizing the one year of regulatory data on barbering from Carpenter et al. (2012), we find that the number of exams required to become a barber in a state is negatively related to the number of barber shops per capita in that year. Conversely, we find that fees, minimum grade levels, and minimum age requirements do not explain state variation in the number of barber shops per capita.

Data

We use barber shops per 100,000 inhabitants for all 50 states and the District of Columbia in 2011 as our measure of entrepreneurial barber activity. Our data come from the U.S. Census Bureau's Nonemployer Statistics database, and we use the North American Industry Classification System (NAICS) code for barber shops (812111) to identify "establishments known as barber shops or men's hair stylist shops engaged in cutting, trimming, and styling boys' and men's hair; and/or shaving and trimming men's beards." State population in 2011 was obtained from the U.S. Census Bureau. The dependent variable is the authors' calculation with scores ranging from 14.0 (Utah) to 92.8 (Alabama) for each state. The score is calculated by dividing each state's total barber shop establishments by the state population. For example, Alabama's score means that, on average, there are approximately 93 barber shops for every 100,000 residents.

There are three categories of explanatory variables in this study which might affect the number of barber shops per capita: Measures of Occupational Regulation, State Controls, and Attributes of Entrepreneurs. Our major variables of interest fall in the Measures of Occupational Regulation category and consist of variables representing governmental burdens imposed by state governments on prospective barbers. The variables included in this category are average number of exams, average fees, average minimum grade level, and average minimum age imposed by states on barbers to acquire a license. These variables are reported from *License to Work: A National Study of Burdens from Occupational Licensing*. While Carpenter et al. (2012) provide regulatory information for 102 occupations in which the average income is below the national

average, we use only their measures of occupational licensure for barbering.¹

All variables in this category are reported in their original form. *Fees* are in dollars and represent the payments necessary to achieve an initial license. Continuing education fees and renewal fees are not included. *Number of Exams* represent the number of written and practical exams required in a state to get a license. *Minimum Grade* is the minimum education level necessary to apply for a license. States without a minimum grade level receive a 0; states with an eighth-grade minimum receive an 8, with a high school minimum a 12, and so on. For barber licensure, no state requires more than a 12th grade education. *Minimum Age* is the minimum age an individual in the state must be to apply for barber licensure and varies across states from 0 to 18. Many states, such as Iowa, have both a minimum grade and age requirement.

In addition to regulatory burdens, state-specific variables related to the economic or social environment might also influence the decision to become a barber and open a barber shop. We primarily draw on the entrepreneurship literature as the motivation for these controls, which are all measured for 2011. For example, the *Unemployment Rate* is found to negatively affect self-employment across OECD countries (Blanchflower 2000). At the level of U.S. states, however, the results are mixed. Unemployment is found to have an insignificant relationship with new business starts (Carree 2002) and a negative relationship with latent entrepreneurship (Gohmann 2012). However, Gohmann and Fernandez (2014) find that unemployment Granger-causes proprietorships. In addition, Coomes, Fernandez, and Gohmann (2013) find that the unemployment rate is positively related to proprietorships at the MSA level. *Unemployment Rate* is obtained from the Bureau of Labor Statistics. The role of median income in influencing entrepreneurship is unclear (Yago, Barth, and Zeidman 2007), but is generally thought to positively affect the number of new businesses as individuals seek greater diversity in consumption. *Median Household*

¹Carpenter et al. (2012) also provide a measure of the days of education and experience necessary to achieve a license. Doing so requires a number of assumptions, however, and we prefer to focus on the directly comparable features of barber regulation listed such as fees and number of exams. Inclusion of the number of days of education and experience does not qualitatively affect our empirical results.

Income for each state and the District of Columbia was obtained from the U.S. Census Bureau. Crime has been found to negatively affect entrepreneurship (Rosenthal and Ross 2010), and we use *Property Crimes* from the FBI's *Uniform Crime Reports*.

In addition to regulatory burden variables and state control variables that affect entrepreneurship, we also include demographic controls to capture the attributes of those most likely to start a business. The variables in this category include percentage of labor force that is *Male*, percentage of labor force that is *White*, and *Median Age* of state residents. All demographic data are for 2011 and were obtained from the Bureau of Labor Statistics and the U.S. Census Bureau. Kreft and Sobel (2005) and Hall and Sobel (2008) find that the percentage of labor force that is male and white, as well as the median age within the state, affect entrepreneurship. Similarly, Langowitz and Minniti (2007) find that the probability of men being entrepreneurs is higher than women. Table 1 presents summary statistics for all variables employed in our article.

The dependent variable, *Barber Shops per 100,000 Residents*, has a mean of 38.80. This means that, on average, there were

TABLE 1
SUMMARY STATISTICS

Variable	Mean	St. Dev.	Min.	Max.
Barber Shops per 100,000 Residents	38.80	20.87	14.0	92.8
Number of Exams	2.20	0.69	0.0	4.0
Fees	127.63	70.25	0.0	330.0
Minimum Grade	6.78	5.21	0.0	12.0
Minimum Age	13.31	7.08	0.0	18.0
White	79.73	13.33	26.03	95.48
Male	49.33	0.79	47.3	51.9
Income	50,686.47	7,475.12	39,856.0	68,876.0
Unemployment Rate	8.17	1.93	3.5	13.1
Property Crimes	2,863.06	670.07	1,395.2	4,795.5
Median Age	37.73	2.38	29.9	43.5

NOTES: N = 51 (all U.S. states and the District of Columbia). For sources of data, see discussion in text.

approximately 39 barber shops per 100,000 residents per state throughout the United States in 2011. There is significant variation across states, however, in the number of barber shops. While Utah had only 14 barber shops per 100,000 residents, Alabama had approximately 93 barber shops per 100,000 of its residents.

There is a lot of variation in terms of *Number of Exams*. Alabama requires no exams while Minnesota and Nevada require four exams. *Fees* varied considerably as well from \$0 in the District of Columbia to \$330 in Kentucky. *Minimum Grade* requirements also varied across states with many requiring no educational attainment level while others specifically require at least a high school or equivalent degree. In terms of *Minimum Age*, many states do not have a minimum age requirement to be a barber while in other states one has to be at least 18 years old.

Unemployment rates vary across states as well. North Dakota had the lowest unemployment rate of 3.5 percent while Nevada had the highest unemployment rate of 13.1 percent. Property crime rates across states also vary notably. Rhode Island had the lowest property crime rate with approximately 1,395 crimes per 100,000 inhabitants, while Washington, D.C., had the most property crimes per 100,000 inhabitants. There is almost a 1.5 times difference between the state with the lowest median income and the state with the highest median income; Kentucky has median income of \$39,856 while Maryland has a median income of \$68,876. Percent of male population in a state also varies with 47.3 percent in District of Columbia to 51.9 percent in Alaska. There is a significant difference within states in terms of racial composition as well. While approximately 26 percent of Hawaii's population is white, 95.48 percent of Vermont's population is white.

Empirical Approach and Results

Since we are limited in terms of numbers of observations in our data set, we employ a simple linear OLS regression model for our empirical analysis. Our model is represented as follows:

$$\text{BARBSHOPS} = \beta_0 + \beta \text{REGULATION} + \gamma \text{STATE} \\ + \delta \text{ENTREPRENEUR} + \epsilon$$

where β , γ , and δ are row vectors and *REGULATION*, *STATE*, and *ENTREPRENEUR* are column vectors. *BARBSHOPS* represents

total barber shops per capita in U.S. states. As mentioned in the previous section, *REGULATION* represents barber-specific regulatory variables; it consists of *Number of Exams*, *Fees*, *Minimum Grade*, and *Minimum Age*. *STATE* represents state controls and therefore includes *Unemployment Rate*, *Property Crimes*, and *Income*. Attributes of entrepreneurs are represented by *ENTREPRENEUR* and consist of *Male*, *White*, and *Median Age*.

Table 2 shows the effect of state-level barber regulations on the total number of barber shops per capita in 2011. Specification 1 represents a parsimonious specification containing only the primary variables of interest. While this specification does not explain the full effect of the explanatory variables on the dependent variable, it helps to outline the basic relationship between them. The signs of *Minimum Grade*, *Fees*, and *Number of Exams* are as expected, with *Number of Exams* statistically significant at the 1 percent level. The sign on *Minimum Age* is positive although not statistically significant.

In Specification 2, we add basic entrepreneur characteristics controls standard in the literature. We find that *Number of Exams* is still significant at the 1 percent level. *Fees* continue to be negatively associated with the dependent variable, but is still statistically insignificant. *Male* exhibits a strong negative relationship at the 1 percent level on the number of barber shops. *White* also is negatively related to the number of barber shops at the 5 percent level. However, the signs for *Male* and *White* exhibit opposite signs than what was previously found for other measures of entrepreneurship (Kreft and Sobel 2005, Hall and Sobel 2008).

Specification 3 adds basic state controls standard in the literature—median household income and the unemployment rate. The key result is that *Number of Exams* continues to exhibit a significant negative effect on the level of barber shops in a state at the 1 percent level. *Income* leads to fewer barber shops per capita, although the economic magnitude is small. The sign on *Unemployment Rate* is positive but statistically insignificant (Blanchflower 2000).

Finally, in Specification 4, we add *Property Crimes* and *Median Age*. *Number of Exams* continues to be negatively related to the number of barbershops per capita at the 1 percent level. *White*, *Male*, and *Income* are statistically significant as well as *Median Age*. *Property Crimes* are not significant. This full specification explains 71 percent of the variation in barber shops per capita in 2011 across U.S. states.

TABLE 2
STATE-LEVEL BARBER REGULATIONS AND NUMBER OF
BARBER SHOPS PER CAPITA

Variable	(1)	(2)	(3)	(4)
Number of Exams	-13.195*** (3.97)	-9.079*** (3.14)	-8.811*** (2.76)	-8.141*** (2.74)
Fees	-0.025 (0.04)	-0.003 (0.03)	-0.010 (0.03)	-0.020 (0.03)
Minimum Grade	-0.431 (0.56)	0.308 (0.48)	0.308 (0.43)	0.408 (0.44)
Minimum Age	0.622 (0.41)	0.317 (0.32)	-0.093 (0.30)	-0.078 (0.30)
White		-0.414** (0.19)	-0.394** (0.17)	-0.387** (0.18)
Male		-13.243*** (2.82)	-11.255*** (2.58)	-13.914*** (2.90)
Income			-0.001*** (0.00)	-0.001*** (0.00)
Unemployment Rate			1.834 (1.12)	1.452 (1.14)
Property Crimes				-0.004 (0.00)
Median Age				-1.713* (0.96)
R-squared	0.23	0.57	0.68	0.71

NOTE: Dependent variable is the number of barber shops per 100,000 state residents.

N = 51 in all specifications. *, **, and *** denote statistical significance at the 10, 5, and 1% levels, respectively. Numbers in parentheses are absolute standard errors. Constant included but not reported.

Conclusion

Given the growth in occupational licensure and the importance of barriers to entry for low-income workers, we analyzed the effect of barber licensure on the number of barber shops across U.S. states. We find that the number of required exams is robustly associated in

a negative way with the number of barber shops per capita in a state. However, we find that other restrictions such as age requirements and fees have no consistent relationship with the number of barber shops. This might be the result of our limited data set. We feel that this exploratory look at the issue of barber licensure opens up future research in this area, especially research that can establish more of a causal link.

Further research could focus on the origins of these laws, especially since historically many of these laws have their roots in discrimination. Bernstein (1994), for example, details how licensing laws have historically been used to reduce the number of African-Americans in certain occupations such as barbering. As Kuznicki (2009) points out, government power exercised through things like occupational licensure is never neutral when it comes to race. Our results also say nothing about the efficacy of the restrictions in terms of the quality of haircuts received in states with more stringent regulations. Carpenter (2012) is a good example of the type of applied research that could be done in this area, as he finds no difference between licensed and unlicensed florists. Finally, it would be fruitful to further investigate the vast differences across states in the amount of regulation of certain industries, such as barbering, from a political economy perspective, in order to better understand the various special interests at play.

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