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POLICY BRIEF

A Response to "New Closed Shop: The Economic and Structural Effects of Occupational Licensure"

Darwyyn Deyo, Morris M. Kleiner, and Edward Timmons

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Occupational licensing, a practice whereby individuals must get permission from the government to work for pay, impacts about a fifth of American workers in jobs from doctor, dentist, and barber to florist, travel agent, upholsterer, and more.[1] Historically, studies on the effects of occupational licensing have found that when a job becomes subject to licensure, employment in that occupation falls and wages rise.[2] In addition, prices for consumers usually go up when buying services in licensed industries.[3] These results follow the standard decrease—or shift to the left—of the supply curve often taught in a principles of economics class. However, a new sociological study on occupational licensing in the *American Sociological Review* has been generating attention because it finds that employment increases in licensed occupations and that wages do not increase.[4] The study uses a newly constructed state-level dataset on licensing statutes and pooled cross-sectional data from the Current Population Survey (CPS) from 1983 through 2012 to address the impact of licensing on employment and wages. The results of the study are that the supply of labor increases as a result of licensing, the demand for licensed services decreases, wages are not affected by licensing, and there is increased entry into licensed professions by historically disadvantaged groups. However, the study has many issues that limit the validity of the findings for policy analysis and decision-making. We will focus on three major issues in the study: (1) the study does not begin with a theoretical framework, (2) there are issues with the data used to generate the study results, and (3) the study suffers from flaws in its empirical methodology. In the sections that follow we highlight several of the problems that we have identified.

IS THEORY JUSTIFYING THE RESULTS OR VICE VERSA?

Although using varied datasets may produce novel results, if these results exist without a theoretical or logical context it is difficult to explain *why* a result exists. Correlation is not the same as causation. Before the results of the empirical study were considered, the author should have set forth a formal theoretical model or consistently logical approach that explains why employment would increase after the passage of occupational licensing. Instead, the paper first presents a series of empirical results that defies existing economic theory and common sense, and then attempts to produce a theory that is not formally developed. In addition, little attempt is made to explain the new results in the context of the existing literature. Instead, the author seems to disregard the approaches and findings of decades of existing economic research and empirical results on the effects of licensing without offering a rigorous alternative model.

Despite occupational licensing often receiving public support on the grounds of improving public health and safety, the research literature suggests that occupational licensing significantly limits entry and employment opportunities in a given occupation.[5] Licensing may also increase demand or perceived quality because consumers consider a licensed service to be of higher quality and are willing to pay more for it.[6] Practitioners in licensed occupations often face multiple barriers to entry in that market, including requirements for several years of additional education and job training, passing exams set by state licensing boards (often overseen by their future competitors), and paying large entry fees upfront and on a yearly basis.[7] Defenders of occupational licensing argue in favor of these restrictions because, they claim, occupational licensing protects the public from undue harm from incompetents and charlatans.

The author's contribution to the theory on the effects of occupational licensing (provided after a discussion of the empirical results) is that licensing enhances entry into an occupation by formalizing entry requirements that were previously nonstandardized or that were applied unevenly from group to group. In the words of the author, "It is more appropriate to think of licensure not as the introduction of closure, but as a shift in the *type* of closure that entrants face."[8] The author also proposes a theory of "diffusion," suggesting that "the supply of labor increases in a licensed occupation as the license is adopted by a greater number of states."[9] However, this theory does not explain why the presence of more specific barriers to entry would make an occupation more attractive to potential new entrants compared with occupations that are unlicensed or less widely licensed. The theory also fails to explain why professional associations fiercely lobby to obtain and maintain occupational licensing. In addition, if we apply this theory to its logical conclusion, we would expect that when all states *separately* require occupational licensing, the labor supply for that occupation would be significantly higher than any comparable scenario with fewer licensed states. However, the author's own results contradict this theory, and an alternative theory of prestige and status is advanced instead.[10] Unfortunately, the author does not test this model of the evolution of licensing. Developing a more carefully defined theory prior to presenting the empirical results would have helped address these issues.

IS THE CPS AN APPROPRIATE DATASET FOR THE ANALYSIS?

The second major limitation of the study comes from the fact that the data sample used to generate the findings is extremely small, especially when considering that most licensing takes place at the state level. The study uses data from the CPS from 1983 to 2012, totaling about 4.6 million observations for individual employment and wages by states, years, and occupations in the full sample.[11] Although 4.6 million observations may appear to be a large number at first, this total is meant to represent individuals over 50 states over a span of 30 years.[12] That total breaks down to an average of 3,061 observations per state per year. Once the hundreds of occupations in the study are accounted for, the sample size is estimated to be in the single digits for each state, year, and occupation.[13] This is a small sample size, and is by no means large enough to estimate the effects of licensing on employment or wages. It is also likely that some occupations do not have multiple observations in a given state—especially in states with small populations such as Rhode Island and Wyoming—and for each year, making it even harder to estimate the effect of licensing on employment and wages over time. We also cannot assume there are representative observations for both licensed and unlicensed occupations with this sample size in each of the states. Even if the results confirmed previous findings about occupational licensing, this sample size would be too small. Further, the sample size used for the significant findings on wages and employment is actually about 1.8 million observations.[14]

In addition to the small sample size, the CPS fails to include wages for the self-employed. Previous estimates suggest that approximately 14 percent of licensed workers are self-employed.[15] As a result, the author excludes all self-employed workers from the analysis. All medical professions (e.g., doctor and dentist), where the barriers presented by occupational licensing are substantial, are ignored. The author does note this limitation, and a robustness check was performed on the pooled sample of all occupations, but this limitation is not fully addressed within the broader interpretation of the empirical findings.[16] This pooling approach also does not account for differences in self-employment across occupations. Using the pooled sample for the robustness tests would conflate the effects of licensing with the effects of occupation-specific factors related to the corresponding labor supply and wages.

FLAWS IN EMPIRICAL METHODOLOGY

Beyond providing insufficient justification of a new theory and using a dataset that is likely not appropriate for the analysis, the empirical methodology used in the study also has serious flaws. Combining approximately 462 occupations,[17] some of which have lengthy requirements for entry (such as dentist), with others (such as notary and manicurist) whose requirements are minimal, causes the estimates of the analysis to be biased downward. The merger of these occupations would naturally drive the results toward a finding of no effect. Unfortunately, the skill level or fixed cost required to be licensed are not taken into account in the analysis.

Perhaps most importantly, the author fails to differentiate occupational licensing "coverage," where there is a law governing the specific occupation, from "attainment," where the person has a specific government license to do the work in that state. In other words, engineers are universally licensed in the United States. That is, engineers are "covered" by occupational licensing statutes in all 50 states. However, most engineers are able to practice without a license depending on the nature of their work. In other words, most engineers do not have to "attain" the license in order to work. The same can be said for accountants. The author acknowledges this limitation, but also falsely claims that "this is a limitation existing in all studies of licensing and wages."[18] Studies using survey data by Morris Kleiner and Alan Krueger; Kleiner and Evgeny Vorotnikov; and Maury Gittleman, Mark Klee, and Kleiner are able to differentiate between coverage and attainment and consistently find evidence that licensing attainment results in increasing wages.[19] The failure to separately account for coverage and attainment downward-biases the study's results on employment and wages, and the author's discussion of this significant limitation is inadequate.

The study also makes a concerning error when calculating the primary results of the study. In the analysis that produces the surprising result of increased employment, the study uses a sample that is limited to observations for occupations that are at least "partially licensed after 1970."[20] This means that the analysis lacks a true control group with which to compare the effect of licensing on occupations. An appropriate control group for the author's analysis would require at least the inclusion of occupations that were never licensed, or comparing the same individuals or occupations before and after they were licensed. Although the control group of unlicensed occupations is currently unbalanced with the treatment group of licensed occupations, a careful study design could address these issues, and both licensed and unlicensed occupations could be included in this analysis. However, the CPS data would still not be the appropriate dataset for this study, given the methodology used by the author. The study includes occupations such as lawyer and doctor, where requirements are high, along with dog walker and florist, where requirements are small. The relevant question is what happens to people in the same occupation before and after licensing is required.[21] Further, if the CPS data are used, the number of occupations studied should be smaller and an effort should be made to make sure that the occupations are similar in terms of licensing requirements and other demographic factors. This will make sure that the study is comparing apples to apples, as opposed to apples to oranges. This issue undermines the fundamental validity of the study results.

In contrast to the Redbird 2017 study, extensive research and economic theory has found that occupational licensing restricts employment and increases wages for those already in the occupation, along with raising prices for consumers. One recent longitudinal study on licensing estimated the effects of "grandfathering" when occupational licensing is introduced. Grandfathering is a practice whereby existing practitioners of a newly licensed occupation are allowed to practice in the occupation but do not face the same entry costs to the market as future entrants.[22] The study considers a 75-year period (22 years of data) for 13 major universally licensed occupations (where

most individuals in the occupation had to obtain a license in order to work), utilizing a sample of more than 11 million observations. The study authors found that licensing was positively associated with wages for continuing and grandfathered workers, a result consistent with decades of occupational licensing research and economic theory.

Some of the issues in the study discussed here may have a plausible explanation that is not reflected in the paper. The author includes a note with a link to the author's website claiming that the newly constructed dataset on licensing restrictions is available.[23] Unfortunately, as of October 2018, a full year and a half after the publication of the study, the data are still not available for download. Until the author of the study shares her data and analysis files, it is difficult to understand which states and occupations are actually being over- or underrepresented, or what the estimates of licensing on employment and wages are actually capturing.

CONCLUSION

Licensing is an important policy issue. It impacts about a fifth of the American workforce and is a barrier to entry in many occupations where individuals could go into business for themselves. It raises prices for many American consumers, raises wages for large groups granted the privilege of working in the occupation, and may even reduce public health and safety or the quality of services received.[24] The study reviewed here fails to provide theory before results, uses a small sample to address the question, and includes methodological issues that undermine the fundamental findings. Future research utilizing longitudinal data should shed light on the long-term effects of occupational licensing on employment, wages, prices, and quality. However, given the policy issues at stake, it is important that research on occupational licensing be transparent and rigorous as more state and federal leaders engage in policy reforms.

ABOUT THE AUTHORS

Darwyyn Deyo is an assistant professor of economics at San Jose State University and an affiliate research fellow at the Harvey L. Neiman Health Policy Institute. Her research topics include law and economics, labor economics, and the economics of crime. Darwyyn earned a doctorate in economics and a masters in economics from George Mason University and a Bachelor of Science in Economics from Saint Mary's College of California. She formerly worked as a research fellow with the Harvey L. Neiman Health Policy Institute and was an affiliate scholar with the Center for Micro-Economic Policy Research at George Mason University.

Morris M. Kleiner is a professor at the Humphrey School of Public Affairs, and he teaches at the Center for Human Resources and Labor Studies, both at the University of Minnesota Twin Cities. He has received many university teaching awards for classes in public affairs, business and economics. He is a research associate in labor studies with the National Bureau of Economic Research in Cambridge, Massachusetts, and he serves as a senior scholar at the Opportunity and Inclusive Growth Institute at the Federal Reserve Bank of Minneapolis. He has published extensively in the top academic journals in labor economics and industrial relations, and is the author, coauthor, or coeditor of eight books, including three on occupational regulation. He has been an associate in employment policy with the Brookings Institution, a visiting scholar in the Harvard University economics department, a visiting researcher in the Industrial Relations Section at Princeton University, a visiting scholar at the W.E. Upjohn Institute for Employment Research, and a visiting professor and research fellow at the London School of Economics. He received a doctorate in economics from the University of Illinois at Urbana-Champaign.

Edward Timmons is a professor of economics and director of the Knee Center for the Study of Occupational Regulation at Saint Francis University. He completed his PhD in economics at Lehigh University. His research on the effects of occupational licensing has been published in the *Journal of Law and Economics*, the *Journal of Labor Research*, the *British Journal of Industrial Relations*, *Cato Journal*, *Health Policy*, *Monthly Labor Review*, and *Eastern Economic Journal*. His research has been heavily cited by the popular press, by the Federal Trade Commission, the Obama White House, and also in Senate and House hearings. His work has also been published by *U.S. News & World Report*, *The Hill*, the *Philadelphia Inquirer*, *Harvard Business Review*, the *Tampa Bay Times*, the *South Florida Sun Sentinel*, the *Detroit News*, the *Louisville Courier-Journal*, and the *Virginian-Pilot*. In May of 2014 he worked as a visiting research fellow at the Collegio Carlo Alberto in Moncalieri, Italy. He is a member of the Board of Policy Advisors of the Heartland Institute and has written papers for the Archbridge Institute, the James Madison Institute, the Mackinac Center, the Mercatus Center, and the Texas Public Policy Foundation.

NOTES

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7. Carpenter et al., *License to Work*.

8. Redbird, "The New Closed Shop?", 619.

9. Redbird, 615.

10. Redbird.

11. Redbird, 608.

12. Redbird.

13. Redbird, 609.

14. Redbird, 612; Redbird, 614.

15. Kleiner and Krueger, "Analyzing the Extent and Influence."

16. Kleiner and Krueger.

17. Redbird, "The New Closed Shop?," 609.

18. Redbird, 609.

19. Morris M. Kleiner and Alan B. Krueger, "The Prevalence and Effects of Occupational Licensing," *British Journal of Industrial Relations* 48, no. 4 (2010): 676–87; Morris M. Kleiner and Evgeny Vorotnikov, "Analyzing Occupational Licensing among the States," *Journal of Regulatory Economics* 52, no. 2 (2017): 132–58; Maury Gittleman, Mark Klee, and Morris M. Kleiner, "Analyzing the Labor Market Outcomes of Occupational Licensing," *Industrial Relations* 57, no. 1 (2017): 57–100.

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21. Suyoun Han and Morris M. Kleiner, "Analyzing the Influence of Occupational Licensing Duration and Grandfathering on Labor Market Outcomes" (NBER Working Paper No. 22810, National Bureau of Economic Research, Cambridge, MA, December 2017).

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23. Redbird, "The New Closed Shop?," 622.

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