MERCATUS CENTER
George Mason University

TESTIMONY

SETTING A SENSIBLE REDUCTION TARGET FOR OHIO'S ADMINISTRATIVE RULES

James Broughel
Senior Research Fellow, Mercatus Center at George Mason University

Ohio House of Representatives, Government Oversight Committee

September 28, 2021

Chair Wilkin, Vice Chair White, Ranking Member Sweeney, and members of the House Government Oversight Committee:

Thank you for the opportunity to submit this testimony. My name is James Broughel. I am a senior research fellow at the Mercatus Center at George Mason University and an adjunct professor at the Antonin Scalia Law School. My research focuses on regulatory institutions, economic analysis of regulations, and the effects of regulations on economic growth.

My testimony today centers around Senate Bill 9 (SB 9), which is currently being considered by this committee. Specifically, I have three main points to convey:

1. Regulations have unintended consequences. These include many regressive effects that disproportionately burden the most vulnerable Americans. Regulations can also increase mortality, which is a hard-learned lesson from the ongoing pandemic.
2. Some states are reviewing their regulatory codes, either in response to the pandemic or as a more general good-housekeeping reform. As part of these efforts, some states have set reductions targets in range of 25 to 33 percent in recent years.
3. Regulatory reductions in this range are achievable, given recent experiences in states such as Idaho and Missouri, with no apparent adverse effects on safety or welfare.

THE UNINTENDED CONSEQUENCES OF EXCESSIVE REGULATION

It is now well known that the process of regulatory accumulation—the buildup of administrative rules over time—can stunt economic growth and lower living standards below what would be otherwise. A coauthor and I recently conducted a review of peer-reviewed studies that rely on measures of regulation constructed by the World Bank and Organisation for Economic Co-operation and Development, and we found an apparent consensus that regulations that affect entry of new firms into

For more information or to meet with the scholar, contact
Mercatus Outreach, 703-993-4930, mercatusoutreach@mercatus.gmu.edu
Mercatus Center at George Mason University, 3434 Washington Blvd., 4th Floor, Arlington, Virginia 22201

an industry and regulations with anticompetitive product and labor market effects are generally harmful to productivity and growth.[1]

Unintended consequences of regulation extend into the realm of health, as became apparent in 2020. Regulations in a wide variety of areas have had to be relaxed or suspended in order to facilitate the public health response to the COVID-19 pandemic. Examples of such waived or relaxed regulations include (a) regulations that restrict telehealth services by preventing medical professionals from meeting with their patients virtually; (b) occupational licensing and scope-of-practice regulations, which restrict who can work in certain professions and what services they can provide; (c) regulations governing clinical laboratories, which determine who can perform diagnostic tests, such as COVID-19 tests; and (d) certificate-of-need laws, which require healthcare providers to seek permission from the government before they offer new services or expand or build new facilities. Had these regulations not been rolled back during the emergency, the devastation from the pandemic would likely have been far higher.

Beyond the pandemic, regulations have other unintended consequences that affect incomes and health. A recent report from the Mercatus Center, which was based on underlying peer-reviewed studies, finds that the increase in federal regulations from 1997 to 2015 is associated with 236,454 more people living in poverty in Ohio, 3.6 percent higher income inequality in the state, 287 fewer businesses annually, 4,508 lost jobs annually, and 7.35 percent higher prices (see the attachment to this testimony).[2]

These unintended consequences affect ordinary citizens, and they can even increase health and safety risks inadvertently. Compliance costs from regulations reduce business profitability, and these losses are passed on to workers in the form of lower wages and to customers in the form of higher prices. By extension, families have less income to spend on doctor's visits, safer vehicles, or living in more secure or less polluted neighborhoods. Across society, some risks inevitably rise as growing regulatory burdens push incomes down.

When regulatory costs rise enough, one can expect more deaths to occur than otherwise would because the assortment of rules increases risks for some hardworking Americans who are on the margins. Recent research suggests that for each $40 million to $110 million or so in regulatory costs, there will be one expected death owing to this impoverishment effect.[3] Relatedly, as federal regulation of states' economies rises so does state mortality, even after controlling for other factors that explain mortality.[4]

REGULATORY ROLLBACKS IN THE STATES

The fact that so many regulations have had to be rolled back to protect public health during the pandemic raises the question as to whether these suspended or relaxed regulations ever made sense to begin with, even during normal times. It is not surprising, therefore, that governments are engaging in reviews of regulations waived or suspended during the pandemic. In Arizona, Governor Doug Ducey signed an executive order in early 2021 directing state agencies to conduct a comprehensive review of regulations suspended during the COVID-19 emergency to determine whether suspensions should be

1. James Broughel and Robert W. Hahn, "The Impact of Economic Regulation on Growth: Survey and Synthesis," *Regulation & Governance*, published ahead of print (December 28, 2020), https://doi.org/10.1111/rego.12376.
2. Dustin Chambers and Colin O'Reilly, "The Regressive Effects of Regulations in Ohio" (Mercatus Policy Brief, Mercatus Center at George Mason University, Arlington, VA, December 2020).
3. James Broughel and W. Kip Viscusi, "The Mortality Cost of Expenditures," *Contemporary Economic Policy* 39, no. 1 (2021): 156–67.
4. James Broughel and Dustin Chambers, "Regulation and Mortality in the 50 States," *Risk Analysis* 00, no. 0 (published ahead of print, 2021): 1–22.

made permanent.[5] In Idaho, Governor Brad Little signed an order that requires regulators to initiate rulemakings to remove regulations waived during COVID-19.[6]

These reviews form part of a broader state regulatory reform movement. Even before the pandemic hit, a wave of regulatory reforms was sweeping the states,[7] as states such as Virginia and Idaho were making substantial headway at trimming regulatory clutter that had accumulated over decades. Ohio has been part of this movement to some extent with the passage of its one-in, two-out provision in 2019.[8]

Regulatory agencies involved in efforts to cut red tape need goals so that they have something to aspire toward and so that they know when they have succeeded. Thus, every regulatory reform should have some goal in mind. A regulatory reform without a goal is like a ship captain sailing aimlessly without a destination, and with no course charted.

Determining the appropriate goal is ultimately a political decision. Several factors, however, can inform the decision as to how much red tape is the appropriate amount to cut. In SB 9, Ohio legislators have proposed a 30 percent reduction target, which would put the state's count of regulatory restrictions (274,000 as of 2020) closer to—but still above—neighboring Pennsylvania (163,000), and still substantially above that of the average state with 135,000.[9]

A 30 percent reduction goal may sound large, but it is similar to goals in other jurisdictions, including British Columbia (33 percent),[10] Kentucky (30 percent),[11] Missouri (33 percent),[12] Oklahoma (25 percent),[13] and Virginia (25 percent).[14]

One factor to consider is whether the same reduction target should apply broadly across the whole government or whether each agency should have to meet a unique target. Some states, such as Idaho and Missouri,[15] have achieved substantial reductions in their regulatory codes in aggregate (see table 1), but the reductions vary greatly by agency. A single, across-the-board reduction target can be made more flexible with an average goal that is exceeded at some agencies but not at others.

Or there could be a process whereby agencies can petition to be exempt from meeting a target (similar to the process SB 9 would create whereby agencies can appeal to the joint committee on agency rule review for their reduction requirement to be lessened). Some states, such as Virginia, have set targets that apply

5. Arizona Exec. Order No. 2021-02 (February 12, 2021).
6. Idaho Exec. Order No. 2020-13 (June 22, 2020).
7. James Broughel, "The Mighty Waves of Regulatory Reform: Regulatory Budgets and the Future of Cost-Benefit Analysis," *Business, Entrepreneurship & Tax Law Review* 3, no. 2 (2019): 206–23.
8. James Broughel, "A Dark Day for Red Tape in the Buckeye State," *Wall Street Journal*, August 2, 2019.
9. James Broughel and Patrick A. McLaughlin, "Quantifying Regulation in US States with State RegData 2.0," Mercatus Center at George Mason University, Arlington, VA, August 31, 2020.
10. Laura Jones, "Cutting Red Tape in Canada: A Regulatory Reform Model for the United States?" (Mercatus Research, Mercatus Center at George Mason University, Arlington, VA, November 2015).
11. Matt Bevin, "State Red Tape Initiative's Goal Is to Reduce Regs by 30 Percent," *Paducah Sun*, August 22, 2016.
12. "State Agencies Still Considering Rules Cutbacks," *News Tribune*, January 14, 2019.
13. Oklahoma Exec. Order No. 2020-03 (February 3, 2020).
14 The 25 percent reduction goal was part of a pilot program that took place at two agencies. See H. B. 883, 2018 Reg. Sess. (Va. 2018).
15. With respect to Missouri, see Justin D. Smith, "Regulatory Reform at the State Level: A Guide to Cutting Red Tape for Governors and Executive Branch Officials," *Business, Entrepreneurship & Tax Law Review* 3, no. 2 (2019): 276.

only to discretionary regulations—that is, regulations that can be amended or repealed without further legislative changes—and have identified backup enforcement mechanisms if targets are missed.[16]

A 30 percent reduction goal such as the one SB 9 creates may sound ambitious, but several states have achieved reductions in this range in recent years. Table 1 presents the top six states to have reduced regulatory counts in recent years. Notably, Idaho and Missouri saw the biggest reductions in regulatory restrictions in percentage terms, and both of these states have attempted to reduce red tape using a regulatory restrictions metric to help guide their efforts. Idaho saw a 37 percent reduction in regulatory restrictions, and Missouri saw a 30 percent reduction.[17] Kentucky also instituted an effort to cut red tape under its previous governor, Matt Bevin,[18] which explains why the state saw the fourth-largest percentage reduction in the country. Nebraska had the sixth-largest reduction, following a regulatory reform executive order from the governor in 2017.[19]

TABLE 1. TOP SIX LARGEST REDUCTIONS IN STATE REGULATORY RESTRICTIONS, BY PERCENTAGE CHANGE

State	Number of Regulatory Restrictions (2016–2019)*	Number of Regulatory Restrictions (2020)	Change in Absolute Number of Restrictions	Percentage Change in Restrictions
Idaho	61,848	38,961	−22,887	−37.01
Missouri	134,702	93,915	−40,787	−30.28
Wyoming	99,566	71,294	−28,272	−28.40
Kentucky	127,935	116,274	−11,661	−9.11
Michigan	83,484	76,236	−7,248	−8.68
Nebraska	100,627	95,955	−4,672	−4.64

* Year when count took place varies by state.
Source: Kofi Ampaabeng et al., "A Policymaker's Guide to State RegData 2.0" (Mercatus Policy Brief, Mercatus Center at George Mason University, Arlington, VA, October 2020).

DECIDING WHAT TO MEASURE

The choice of what measure to use to guide a state's regulatory reform effort is an important one. Any effort to cut red tape should start with a measure of regulation in mind so that reformers can track their progress. Some may question a state's decision to set a reduction goal based on counts of restrictive terms.

Tradeoffs inevitably arise between simple and more complicated metrics. A complicated measure, such as regulatory cost, could be hard to apply broadly, since relatively few policies have credible cost estimates. A more easily applied measure, like restrictive term counts, may only roughly approximate the true regulatory burden, but can be applied broadly to a wide swath of law easily. The optimal tradeoff might be to use simple measures applied broadly to as many laws as possible and to supplement

16. If agencies fail to meet their reduction goals, Virginia law provides that a one-in, two-out provision will be considered as a backup.
17. Kofi Ampaabeng et al., "A Policymaker's Guide to State RegData 2.0" (Mercatus Policy Brief, Mercatus Center at George Mason University, Arlington, VA, October 2020).
18. James Broughel, "Tracking the Progress of Kentucky's Red Tape Reduction Initiative" (Mercatus Policy Brief, Mercatus Center at George Mason University, Arlington, VA, June 2019).
19. Nebraska Exec. Order No. 17-04 (July 6, 2017).

them with more complicated measures on a case-by-case basis (for example, for some of the largest individual regulations).

Ohio already has experience reporting counts of regulatory restrictions by department, as doing so was a requirement in the 2019 budget.[20] Many regulatory departments have already reported their base inventories of regulatory restrictions,[21] meaning that Ohio is well-positioned to move forward with further regulatory reforms. The base inventory reports contain meaningful information about departments' regulatory requirements. Real people are taking time to look up individual restrictions and explain their purpose. Having an oversight authority, such as the Joint Committee on Agency Rule Review or the Common Sense Initiative, can continue to ensure that reporting contains meaningful information, which is likely why these bodies have been assigned oversight roles in SB 9.

CONCLUSION

Regulatory agencies seeking to cut red tape need a concrete measure of regulation to track their progress and to have a goal in mind so that they have something to aspire toward and so that they know when they have succeeded. Just as a ship captain needs a compass, a red tape cutter needs a guide for his or her journey. To continue the ship analogy, a regulatory reform without a goal is like a captain sailing without a course charted to a destination.

Ohio is already on the path to meaningful regulatory reform. Legislation being considered before this committee would continue Ohio down that path. Thank you for the opportunity to submit this testimony. I am happy to answer any questions you may have.

ATTACHMENTS (1)

Dustin Chambers and Colin O'Reilly, "The Regressive Effects of Regulations in Ohio" (Mercatus Policy Brief, Mercatus Center at George Mason University, Arlington, VA, December 2020).

20. H. B. 166, 133rd Gen. Assemb., Reg. Sess. (Ohio 2019).
21. To name a few, see Ohio Department of Aging, *Base Inventory of 1842 Regulatory Restrictions*, November 14, 2019; Ohio Department of Higher Education, *Base Inventory of Regulatory Restrictions*, December 27, 2019; Ohio Department of Developmental Disabilities, *Base Inventory of Regulatory Restrictions*, December 16, 2019; Ohio Department of Health, *Base Inventory of Regulatory Restrictions*, December 31, 2019.

MERCATUS CENTER
George Mason University

POLICY BRIEF

The Regressive Effects of Regulations in Ohio

Dustin Chambers and Colin O'Reilly

December 2020

Published in partnership with the Institute for Economic Inquiry (IEI)

KEY FINDINGS

The impact of federal regulations from 1997 to 2015 on the Ohio economy is associated with the following regressive effects:

- 236,454 people living in poverty
- 3.6 percent higher income inequality
- 287 fewer businesses annually
- 4,508 lost jobs annually
- 7.35 percent higher prices

With regard to the volume of state-level regulations, Ohio ranks 3 of 44 states for which data are available (where a rank of "1" is most burdensome).

Regulations have unintended consequences. Recent research shows that a greater regulatory burden (as measured by the number of regulatory restrictions—instances of the words and phrases *shall*, *must*, *may not*, *prohibited,* and *required*—included in rules and regulations) is associated with increased poverty rates, higher levels of income inequality, reduced entrepreneurship, and increased consumer prices (especially for the products consumed by individuals living in poverty). Focusing specifically on Ohio, this snapshot describes each of these regressive effects.

POVERTY

The increase in Ohio's regulatory burden from 1997 to 2015 is associated with an increase in the number of people living in poverty by 236,454 (1,568,586 after vs. 1,332,132 before) and an increase in the poverty rate of 2.08 percentage points (13.8 percent after vs. 11.72 percent before).[1]

Using the federal regulation and state enterprise (FRASE) index, which "represents the degree of impact federal regulations have on a state's economy relative to federal regulations' impact on the national economy,"[2] researchers have found that states with a higher incidence of federal regulations also tend to exhibit higher poverty rates.[3] Specifically, a 10 percent increase in the effective federal regulatory burden upon a state is associated with about a 2.5 percent increase in the poverty rate.

From 1997 to 2015 (the period for which FRASE estimates are available), the effective federal regulatory burden upon Ohio increased by 71 percent and is associated with an increase in Ohio's poverty rate of 17.75 percent.[4] As of 2018, the overall poverty rate in Ohio stood at 13.8 percent.[5] If the increase in the regulatory burden had not occurred, our research suggests that the poverty rate could have been as low as 11.72 percent in 2018.[6] Though this may not seem like a large difference in relative terms, it amounts to *236,454 fewer people living in poverty in Ohio in 2018*.

INCOME INEQUALITY

The increase in Ohio's regulatory burden from 1997 to 2015 is associated with an increase in the state's income inequality by 3.6 percent.

Given the association between rising poverty and federal regulations, it is no surprise that income inequality has also increased. Using the FRASE index, researchers have found that states with a higher incidence of federal regulations also have higher levels of income inequality. Specifically, a 10 percent increase in the effective federal regulatory burden upon a state is associated with an approximate 0.5 percent increase in the state's Gini coefficient (the most commonly used measure of income inequality).[7]

From 1997 to 2015, the effective federal regulatory burden upon Ohio increased by 71 percent,[8] *and that increase is associated with a 3.6 percent increase in Ohio's level of income inequality*.[9] As of 2015, Ohio was the 45th most unequal state in terms of income inequality.

ENTREPRENEURSHIP

The average annual growth rate of industry-specific federal regulations (measured from 1999 to 2015) is associated with an annual loss of 287 small firms and 4,508 jobs in Ohio.

One reason a greater regulatory burden may increase poverty and inequality is that regulation can reduce entrepreneurship. Researchers matched data from the Mercatus Center at George Mason University on industry-level federal regulation (from the RegData dataset) with Census Bureau data on the number of small and large firms and the number of employees per industry.[10] They estimate that a 10 percent increase in the number of regulatory restrictions pertaining to a particular industry is associated with a 0.42 percent reduction in the total number of small firms (that is, with fewer than 500 employees)[11] within that industry and a corresponding 0.55 percent

reduction in small firm employment.[12] Moreover, the researchers find that consecutive years of rising regulatory burden on an industry have a compounding effect, whereby the negative effects of regulation are amplified if preceded by above-average regulation growth.

In 2017, Ohio had 179,743 small firms, collectively employing 2,180,337 workers.[13] Between 1999 and 2015, industry-level federal regulatory restrictions increased, on average, by 3.78 percent per year.[14] The results of the research mentioned earlier suggest that in an average year, if industry-level federal regulations uniformly increase by 3.78 percent, Ohio loses about 287 small firms (0.16 percent of total small firms) and 4,508 jobs (0.21 percent of small firm employment).[15]

CONSUMER PRICES

The increase in industry-specific federal regulations (measured from 1999 to 2015) is associated with a 7.35 percent increase in consumer prices in Ohio and the rest of the nation.[16]

A 2018 study combines consumer expenditure and pricing data from the Bureau of Labor Statistics with regulation data from RegData to determine the impact of industry-level regulation on the prices of consumer goods.[17] Given that regulations drive up compliance costs, it is not surprising that the researchers find that a 10 percent increase in federal regulations is associated with a 0.9 percent increase in consumer prices. The study also finds that the poorest households spend an outsized share of their income on the goods that are most regulated. Consequently, between 1999 and 2015, the average annual increase in prices for the households in the lowest income group was 2.46 percent, significantly more than the 2.08 percent increase in average prices experienced by households in the top income group.

Over the same period, industry-level federal regulations increased by an average of 3.78 percent per year, which, based on the research mentioned earlier, is associated with 0.34 percent higher prices nationally.[18] To put this into perspective, the annual rate of inflation from 1999 to 2015 in the United States averaged 2.19 percent,[19] but it could have been as little as 1.85 percent per annum if there had been no growth in regulation. Whereas this may seem like a small difference in the inflation rate, the effects compound over time.

OHIO'S STATE-LEVEL REGULATIONS

In terms of the number of state-level regulatory restrictions, Ohio ranks 3 of 44 states, with 274,470 regulatory restrictions (where a rank of "1" is most regulated). Ohio also ranks 38 in the nation in terms of occupational licensure burden (where a rank of "1" is most burdensome).

Although Ohio cannot unilaterally reduce federal regulatory burdens impacting the state, it can reduce homegrown red tape. An example of state-level red tape is occupational licensure, which can impose a costly barrier to entering a profession. Ohio requires a license to work in 40 low-

income occupations and requires an average of 350 days of education, training, or apprenticeships to obtain a license.[20] Ohio is the 38th most regulated state in terms of the breadth and burden of occupational licensing, according to the Institute for Justice. Using a more comprehensive measure of regulation, Ohio's administrative law code measured 22,646,803 words in total length in 2020 and contained 274,470 distinct regulatory restrictions.[21] *Compared with 43 other states for which data are available, Ohio ranks 3 (California ranks 1, as the state with the most regulatory restrictions, and Idaho ranks 44, as the state with the fewest regulatory restrictions)*.

ABOUT THE AUTHORS

Dustin Chambers is a professor of economics in the Perdue School of Business at Salisbury University, a senior affiliated scholar for the Mercatus Center at George Mason University, and a policy adviser at the Heartland Institute. Chambers is an applied econometrician who has published widely on the topics of income inequality, poverty, and economic growth. His most recent research focuses on the regressive effects of government regulations, including their unintended impact on consumer prices, entrepreneurship, and social mobility vis-à-vis income inequality and poverty. He earned his MA in economics from UCLA and his PhD in economics from the University of California at Riverside.

Colin O'Reilly is an associate professor of economics in the Heider College of Business at Creighton University and a scholar at Creighton's Institute for Economic Inquiry. Since receiving his PhD in economics from Suffolk University in 2014, he has published more than a dozen articles studying institutions and economic development in such peer-reviewed journals as *World Development*, *Economics of Transition and Institutional Change*, *Empirical Economics*, and *Public Choice*. His current research studies the relationship between regulation, rent-seeking, and income inequality. More recently, he has been invited by Fortune 500 companies and local business groups to give presentations on current economic issues.

NOTES

1. Our estimates, based on data from 1997 to 2015, are applied to the poverty rate in 2018, the most recent year with available data.
2. For more information on the FRASE index, see Patrick A. McLaughlin and Oliver Sherouse, *The Impact of Federal Regulation on the 50 States*, 2016 ed. (Arlington, VA: Mercatus Center at George Mason University, 2016); "FRASE Technical Documentation," QuantGov, December 1, 2017, https://www.quantgov.org/frase-documentation.
3. Dustin Chambers, Patrick A. McLaughlin, and Laura Stanley, "Regulation and Poverty: An Empirical Examination of the Relationship between the Incidence of Federal Regulation and the Occurrence of Poverty across the US States," *Public Choice* 180, no. 1–2 (2019): 131–44.

The Institute for Economic Inquiry (IEI) seeks to generate robust discussions on Creighton University's campus about markets and how economic freedom affects human flourishing. The Institute supports programs that analyze economic and social outcomes from various academic perspectives, including economics, ethics, and entrepreneurship.

4. Multiplying the poverty elasticity measure (0.25 percent increase in poverty per 1.00 percent increase in regulation) by the increase in regulations in Ohio as measured by the FRASE index (71 percent) yields the percentage increase in the poverty rate owing to regulation (17.75 percent).

5. For overall poverty rates and numbers of people living in poverty by state, see Census Bureau, "SAIPE State and County Estimates for 2018" (dataset), December 12, 2019, https://www.census.gov/data/datasets/2018/demo/saipe/2018-state-and-county.html.

6. The potential poverty rate of 11.72 percent (13.8/1.1775) ignores any additional growth in regulation since 2015.

7. Dustin Chambers and Colin O'Reilly, "Regulation and Income Inequality in the United States" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, June 2020).

8. McLaughlin and Sherouse, *The Impact of Federal Regulation on the 50 States*; "FRASE Technical Documentation," QuantGov.

9. Multiplying the inequality elasticity measure (0.05 percent increase in the Gini coefficient per 1.00 percent increase in regulation) by the increase in regulations in Ohio as measured by the FRASE index (71 percent) yields the percentage increase in the Gini coefficient owing to regulation (3.6 percent).

10. For more information about RegData, see Patrick A. McLaughlin, "RegData US 3.2 Annual" (dataset), QuantGov, Mercatus Center at George Mason University, Arlington, VA, 2020, https://www.quantgov.org/regdata-us-documentation.

11. Dustin Chambers, Patrick A. McLaughlin, and Tyler Richards, "Regulation, Entrepreneurship, and Firm Size" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, April 2018). Following Small Business Administration classifications, Chambers, McLaughlin, and Richards define small firms as businesses with fewer than 500 employees.

12. Chambers, McLaughlin, and Richards, "Regulation, Entrepreneurship, and Firm Size."

13. For data on employment and firms, see "SUSB Tables," Census Bureau, accessed October 14, 2020, https://www.census.gov/programs-surveys/susb/data/tables.All.html.

14. Chambers, McLaughlin, and Richards, "Regulation, Entrepreneurship, and Firm Size," 35.

15. Multiplying the small firm elasticity measure (0.0423 percent reduction in small firms within an industry per 1 percent increase in industry regulation) by the average increase in national industry-level regulation as measured in RegData (3.78 percent) yields the annual percent reduction in small firms owing to regulation (0.159894 percent). Multiplying this value by the number of firms with fewer than 500 employees (179,743 firms) yields the number of lost small businesses annually, 287 firms (0.159894 percent × 179,743). To determine lost jobs, multiply the employment elasticity measure (0.0547 percent reduction in small business employment within an industry per 1 percent increase in industry regulation) by the average increase in national industry-level regulation as measured in RegData (3.78 percent) yields the annual percentage reduction in small business employment owing to regulation (0.206766 percent). Multiplying this value by the number of small business employees (2,180,337) yields the number of small business jobs lost annually, 4,508 (0.206766 percent × 2,180,337).

16. If the annual inflation rate equals 2.19 percent, the price level grows by approximately 41.43 percent over a 16-year period (that is, 1999 to 2015). At the lower rate of inflation (1.85 percent), the price level grows by 34.08 percent. The difference in gross price appreciation over the period equals 7.35 percent.

17. Dustin Chambers, Courtney A. Collins, and Alan Krause, "How Do Federal Regulations Affect Consumer Prices? An Analysis of the Regressive Effects of Regulation," *Public Choice* 180, no. 1–2 (2019): 57–90.

18. Multiplying the price elasticity measure (0.09 percent increase in consumer prices per 1.00 percent increase in regulation) by the average increase in national industry-level regulation as measured by RegData (3.78 percent) yields the annual percentage increase in consumer prices owing to regulation (0.3402 percent).

19. The inflation rate (2.19 percent) is the average annualized rate of change in the seasonally adjusted consumer price index for all urban consumers (CPI-U), Series ID CUSR0000SA0, from January 1999 to December 2015 as reported by the Bureau of Labor Statistics.

20. Dick M. Carpenter II et al., *License to Work: A National Study of the Burdens from Occupational Licensing*, 2nd ed. (Arlington, VA: Institute for Justice, 2017).

21. Patrick A. McLaughlin and Oliver Sherouse, "State RegData 2.0" (dataset), QuantGov, July 8, 2020, https://www.quantgov.org/state-regdata-documentation?rq=state%20regdata.