

Quarter 4 of Calendar Year 2022

Inefficiencies from old rules are cumulative, and over time, the impacts are compounded by multiplier effects. Removing burdens associated with 284 rules in the fourth quarter of calendar year 2022 eliminated \$59,402,276 of lost productivity for Arizona businesses. These changes do not reduce the welfare of Arizonans.

**284 Rules Improved
or Eliminated
Across
11 Agencies**

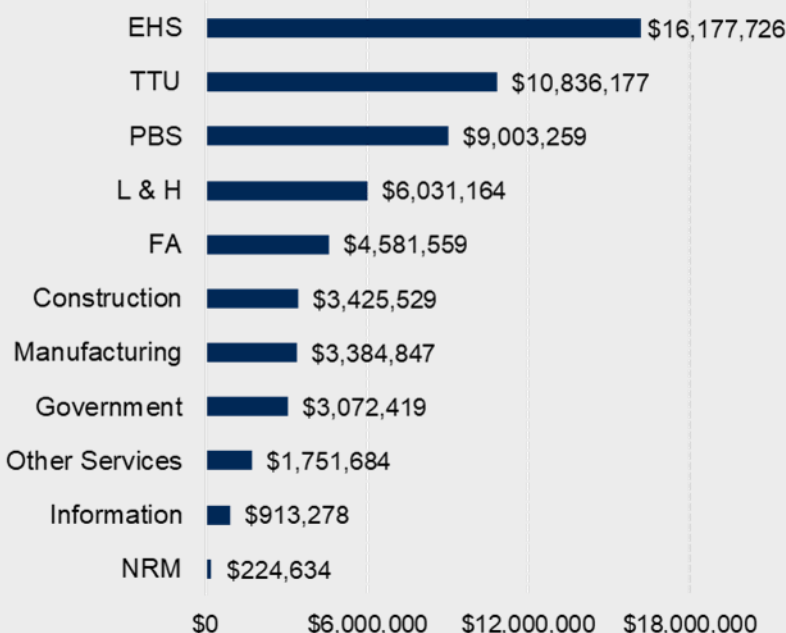
\$59,402,276

**Annual Savings for the
Arizona Economy**

\$0.00

**Lost Benefits
for Arizonans**

Value of Rule Improvements and Rule Eliminations from CY2022 Q4 by Supersector



The monetized economic impact refers to the costs to businesses simply due to the existence of these outdated or obsolete rules within the Arizona Administrative Code (AAC). These rules may have become obsolete due to timeliness or even lack of statutory authority. The estimates for lost economic activity quantify how much productivity businesses lose because a worker must sift through these rules even though they are invalid. This could mean reading an outdated rule, consulting the Arizona Revised Statutes (ARS) for statutory authority, or even possibly making a business decision based on a rule that lacks validity. Since these rules do not increase societal welfare, there is no loss in benefits. These estimates are focusing on a very narrow and conservative estimate of how businesses can be impacted by outdated rules.

Introduction

This report contains tables and charts that monetize the impact of regulation improvement during the fourth quarter of calendar year (CY) 2022 (October 2022 – December 2022). This includes the value of both rule improvements and rule eliminations. The final section includes the methodology for each process as well as a sample of the formula that is used to generate these estimates. These estimates represent preliminary impacts using a very conservative process. The following table shows the status of each quarter in calendar year 2022.

Progress of Monetization Project by Quarter				
<u>Calendar Quarter</u>	<u>Calendar Equivalent</u>	<u>Monetization Status</u>	<u>Rule Count</u>	<u>Savings</u>
Q1 CY2022	January - March 2022	Completed	109	\$2,209,161
Q2 CY2022	April - June 2022	Completed	209	\$11,788,636
Q3 CY2022	July - September 2022	Completed	137	\$4,325,266
Q4 CY2022	October - December 2022	Completed	284	\$59,402,276
Total			739	\$77,725,339

In the fourth quarter of CY 2022, 11 agencies improved or eliminated 284 rules. We estimate that the unimproved versions of these rules resulted in an aggregate loss of \$59,402,276 every year across the economy of Arizona in the form of lost productivity. In regulation, the benefits must always be considered against the costs, and for these regulations, the benefits were \$0.00 each year. Individually, these rules have minimal impact, but over the entire economy over time, these very minimal impacts can combine to produce significant inefficiencies in the economy.

Eliminations and Improvements Combined

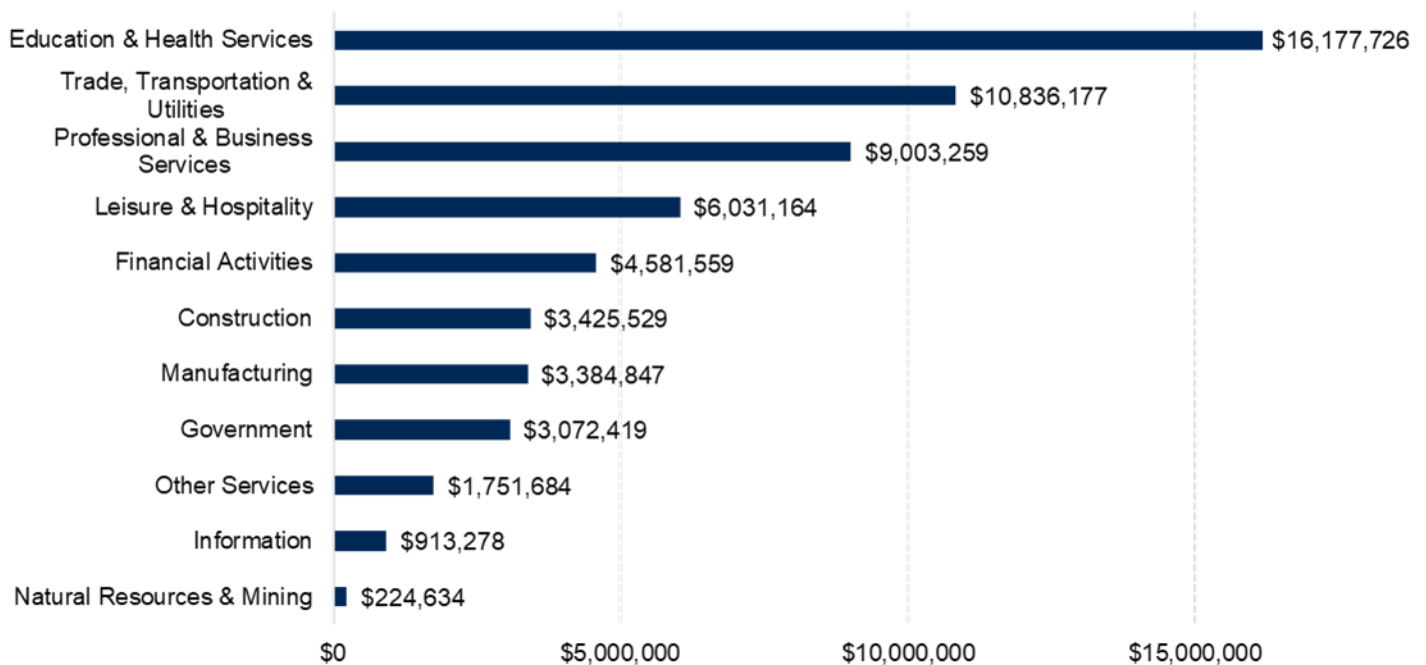
Value of Rule Eliminations and Rule Improvements from CY2022 Q4 by Agency

Agency	Total Savings	Rule Count
Arizona Health Care Cost Containment System	\$40,556	1
Arizona Peace Officer Standards and Training Board	\$26,843	2
Arizona State Lottery Commission	\$79,303	26
Board of Psychologist Examiners	\$3,118,526	27
Department of Environmental Quality	\$749,327	4
Department of Health Services	\$4,393,442	33
Department of Insurance and Financial Institutions	\$270,870	24
Department of Public Safety	\$52,737	7
Game & Fish Commission	\$20,911	5
Industrial Commission of Arizona	\$50,194,043	121
School Facilities Board	\$455,718	34
Total	\$59,402,276	284

Value of Rule Eliminations and Rule Improvements from CY2022 Q4 by Supersector

NAICS	Supersector	Total Savings
10000000	Natural Resources and Mining	\$224,634
20000000	Construction	\$3,425,529
30000000	Manufacturing	\$3,384,847
40000000	Trade, Transportation, and Utilities	\$10,836,177
50000000	Information	\$913,278
55000000	Financial Activities	\$4,581,559
60000000	Professional and Business Services	\$9,003,259
65000000	Education and Health Services	\$16,177,726
70000000	Leisure and Hospitality	\$6,031,164
80000000	Other Services	\$1,751,684
90000000	Government	\$3,072,419
Total		\$59,402,276

Value of Rule Improvements and Rule Eliminations from CY2022 Q4 by Supersector



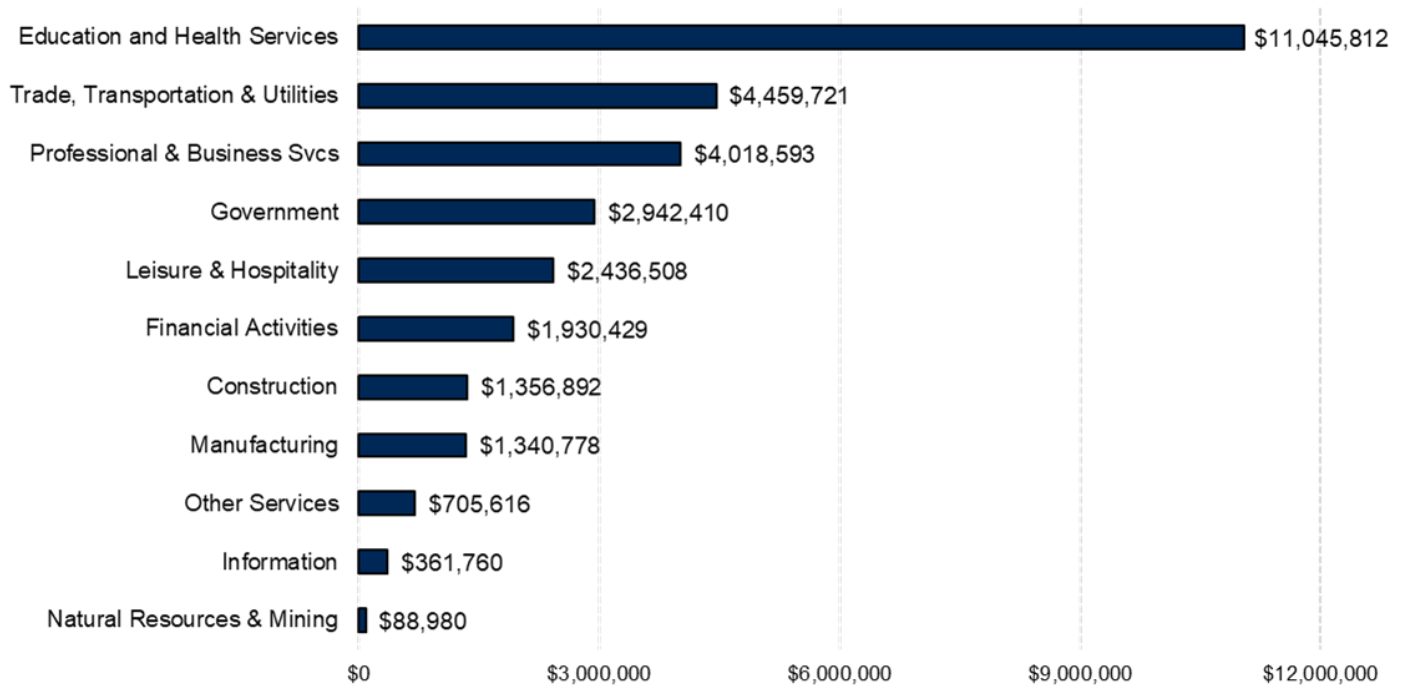
Improvements Only

Value of Rule Improvements from CY2022 Q4 by Agency		
Agency	Rule	Total Savings
Arizona Health Care Cost Containment System	R9-22-712.63	\$40,556
Arizona Peace Officer Standards and Training Board	R13-4-1XX	\$26,843
Arizona State Lottery Commission	R19-3-XXX	\$78,645
Board of Psychologist Examiners	R4-26-XXX	\$3,118,383
Department of Environmental Quality	R18-XX-XXX	\$749,327
Department of Health Services	R9-XX-XXX	\$4,393,442
Department of Insurance and Financial Institutions	RXX-XXX-XXX	\$269,473
Department of Public Safety	R13-1-XXX	\$44,882
Game & Fish Commission	R12-4-5XX	\$20,911
Industrial Commission of Arizona	R20-5-4XX	\$21,536,517
School Facilities Board	R7-6-XXX	\$408,519
Total	169	\$30,687,498

Value of Rule Improvements from CY2022 Q4 by Supersector

NAICS	Supersector	Total Savings
10000000	Natural Resources & Mining	\$88,980
20000000	Construction	\$1,356,892
30000000	Manufacturing	\$1,340,778
40000000	Trade, Transportation & Utilities	\$4,459,721
50000000	Information	\$361,760
55000000	Financial Activities	\$1,930,429
60000000	Professional & Business Svcs	\$4,018,593
65000000	Education and Health Services	\$11,045,812
70000000	Leisure & Hospitality	\$2,436,508
80000000	Other Services	\$705,616
90000000	Government	\$2,942,410
Total		\$30,687,498

Value of Rule Improvements from CY2022 Q4
by Supersector



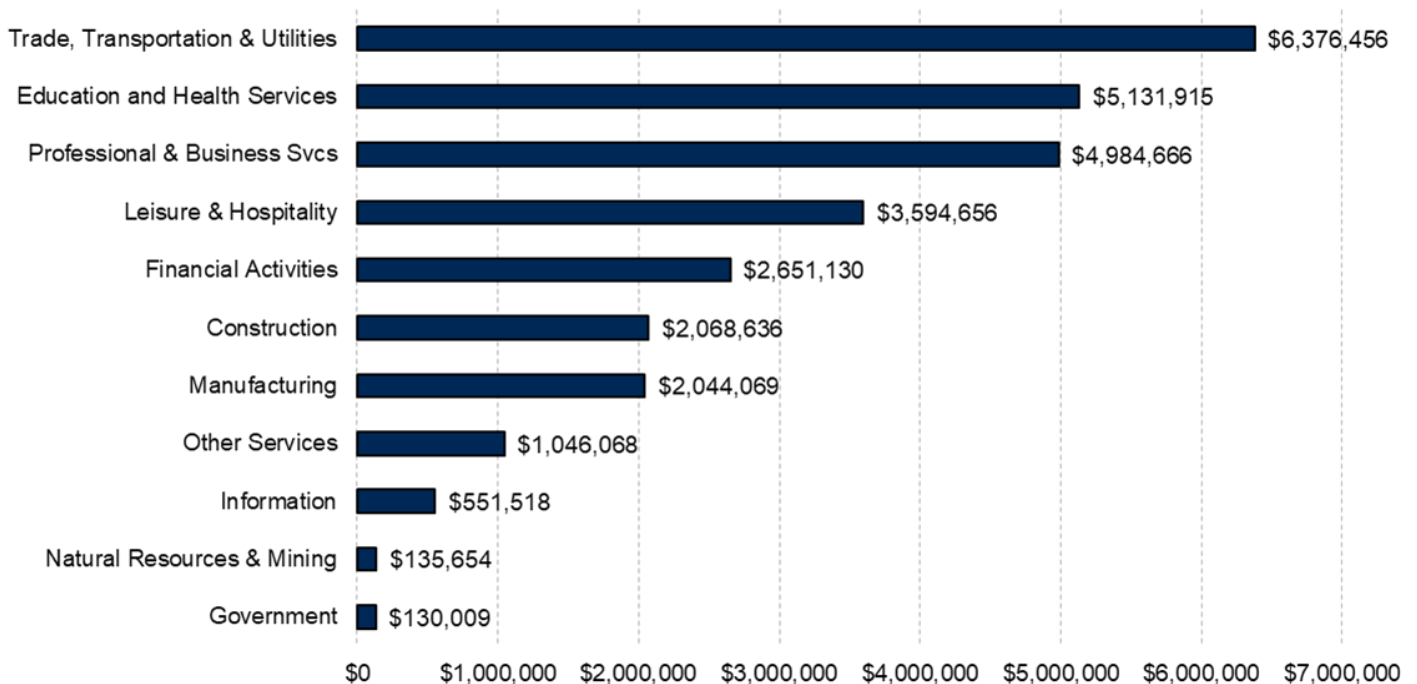
Eliminations Only

Value of Rule Eliminations from CY2022 Q4 by Agency		
Agency	Rule	Total Savings
Arizona State Lottery Commission	R19-3-70X	\$658
Board of Psychologist Examiners	R4-26-10X	\$143
Department of Insurance and Financial Institutions	R20-X-XXXX	\$1,397
Department of Public Safety	R13-1-XXX	\$7,855
Industrial Commission of Arizona	R20-5-XXXX	\$28,657,526
School Facilities Board	R7-6-XXX	\$47,199
Total	115	\$28,714,778

Value of Rule Eliminations from CY2022 Q4 by Supersector

NAICS	Supersector	Total Savings
10000000	Natural Resources & Mining	\$135,654
20000000	Construction	\$2,068,636
30000000	Manufacturing	\$2,044,069
40000000	Trade, Transportation & Utilities	\$6,376,456
50000000	Information	\$551,518
55000000	Financial Activities	\$2,651,130
60000000	Professional & Business Services	\$4,984,666
65000000	Education and Health Services	\$5,131,915
70000000	Leisure & Hospitality	\$3,594,656
80000000	Other Services	\$1,046,068
90000000	Government	\$130,009
	Total	\$28,714,778

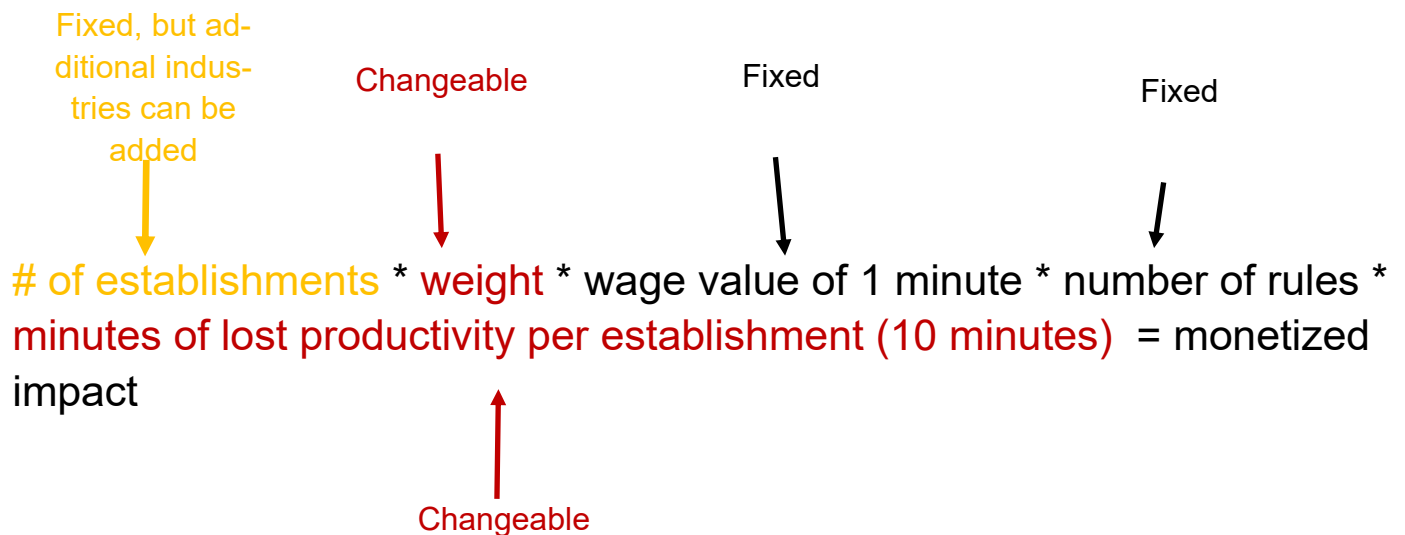
Value of Rule Eliminations from CY2022 Q4 by Supersector



Improvement Formula

of establishments * weight * wage value of 1 minute * number of rules * minutes of lost productivity per establishment (10 minutes) = monetized

1,230 * 1 * \$0.24 * 13 * 10 = \$38,376.00 (rounded value for wage used in this example)



Number of establishments— derived from number of establishments for each industry attached to particular rules from QCEW at the three digit NAICS level or higher.

Weight— this number can control for industries that are comprised of a small number of very large establishments (NAICS 622: Hospitals). The ratio of average employees per establishment in the industry over the average employees per establishment among all industries. Minimum value is 1. Values that exceed 1 are rounded down to the whole integer. This is designed to control for industries that have a small number of large establishments.

This number can also be used to control for industries that are overly broad (NAICS 541: Professional, Scientific, and Technical Services). Reducing this number below the value of 1 can limit the size of establishments used in overly broad NAICS industries.

Wage value of 1 minute— derived from the weekly wages for each industry attached to a particular rules from QCEW at the three digit NAICS level or higher.

Number of rules— derived from the quantity of rules in each group of rulemakings.

Minutes of lost productivity per establishment— a reasonable estimate of 10 minutes are used for each rule.

Improvement Methodology

1. Identify at least one industry at the three digit or higher North American Industrial Classification System (NAICS) level.¹ These are somewhat broad industry classifications at the three digit level. Not all businesses in each industry will be impacted in the same way. There will also be businesses outside of each industry that could be impacted. This analysis includes businesses that are probably not impacted and excludes businesses that are probably impacted.
2. Use Quarterly Census of Employment and Wages (QCEW) data from the second quarter of 2022. At the state level, this data set can provide a quarterly average of the number of establishments and average weekly wages in each industry at the three digit NAICS level or higher.
3. Assume that each establishment has at least one person dedicated to working on compliance issues for the establishment. Some establishments will have more individuals working on compliance, and others may outsource their regulatory compliance matters to outside businesses. Our analysis generally assumes that each obsolete rule drains productivity of compliance employees once per year.
4. Divide the average number of employees in the industry by the average number of employees in all industries. Round this value down to the nearest integer (minimum value of 1). This weight controls for large industries with few establishments, like NAICS 622: Hospitals.
5. Establish the cost or burden of the rule on each individual's time. This is established by assigning a weight of 10 minutes for each rule. This weight is then multiplied by the number of rules improved to establish a rough estimate of time saved for each individual. This weight is intended to include time saved by not working with statutes and rules that are out of sync or unclear.
6. Apply the weekly average wage in the industry to the amount of time lost by the individual employee in each establishment. $(\text{Average Weekly Wage}/2,400)$.
7. Multiply the cost of the lost time by the number of establishments to get the total lost productivity from the rule for an entire year across the entire industry. $(\text{Average Weekly Wage}/2,400) * \text{Number of Establishments}$.
8. This final number estimates how much businesses lose in productivity due to the existence of obsolete and outdated rules each year.

Elimination Formula

of establishments * weight * wage value of 1 minute * (word count/100)
= monetized impact

20,306 * 0.5 * \$0.58 * (2,981/100) = \$175,921.67 (rounded value for wage used in this example)

Fixed, but additional industries can be added

Changeable

Fixed

Fixed

Changeable

↓ ↓ ↓ ↓ ↓

of establishments * weight * wage value of 1 minute * (word count/ 100) * = monetized impact

Number of establishments– derived from number of establishments for each industry attached to particular rules from QCEW at the three digit NAICS level or higher.

Weight– this number can control for industries that are comprised of a small number of very large establishments (NAICS 622: Hospitals). The ratio of average employees per establishments in the industry over the average employees per establishment among all industries. Minimum value is 1. Values that exceed 1 are rounded down to the whole integer. This is designed to control for industries that have a small number of large establishments.

This number can also be used to control for industries that are overly broad (NAICS 541: Professional, Scientific, and Technical Services). Reducing this number below the value of 1 can limit the size of establishments used in overly broad NAICS industries.

Wage value of 1 minute– derived from the weekly wages for each industry attached to a particular rules from QCEW at the three digit NAICS level or higher.

Word Count– number of words in the eliminated rules.

100– an estimated reading speed of 100 words per minute for an individual reading the AAC.

Elimination Methodology

1. Identify at least one industry at the three digit or higher North American Industrial Classification System (NAICS) level. These are somewhat broad industry classifications at the three digit level. Not all businesses in each industry will be impacted in the same way. There will also be businesses outside of each industry that could be impacted. This analysis includes businesses that are probably not impacted and excludes businesses that are probably impacted.
2. Use Quarterly Census of Employment and Wages (QCEW) data from the second quarter of 2022. At the state level, this data set can provide a quarterly average of the number of establishments and average weekly wages in each industry at the three digit NAICS level or higher.
3. Assume that each establishment has one person dedicated to working on compliance issues for the establishment. Some establishments will have more individuals working on compliance, and others may outsource their regulatory compliance matters to outside businesses. Our analysis assumes that each obsolete rule drains productivity of compliance employees once per year.
4. Divide the average number of employees in the industry by the average number of employees in all industries. Round this value down to the nearest integer (minimum value of 1). This weight controls for large industries with few establishments.
5. Establish the cost or burden of the rule on each individual's time. This is established by counting the words in each repealed section and assuming that individuals read legal documents at roughly 100 words per minute (WPM). Generally, adults read somewhere between 200 and 300 words per minute, but legal and technical documents generally take more time. Some rules may include references to other places in the Arizona Administrative Code (AAC). Other rules may require frequent re-reading due to their complexity. These types of issues are excluded from the analysis aside from the 100 WPM assumption.
6. Apply the weekly average wage in the industry to the amount of time lost by the individual employee in each establishment. $(\text{Average Weekly Wage}/2,400)$.
7. Multiply the cost of the lost time by the number of establishments to get the total lost productivity from the rule for an entire year across the entire industry. $(\text{Average Weekly Wage}/2,400) * \text{Number of Establishments}$.
8. This final number estimates how much businesses lose in productivity due to the existence of obsolete and outdated rules each year.

Conclusion

284 obsolete or antiquated rules were improved or eliminated in the fourth quarter of CY 2022. Some of these rules had minimal impact on a narrow set of businesses, and others had minimal impact on a very broad set of businesses. These minimal impacts are insignificant on the individual level, but as these aggregate, they can become a significant drag on economic growth.

For this limited set of rules, OEO estimates that Arizona businesses forego \$59,402,276 lost productivity each year. This may also seem insignificant in a state with Gross Domestic Product of \$354 billion, but these annual losses become cumulative over multiple years. Even modest gains in GDP can multiply into immense gains over large time horizons. This analysis is limited in scope to the current year, but future projects will include future projections of the economic activity generated from the removal of these rules ten years into the future.

Addendum

The following table includes the information from all twenty-six quarters of rule monetization that have been completed by OEO to date. These quarters all use the same methodology. When OEO makes improvements to its methodology, historic quarters are updated to reflect any new methodological changes.

<u>Calendar Quarter</u>	<u>Calendar Equivalent</u>	<u>Rule Count</u>	<u>Savings</u>
Q3 CY2016	July - Sept. 2016	144	\$5,746,774
Q4 CY2016	Oct. - Dec. 2016	67	\$2,773,221
Q1 CY2017	Jan. - March 2017	144	\$6,569,110
Q2 CY2017	April - June 2017	144	\$10,769,528
Q3 CY2017	July - Sept. 2017	255	\$24,032,472
Q4 CY2017	Oct. - Dec. 2017	132	\$7,589,385
Q1 CY2018	Jan. - March 2018	113	\$3,423,126
Q2 CY2018	April - June 2018	95	\$6,710,569
Q3 CY2018	July - Sept. 2018	105	\$10,827,569
Q4 CY2018	Oct. - Dec. 2018	109	\$10,471,985
Q1 CY2019	Jan. - March 2019	158	\$17,058,721
Q2 CY2019	April - June 2019	186	\$13,949,558
Q3 CY2019	July - Sept. 2019	69	\$9,407,096
Q4 CY2019	Oct. - Dec. 2019	224	\$13,472,850
Q1 CY2020	Jan. - March 2020	55	\$3,399,148
Q2 CY2020	April - June 2020	159	\$4,606,195
Q3 CY2020	July - Sept. 2020	90	\$2,482,360
Q4 CY2020	Oct. - Dec. 2020	158	\$4,170,538
Q1 CY2021	Jan. - March 2021	82	\$6,741,718
Q2 CY2021	April - June 2021	30	\$2,006,623
Q3 CY2021	July - Sept. 2021	30	\$430,480
Q4 CY2021	Oct. - Dec. 2021	89	\$2,472,557
Q1 CY2022	Jan.-March 2022	109	\$2,209,161
Q2 CY2022	April - June 2022	209	\$11,788,636
Q3 CY2022	July - Sept. 2022	137	\$4,325,266
Q4 CY2022	Oct.-Dec. 2022	284	\$59,402,276
Total		3,377	\$246,836,921